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8.1 Consolidate Statement of Profit or Loss

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8 FINANCIAL STATEMENTS

8.1 Consolidated Statement of Profit or Loss

		Year ended 31 December 2022			Year ended 31 December 2021 (re-presented (a))		
In thousands of euros (except per share data)	Note	Underlying items	Non-Underlying items (b)	Total	Underlying items	Non-Underlying items (b)	Total
Revenue	8	1,418,774	—	1,418,774	1,253,523	—	1,253,523
Net treasury income through CCP business	8	44,038	(48,951)	(4,913)	35,432	—	35,432
Other income	8	4,949	—	4,949	9,700	—	9,700
Total revenue and income		**1,467,761**	**(48,951)**	**1,418,810**	**1,298,655**	**—**	**1,298,655**
Salaries and employee benefits	9	(301,059)	(5,958)	(307,017)	(275,800)	(11,273)	(287,073)
Depreciation and amortisation	10	(68,829)	(91,362)	(160,191)	(61,392)	(73,180)	(134,572)
Other operational expenses	11	(305,085)	(21,259)	(326,344)	(251,828)	(45,891)	(297,719)
Operating profit		**792,788**	**(167,530)**	**625,258**	**709,635**	**(130,344)**	**579,291**
Finance costs	13	(37,078)	—	(37,078)	(30,797)	(9,907)	(40,704)
Other net financing income/(expense)	13	5,115	—	5,115	6,312	—	6,312
Results from equity investments	14	9,842	—	9,842	25,712	—	25,712
Gain on disposal of subsidiaries	14	—	2,274	2,274	—	2,681	2,681
Share of net profit/(loss) of associates and joint ventures accounted for using the equity method, and impairments thereof	7	10,360	(1,526)	8,834	11,735	(4,294)	7,441
Profit before income tax		**781,027**	**(166,782)**	**614,245**	**722,597**	**(141,864)**	**580,733**
Income tax expense	15	(208,321)	44,716	(163,605)	(187,443)	28,799	(158,644)
Profit for the period		**572,706**	**(122,066)**	**450,640**	**535,154**	**(113,065)**	**422,089**
Profit attributable to:							
– Owners of the parent		555,308	(117,481)	437,827	525,536	(112,192)	413,344
– Non-controlling interests		17,398	(4,585)	12,813	9,618	(873)	8,745
Basic earnings per share	27	**5.21**	**(1.10)**	**4.10**	**5.47**	**(1.17)**	**4.30**
Diluted earnings per share	27	**5.19**	**(1.10)**	**4.10**	**5.46**	**(1.17)**	**4.29**

(a) The comparative period has been re-presented, comprising the removal of the exceptional items line and the addition of two columns reflecting 'underlying' and 'non-underlying' items. See Note 3 section Z, for more details.

(b) Details of non-underlying items are disclosed in Note 12.

The above Consolidated Statement of Profit or Loss should be read in conjunction with the accompanying notes.

8.2 Consolidated Statement of Comprehensive Income

In thousands of euros	Note	Year ended 31 December 2022	31 December 2021
Profit for the period		**450,640**	**422,089**
Other comprehensive income			
Items that may be reclassified to profit or loss:			
– Exchange differences on translation of foreign operations		(29,371)	51,226
– Income tax impact on exchange differences on translation of foreign operations	19	2,773	(6,098)
– Change in value of debt investments at fair value through other comprehensive income		(40,346)	(7,727)
– Realisation of fair value changes upon disposal of debt investments		48,951	—
– Income tax impact on change in value of debt investments at fair value through other comprehensive income	19	(2,426)	2,585
Items that will not be reclassified to profit or loss:			
– Change in value of equity investments at fair value through other comprehensive income		42,054	2,995
– Income tax impact on change in value of equity investments at fair value through other comprehensive income	19	(8,469)	(1,228)
– Remeasurements of post-employment benefit obligations	30	11,896	2,897
– Income tax impact on remeasurements of post-employment benefit obligations	19	(1,329)	(214)
Other comprehensive income for the period, net of tax		**23,733**	**44,436**
Total comprehensive income for the period		**474,373**	**466,525**
Comprehensive income attributable to:			
– Owners of the parent		461,989	456,513
– Non-controlling interests		12,384	10,012

The above Consolidated Statement of Comprehensive Income should be read in conjunction with the accompanying notes.

8.3 Consolidated Balance Sheet

In thousands of euros	Note	As at 31 December 2022	As at As at 31 December 2021 (restated (a))
Assets			
Non-current assets			
Property, plant and equipment	16	109,389	97,580
Right-of-use assets	17	42,290	66,168
Goodwill and other intangible assets	18	6,205,826	6,215,844
Deferred tax assets	19	18,917	37,489
Investments in associates and joint ventures	7	72,009	69,237
Financial assets at fair value through other comprehensive income	20,35	278,219	258,068
Financial assets at amortised cost	35	2,312	2,902
Other non-current assets		1,374	1,317
Total non-current assets		**6,730,336**	**6,748,605**
Current assets			
Trade and other receivables	21	318,087	394,986
Other current assets	22	27,585	21,573
Income tax receivables		54,931	9,965
Derivative financial instruments	23	—	11,913
CCP clearing business assets	35	166,842,539	137,750,884
Other current financial assets	24	162,740	157,590
Cash and cash equivalents	25	1,001,082	804,361
Total current assets		**168,406,964**	**139,151,272**
Assets from disposal groups held for sale	22	—	6,436
Total assets		**175,137,300**	**145,906,313**
Equity and liabilities			
Equity			
Issued capital	26	171,370	171,370
Share premium		2,432,426	2,432,426
Reserve own shares		(32,836)	(42,778)
Retained earnings		1,265,765	1,022,921
Other reserves		77,242	63,647
Shareholders' equity		**3,913,967**	**3,647,586**
Non-controlling interests		126,339	123,114
Total equity		**4,040,306**	**3,770,700**
Non-current liabilities			
Borrowings	29	3,027,161	3,044,391
Lease liabilities	17	21,648	50,691
Deferred tax liabilities	19	552,574	592,431
Post-employment benefits	30	19,631	32,123
Contract liabilities	33	63,785	70,276
Provisions	31	7,049	8,847
Total non-current liabilities		**3,691,848**	**3,798,759**
Current liabilities			
Borrowings	29	17,370	17,359
Lease liabilities	17	28,466	20,993
Derivative financial instruments	23	19	—
CCP clearing business liabilities	35	166,858,684	137,732,403
Current income tax liabilities		28,463	42,068
Trade and other payables	32	396,287	439,856
Contract liabilities	33	75,198	80,546
Provisions	31	659	2,308
Total current liabilities		**167,405,146**	**138,335,533**
Liabilities from disposal groups held for sale	22	—	1,321
Total equity and liabilities		**175,137,300**	**145,906,313**

(a) See Note 3 section Y, for more details regarding the restatement as a result of an error.

The above Consolidated Balance Sheet should be read in conjunction with the accompanying notes.

8.4 Consolidated Statement of Cash Flows

In thousands of euros	Note	Year ended 31 December 2022	31 December 2021 (represented (a))
Profit before income tax		**614,245**	**580,733**
Adjustments for:			
• Depreciation and amortisation	10	160,191	134,572
• Share based payments	9	13,994	10,394
• Share of profit from associates and joint ventures, and impairments thereof	7	(8,834)	(7,441)
• Changes in working capital and provisions		57,526	41,062
Cash flow from operating activities		**837,122**	**759,320**
Income tax paid		(220,636)	(215,614)
Net cash generated by operating activities		**616,486**	**543,706**
Cash flow from investing activities			
Acquisition of associates		(654)	—
Acquisition of subsidiaries, net of cash acquired	5	(65,988)	(4,195,969)
Purchase of other current financial assets		(30,599)	(40,390)
Redemption of other current financial assets		42,900	50,158
Proceeds from sale of subsidiaries		8,743	5,876
Purchase of property, plant and equipment	16	(31,867)	(33,367)
Purchase of intangible assets	18	(67,650)	(34,223)
Dividends received from equity investments	14	9,840	25,707
Dividends received from associates	7	6,748	6,699
Proceeds from sale of property, plant and equipment and intangible assets		53	—
Net cash (used in) investing activities		**(128,474)**	**(4,215,509)**
Cash flow from financing activities			
Proceeds from borrowings, net of transaction fees	29	—	5,471,694
Repayment of borrowings, net of transaction fees	29	—	(3,762,855)
Interest paid		(29,565)	(16,071)
Interest received		5,889	5,000
Settlement of derivatives financial instruments		(8,886)	—
Dividends paid to the company's shareholders	26	(205,985)	(157,165)
Dividends paid to non-controlling interests		(10,931)	(16,021)
Issuance of new shares, net of transaction fees	26	—	2,375,236
Payment of lease liabilities	17	(23,417)	(23,762)
Transactions in own shares	26	(18)	(31,844)
Employee Share transactions		(3,566)	(5,125)
Net cash generated by financing activities		**(276,479)**	**3,839,087**
Net (decrease)/increase in cash and cash equivalents		**211,533**	**167,284**
Cash and cash equivalents - Beginning of the period		809,409	629,469
Non-cash exchange (losses)/gains on cash and cash equivalents		(19,860)	12,656
Cash and cash equivalents - End of the period (b)		**1,001,082**	**809,409**

(a) The comparative period has been re-presented. See Note 3 section Z, for more details.

(b) Cash and cash equivalents at the end of the comparative period included €5.0 million classified as assets held for sale.

The above Consolidated Statement of Cash Flows should be read in conjunction with the accompanying notes.

8.5 Consolidated Statement of Changes in Equity

						Other reserves					
In thousands of euros	**Note**	**Issued capital**	**Share premium**	**Reserve own shares**	**Retained Earnings**	**Foreign currency translation reserve**	**Fair value reserve of financial assets at FVOCI**	**Total other reserves**	**Total Shareholders' equity**	**Non-controlling interests**	**Total equity**
Balance as at 1 January 2021		**112,000**	**116,560**	**(19,867)**	**826,302**	**(54,492)**	**78,245**	**23,753**	**1,058,748**	**30,238**	**1,088,986**
Profit for the period		—	—	—	413,344	—	—	—	413,344	8,745	422,089
Other comprehensive income for the period		—	—	—	2,683	43,861	(3,375)	40,486	43,169	1,267	44,436
Total comprehensive income for the period		**—**	**—**	**—**	**416,027**	**43,861**	**(3,375)**	**40,486**	**456,513**	**10,012**	**466,525**
Transfer of revaluation result to retained earnings		—	—	—	592	—	(592)	(592)	—	—	—
Issuance of common stock		59,370	2,315,866	—	—	—	—	—	2,375,236	—	2,375,236
Share based payments		—	—	—	10,492	—	—	—	10,492	—	10,492
Dividends paid		—	—	—	(157,165)	—	—	—	(157,165)	(16,021)	(173,186)
Transactions in own shares	26	—	—	(31,844)	—	—	—	—	(31,844)	—	(31,844)
Acquisition of non-controlling interest		—	—	—	(59,291)	—	—	—	(59,291)	(9,066)	(68,357)
Non-controlling interests on acquisition/(disposal) of subsidiary (restated (a))		—	—	—	—	—	—	—	—	107,951	107,951
Other movements		—	—	8,933	(14,036)	—	—	—	(5,103)	—	(5,103)
Balance as at Balance as as 31 December 2021 (restated (a))		**171,370**	**2,432,426**	**(42,778)**	**1,022,921**	**(10,631)**	**74,278**	**63,647**	**3,647,586**	**123,114**	**3,770,700**
Profit for the period		—	—	—	437,827	—	—	—	437,827	12,813	450,640
Other comprehensive income for the period		—	—	—	10,567	(26,169)	39,764	13,595	24,162	(429)	23,733
Total comprehensive income for the period		**—**	**—**	**—**	**448,394**	**(26,169)**	**39,764**	**13,595**	**461,989**	**12,384**	**474,373**
Share based payments		—	—	—	13,976	—	—	—	13,976	—	13,976
Dividends paid		—	—	—	(205,985)	—	—	—	(205,985)	(8,990)	(214,975)
Transactions in own shares	26	—	—	(18)	—	—	—	—	(18)	—	(18)
Acquisition of non-controlling interest		—	—	—	—	—	—	—	—	—	—
Non-controlling interests on acquisition/(disposal) of subsidiary		—	—	—	—	—	—	—	—	(169)	(169)
Other movements		—	—	9,960	(13,541)	—	—	—	(3,581)	—	(3,581)
Balance as at 31 December 2022		**171,370**	**2,432,426**	**(32,836)**	**1,265,765**	**(36,800)**	**114,042**	**77,242**	**3,913,967**	**126,339**	**4,040,306**

(a) See Note 3 section Y, for more details regarding the restatement as a result of an error.

The above Consolidated Statement of Changes in Equity should be read in conjunction with the accompanying notes.

Notes to the Consolidated Financial Statements

Note 1. General information

Euronext N.V. ("the Group" or "the Company") is a public limited liability company incorporated and domiciled at Beursplein 5, 1012 JW, Amsterdam in the Netherlands under Chamber of Commerce number 60234520 and is listed on the following Euronext local markets: Euronext Amsterdam, Euronext Brussels, Euronext Lisbon and Euronext Paris.

The Group operates securities and derivatives exchanges in Continental Europe, Ireland and Norway. It offers a full range of exchange- and corporate services, including security listings, cash and derivatives trading, and market data dissemination. It combines the Amsterdam, Brussels, Dublin, Lisbon, Milan, Oslo and Paris exchanges in a highly integrated, cross-border organisation.The Group also operates Interbolsa S.A. (Euronext Securities Porto), Verdipapirsentralen ASA (Euronext Securities Oslo), VP Securities AS (Euronext Securities Copenhagen) and Monte Titoli S.p.A. (Euronext Securities Milan) (respectively the Portuguese, Norwegian, Danish and Italian national Central Securities Depositories (CSDs)) and Cassa di Compensatione e Garanzia S.p.A. (Euronext Clearing), a fully owned Italian multi-asset clearing house.

The Group further owns Euronext FX Inc., a US-based Electronic Communication Network in the spot foreign exchange market, and has majority stakes in Nord Pool, a leading power market in Europe offering intraday and day-ahead trading in the physical energy markets, and MTS S.p.A., a leading trading platform for European government bonds.

The Group's in-house IT function supports its exchange operations. In addition, the Group provides software licenses as well as IT development, operation and maintenance services to third-party exchanges.

These Consolidated Financial Statements were authorised for issuance by Euronext N.V.'s Supervisory Board on 30 March 2023 and will be submitted for adoption by the Annual General Meeting (AGM) of Shareholders on 17 May 2023.

Note 2. Significant events and transactions

The financial position and performance of the Group was particularly affected by the following events and transactions that have occurred during the year:

Acquisition of Spafid's Issuer Services Business

On 1 April 2022, Euronext Securities Milan acquired the Issuer Services Business of Spafid S.p.A., which operates as an investment advisory firm and is a fully owned subsidiary of Mediobanca S.p.A. The purchase consideration for this business acquisition amounted to €12.0 million. For more details on the acquisition, reference is made to Note 5.

Acquisition of the technology businesses from Nexi's capital markets activities

On 2 December 2022, the Group acquired the technology businesses of Nexi S.p.A., an Italian bank specialised in payment systems, currently powering MTS and Euronext Securities Milan. The purchase consideration for this business acquisition amounted to €57 million (on a debt free, cash free basis). For more details on the acquisition, reference is made to Note 5.

Disposal of subsidiaries and impairment of joint venture

In 2022, the Group sold its 60% majority interest in subsidiary Finance Web Working S.A.S. ("Euronext Funds360") to FE Fundinfo, a global provider of data and tools management for the funds industry. The proceeds from the sale amounted to €0.8 million (net of cash). Including allocated goodwill, the loss from disposal of this subsidiary was €0.8 million (see Note 14).

Furthermore, MTS S.p.A. sold its interest in subsidiary MTS Markets International Inc. (which was classified as a disposal group held for sale) to Tradition America Holdings Inc., a subsidiary of Compagnie Financière Tradition SA, an interdealer broker in over-the-counter financial and commodity related products. The proceeds from the sale amounted to €7.8 million. The net assets disposed of amounted to €4.7 million, which resulted in a gain on disposal of €3.1 million (see Note 14).

In addition, following indications of a deteriorated future cash flow situation and Board decision to propose to the Shareholders meeting to liquidate the entity, the investment in joint venture LiquidShare was impaired by €1.5 million to zero value in 2022 (see Note 7).

Revaluation of direct- and indirect stakes in Euroclear S.A./N.V.

For the determination of fair value of its direct and indirect investments in Euroclear S.A./N.V., the Group applied a weighted approach of the Gordon Growth model and recent observed market transactions taking into account an illiquidity discount for the limited number of transactions. This valuation method resulted in a total valuation of Euroclear S.A./N.V. of €5.0 billion and to an increase in fair value of Euronext S.A./N.V.'s direct- and indirect investments of €42.0 million as per 31 December 2022. This revaluation was recorded in Other Comprehensive Income.

Termination of Interest Rate Swap agreements

On 3 May 2022, the Group terminated its interest rate swap agreements which were formally designated and qualified as fair value hedges of Senior Unsecured Note #1. On termination, the Group cash settled the swap agreements that had a carrying amount of €8.9 million and the hedge relationship was discontinued.

As from the moment of discontinuation of the fair value hedge, the accumulated fair value adjustments of Senior

Unsecured Note #1 will be amortised to profit or loss based on a recalculated Effective Interest Rate over the remaining term of the Senior Unsecured Note #1. As per 31 December 2022, the accumulated fair value adjustments amounted to a negative €5.9 million (see Note 29).

Migration of Euronext Data Centre from Basildon (UK) to Bergamo (Italy)

On 6 June 2022, the Group completed the first part of the migration of its core data centre from Basildon (UK) to Bergamo (Italy). The core data centre migration was executed in order to pave the way for the migration of the Borsa Italiana equity and derivatives markets onto Euronext Optiq® trading technology by 2023/2024.

Partial accelerated depreciation of its right of use asset related to the Basildon data centre was recorded as non-underlying item (see Note 12).

Partial disposal of debt investment portfolio at Euronext Clearing

In July 2022, Euronext Clearing reduced its investment portfolio with the aim of strengthening and preserving its available regulatory capital and aligning the investment strategy to the current level of market volatility and uncertainty.

As a result, Euronext Clearing disposed of its portfolio maturing after 1 May 2023 and decided to retain its short-term investment portfolio maturing through April 2023 and hold these to maturity (see Notes 35 and 37 for more information of these balances). The Group recycled the related revaluation loss of €48.9 million from Other Comprehensive Income to non-underlying net treasury income (see Note 12).

Long-Term Incentive Plan 2022

On 23 May 2022, a Long-Term Incentive plan ("LTI 2022") was established under the revised Remuneration Policy that was approved by the AGM in May 2021. The LTI cliff vests after 3 years whereby performance criteria will impact the actual number of shares at vesting date. The share price for this grant at grant date was €77.60 and 197,416 Restricted Stock Units ("RSU's") were granted. The total share-based payment expense at the vesting date in 2025 is estimated to be €13.5 million. As from the grant date, compensation expense recorded for this LTI 2022 plan amounted to €3.1 million in the income statement for the year ended 31 December 2022.

Changes in the Group's key management personnel during 2022

On 17 May 2022, the Group announced that Manuel Bento was appointed as Chief Operating Officer and Member of the Managing Board of Euronext N.V., subject to regulatory and shareholder approvals. This follows the decision from Georges Lauchard to resign from his position as Chief Operating Officer and Member of the Managing Board of Euronext N.V. as per 10 June 2022. On 18 May 2022, Fabrizio Testa as CEO of Borsa Italiana was appointed as a Member of the Managing Board of Euronext N.V.

No changes in the Supervisory Board occurred to date.

See Note 36, for more details on the Group's key management personnel.

Note 3. Significant accounting policies and judgments

The significant accounting policies applied in the preparation of these Consolidated Financial Statements are set out below. These policies have been consistently applied to all the years presented, unless stated otherwise. The financial statements for the year ended 31 December 2022 are for the Group consisting of Euronext N.V. and its subsidiaries.

A). Basis of preparation

The Consolidated Financial Statements of the Group have been prepared in accordance with International Financial Reporting Standards (IFRS) adopted by the European Union. They also comply with the financial reporting requirements included in Title 9 Book 2 of the Dutch Civil Code, as far as applicable.

The Consolidated Financial Statements have been prepared on a historical cost basis, unless stated otherwise. They have also been prepared on the basis that the Group will continue to operate as a going concern.

B). Basis of consolidation

These Consolidated Financial Statements include the financial results of all subsidiaries in which entities in the Group have a controlling financial interest and it also incorporates the share of results from associates and joint ventures. The list of individual legal entities which together form the Group, is provided in Note 4. All transactions and balances between subsidiaries have been eliminated on consolidation. All transactions and balances with associates and joint ventures are reflected as related party transactions and balances (see Note 36).

(i) Subsidiaries

Subsidiaries are all entities controlled by the Group. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power to direct the activities of the entity. Subsidiaries are fully consolidated from the date on which control is transferred to the Group. They are de-consolidated from the date that control ceases.

Intergroup transactions, balances and unrealised gains and losses on transactions between companies within the Group are eliminated upon consolidation unless they provide evidence of impairment. Accounting policies of subsidiaries have been changed where necessary to ensure consistency with the policies adopted by the Group.

Non-controlling interest in the results and equity of subsidiaries are shown separately in the consolidated statement or profit or loss, statement of comprehensive income, statement of changes in equity and balance sheet respectively.

(ii) Associates and joint arrangements

Associates are entities over which the Group has the ability to exercise significant influence, but does not control. Generally, significant influence is presumed to exist when the Group holds 20% to 50% of the voting rights in an entity. Joint arrangements are joint operations or joint-ventures over which the Group, together with another party or several other parties, has joint control. Investments in associates and joint ventures are accounted for using the equity method of accounting.

Under the equity method of accounting, the investments are initially recognised at cost and adjusted thereafter to recognise the group's share of the post-acquisition profits or losses of the investee in profit or loss, and the group's share of movements in other comprehensive income of the investee in other comprehensive income. Dividends received or receivable from associates and joint ventures are recognised as a reduction in the carrying amount of the investment. When the group's share of losses in an equity-accounted investment equals or exceeds its interest in the entity, including any other unsecured long-term receivables, the group does not recognise further losses, unless it has incurred obligations or made payments on behalf of the other entity. Unrealised gains on transactions between the group and its associates and joint ventures are eliminated to the extent of the group's interest in these entities. Unrealised losses are also eliminated unless the transaction provides evidence of an impairment of the asset transferred. Accounting policies of equity accounted investees have been changed where necessary to ensure consistency with the policies adopted by the group. The carrying amount of equity-accounted investments is tested for impairment.

C). Business combinations

Business combinations are accounted for using the acquisition method. The cost of an acquisition is measured as the aggregate of the consideration transferred, which is measured at acquisition date fair value, and the amount of any non-controlling interests in the acquiree. For each business combination, the Group elects whether to measure the non-controlling interests in the acquiree at fair value or at the proportionate share of the acquiree's identifiable net assets. Acquisition-related costs are expensed as incurred and included in administrative expenses.

The Group determines that it has acquired a business when the acquired set of activities and assets include an input and a substantive process that together significantly contribute to the ability to create outputs. When the Group acquires a business, it assesses the financial assets and liabilities assumed for appropriate classification and designation in accordance with the contractual terms, economic circumstances and pertinent conditions as at the acquisition date. The identifiable assets acquired and liabilities are measured initially at their fair values at the acquisition date. Contingent consideration is classified either as equity or as a financial liability. Amounts classified as a financial liability are subsequently re-measured to fair value with changes in fair value recognised in profit or loss.

The consideration transferred is measured at the fair value of any assets transferred, liabilities incurred and equity interests issued. The excess of the consideration transferred over the fair value of the Group's share of the identifiable net assets acquired is recorded as goodwill. To the extent applicable, any non-controlling interest in the acquiree and the acquisition-date fair value of any previous equity interest in the acquiree are added to consideration transferred for purposes of calculating goodwill. Goodwill is initially measured at cost. After initial recognition, goodwill is measured at cost less any accumulated impairment losses.

For the purpose of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to each of the Group's cash-generating units that are expected to benefit from the combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units. Where goodwill has been allocated to a cash-generating unit (CGU) and part of the operation within that unit is disposed of, the goodwill associated with the disposed operation is included in the carrying amount of the operation when determining the gain or loss on disposal. Goodwill disposed in these circumstances is measured based on the relative values of the disposed operation and the portion of the cash-generating unit retained.

D). Segment reporting

Segments are reported in a manner consistent with how the business is operated and reviewed by the chief operating decision maker (CODM), who is responsible for allocating resources and assessing performance of the operating segments. The chief operating decision maker of the Group is the Extended Managing Board. The organisation of the Group reflects the high level of mutualisation of resources across geographies and product lines. Operating results are monitored on a group-wide basis and, accordingly, the Group represents one operating segment and one reportable segment. Operating results reported to the Extended Managing Board are prepared on a measurement basis consistent with the reported Consolidated Statement of Profit or Loss.

In presenting and discussing the Group's financial position, operating results and net results, management uses certain Alternative performance measures not defined by IFRS. These Alternative performance measures (APMs) should not be viewed in isolation as alternatives to the equivalent IFRS measures and should be used as supplementary information in conjunction with the most directly comparable IFRS measures. APMs do not have standardised meaning under IFRS and therefore may not be comparable to similar measures presented by other companies. The Group measures performance based on EBITDA1, as management believes that this measurement is most relevant in evaluating the operating results of the Group. This measure is included in the internal management reports that are reviewed by the CODM.

Reference is made to one of the below definitions, whenever the term 'EBITDA' is used throughout these Consolidated Financial Statements:

- EBITDA1: 'Underlying' operating profit before 'underlying' depreciation and amortisation, taking into account the lines described in the Consolidated Statement of Profit or Loss;
- EBITDA2: Profit before (i)interest expense, (ii)tax, (iii)any share of the profit of any associated company or undertaking, except for dividends received in cash by any member of the Group,

(iv)exceptional items; and (v) depreciation and amortisation;

- EBITDA3: EBITDA as defined in the Share Purchase Agreements of the acquired companies involved.

E). Foreign currency transactions and translation

(i) Functional and presentation currency

These Consolidated Financial Statements are presented in Euro (EUR), which is the Group's presentation currency. The functional currency of each Group entity is the currency of the primary economic environment in which the entity operates.

(ii) Transactions and balances

Foreign currency transactions are converted into the functional currency using the rate ruling at the date of the transactions. Foreign exchange gains or losses resulting from the settlement of such transactions and from the translation at year-end rates of monetary assets and liabilities denominated in foreign currencies are recognised in the Income Statement.

Exceptions to this are where the monetary items form part of the net investment in a foreign operation or are designated as hedges of a net investment, in which case the exchange differences are recognised in Other Comprehensive Income.

(iii) Group companies

The results and financial position of Group entities that have a functional currency different from the presentation currency are converted into the presentation currency as follows:

- assets and liabilities (including goodwill) are converted at the closing balance sheet rate.
- income and expenses are translated at average exchange rates (unless this is not a reasonable approximation of the cumulative effect of the rates prevailing on the transaction dates, in which case income and expenses are translated at the dates of the transactions); and
- all resulting exchange differences are recognised as currency translation adjustments within Other Comprehensive Income.

F). Property, plant and equipment

Property, plant and equipment is carried at historical cost, less accumulated depreciation and any impairment loss. The cost of purchased property, plant and equipment is the value of the consideration given to acquire the assets and the value of other directly attributable costs. All repairs and maintenance costs are charged to expense as incurred.

Property, plant and equipment is depreciated on a straight-line basis over the estimated useful lives of the assets, except land and construction in process assets, which are not depreciated. The estimated useful lives, which are reviewed annually and adjusted if appropriate, used by the Group in all reporting periods presented are as follows:

- Buildings (including leasehold improvements) 5 to 40 years
- IT equipment 2 to 3 years
- Other equipment 5 to 12 years
- Fixtures and fittings 4 to 10 years

G). Leases

(i) Right-of-use assets

The Group recognises right-of-use assets at the commencement date of the lease (i.e., the date the underlying asset is available for use). Right-of-use assets are measured at cost less any accumulated depreciation and if necessary any accumulated impairment. The cost of a right-of-use asset comprise the present value of the outstanding lease payments, any lease payments made at or before the commencement date less any lease incentives received, any initial direct costs and an estimate of costs to be incurred in dismantling or removing the underlying asset. If the lease transfers ownership of the underlying asset to the lessee at the end of the lease term or if the cost of the right-of-use asset reflects that the lessee will exercise a purchase option, the right-of-use asset is depreciated to the end of the useful life of the underlying asset. Otherwise the right-of-use asset is depreciated to the end of the lease term.

(ii) Lease liabilities

At the commencement date of the lease, the Group recognises lease liabilities measured at the present value of lease payments to be made over the lease term. The lease payments include fixed payments (including in-substance fixed payments) less any lease incentives receivable, variable payments that depend on an index or rate and amounts expected to be paid under residual value guarantees. The lease payments also include the exercise price of a purchase option reasonably certain to be exercised by the Group and payments for penalties for terminating a lease, if the lease term reflects the Group exercising the option to terminate. Variable lease payments that do not depend on an index or a rate are recognised as expense in the period on which the event or condition that triggers the payment occurs. In this context, the Group also applies the practical expedient that the payments for non-lease components are generally recognised as lease payments. In calculating the present value of lease payments, the Group uses the incremental borrowing rate at the lease commencement date if the interest rate implicit in the lease is not readily determinable. After the commencement date, the amount of lease liabilities is increased to reflect the accretion of interest and reduced for the lease payments made. In addition, the carrying amount of lease liabilities is remeasured if there is a modification, a change in the lease term, a change in the in-substance fixed lease payments or a change in the assessment to purchase the underlying asset.

(iii) Short-term leases and leases of low-value assets

The Group applies the short-term lease recognition exemption to leases that have a lease term of 12 months or less from the commencement date and do not contain a purchase option. It also applies the lease of low-value assets recognition exemption to leases of office IT equipment and other staff equipment that are of low value. Lease payments on short-term leases and leases of low-value assets are recognised as expense on a straight-line basis over the lease term.

H). Goodwill and other intangible assets

(i) Goodwill

Goodwill represents the excess of the consideration transferred in a business combination over the Group's share in the fair value of the net identifiable assets and liabilities of the acquired business at the date of acquisition. Goodwill is not amortised but is tested at least annually for impairment, or whenever an event or change in circumstances indicate a potential impairment.

For the purpose of impairment testing, goodwill arising in a business combination is allocated to the cash-generating units (CGUs) or groups of CGUs that are expected to benefit from the synergies of the combination. Each CGU or CGU Group to which goodwill is allocated represents the lowest level within the Group at which the goodwill is monitored for internal management purposes.

The carrying value of a CGU Group is compared to its recoverable amount, which is the higher of its value in use and its fair value less costs of disposal. Impairment losses on goodwill are not subsequently reversed. Value in use is derived from the discounted future free cash flows of the CGU Group. Fair value less costs of disposal is based on discounted cash flows and market multiples applied to forecasted earnings. Cash flow projections are based on budget and business plan approved by management and covering a 2-year period in total. Cash flows beyond the business plan period are extrapolated using a perpetual growth rate. Key assumptions used in goodwill impairment test are described in Note 18.

(ii) Internally generated intangible assets

An intangible asset is an identifiable non-monetary asset without physical substance. Such an asset is identifiable when it is separable, or when it arises from contractual or other legal rights.

Software development costs are capitalised only from the date when all of the following conditions are met:

- The technical feasibility of the development project is demonstrated
- It is probable that the project will be completed and will generate future economic benefits; and
- The project development costs can be reliably measured.

Capitalised software development costs are amortised on a straight-line basis over their useful lives, generally from 2 to 7 years. Other development expenditures that do not meet these criteria, as well as software maintenance and minor enhancements, are expensed as incurred.

(iii) Other intangible assets

Other intangible assets, which are acquired by the Group, are stated at cost less accumulated amortisation and impairment losses (if applicable). The estimated useful lives are as follows:

- Purchased software and licenses: 2-8 years
- Customer relationships: 11-40 years
- Brand names: Generally for brand names an indefinite useful life is assumed. For brand names with finite useful lives the expected useful life is up to 3 years.

I). Impairment of non-financial assets other than goodwill

Assets that are subject to amortisation and depreciation are reviewed for impairment whenever events or circumstances indicate that the carrying amount may not be recoverable. Assets that have an indefinite useful life are not subject to amortisation nor depreciation and are tested at least annually for impairment. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell or value in use. For purposes of assessing impairment, assets are grouped into Cash Generating Units (CGUs). A CGU is the smallest identifiable group of assets that generates cash inflows that are largely independent from other groups of assets. Non-financial assets, other than goodwill, that were previously impaired are reviewed for possible reversal of the impairment at each reporting date.

J). Derivative financial instruments and hedging activities

(i) Initial recognition and measurement

The Group uses derivative financial instruments, such as forward currency contracts and interest rate swaps, to hedge its foreign currency risk and interest rate risks. Such derivative financial instruments are initially recognised at fair value on the date on which a derivative contract is entered into and are subsequently remeasured at fair value. Derivatives are carried as financial assets when the fair value is positive and as financial liabilities when the fair value is negative.

For the purpose of hedge accounting, hedges are classified as fair value hedges when hedging the exposure to changes in the fair value of a recognised asset or liability or an unrecognised firm commitment.

At the inception of a hedge relationship, the Group formally designates and documents the hedge relationship to which it wishes to apply hedge accounting and the risk management objective and strategy for undertaking the hedge.

The documentation includes identification of the hedging instrument, the hedged item, the nature of the risk being hedged and how the Group will assess whether the hedging relationship meets the hedge effectiveness requirements (including the analysis of sources of hedge ineffectiveness and how the hedge ratio is determined). A hedging relationship qualifies for hedge accounting if it meets all of the following effectiveness requirements:

- There is 'an economic relationship' between the hedged item and the hedging instrument.
- The effect of credit risk does not 'dominate the value changes' that result from that economic relationship.
- The hedge ratio of the hedging relationship is the same as that resulting from the quantity of the hedged item that the Group actually hedges and the quantity of the hedging instrument that the Group actually uses to hedge that quantity of hedged item.

The hedges relevant to the Group, that meet all the qualifying criteria for hedge accounting are accounted for, as described below:

Fair value hedges

The change in the fair value of a hedging instrument is recognised in the statement of profit or loss. The change in the fair value of the hedged item attributable to the risk hedged is recorded as part of the carrying value of the hedged item and is also recognised in the statement of profit or loss.

For fair value hedges relating to items carried at amortised cost, any adjustment to carrying value is amortised through profit or loss over the remaining term of the hedge using the Effective Interest Rate (EIR) method. The EIR amortisation may begin as soon as an adjustment exists and no later than when the hedged item ceases to be adjusted for changes in its fair value attributable to the risk being hedged.

If the hedged item is derecognised, the unamortised fair value is recognised immediately in profit or loss.

When an unrecognised firm commitment is designated as a hedged item, the subsequent cumulative change in the fair value of the firm commitment attributable to the hedged risk is recognised as an asset or liability with a corresponding gain or loss recognised in profit or loss.

Hedges of a net investment

Hedges of a net investment in a foreign operation, including a hedge of a monetary item that is accounted for as part of the net investment, are accounted for as follows:

Gains or losses on the hedging instrument relating to the effective portion of the hedge are recognised as Other Comprehensive Income while any gains or losses relating to the ineffective portion are recognised in the statement of profit or loss. On disposal of the foreign operation, the cumulative value of any such gains or losses recorded in equity is transferred to the statement of profit or loss.

K). Financial instruments

(i) Classification and initial recognition

The Group classifies its financial instruments in the following measurement categories:

- Amortised cost
- Fair value through Other Comprehensive Income (FVOCI)
- Fair value through profit or loss (FVPL)

The classification depends on the Group's business model for managing the financial instruments and the contractual terms of the cash flows. For instruments measured at fair value, gains and losses will either be recorded in profit or loss or Other Comprehensive Income. For investments in equity instruments that are not held for trading, this will depend on whether the group has made an irrevocable election at the time of initial recognition to account for the equity investment at fair value through Other Comprehensive Income (FVOCI).

Financial assets and financial liabilities are initially recognised on their settlement date. Except for trade receivables, at initial recognition the Group measures a financial asset at its fair value plus, in the case of a financial asset not at fair value through profit or loss (FVPL), transaction costs that are directly attributable to the acquisition of the financial asset. Transaction costs of financial assets carried at FVPL are expensed in profit or loss. Financial assets with embedded derivatives are considered in their entirety when determining whether their cash flows are solely payment of principal and interest. Trade receivables are initially measured at their transaction price if they do not contain a significant financing component in accordance with IFRS 15.

(ii) Subsequent measurement

Financial assets at amortised cost

Assets that are held for collection of contractual cash flows where those cash flows represent solely payments of principal and interest are measured at amortised cost. Interest income from these financial assets is measured using the effective interest rate method and is shown in finance income. Any gain or loss arising on de-recognition is recognised directly in profit or loss and presented in other gains/(losses), together with foreign exchange gains and losses. Impairment losses are presented as separate line item in the statement of profit or loss.

The Group's financial assets at amortised cost include the Group's trade and other receivables, loans and deposits included under (non-current) Financial assets at amortised cost, short-term deposits with a maturity of more than three months included under other current financial assets and cash and cash equivalents.

Financial assets at amortised cost - CCP clearing business

For financial assets from CCP clearing business all measurement effects are shown in net treasury income through CCP business.

This category includes clearing member trading balances relating to certain collateralised transactions, other receivables from clearing members of the CCP business and clearing member cash an cash equivalents, representing amounts received from the clearing members to cover initial and variation margins and default fund contributions that are not invested in bonds.

Financial assets at fair value through Other Comprehensive Income (FVOCI)

Debt instruments that are held for collection of contractual cash flows and for selling the financial assets, where the assets' cash flows represent solely payments of principal and interest, are measured at FVOCI. Movements in the carrying amount are taken through Other Comprehensive Income, except for the recognition of impairment gains or losses, interest revenue and foreign exchange gains and losses which are recognised in profit or loss. When the financial asset is derecognised, the cumulative gain or loss previously recognised in Other Comprehensive Income is reclassified from equity to profit or loss and recognised in other gains/(losses). Interest income from these financial assets is included in finance income using the effective interest rate method. Foreign exchange gains and losses are presented in other gains/(losses) and impairment expenses are presented as separate line item in the statement of profit or loss. The Group's debt instruments at FVOCI include the Group's investments in short-term listed bonds and government bonds (long-term and short-term) linked to Euronext Clearing's own funds.

Where the Group's management has elected to present fair value gains and losses on equity investments in Other Comprehensive Income, there is no subsequent reclassification of fair value gains and losses to profit or loss following the de-recognition of the investment. Dividends from such investments will be recognised in profit or loss as results from equity investments when the Group's right to receive payments is established, except when the Group benefits from such proceeds as a recovery of part of the cost of the financial asset, in which case, such gains are recorded in Other Comprehensive Income. The Group elected to classify irrevocably its unlisted equity securities that are held as long-term strategic investments that are not expected to be sold in the foreseeable future in this category.

Financial assets at fair value through Other Comprehensive Income (FVOCI) - CCP clearing business
This category includes the investments made in (predominantly) government bonds, that are funded by the margins and default funds deposited by members of the CCP clearing business. These investments are recognised in 'CCP clearing business assets'. Interest income and reclassified fair value gains/(losses) from these financial assets are shown in net treasury income through CCP business.

Financial assets at fair value through Profit or Loss (FVPL)
Assets that do not meet the criteria for amortised cost or FVOCI are measured at FVPL. Changes in the fair value of financial assets at FVPL are recognised in other gains/(losses) in the statement of profit or loss as applicable.

Financial assets at fair value through Profit or Loss (FVPL) - CCP clearing business
This category includes clearing member trading balances comprising derivatives, equity and debt instruments that are marked to market on a daily basis. In particular these include open transactions not settled at the reporting date on the derivatives market in which Euronext Clearing operates as a central counterparty. The fair valuation of such positions is determined on the market price of each individual financial instrument at closing of the reporting period.

As the amounts of clearing member trading assets and liabilities at FVPL are equally entered in both assets and liabilities, the fair valuation of both items does not lead to any net profit or loss in the income statement of the Group.

Financial liabilities at fair value through Profit or Loss (FVPL)
Liabilities that are held for trading are measured at FVPL. Changes in the fair value of financial liabilities at FVPL are recognised in other gains/(losses) in the statement of profit or loss as applicable.

Financial liabilities at fair value through Profit or Loss (FVPL) - CCP clearing business
This category includes clearing member trading balances comprising derivatives, equity and debt instruments that are marked to market on a daily basis. In particular these include open transactions not settled at the reporting date on the derivatives market in which Euronext Clearing operates as a central counterparty. The fair valuation of such positions is determined on the market price of each individual financial instrument at closing of the reporting period.

As the amounts of clearing member trading assets and liabilities at FVPL are equally entered in both assets and liabilities, the fair valuation of both items does not lead to any net profit or loss in the income statement of the Group.

Financial liabilities at amortised cost
Financial liabilities that are not held for trading are generally accounted for at amortised cost. These instruments are measured using the effective interest rate method and interest expense is shown in finance costs. The Group's financial liabilities at amortised cost include the Group's trade and other payables, borrowings and lease liabilities.

Financial liabilities at amortised cost - CCP clearing business
For financial liabilities from CCP clearing business all measurement effects are shown in net treasury income through CCP business. This category includes as well CCP repurchase agreements and other payables to clearing members related to initial and variation margins and default fund contributions.

(iii) Impairment of financial assets

The Group recognises an allowance for expected credit losses (ECLs) for all debt instruments not held at fair value through profit or loss. ECLs are based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the Group expects to receive, discounted at an approximation of the original effective interest rate. The expected cash flows will include cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms.

ECLs are recognised in two stages. For credit exposures for which there has not been a significant increase in credit risk since initial recognition, ECLs are provided for credit losses that result from default events that are possible within the next 12-months (a 12-month ECL). For those credit exposures for which there has been a significant increase in credit risk since initial recognition, a loss allowance is required for credit losses expected over the remaining life of the exposure, irrespective of the timing of the default (a lifetime ECL).

For trade and contract receivables, the Group applies a simplified approach in calculating ECLs. Therefore, the Group does not track changes in credit risk, but instead recognises a loss allowance based on lifetime ECLs at each reporting date. The Group has established a provision matrix that is based on its historical credit loss experience, adjusted for forward-looking factors specific to the debtors and the economic environment.

Impairment losses (and reversal of impairment losses) on equity investments measured at FVOCI are not reported separately from other changes in fair value.

Further disclosures relating to impairment of financial assets are also provided in Note 37.4. The Group considers a financial asset in default when contractual payments are 90 days past due. However, in certain cases, the Group may also consider a financial asset to be in default when internal or external information indicates that the Group is unlikely to receive the outstanding contractual amounts. A financial asset is written off when there is no reasonable expectation of recovering the contractual cash flows.

(iv) Offsetting of financial assets and liabilities

Financial assets and liabilities are offset and only the net amount is presented in the consolidated balance sheet when there is a legally enforceable right to offset the recognised amounts and there is an intention to settle on a net basis or to realise the asset and settle the liability simultaneously.

L). Trade receivables

Trade receivables are amounts due from customers for services performed in the ordinary course of business. They are generally due for settlement within 30 days and therefore are all classified as current. Trade receivables are recognised initially at the amount of consideration that is unconditional unless they contain significant financing components, when they are recognised at fair value. The Group holds the trade receivables with the objective to collect the contractual cash flows and therefore measures them subsequently at amortised cost using the effective interest method, less loss allowance.

At Nord Pool all trades are settled on the day of trading or on the following business day, with invoices and credit notes being dispatched in the afternoon. Financial settlement is due one working day after trading for net buyers and two working days after trading for net sellers. Variations in settlement cycle following variations in working days combined with variations in physical power prices traded on Nord Pool markets can give rise to significant fluctuations in trade receivables from period to period.

M). Cash and cash equivalents

Cash and cash equivalents comprise cash at banks, highly liquid investments with original maturities of three months or less and investments in money market funds that are readily convertible to known amounts of cash and are subject to insignificant risk of changes in value.

N). Borrowings

Borrowings are initially recorded at the fair value of proceeds received, net of transaction costs. Subsequently, these liabilities are carried at amortised cost, and interest is charged to profit or loss over the period of the borrowings using the effective interest method. Accordingly, any difference between the proceeds received, net of transaction costs, and the redemption value is recognised in profit or loss over the period of the borrowings using the effective interest rate method. Fees paid on the establishment of loan facilities are recognised as transaction costs of the loan to the extent that it is probable that some or all of the facility will be drawn down. In this case, the fee is deferred until the draw down occurs. To the extent there is no evidence that it is probable that some or all of the facility will be drawn down, the fee is capitalised as a prepayment for liquidity services and amortised over the period of the facility to which it relates.

O). Provisions

Provisions are recognised when the Group has a present legal or constructive obligation as a result of past events; it is probable that an outflow of resources will be required to settle the obligation; and the amount can be reliably estimated. Restructuring provisions primarily comprise employee termination payments. Provisions are not recognised for future operating losses, unless there is an onerous contract. Provisions are measured at the present value of the expenditures expected to be required to settle the obligation using a pre-tax risk-free discount rate. The increase in the provision due to passage of time is recognised as interest expense.

An onerous contract is a contract in which the unavoidable costs of meeting the obligations under the contract exceed the economic benefits expected to be received under it. The unavoidable costs under a contract reflect the least net cost of exiting from the contract, which is the lower of the cost of fulfilling it or any compensation or penalties arising from failure to fulfil it.

P). Trade and other payables

Trade payables are obligations to pay for goods or services that have been acquired in the ordinary course of business. Trade and other payables are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method.

At Nord Pool all trades are settled on the day of trading or on the following business day, with invoices and credit notes being dispatched in the afternoon. Financial settlement is due one working day after trading for net buyers and two working days after trading for net sellers. Variations in settlement cycle following variations in working days combined with variations in physical power prices traded on Nord Pool markets can give rise to significant fluctuations in trade payables from period to period.

Q). Post-employment benefits

The Group operates defined benefit pension schemes and defined contribution pension schemes. When the Group pays fixed contributions to a pension fund or pension insurance plan and the Group has no legal or constructive obligation to make further contributions, if the fund's assets are insufficient to pay all pension benefits, the plan is considered to be a defined contribution plan. In that case, contributions are recognised as employee expense when they become due.

For the defined benefit schemes, the net asset or liability recognised on the balance sheet comprises the difference between the present value of the defined benefit pension obligation and the fair value of plan assets. A net asset is recognised only to the extent the Group has the right to effectively benefit from the plan surplus. The service cost, representing benefits accruing to employees in the period, and the net interest income or expense arising from the net defined benefit asset or liability are recorded within operating expenses in the Statement of Profit or Loss. Actuarial gains and losses arising from experience adjustments, changes in actuarial assumptions or differences between actual and expected returns on assets are recognised in equity as a component of Other Comprehensive Income. The impact of a plan amendment, curtailment or settlement is recognised immediately when it arises in profit or loss.

R). Share-based compensation

Certain employees of the Group participate in Euronext's share-based compensation plans. Awards granted by Euronext under the plans are restricted stock units (RSUs). Under these plans, Euronext receives services from its employees as consideration for equity instruments of the group. As the awards are settled in shares of Euronext N.V., they are classified as equity settled awards.

The share-based compensation reflected in the Statement of Profit or Loss relates to the RSUs granted by Euronext to the Group's employees. The equity instruments granted do not vest until the employee completes a specified period of service, typically three years. The grant-date fair value of the equity settled RSUs is recognised as compensation expense over the required vesting period, with a corresponding credit to equity.

Euronext has performance share plans, under which shares are conditionally granted to certain employees. The fair value of awards at grant date is calculated using market-based pricing, i.e. the fair value of Euronext shares. This value is expensed over their vesting period, with a corresponding credit to equity. The expense is reviewed and adjusted to reflect changes to the level of awards expected to vest, except where this arises from a failure to meet a market condition or a non-vesting condition in which case no adjustment applies.

S). Treasury shares

The Group reacquires its own equity instruments. Those instruments ('treasury shares') are deducted from equity. No gain or loss is recognised in profit or loss on the purchase, sale, issue or cancellation of an entity's own equity instruments. Such treasury shares may be acquired and held by the entity or by other members of the consolidated group. Consideration paid or received is recognised directly in equity.

T). Revenue (from contracts with customers) and income

The Group is in the business of providing a diverse range of products and services combining transparent and efficient equity, fixed income securities and derivatives markets. The Group's main businesses comprise listing, cash trading, derivatives trading, fixed income trading, spot FX trading, power trading, market data and indices, post-trade and market solutions & other. Revenue from contracts with customers is recognised when control of the good and services are transferred to the customer at an amount that reflects the consideration to which the Group expects to be entitled in exchange for those goods or services. The Group has generally concluded that, except for the revenue sharing agreement with Intercontinental Exchange (ICE), it is principal in its revenue arrangements because it typically controls the goods or services before transferring them to the customer.

The disclosures of significant accounting judgements, estimates and assumptions relating to revenue from contracts with customers are provided in section *'Critical accounting estimates and assumptions'*.

(i) Listing and Corporate services

Listing fees primarily consist of original listing fees paid by issuers to list securities on the various cash markets (admission fees), subsequent admission fees for other corporate actions (such as admission of additional securities) and annual listing fees paid by companies whose financial instruments are listed on the cash markets. The admission services around initial (and subsequent) admission and its directly related corporate action services are considered activities that the Group needs to undertake to enable the customer to be listed. These activities are combined with the ongoing listing services and are used as inputs to produce the combined output, which is the service of being listed. Consequently, revenue generated from this combined performance obligation is recognised based on time elapsed over the listing period, as this best reflects the continuous transfer of the listing services.

Corporate services revenues are earned from webcast solutions, board portal solutions, insider list management solutions and investor relationship management solutions. For corporate services that are provided to customers under an access license, revenue is recognised evenly over the contractual period of the license, as this best reflects the continuous benefit from the license by the customer throughout this period. For corporate services that are provided to customers on an event basis or under a 'right-to-use' license, revenue will be recognised at the point in time of the event or acceptance of the license.

(ii) Trading

The Group earns cash trading fees for customer orders of equity securities and other cash instruments on the Group's cash markets, earns derivative trading fees for the execution of trades of derivative contracts on the Group's derivative markets and earns fixed income trading fees for the execution of trades of debt securities on the Group's fixed income markets. Spot FX trading fees are earned for execution of trades of foreign exchange contracts on the FastMatch markets. Power trading fees are earned for execution of trades on Nord Pool's day ahead and intraday physical energy markets. Customers obtain control over the service provided at execution of the trade. Revenue is recognised at that point in time.

Membership and subscription fees for the Borsa Italiana Group markets are generally paid in advance on the first day of the membership or subscription period. The Group recognises revenue on a straight-line basis over the period to which the fee relates, as this best reflects the extent of the Group's progress towards completion of the performance obligation under the contract.

(iii) Advanced data services

The Group charges clients on a per-user basis for the access to its real-time and proprietary market data information services. The Group also collects periodic license fees from clients for the right to distribute the Group data to third parties. Customers obtain control over the market data service provided during the period over which it has access to the data. Consequently revenue is recognised based on time elapsed over the market data access period, as the Group meets its obligation to deliver data consistently throughout this period.

The Group generates indices revenues from Index licensing fees, which gives customers the right to apply Euronext Index Trademark names in their products and ETFs. The nature of an index-license is considered a distinct 'right-to-access' license as the customer can reasonably expect the Group to undertake ongoing activities to support and maintain the value of its trademark names. Revenue generated from these licenses are therefore recognised evenly over the contractual period of the license, as this best reflects the continuous benefit from the license by the customer throughout this period.

(iv) Post trade

Post-trade revenue primarily include clearing, settlement and custody fees. Clearing fees are recognised when the clearing of the trading transaction is completed. Customers obtain control over the service provided at completion of clearing the securities, which is the only performance obligation. Revenue is recognised at that point in time. The Group earns clearing fees through the activities from its own clearing house CC&G and through an agreement with LCH S.A. in which the latter is providing clearing service as a service provider, executing the service under control of the Group. The nature of the promise is the execution of a cleared trade on the Group's trading platforms. The Group controls the services that are derived from that promise, before it is transferred to the customer. This makes the Group the principal in the transaction of providing clearing services to its customers and consequently the Group recognises its clearing revenue on a gross basis.

Settlement fees are recognised when the settlement of the trading transaction is completed. Customers obtain control over the service provided at completion of the settlement of the securities, which is the only performance obligation. Revenue is recognised at that point in time. Custody fees are recognised as the service of holding the customer's securities in custody is performed. Revenue is recognised based on time elapsed over that period of time, as this best reflects the continuous transfer of services.

(v) Euronext Technologies & Other revenue

Euronext Technologies and other revenue include software license and maintenance services, IT (hosting) services provided to third-party market operators, connection services and data centre colocation services provided to market participants, and other revenue.

Software licenses that are distinct can be considered a 'right-to-use' license, given the significant stand-alone functionality of the underlying intellectual property. Consequently revenue will be recognised at the point in time of acceptance of the software and the source code by the customer. For software licenses that are combined with a significant modification service revenues are recognised over time, using the input method of labor hours spend during the significant modification period, as the Group has no alternative use for these combined performance obligations and would have an enforceable right to payment for performance completed to date. Revenue from software maintenance services are recognised evenly over the maintenance agreement period, as this best reflects the continuous transfer of maintenance services throughout the contract period.

The Group delivers hosting services to customers that are using the software installed in the Euronext data centre to use the Group's trading platforms. Installation services provided before the start of a hosting service do not include significant client customisation of the software installed in the Euronext data centre. The installation service itself does not transfer a good or service to the customer, but are required to successfully transfer the only performance obligation for which the customer has contracted, which is the hosting service. Revenue generated from this performance obligation is recognised evenly over the full service period of the hosting contract, as this best reflects the continuous transfer of hosting services to the customer.

Part of the connection services and data centre colocation services are provided under a revenue sharing agreement with Intercontinental Exchange (ICE). Euronext is providing ICE the right to provide services directly to Euronext customers, to which Euronext provides a continuous customer access to the relevant Euronext Group markets and as such, Euronext is arranging for the specified services to be provided by another party as an agent. Euronext customers connect to its markets via the ICE SFTI® network or rent colocation space in the ICE data centres that house Euronext's trading platforms. ICE receives fees from Euronext customers over the period of access to the SFTI® network and over the colocation rental period. The Group recognises its revenue share over that same period of time, using the practical expedient provided in IFRS 15.B16 that allows an entity to recognise revenue in the amount to which it has the right to invoice. The entitled amount that Euronext invoices to ICE corresponds directly with the value that Euronext's performance obligation has to ICE, which equals to the agreed commission.

As from the data centre migration in June 2022, revenues for connection services and data centre colocation services are also generated from Euronext's core data centre facility in Bergamo. Fees received for these services are recognised evenly over the customer's access period and colocation rental period, as this best reflects the continuous transfer of these services.

The Group also generates revenue from other connection services that trading members are using primarily for the purpose of placing their cash and derivatives trading orders. Members enter into contracts that generate access availability for placing trading orders (the active logon session). Customers obtain control over the service provided during the period of access to their active logon session. Revenue is recognised evenly over that period of time, as this best reflects the continuous transfer of technology services.

(vi) Net treasury income through CCP business

Income recognised in the CCP clearing businesses includes net treasury income earned on margin and default funds, held as part of the risk management process. Net treasury income is the result of interest earned on cash assets lodged with the clearing house, less interest paid to the members on their margin and default fund contributions. Net treasury income is shown separately from the Group's revenues on the face of the income statement to distinguish this income stream from revenues arising from other activities and provide a greater understanding of the operating activities of the Group. Where negative interest rates apply, the Group recognises interest paid on cash assets as a treasury expense and interest received on clearing members' margin as treasury income.

(vi) Other income

Other income is income not attributable to the typical business model of the Group. Other income primarily consists of transitional income from services provided by Borsa Italiana Group to London Stock Exchange Group (LSEG) to facilitate the transition of ownership following the acquisition of Borsa Italiana Group.

(vii) Contract balances

Receivables

A receivable represents the Group's right to an amount of consideration that is unconditional (i.e., only the passage of time is required before payment of the consideration is due from the customer). The Group refers to billed receivables as *trade receivables*, whereas unbilled receivables are referred to as *contract receivables* by the Group.

Contract assets

A contract asset is the conditional right to consideration in exchange for goods or services transferred to the customer. Contract assets are transferred to receivables when the entitlement to consideration becomes unconditional and only the passage of time is required before payment is due.

Contract liabilities

A contract liability is the obligation to transfer goods or services to a customer for which the Group has received consideration (or an amount of consideration is due) from the customer. If a customer pays consideration before the Group transfers goods or services to the customer, a contract liability is recognised when the payment is made or the payment is due (whichever is earlier). Contract liabilities are recognised as revenue when the Group performs under the contract.

(viii) Significant financing component

Generally, the Group does not expect to have any contracts where the period between the transfer of the promised goods or services to the customer and payment by the customer exceeds one year. The primary exception considers contracts containing listing services. As the payment for listing admission services appears upfront the start of the contract, the period between revenue recognition from listing admission services and payment by the customer can exceed one year. However the Group determined that the payment terms were structured not with the primary purpose of obtaining financing from the customer, but to minimise the risk of non-payment as there is not a stated duration of the period of the listing. As a consequence, the Group does not adjust any of the transaction prices for the time value of money.

(viv) Cost to obtain or fulfil a contract

The Group does not incur material costs to obtain contracts such as sales commissions. Costs to fulfil a contract are costs that relate directly to a contract or a specifically anticipated contract, generate or enhance resources of the Group that will be used to satisfy future performance obligations, and are recoverable. Costs to fulfil a contract are capitalised and amortised on a straight line basis over the term of the specific contract it relates to, consistent with the pattern of recognition of the associated revenue.

U). Non-underlying items

Non-underlying items are items of income and expense that are material by their size and/or that are infrequent and unusual by their nature or incidence are not considered to be incurred in the normal course of business and are classified as non-underlying items on the face of the income statement within their relevant category in order to provide further understanding of the ongoing sustainable performance of the Group.

Non-underlying items include:

- Operating income and expense items which are material by their size and/or are infrequent and unusual by their nature, such as integration or double run costs of significant projects (one side of the cost to resource both the old and the new services within the project), restructuring costs and costs related to acquisitions that change the perimeter of the Group.

- Non-operating income and expense items which are material by their size and/or are infrequent and unusual by their nature, such as one-off finance costs, gains or losses on sale of subsidiaries and impairments of investments.

- Amortisation and impairment of intangible assets which are recognised as a result of acquisitions. These intangible assets mostly comprise customer relationships, brand names and software that were identified during purchase price allocation (PPA). This amortisation is presented as a non-underlying item in order to provide more meaningful information regarding the Group's sustainable performance.

- Tax related to non-underlying items.

V). Taxation

The income tax expense for the fiscal year is comprised of current and deferred income tax. Income tax expense is recognised in the Income Statements, except to the extent that it relates to items recognised in other comprehensive income or directly in equity. In this case, the income tax impact is also recognised in other comprehensive income or directly in equity.

(i) Current income tax

The current income tax expense is calculated on the basis of the tax laws enacted or substantively enacted at the balance sheet date in the countries where the Group operates and generates taxable income. The Group recognises liabilities for uncertain tax treatment when it is not probable that the tax authorities will accept the tax treatment. The liabilities are measured through one of the following methods depending on which method is expected to best predict the resolution of the tax uncertainty:

a) The most likely amount – the single most likely amount in a range of possible outcomes. The most likely amount may better predict the resolution of the uncertainty if the possible outcomes are binary or are concentrated on one value.

b) The expected value – the sum of the probability-weighted amounts in a range of possible outcomes. The expected value may better predict the resolution of the uncertainty if there is a range of possible outcomes that are neither binary nor concentrated on one value.

Estimated liabilities for uncertain tax treatments, along with estimates of interest and penalties, are presented within income taxes payable on the Balance Sheet and are included in current income tax expense in the Statement of Profit or Loss.

(ii) Deferred income tax

Deferred income tax is recognised on temporary differences arising between the tax basis of assets and liabilities and their carrying amounts in these Consolidated Financial Statements. However, deferred income tax liabilities are not recognised if they arise from the initial recognition of goodwill. Deferred income tax is not accounted for if it arises from initial recognition of an asset or liability in a transaction, other than a business combination, that at the time of the transaction affects neither accounting nor taxable profit or loss and at the time of the transaction, does not give rise to equal amounts of taxable and deductible temporary differences. If a transaction that is not a business combination gives rise to equal amounts of taxable and deductible differences, deferred taxation on the taxable temporary difference and the deductible temporary differences will be accounted for, which at initial recognition are equal and offset to zero (i.e. leases).

Deferred income tax is determined using tax rates that have been enacted or substantively enacted at the balance sheet date and are expected to apply when the related deferred income tax asset is realised or the deferred income tax liability is settled. Deferred income tax assets are recognised only to the extent that it is probable that future taxable profit will be available against which the temporary differences or tax losses can be utilised. Deferred income tax is provided on temporary differences arising from investments in subsidiaries and associates, except where the timing of the reversal of the temporary difference is controlled by the Group and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred income tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities and when they relate to income taxes levied by the same taxation authority on the same taxable entity.

W). Non-current assets held for sale

The Group classifies non-current assets and disposal groups as held for sale if their carrying amounts will be recovered principally through a sale transaction rather than through continuing use. Non-current assets and disposal groups classified as held for sale are measured at the lower of their carrying amount and fair value less costs to sell. Costs to sell are the incremental costs directly attributable to the disposal of an asset (disposal group), excluding finance costs and income tax expense.

The criteria for held for sale classification is regarded as met only when the sale is highly probable and the asset or disposal group is available for immediate sale in its present condition. Actions required to complete the sale should indicate that it is unlikely that significant changes to the sale will be made or that the decision to sell will be withdrawn. Management must be committed to the plan to sell the asset and the sale expected to be completed within one year from the date of the classification.

Property, plant and equipment and intangible assets are not depreciated or amortised once classified as held for sale. Assets and liabilities classified as held for sale are presented separately as current items in the statement of financial position.

X). Critical accounting estimates and assumptions

In the application of the Group's accounting policies, management is required to make estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates. The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period or in the period of the revision and future periods if the revision affects both current and future periods.

The following critical assumptions concerning the future, and other critical sources of estimation uncertainty at the end of the reporting period, have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year:

(i) Impairment of goodwill

The Group performs goodwill impairment reviews in accordance with the accounting policy described above in Note 18. The recoverable amount of a CGU Group is determined based on a discounted cash flow approach, which requires the use of estimates. The critical assumptions used and the related sensitivity analysis are described in Note 18.

(ii) Income taxes

Due to the inherent complexities arising from the nature of the Group's business, and from conducting business and being taxed in a substantial number of jurisdictions, critical assumptions and estimates are required to be made for income taxes. The Group computes income tax expense for each of the jurisdictions in which it operates. However, actual amounts of income tax due only become final upon filing and acceptance of the tax return by relevant authorities, which may not occur for several years subsequent to issuance of these Consolidated Financial Statements.

The estimation of income taxes also includes evaluating the recoverability of deferred income tax assets based on an assessment of the ability to use the underlying future tax deductions against future taxable income before they expire. This assessment is based upon existing tax laws and estimates of future taxable income. To the extent estimates differ from the final tax return, earnings may be affected in a subsequent period.

The Group operates in various countries with local tax regulations. New tax legislation being issued in certain territories as well as transactions that the Group enters into regularly result in potential tax exposures. The calculation of our tax liabilities involves uncertainties in the application of complex tax laws. Our estimate for the potential outcome of any uncertain tax treatment is highly judgmental. However, the Group believes that it has adequately provided for uncertain tax treatments. Settlement of these uncertainties in a manner inconsistent with our expectations could have a material impact on our results of operations, financial condition and cash flows. The Group recognises a liability for uncertain tax treatments when it is not probable that a taxation authority will accept an uncertain tax treatment.

(iii) Fair value of equity investments

The Group holds investments in unlisted equity securities which are carried at fair value in the balance sheet. The valuation methodology and critical assumptions are described in Note 20 and 35.

(iv) Classification of investments in associates

The Group classifies the interest in LCH SA as an investment in associate suggesting significant influence even though it owns less than 20% of the voting rights (see Note 7). The Group concluded that it has significant influence over this investment, which is derived from the governance structure that was put in place, the Group's position as the largest customer and sole minority shareholder of LCH SA.

(v) Contingent consideration and buy options resulting from business combinations

The Group may structure its business combinations in a way that leads to recognition of contingent consideration to selling shareholders and/or buy options for equity held by non-controlling interests. Contingent consideration and buy options are recognised at fair value on acquisition date. When the contingent consideration or buy option meets the definition of a financial liability or financial instrument, it is subsequently re-measured to fair value at each reporting date. The determination of fair value is based on the expected level of EBITDA3 over the last 12 months that precede the contractual date (in case of contingent consideration) or exercise date of the underlying call- and put options (in case of buy option). The Group monitors the expected EBITDA3 based on updated forecast information from the acquired companies involved.

(vi) Purchase price allocation

The cost of other intangible assets that are acquired in the course of business combinations, corresponds to their acquisition date fair values. Depending on the nature of the intangible asset, fair value is determined by application of:

- Market approach (by reference to comparable transactions)
- Income approach (Relief-from-Royalty- or Multi-period Excess Earnings Method)
- Cost approach

Assets with a finite useful life are amortised using the straight-line method over their expected useful life. Assets with an indefinite useful life are tested for impairment at least once a year.

(vii) Revenue from contracts with customers

The Group applied the following judgments that significantly affect the determination of the amount and timing of revenue from contracts with customers:

Identifying performance obligations and determining the timing of revenue recognition of Listing admission fees

The Group provides services related to the initial (and subsequent) listing of securities on its markets and hereto directly related corporate action services, and ongoing services related to the continuous listing.

The Group determined that the admission services around initial (and subsequent) admission and its directly related corporate action services do not transfer a good or service to the customer, but are considered activities that the Group needs to undertake to enable the customer to be listed. The Group concluded that these activities should be combined with the ongoing listing services and should be used as inputs to produce the combined output, which is the service of being listed. As the service of being listed is satisfied over a period of time, as the customer simultaneously receives and consumes the benefits from the service, the related revenues are therefore recognised over a period of time.

The Group determined that the period of time that best reflects the satisfaction of listing admission services is the period over which the customer actually benefits from the admission. An average lifetime of companies being listed on Euronext markets would serve as best proxy for the period that a listing customer benefits from an admission. Specific local market characteristics can result and would justify differences in amortisation terms. Based on historic evidence, the Group has defined the following average lifetimes for the relevant groupings of listed securities:

Equity admissions:	5-12 years
Bond- and fund admissions:	3 years
Equity subsequent admissions (follow-on's):	3 years

Revenue from the listing admission services is therefore recognised over those periods of time.

Cost to obtain or fulfil a contract related to listing admission services

The Group has considered the type of cost that is directly associated to a listing contract and that can be separately identifiable. Such cost would typically concern staff cost incurred by the Listings team involved in admission- and subsequent listing of an issuer. There is no correlation between number of listings and staff cost associated to the Listings team.

The majority of the cost to obtain and fulfil the contract is incurred in the period before the actual admission. The remaining cost associated to an admission and subsequent listing that is recorded post-admission, and its impact on the Group's income statement, would be marginal, therefore the Group has decided not to capitalise cost incurred to obtain- or fulfil listing contracts.

Principal versus agent considerations

The Group entered into a clearing agreement with LCH SA in respect of the clearing of trades on our continental Europe derivatives markets (the "Derivatives Clearing Agreement"). Under the terms of this Derivatives Clearing Agreement Euronext agreed with LCH SA to share revenues and receives clearing fee revenues based on the number of trades on these markets cleared through LCH SA. In exchange for that, we have agreed to pay LCH SA a fixed fee plus a variable fee based on revenues.

The definition of the accounting treatment of this agreement requires significant management judgment for the valuation and weighting of the indicators leading the principal versus agent accounting analysis. Based on all facts and circumstances around this arrangement, management has concluded that Euronext is 'principal' in providing Derivatives clearing services to its trading members. Therefore Euronext recognises (i) the clearing fees received are classified as post trade revenues, and (ii) the fixed and variable fees paid to LCH SA as other operational expenses.

(viii) Provision for expected credit losses of trade and contract receivables

The Group uses a provision matrix to calculate ECLs for trade and contract receivables. To measure expected credit losses, trade and contract receivables have been grouped based on shared credit risk characteristics and the days past due. The historical loss rates are based on the payment profiles of the sales over a period of 24 months before reporting date and the corresponding historical credit loss experience within this period. The historical loss rates are adjusted to reflect current and forward-looking factors specific to the debtors and economic environment.

The provision matrix is initially based on the Group's historical observed default rates. The Group will calibrate the matrix to adjust the historical credit loss experience with forward-looking information. At every reporting date, the historical observed default rates are updated and changes in the forward-looking estimates are analysed.

The assessment of the correlation between historical observed default rates, forecast economic conditions and ECLs is a significant estimate. The amount of ECLs is sensitive to changes in circumstances and of forecast economic conditions. The Group's historical credit loss experience and forecast of economic conditions may also not be representative of customer's actual default in the future. The information about the ECLs on the Group's trade and contract receivables is disclosed in Note 37.5.1

(ix) Determining the lease term of contracts with extension and termination options

In determining the lease term, management assesses the period for which the contract is enforceable. It considers all facts and circumstances that create an economic incentive to exercise an extension option, or not exercise a termination option. Extension options (or periods after termination options) are only included in the lease term if the lease is reasonably certain to be extended (or not terminated). If the Group concludes that the contract is enforceable beyond the notice period of a cancellable lease (or the initial period of a renewable lease), it then need to assess whether the Group is reasonably certain not to exercise the option to terminate the lease. However in general, the Group's lease portfolio contains very limited leases that include renewal -or termination options.

(x) Estimating the incremental borrowing rate (IBR)

The Group cannot readily determine the interest rate implicit in the lease, therefore, it uses its incremental borrowing rate (IBR) to measure lease liabilities. The IBR is the rate of interest that the Group would have to pay to borrow over a similar term, and with a similar security, the funds necessary to obtain an asset of a similar value to the right-of-use asset in a similar economic environment. The IBR therefore reflects what the Group 'would have to pay', which requires estimation when no observable rates are available or when they need to be adjusted to reflect the terms and conditions of the lease. The Group estimates the IBR using the observable inputs (such as market interest rates) when available and makes certain entity-specific estimates if needed.

Y). Correction of misstatements

(i) Non-controlling interests

In November 2022, following reassessment of its non-controlling interests position, the Group discovered a computational error in calculating non-controlling interest related to the acquisition of Borsa Italiana Group on 28 April 2021.

Based on the reassessment, the Group determined that it had understated non-controlling interests and understated the amount of goodwill in the balance sheet for the year ended 31 December 2021. Because the measurement period for the business combination ended on 28 April 2022 and therefore the one-year window for adjustments to the PPA no longer applies, the Group has restated the balance sheet retrospectively in accordance with IFRS 3.50, as the item comprises an error in accordance with IAS 8.

The following tables summarizes the impact on the Group's consolidated financial statements.

Impact on balance sheet (Increase /(decrease)):

In thousands of euros	As at 31 December 2021	Increase / (decrease)	Year ended 31 December 2021 (Restated)
Assets			
Non-current assets			
Goodwill and other intangible assets	6,178,067	37,777	6,215,844
Total non-current assets	**6,710,828**	**37,777**	**6,748,605**
Total assets	**145,868,536**	**37,777**	**145,906,313**
Equity and liabilities			
Equity			
Non-controlling interests	85,337	37,777	123,114
Total equity	**3,732,923**	**37,777**	**3,770,700**
Total equity and liabilities	**145,868,536**	**37,777**	**145,906,313**

Impact on statement of changes in equity (increase/(decrease)):

In thousands of euros	Non-controlling interests	Total equity
Balance as at 31 December 2021 (originally reported)	**85,337**	**3,732,923**
Non-controlling interests on acquisition of subsidiary	37,777	37,777
Balance as at 31 December 2021 (restated)	**123,114**	**3,770,700**

The correction had no impact on the profit for the year ended 31 December 2021.

The impact on the profit attributions to the owners of the parent and to non-controlling interests, as well as the impact on basic earnings per share and diluted earnings per share was not material.

The correction had no impact on the outcome of the goodwill impairment test as performed at 31 December 2021. The goodwill related to the acquisition of Borsa Italiana Group is included in the Euronext CGU, which provides sufficient headroom to absorb the impact of the correction.

(ii) Legal reserve

In the second half of 2022, management discovered that in prior periods some of the Dutch subsidiaries of Euronext N.V. had incorrectly applied article 365, Book 2 of the Dutch Civil Code, and as a result did not recognise a legal reserve for the carrying amount of capitalised development costs.

As the legal reserve for capitalised development costs is restricted for distribution, this can impact the reserve for "non-distributable retained earnings and other reserves regarding subsidiaries" in the company financial statements of Euronext N.V.

Management recalculated the legal reserve for "non-distributable retained earnings and other reserves regarding subsidiaries" and concluded that the reserve was understated for the 2021 and prior financial years.

Reference is made to Note 41 of the company financial statements for further details on the impacts of the correction.

Z). Change of presentation in the income statement and updated accounting policy

As from 1 January 2022, the Group removed the line 'exceptional items' from its consolidated income statement and introduced a columnar format for the presentation of 'underlying' and 'non-underlying' items. This change has been established in order to provide the reader with supplemental data relating to the Group's financial condition and results of operations. The Group presents profit for the year before any 'non-underlying' items as this highlights more clearly trends in the Group's business and gives an indication of the Group's ongoing sustainable performance.

Accordingly, the exceptional items accounting policy, as presented in the consolidated financial statements for the year ended 31 December 2021, has been replaced by an updated accounting policy to reflect the extension to 'non-underlying' items. The updated accounting policy is reflected at section U). above.

The above changes resulted in the following re-presentation of exceptional items to their respective categories for the comparative period:

In thousands of euros	Year ended Reported 31 December 2021	Increase / (decrease)	Re-presented 31 December 2021
Statement of Profit or Loss (extract)			
Salaries and employee benefits	(275,883)	(11,190)	(287,073)
Depreciation and amortisation	(125,747)	(8,825)	(134,572)
Other operational expenses	(269,928)	(27,791)	(297,719)
Operating profit before exceptional items	**627,097**	**(47,806)**	**579,291**
Exceptional items	(47,806)	47,806	—
Operating profit	**579,291**	**—**	**579,291**
Statement of Cash Flows (extract)			
Adjustments for:			
• Depreciation and amortisation	125,747	8,825	134,572
• Changes in working capital and provisions	49,887	(8,825)	41,062
Cash flow from operating activities	**289,712**	**—**	**289,712**

AA). Changes in accounting policies and disclosures

The International Accounting Standards Board (IASB) continues to issue new standards and interpretations, and amendments to existing standards. The Group applies these new standards when effective and endorsed by the European Union. The Group has not opted for early adoption for any of these standards.

(i) New and amended standards and interpretations

The Group has applied the following standards and amendments for the first time for their annual reporting period commencing 1 January 2022.

Amendments to IFRS 3 – References to the conceptual framework

The amendments replaced the reference to an old version of the IASB's Conceptual Framework (the 1989 Framework) with a reference to the current version issued in March 2018 (the Conceptual Framework). The amendments further added an exception to the recognition principle in IFRS 3. That is, for liabilities and contingent liabilities that would be within the scope of IAS 37 or IFRIC 21, if incurred separately, an acquirer would apply IAS 37 or IFRIC 21, respectively, instead of the Conceptual Framework, to identify the obligations it has assumed in a business combination. The amendment further added an explicit statement in the standard that an acquirer cannot recognise contingent assets acquired in a business combination.

These amendments had no impact on the consolidated financial statements of the Group, as there were no contingent assets, liabilities or contingent liabilities within the scope of these amendments that arose during the period.

Amendments to IAS 16 – Proceeds before intended use

The amendments address the accounting for any proceeds received from selling items produced while bringing that asset to the location and condition necessary for it to be capable of operating in the manner intended by management. The amendments specify that an entity would recognise the proceeds from selling such items, and the costs of producing those items, in profit or loss.

These amendments had no impact on the consolidated financial statements of the Group, as there were no sales of such items produced by property, plant and equipment made available for use on or after the beginning of the earliest period presented.

Amendments to IAS 37 – onerous contracts – cost of fulfilling a contract

The amendments specify which costs an entity needs to include when assessing whether a contract is onerous or loss-making. The amendments specify that the cost of fulfilling a contract comprises the costs that relate directly to the contract. Costs that relate directly to a contract consist of both:

- the incremental costs of fulfilling that contract—for example, direct labour and materials; and
- an allocation of other costs that relate directly to fulfilling contracts—for example, an allocation of the depreciation charge for an item of property, plant and equipment used in fulfilling that contract among others.

The amendments further specify that before a separate provision for an onerous contract is established, an entity recognises any impairment loss that has occurred on assets used in fulfilling the contract. The amendments had no impact on the Group's consolidated financial statements, as the Group had not identified any contracts as being onerous in accordance with IAS 37. The onerous lease contract of the Basildon Data Centre is accounted for in accordance with IFRS 16, hence these amendments are not applicable for this contract.

Annual Improvements Cycle - 2018-2020

The IASB issued the 2018-2020 cycle improvements to its standards and interpretations. These improvements include:

- *IFRS 9 Financial instruments* – The amendment clarifies the fees that an entity includes when assessing whether the terms of a new or modified financial liability are substantially different from the terms of the original financial liability, when determining whether to derecognise a financial liability that has been modified or exchanged. There is no similar amendment proposed for IAS 39. In accordance with the transitional provisions, the Group applies the amendments to financial liabilities that are modified or exchanged on or after the beginning of the annual reporting period in which the entity first applies the amendment. The amendments had no impact on the consolidated financial statements of the Group, as there were no modifications of the Group's financial instruments during the period.

- *IFRS 1 First-time adoption of IFRS.* These amendments had no impact on the consolidated financial statements of the Group.
- *IAS 41 Agriculture.* These amendments had no impact on the consolidated financial statements of the Group.

(ii) Future implications of new and amended standards and interpretations not yet adopted

The new and amended standards and interpretations that are issued, but not yet effective, up to the date of issuance of the Group's financial statements are disclosed below. The Group intends to adopt these new and amended standards and interpretations, if applicable, when they become effective.

IFRS 17 - Insurance Contracts

In May 2017, the IASB issued IFRS 17 Insurance Contracts (IFRS 17), a comprehensive new accounting standard for insurance contracts covering recognition and measurement, presentation and disclosure. IFRS 17 is effective for reporting periods beginning on or after 1 January 2023, with comparative figures required. This standard does not affect the Group.

Amendments to IAS 1 - Classification of Liabilities as Current or Non-current

In January 2020, the IASB issued amendments to paragraphs 69 to 76 of IAS 1 to specify the requirements for classifying liabilities as current or non-current. The amendments clarify:

- What is meant by a right to defer settlement
- That a right to defer must exist at the end of the reporting period
- That classification is unaffected by the likelihood that an entity will exercise its deferral right
- That only if an embedded derivative in a convertible liability is itself an equity instrument would the terms of a liability not impact its classification

The amendments are effective for annual reporting periods beginning on or after 1 January 2024 and must be applied retrospectively. The Group is currently assessing the impact the amendments will have on current practice.

Amendments to IAS 1 - Non-current Liabilities with Covenants

In October 2022, the IASB issued Non-current Liabilities with Covenants, which amended IAS 1 Presentation of Financial Statements. The amendments:

- Modify the requirements introduced by 'Classification of Liabilities as Current or Non-current' on how an entity classifies debt and other financial liabilities as current or non-current in particular circumstances: Only covenants with which an entity is required to comply on or before the reporting date affect the classification of a liability as current or non-current. In addition, an entity has to disclose information in the notes that enables users of financial statements to understand the risk that non-current liabilities with covenants could become repayable within twelve months.
- Defer the effective date of the 2020 amendments to 1 January 2024.

The amendments are effective for reporting periods beginning on or after 1 January 2024. The amendments are applied retrospectively and earlier application is permitted. The Group is currently assessing the impact the amendments will have on current practice.

Amendments to IAS 8 - Definition of Accounting Estimates

In February 2021, the IASB issued amendments to IAS 8, in which it introduces a definition of 'accounting estimates'. The amendments clarify the distinction between changes in accounting estimates and changes in accounting policies and the correction of errors. Also, they clarify how entities use measurement techniques and inputs to develop accounting estimates. The amendments are effective for annual reporting periods beginning on or after 1 January 2023 and apply to changes in accounting policies and changes in accounting estimates that occur on or after the start of that period. Earlier application is permitted as long as this fact is disclosed. The amendments are not expected to have a material impact on the Group.

Amendments to IAS 1 and IFRS Practice Statement 2 - Disclosure of Accounting Policies

In February 2021, the IASB issued amendments to IAS 1 and IFRS Practice Statement 2 Making Materiality Judgements, in which it provides guidance and examples to help entities apply materiality judgements to accounting policy disclosures. The amendments aim to help entities provide accounting policy disclosures that are more useful by replacing the requirement for entities to disclose their 'significant' accounting policies with a requirement to disclose their 'material' accounting policies and adding guidance on how entities apply the concept of materiality in making decisions about accounting policy disclosures. The amendments to IAS 1 are applicable for annual periods beginning on or after 1 January 2023 with earlier application permitted. Since the amendments to the Practice Statement 2 provide non-mandatory guidance on the application of the definition of material to accounting policy information, an effective date for these amendments is not necessary. The Group is assessing the impact of the amendments to determine the impact they will have on the Group's accounting policy disclosures.

Amendment to IAS 12 - Deferred Tax related to Assets and Liabilities arising from a Single Transaction

The amendments clarify that the initial recognition exemption does not apply to transactions in which equal amounts of deductible and taxable temporary differences arise on initial recognition. The amendments are effective for annual reporting periods beginning on or after 1 January 2023. The Group is currently assessing the impact of these amendments on the Group's consolidated financial statements.

There are no other IFRS's or IFRIC interpretations not yet effective, that would be expected to have a material impact on the Group in the current or future reporting periods and on foreseeable future transactions.

Note 4. Group information

The following table provides an overview of the Group's subsidiaries, associates, joint-ventures and non-current investments:

		Ownership	
Subsidiaries	**Domicile**	**As at 31 December 2022**	**As at 31 December 2021**
Euronext Amsterdam N.V.	The Netherlands	100.00%	100.00%
Euronext Brussels S.A./N.V.	Belgium	100.00%	100.00%
Euronext IP & IT Holding B.V.	The Netherlands	100.00%	100.00%
Euronext Hong Kong Limited	Hong Kong	100.00%	100.00%
Euronext Lisbon S.A. (a)	Portugal	100.00%	100.00%
Euronext London Ltd.	United Kingdom	100.00%	100.00%
Euronext Paris S.A.	France	100.00%	100.00%
Euronext Technologies S.A.S.	France	100.00%	100.00%
Euronext Technologies Unipessoal Lda.	Portugal	100.00%	100.00%
Euronext Technologies S.r.l.	Italy	100.00%	100.00%
Interbolsa S.A. (b),(c)	Portugal	100.00%	100.00%
The Irish Stock Exchange Plc. (d)	Ireland	100.00%	100.00%
Euronext Corporate Services B.V.	The Netherlands	100.00%	100.00%
Company Webcast B.V.	The Netherlands	100.00%	100.00%
iBabs B.V.	The Netherlands	100.00%	100.00%
Euronext Corporate Services UK Ltd.	United Kingdom	100.00%	100.00%
Euronext Corporate Services Sweden AB	Sweden	100.00%	100.00%
Euronext US Inc.	United States	100.00%	100.00%
Euronext Market Services LLC	United States	100.00%	100.00%
Euronext Markets Americas LLC	United States	100.00%	100.00%
Euronext FX Inc.	United States	100.00%	100.00%
Euronext Markets Singapore Pte Ltd.	Singapore	100.00%	100.00%
Euronext UK Holdings Ltd.	United Kingdom	100.00%	100.00%
Commcise Software Ltd.	United Kingdom	100.00%	100.00%
Euronext India Private Limited	India	100.00%	100.00%
Oslo Børs ASA	Norway	100.00%	100.00%
Verdipapirsentralen ASA ("VPS") (c)	Norway	100.00%	100.00%
Fish Pool ASA	Norway	97.00%	97.00%
NOTC AS	Norway	100.00%	100.00%
Euronext Nordics Holding AS	Norway	100.00%	100.00%
Finance Web Working SAS (e)	France	0.00%	60.00%
Nord Pool Holding AS	Norway	66.00%	66.00%
Nord Pool AS	Norway	66.00%	66.00%
Nord Pool Finland Oy	Finland	66.00%	66.00%
Nord Pool AB	Sweden	66.00%	66.00%
Nord Pool Consulting AS	Norway	0.00%	66.00%
Nord Pool European Market Coupling Operator AS	Norway	66.00%	66.00%
Nord Pool European Market Coupling Operator AB	Sweden	0.00%	66.00%
Nord Pool European Market Coupling Operator OY	Finland	0.00%	66.00%
Euronext Corporate Services Finland Oy	Finland	100.00%	100.00%
Euronext Corporate Services France S.A.S.	France	100.00%	100.00%
VP Securities AS (c)	Denmark	100.00%	100.00%
Euronext Italy Merger S.r.l.	Italy	0.00%	100.00%
Euronext Holding Italia S.p.A.	Italy	100.00%	100.00%
GATElab S.r.l.	Italy	100.00%	100.00%
GATElab Ltd.	United Kingdom	100.00%	100.00%
Bit Market Services S.p.A. (h)	Italy	99.99%	99.99%

Borsa Italiana S.p.A.	Italy	99.99%	99.99%
Cassa di Compensazione e Garanzia S.p.A. (f)	Italy	99.99%	99.99%
Monte Titoli S.p.A. (c)	Italy	98.92%	98.92%
MTS S.p.A.	Italy	62.52%	62.52%
MTS Markets International Inc. (g)	United States	0.00%	62.52%
Marche de Titres France SAS	France	62.52%	62.52%
Euro MTS Ltd.	United Kingdom	62.52%	62.52%
Elite S.p.A.	Italy	74.99%	74.99%
Elite Club Deal Ltd. (h)	United Kingdom	74.99%	74.99%
Elite SIM S.p.A.	Italy	74.99%	74.99%
Euronext Corporate Services GmbH (i)	Germany	100.00%	0.00%
Euronext Corporate Services S.r.l.	Italy	100.00%	100.00%
Stichting Euronext Foundation (j)	The Netherlands	0.00%	0.00%
Associates	**Domicile**		
LCH SA	France	11.10%	11.10%
Tokeny S.a.r.l.	Luxembourg	18.93%	18.93%
ATS Advanced Technology Solutions S.p.A. (k)	Italy	30.00%	0.00%
MTS Associated Markets SA	Belgium	23.00%	23.00%
Joint Ventures	**Domicile**		
LiquidShare S.A. (h)	France	16.23%	16.23%
FinansNett Norge	Norway	50.00%	50.00%
Non-current investments	**Domicile**		
Sicovam Holding S.A.	France	9.60%	9.60%
Euroclear Holding S.A./N.V.	Belgium	3.53%	3.53%
Nordic Credit Rating AS	Norway	5.00%	5.00%
Association of National Numbering Agencies	Belgium	2.20%	2.20%
Investor Compensation Company Designated Activity Company	Ireland	33.30%	33.30%

(a) *Legal name of Euronext Lisbon S.A. is Euronext Lisbon - Sociedade Gestora de Mercados Regulamentados, S.A.*
(b) *Legal name of Interbolsa S.A. is Interbolsa - Sociedade Gestora de Sistemas de Liquidaçao e de Sistemas Centralizados de Valores Mobiliários, S.A.*
(c) *Interbolsa S.A., Verdipapirsentralen ASA, VP Securities AS and Monte Titoli S.p.A. respectively operate under the business names "Euronext Securities Porto", "Euronext Securities Oslo", "Euronext Securities Copenhagen" and "Euronext Securities Milan".*
(d) *The Irish Stock Exchange plc. operates under the business name Euronext Dublin.*
(e) *On 3 March 2022, the Group sold its 60% ownership in Finance Web Working ("Euronext Funds360").*
(f) *Cassa di Compensazione e Garanzia S.p.A.operates under the business name "Euronext Clearing".*
(g) *On 15 December 2022, the Group finalised the sale of MTS Markets International Inc. (see Note 2).*
(h) *Bit Market Services S.p.A., Elite Club Deal Limited and LiquidShare S.A. are under liquidation.*
(i) *Euronext Corporate Services GmbH was incorporated on 5 August 2022.*
(j) *Stichting Euronext Foundation is not owned by the Group but included in the scope of consolidation.*
(k) *On 1 December 2022, the Group acquired a 30% interest in ATS Advanced Technology Solutions S.p.A. (see Note 7).*

Note 5. Business combinations

The acquisitions that occurred during the year are set out below.

5.1 Acquisition of Spafid's Issuer Services Business

On 1 April 2022, the Group acquired the Issuer Services Business of Spafid S.p.A., which operates as an investment advisory firm and is a fully owned subsidiary of Mediobanca S.p.A. The purchase consideration for this business acquisition amounted to €12.0 million.

The acquisition is an important step to further develop local added-value services to issuers, and to deliver on Euronext Securities' ambition to converge issuers services across all its locations (Denmark, Norway, Portugal and Italy). The agreement includes the transfer of business relationships with over 200 trusted customers, hardware, technical software tools and experienced personnel who will oversee and manage all operational aspects of the services.

The initial book values of the net assets acquired were considered not material from a Euronext Group perspective. The Group identified €5.6 million of customer relationships and €0.5 million of software intangible assets as part of the purchase price allocation. The related goodwill amounted to €5.9 million.

Acquisition related costs of €0.4 million were expensed and recognised as non-underlying other operational expenses.

5.2 Acquisition of the technology businesses from Nexi's capital markets activities

On 1 December 2022, the Group acquired the technology businesses of Nexi S.p.A., an Italian bank specialised in payment systems, currently powering MTS and Euronext Securities Milan. The purchase price for this business acquisition approximates €57 million (on a debt free, cash free basis).

This acquisition is a new step in the Group's strategy to leverage its integrated value chain as it further enhances the Group's technology competencies and capabilities in trading and post trade. The acquisition will also strengthen the core operations of MTS and Euronext Securities Milan.

With this acquisition, the Group internalises the core trading platform of MTS and its largest IT contract. It enables Euronext to become more agile and efficient by fully owning the technology powering MTS and Euronext Securities Milan.

As the initial book values of the net assets acquired were considered not material from a Euronext Group perspective, the preliminary goodwill equals the purchase consideration pending final valuation outcomes of the net identifiable assets acquired (including software and customer relationships), which had not been completed by the date these consolidated financial statements were authorised for issuance by Euronext N.V.'s Supervisory Board. Consequently, the goodwill is subject to subsequent purchase price allocation adjustments.

Note 6. Non-controlling interests (NCI)

Financial information of subsidiaries that have material non-controlling interest is provided below.

Proportion of equity interest held by non-controlling interests:

Name of entity	Place of business / country of Incorporation	% of ownership interest held by NCI	
		2022	**2021**
		%	%
Nord Pool Holding AS	Norway	34.00	34.00
MTS S.p.A.	Italy	37.48	37.48

The summarised financial information of these subsidiaries is provided below. This information is based on amounts before inter-company eliminations.

Summarised balance sheet	**Nord Pool Holding AS**		**MTS S.p.A**	
(In thousands of euros)	**31 Dec 2022**	**31 Dec 2021**	**31 Dec 2022**	**31 Dec 2021 (a)**
Current assets	159,574	264,296	51,113	67,185
Current liabilities	131,173	237,801	33,192	19,433
Current net assets	**28,401**	**26,495**	**17,921**	**47,752**
Non-current assets	26,084	31,289	358,026	312,784
Non-current liabilities	5,137	6,816	74,355	81,174
Non-current net assets	**20,947**	**24,473**	**283,671**	**231,610**
Net assets	**49,348**	**50,968**	**301,592**	**279,362**
Accumulated NCI	16,778	17,329	113,022	103,430

(a) The comparative period was adjusted.

Summarised statement of comprehensive income	**Nord Pool Holding AS**		**MTS S.p.A**	
(In thousands of euros)	**2022**	**2021**	**2022**	**2021 (a)**
Revenue	42,156	38,202	79,073	59,010
Profit for the year	**7,141**	**3,674**	**26,505**	**4,611**
OCI	(180)	(415)	65	13
Total comprehensive income	**6,961**	**3,259**	**26,570**	**4,624**
Profit / (loss) allocated to NCI	2,428	1,249	9,934	1,728
Dividends paid to NCI	2,251	2,526	8,345	9,157

(a) As from acquisition date.

Summarised cash flow information	Nord Pool Holding AS		MTS S.p.A	
(In thousands of euros)	2022	2021	2022	2021 (a)
Cash flow from operating activities	(18,723)	55,077	665	33,902
Cash flow from investing activities	(1,393)	(1,417)	38,423	(1,916)
Cash flow from financing activities	(7,343)	(8,082)	(4,484)	(9,866)
Non-cash exchange gains/ (losses)	(15,811)	5,431	—	—
Net increase / (decrease) in cash and cash equivalents	**(43,270)**	**51,009**	**34,604**	**22,120**

(a) As from acquisition date.

Note 7. Investments in associates and joint ventures

7.1. Interests in associates and joint ventures

Set out below are the associates and joint ventures of the Group as at 31 December 2022. The country of incorporation or registration is also their principal place of business, and the proportion of ownership interest is the same as the proportion of voting rights held.

Name of entity	Place of business / country of Incorporation	% of ownership interest 2022	% of ownership interest 2021	Nature of relationship	Carrying amount *(In thousands of euros)* 2022	Carrying amount *(In thousands of euros)* 2021
		%	%			
LCH SA	France	11.1%	11.1%	Associate (a)	70,563	66,809
Immaterial joint ventures					348	2,032
Immaterial associates					1,098	396
Total equity accounted investments					**72,009**	**69,237**

(a) LCH SA is a Continental European clearing house, offering clearing services for a diverse range of asset classes. As described in Note 3, the Group has determined that it has significant influence over LCH SA even though it only holds 11.1% of the voting rights.

7.2 Commitments and contingent liabilities in respect of associates and joint ventures

The Group has no outstanding contingent liabilities with respect to its associates or joint ventures.

7.3 Summarised financial information for associates and joint ventures

The tables below provide summarised financial information for those associates and joint ventures that are material to the Group. The information disclosed reflects the amounts presented in the financial statements of the relevant associates or joint ventures and not Euronext's share of those amounts. They have been amended to reflect adjustments made by the entity when using the equity method, including fair value adjustments and modifications for differences in accounting policy.

Summarised balance sheet	**LCH SA**	
(In thousands of euros)	**31 Dec 2022**	**31 Dec 2021**
Non-current assets	141,920	131,776
Current assets	579,389,798	533,620,624
Non-current liabilities	(6,900)	(12,700)
Current liabilities	(579,051,100)	(533,299,800)
Net assets	**473,718**	**439,900**
Reconciliation to carrying amounts:		
Opening net assets 1 January	439,900	391,712
Adjustments	(4,782)	(4,812)
Profit/(loss) for the year (a)	101,700	112,700
Other comprehensive income	(3,184)	300
Dividends paid	(59,916)	(60,000)
Closing net assets	**473,718**	**439,900**
Group's share in %	11.1%	11.1%
Group's share in thousands of euros	52,583	48,829
Goodwill	17,980	17,980
Carrying amount	**70,563**	**66,809**

(a) *In 2022, LCH SA contributed a €10.4 million profit (2021: €12.0 million) to the line 'Share of net profit/(loss) of associates and joint ventures accounted for using the equity method, and impairments thereof' in the Consolidated Statement of Profit or Loss.*

Summarised statement of comprehensive income	**LCH SA**	
(In thousands of euros)	**2022**	**2021**
Revenue	204,100	210,700
Profit from continuing operations	**101,700**	**112,700**
Profit from discontinued operations	—	—
Profit for the year	**101,700**	**112,700**
Other comprehensive income	(3,184)	300
Total comprehensive income	**98,516**	**113,000**
Dividends received from associates	6,748	6,699

7.4 Individually immaterial associates and joint ventures

In addition to the interest in material associates and joint ventures disclosed above, the Group also has interests in individually immaterial associates and individually immaterial joint ventures, that are all accounted for using the equity method.

Individually immaterial associates

The Group has an 18.93% interest in Tokeny Solutions, a tokenisation platform that provides users end-to-end solutions to issue, manage and transfer tokenised securities on public blockchain. In the first half of 2021, following indications of a deteriorated future cash flow situation, the investment in associate Tokeny Solutions was impaired by €4.3 million to zero value.

The Group also has an interest of 23.0% in MTS Associated Markets S.A., offering an electronic trading platform for sovereign securities (e.g. government bonds). On 1 December 2022, the Group acquired a 30% interest in ATS Advanced Technology Solutions S.p.A. (which line of business includes designing, developing, and producing prepackaged computer software) at consideration of €0.7 million.

(In thousands of euros)	**2022**	**2021**
Aggregate carrying amount of individually immaterial associates	1,098	396
Aggregate amounts of the group's share of:		
Profit/(loss) from continuing operations	49	(135)
Post-tax profit or loss from discontinued operations	—	—
Other comprehensive income	—	—
Total comprehensive income	**49**	**(135)**

Individually immaterial joint ventures

The Group has an interest of 50% in joint venture FinansNett Norge AS, a company offering data communications through a metropolitan area network (MAN) in Oslo. This network provides communication services for use by backup and disaster recovery solutions as used by brokers and other participants in the financial sector.

In addition, the Group (sharing joint control with the other founders) has an interest of 16.23% in LiquidShare SAS, a fintech joint venture with the objective to improve SME's access to capital markets and improving the transparency and security of post-trading operations using blockchain technology. In 2022, following indications of a deteriorated future cash flow situation and Board decision to propose to the Shareholders meeting to liquidate the entity, the investment in joint venture LiquidShare was impaired by €1.5 million to zero value.

(In thousands of euros)	2022	2021
Aggregate carrying amount of individually immaterial joint ventures	348	2,032
Aggregate amounts of the group's share of:		
Profit/(loss) from continuing operations	(142)	(129)
Post-tax profit or loss from discontinued operations	—	—
Other comprehensive income	—	—
Total comprehensive income	**(142)**	**(129)**

Note 8. Revenue and income

8.1 Revenue from contracts with customers

8.1.1 Disaggregation of revenue from contracts with customers

Substantially all of the Group's revenues are considered to be revenues from contracts with customers. At 31 December 2022 and 2021, there were no customers that individually exceeded 10% of the Group's revenue.

Set out below is the disaggregation of the Group's revenue from contracts with customers:

In thousands of euros	Year ended 31 December	Timing of revenue recognition Product or service transferred		Year ended 31 December	Timing of revenue recognition Product or service transferred	
Major revenue stream	**2022**	at a point in time	over time	**2021**	at a point in time	over time
Listing	218,380	14,989	203,391	189,689	14,314	175,375
of which						
Primary listing services and other	*178,868*	*4,280*	*174,588*	*152,600*	*3,831*	*148,769*
Corporate services	*39,512*	*10,709*	*28,803*	*37,088*	*10,483*	*26,605*
Trading revenue	514,125	491,609	22,516	465,265	449,926	15,339
of which						
Cash trading	*301,714*	*295,330*	*6,384*	*293,684*	*289,098*	*4,586*
Derivatives trading	*58,380*	*56,743*	*1,637*	*52,458*	*51,256*	*1,202*
Fixed income trading	*92,951*	*78,456*	*14,495*	*65,783*	*56,232*	*9,551*
FX trading	*28,406*	*28,406*	—	*23,479*	*23,479*	—
Power trading	*32,674*	*32,674*	—	*29,861*	*29,861*	—
Investor services	9,596	—	9,596	8,894	140	8,754
Advanced data services	212,053	1,523	210,530	183,607	1,275	182,332
Post-trade	364,519	206,701	157,818	320,570	185,537	135,033
of which						
Clearing	*121,393*	*121,393*	—	*101,376*	*101,376*	—
Custody & Settlement and other	*243,126*	*85,308*	*157,818*	*219,194*	*84,161*	*135,033*
Euronext Technology solutions & other revenue	100,101	1,020	99,081	85,498	1,587	83,911
Total revenue from contracts with customers	**1,418,774**	**715,842**	**702,932**	**1,253,523**	**652,779**	**600,744**

The significant movements in revenues from contracts with customers during the year, related to the following:

- Listing revenue increased by €28.7 million, of which €17.0 million related to the inclusion of full year impact of Borsa Italiana Group.
- Cash -and derivatives trading revenue increased by €13.9 million, of which €20.4 million related to the inclusion of full year impact of Borsa Italiana Group. The decrease for the Group excluding Borsa Italiana, related to a significant drop in trading volume, given the current uncertain economic environment.
- Fixed income trading revenue increased by €27.2 million, which is almost fully related to the inclusion of full year impact of the MTS S.p.A. bond trading platform that was acquired as part of Borsa Italiana Group.
- Advanced data services revenues increased by €28.5 million, of which €21.9 million related to the inclusion of full year impact of Borsa Italiana Group.

- Clearing revenues increased by €20.0 million, of which €15.7 million is related to the inclusion of full year impact of clearing activity of Cassa di Compensazione e Garanzia S.p.A., that was acquired as part of Borsa Italiana Group.
- Custody & Settlement revenues increased by €23.9 million, of which €27.9 million is related to the inclusion of full year impact of activity of Monte Titoli S.p.A., the Italian CSD, that was acquired as part of Borsa Italiana Group.
- Technology solutions and other revenue increased by €14.6 million, of which €10.7 million is related to the inclusion of full year impact of Borsa Italiana Group.

Set out below is the geographical information of the Group's revenue from contracts with customers:

In thousands of euros	France	Italy	Netherlands	United Kingdom	Belgium	Portugal	Ireland	United States	Norway	Sweden	Denmark	Finland	Total
2022													
Revenue from contracts with customers (a)	375,945	436,696	184,858	8,029	31,039	34,604	39,104	31,266	199,507	4,137	73,069	520	**1,418,774**
2021													
Revenue from contracts with customers (a)	375,170	294,624	183,352	6,910	29,897	33,584	39,006	25,622	186,463	4,000	74,373	522	**1,253,523**

(a) Cash trading, Derivatives trading, Clearing and Advanced data services revenues are attributed to the country where the exchange is domiciled. Revenues from other categories are attributed to the billing entity.

8.1.2 Contract balances

The Group has recognised the following assets and liabilities related to contracts with customers:

In thousands of euros	31 December 2022	31 December 2021	1 January 2021
Trade receivables (Note 21)	271,829	290,726	107,633
Contract receivables (Note 21)	32,096	24,695	24,926
Contract liabilities (Note 33)	138,983	150,822	106,874

Trade receivables are non-interest bearing and are generally due on terms of 30 to 90 days and represent amounts in respect of billed revenue, for which the Group has an unconditional right to consideration (i.e. only the passage of time is required before payment of the consideration is due). Trade receivables decreased by €18.9 million, which is mainly attributable to lower outstanding power sales positions at Nord Pool, as a result of lower energy prices at the end of 2022 when compared to last year.

Contract receivables represent amounts in respect of unbilled revenue, for which the Group has an unconditional right to consideration (i.e. only the passage of time is required before payment of the consideration is due). Contract receivables increased by €7.4 million, which is almost fully attributable to accrued income at Borsa Italiana Group.

In 2022, €7.4 million (2021: €4.9 million) was recognised as provision for expected credit losses on trade and contract receivables. The increase in loss allowance provision, was primarily due to increased risk on specific debtors.

Contract liabilities primarily relate to received consideration (or an amount of consideration is due) from customers for the initial (or subsequent) listing of equity securities, bond lifetime fees, indices licenses, software maintenance & hosting and corporate services. In 2022, contract liabilities decreased by €11.8 million, which primarily related to a drop in new IPOs and subsequent listings pipeline, as a result of negative sentiment caused by the current uncertain economic environment.

Revenue recognised in the reporting period that was included in the contract liability balance at the beginning of the period amounted to €74.8 million (2021: €55.4 million). The increase is mainly explained by a higher balance at the beginning of the period, due to the inclusion of Borsa Italiana Group. The amount of revenue recognised in the reporting period from performance obligations satisfied (or partially satisfied) in previous periods was considered not material (2021: not material).

8.1.3 Performance obligations

Information about the Group's performance obligations are described in Note 3 'Significant accounting policies and judgements'.

The transaction price allocated to the remaining performance obligations (unsatisfied or partially unsatisfied) are as follows:

In thousands of euros	31 December 2022	31 December 2021
Within one year	76,855	81,682
More than one year	72,595	82,032
Total	**149,450**	**163,714**

The remaining performance obligations expected to be recognised in more than one year primarily relate to the initial (or subsequent) listing of equity securities and bond lifetime fees which are recognised over the related listing period. Other performance obligations included in this category are software maintenance & hosting contracts, market data and Indices license contracts and corporate services license contracts. In 2022, the number of listing admissions (IPO's) significantly decreased when compared to prior year, causing a declining impact to the remaining performance obligations that are still to be satisfied in the upcoming years.

8.2 Net treasury income through CCP business

Income recognised in the CCP clearing business executed by Euronext Clearing includes net treasury income earned on margin and default funds, held as part of the risk management process.

For the year ended 31 December 2022, 'underlying' net treasury income through CCP business amounted to €44.0 million (2021: €35.4 million) and is the result of gross interest income of €60.9 million (2021: €123.2 million), less gross interest expense of €16.8 million (2021: €87.8 million) (see Note 35). Where negative interest rates apply, the Group recognises interest paid on financial assets as a treasury expense, which amounted to €43.6 million (2021: €86.5 million), and interest received on clearing members' margin as treasury income, which amounted to €27.2 million (2021: €91.1 million).

In July 2022, the Group partially disposed of the debt investment portfolio held at Euronext Clearing. The related revaluation loss of €48.9 million was recycled from Other Comprehensive Income to 'non-underlying' net treasury income (see Note 12).

8.3 Other income

Other income primarily consists of transitional income from services provided by Borsa Italiana Group to London Stock Exchange Group (LSEG) to facilitate the transition of ownership following the acquisition of Borsa Italiana Group.

Transitional Service Agreements ("TSAs") were established, providing for temporary services rendered to or received from LSEG. Each individual service is priced separately, generally on a fixed fee basis, based on actual usage or mutually agreed service level. The agreement was established on arm's length basis.

Services rendered to LSEG primarily include technology and various ancillary services. All such services to LSEG are transitional and, accordingly, the related income from LSEG is expected to be phased out after fiscal year 2023.

Expenses for services received from LSEG under this agreement are recognised in other operational expenses (see Note 11).

Note 9. Salaries and employee benefits

In thousands of euros	Year ended 31 December 2022	31 December 2021
Salaries and other short term benefits	(212,764)	(199,378)
Social security contributions	(60,070)	(55,760)
Share-based payment costs	(13,994)	(10,394)
Pension cost - defined benefit plans	(7,590)	(5,101)
Pension cost - defined contribution plans	(6,641)	(5,167)
Underlying salaries and employee benefits	**(301,059)**	**(275,800)**
Non-underlying salaries and employee benefits	(5,958)	(11,273)
Total	**(307,017)**	**(287,073)**

Underlying salaries and employee benefits increased, as 2022 includes the full impact from Borsa Italiana Group, whereas the comparative period only includes the impact from Borsa Italiana Group as from the date of control, i.e. 29 April 2021. Non-underlying salaries and employee benefits mainly related to termination expenses linked to the integration of the Borsa Italiana Group activities with those of the Group and termination expenses in the various other Euronext entities (see Note 12).

At the end of the year, the number of employees, based on full-time equivalents (FTE) stood at 2,203 (2021: 2,108). The increase in FTE was the result of additional employees from the acquired Spafid and Nexi businesses in 2022.

In 2022, 'Share based payments costs' primarily contain costs related to the LTI Plans 2019, 2020, 2021 and 2022. Details of these plans are disclosed in Note 28.

Note 10. Depreciation and amortisation

In thousands of euros	Year ended 31 December 2022	Year ended 31 December 2021
Depreciation of tangible fixed assets	(16,528)	(15,471)
Amortisation of intangible fixed assets	(29,801)	(23,179)
Amortisation of right-of-use assets	(22,500)	(22,742)
Underlying depreciation and amortisation	**(68,829)**	**(61,392)**
Non-underlying depreciation and amortisation	(91,362)	(73,180)
Total	**(160,191)**	**(134,572)**

Underlying depreciation and amortisation increased, as 2022 includes the full impact from Borsa Italiana Group, whereas the comparative period only includes the impact from Borsa Italiana Group as from the date of control, i.e. 29 April 2021. Non-underlying depreciation and amortisation mainly related to amortisation of acquired intangible assets (PPA) and accelerated depreciation of the right-of-use asset of the datacentre in Basildon (see Note 12).

Note 11. Other operational expenses

In thousands of euros	Year ended 31 December 2022	Year ended 31 December 2021
Systems and communications	(116,676)	(86,169)
Professional services	(58,740)	(67,177)
Clearing expenses (a)	(35,604)	(33,650)
Accommodation	(13,533)	(9,314)
Other expenses (b)	(80,532)	(55,518)
Underlying other operating expenses	**(305,085)**	**(251,828)**
Non-underlying other operational expenses	(21,259)	(45,891)
Total	**(326,344)**	**(297,719)**

(a) Clearing expenses consist of the fees paid to LCH SA for services received under the Derivatives Clearing Agreement.
(b) Other expenses include marketing, taxes, insurance, travel, professional membership fees, corporate management and other expenses.

Underlying other operational expenses increased, as 2022 includes the full year impact from Borsa Italiana Group, whereas the comparative period only includes the impact from Borsa Italiana Group as from the date of control, i.e. 29 April 2021. Furthermore, the increase in other expenses is due to higher travel costs and higher costs for corporate events, following the end of the COVID restrictions in 2022.

In addition, underlying other operational expenses include expenses for services received from LSEG under the TSA agreements, which include the use of operational systems and infrastructure, as well as certain market data, hosting, connectivity and other services. The services received from LSEG are expected to be transitional. For the year ended 31 December 2022, approximately €10.4 million of transitional costs were recognised (2021: approximately €12.1 million).

Non-underlying other operational expenses primarily comprises cost incurred to integrate the Borsa Italiana Group activities with those of the Group and costs related to acquisitions that change the perimeter of the Group (see Note 12).

Note 12. Non-underlying items

In thousands of euros	Year ended 31 December 2022	31 December 2021
Non-underlying revenues and income		
Realisation of fair value changes upon disposal of debt investments a)	(48,951)	—
	(48,951)	**—**
Non-underlying salaries and employee benefits		
Integration -and double run costs b)	(6,472)	(7,548)
Restructuring costs	514	(3,725)
	(5,958)	**(11,273)**
Non-underlying depreciation and amortisation		
Integration -and double run costs b)	(6,912)	(1,875)
Amortisation and impairment of acquired intangible assets (PPA) c)	(83,664)	(70,366)
Amortisation and impairment of other assets	(786)	(939)
	(91,362)	**(73,180)**
Non-underlying other operational expenses		
Integration -and double run costs b)	(16,736)	(18,094)
Acquisition costs d)	(3,426)	(27,843)
Litigation (provisions)/settlements	(549)	710
Other	(548)	(664)
	(21,259)	**(45,891)**
Non-underlying non-operating items e)		
Finance costs	—	(9,907)
Gain/(loss) on sale of subsidiaries	2,274	2,681
Impairment of associates and joint ventures	(1,526)	(4,294)
	748	**(11,520)**
Non-underlying items before tax	**(166,782)**	**(141,864)**
Tax on non-underlying items f)	44,716	28,799
Non-controlling interest	4,585	873
Non-underlying profit / (loss) for the period attributable to the shareholders of the Company	**(117,481)**	**(112,192)**

a) *Following a one–off partial disposal of the debt investment portfolio held at Euronext Clearing, the Group recycled the related revaluation loss of €48.9 million from Other Comprehensive Income to net treasury income.*

b) *The total integration- and double run costs amounted to €30.1 million (2021: €27.5 million) and were attributable to significant projects and activities to integrate the Borsa Italiana Group businesses with those of the Group.*

c) *Amortisation of intangible assets that were recorded as a result of acquisitions amounted to €83.7 million (2021: €70.3 million).*

d) *The acquisition costs of €3.4 million mainly related to the acquisitions of Spafid's Issuer Services Business and the technology businesses of Nexi S.p.A.. In the comparative period, the acquisition costs of €27.8 million related to the acquisition of Borsa Italiana Group.*

e) *The non-underlying non-operating items comprised a €2.3 million gain/(loss) on sale of the interest in subsidiaries Finance Web Working SAS and MTS Markets International Inc. and a €1.5 million impairment of investment in joint venture LiquidShare. The comparative period included €9.9 million of fees related to the bridge loan facility, a €2.7 million gain on sale of the interests in subsidiaries Centevo AB and Oslo Market Solutions AS and a €4.3 million impairment of investment in associate Tokeny Solutions.*

f) *After the determination that an item is taxable, the tax impact of the Group's non-underlying items of the individual entities of the Group to which the non-underlying items relate, is computed based on the tax rates applicable to the respective territories in which the entity operates.*

Note 13. Net financing income / (expense)

In thousands of euros	Year ended 31 December 2022	Year ended 31 December 2021
Interest expense (effective interest method)	(36,587)	(30,388)
Interest in respect of lease liabilities	(733)	(718)
Other finance costs	242	309
Underlying finance costs	**(37,078)**	**(30,797)**
Non-underlying finance costs	—	(9,907)
Total finance costs	**(37,078)**	**(40,704)**
Interest income (effective interest method)	5,806	1,479
Interest income from interest rate swaps	1,479	5,004
Hedging result	—	(698)
Gain / (loss) on disposal of treasury investments	(2,307)	(711)
Net foreign exchange gain/(loss)	137	1,238
Other net financing income/(expense)	**5,115**	**6,312**
Total	**(31,963)**	**(34,392)**

Underlying finance costs for the year, includes the full year impact of interest expenses on the Senior Unsecured Notes #3, #4 and #5, that were issued in May 2021 for the purpose of repayment of the bridge loan facility.

Non-underlying finance costs comprises fees related to the bridge loan facility, that was used to pre-finance the acquisition of Borsa Italiana Group in 2021.

Interest income from short-term financial investments increased, as a result of rising interest rates during 2022.

Interest income from interest rate swaps decreased, following the termination of the interest rate swap agreements in May 2022.

The interest income and interest expenses from CCP clearing business assets and liabilities are shown in net treasury income through CCP business (see Note 8.2).

Note 14. Results from equity investments and gain/(loss) on disposal of subsidiaries

Result from equity investments

In thousands of euros	Year ended 31 December 2022	Year ended 31 December 2021
Dividend income	9,842	25,712
Total	**9,842**	**25,712**

In 2022, dividend income relates to dividends received from the Group's non-current equity investments at FVOCI in Euroclear S.A./N.V.

In 2021, dividend income relates to dividends received from the Group's non-current equity investments at FVOCI in Euroclear S.A./N.V. and Sicovam Holding S.A. Furthermore, an additional dividend from Euroclear S.A./N.V. was received.

Gain/(loss) on disposal of subsidiaries

In thousands of euros	Year ended 31 December 2022	Year ended 31 December 2021
Gain/(loss) on disposal of subsidiaries	2,274	2,681
Total	**2,274**	**2,681**

During the year, the Group disposed its interests in subsidiaries Finance Web Working SAS and MTS Markets International Inc., the latter being classified as a disposal group held for sale as per 31 December 2021 (see Note 22). The proceeds from the sale of Finance Web Working SAS were €0.8 million (net of cash), which resulted in a loss on disposal of €0.8 million. The proceeds from the sale of MTS Markets International Inc. were €7.8 million, whereas the combined net assets disposed of amounted to €4.7 million. This resulted in a gain on disposal of €3.1 million.

In the comparative period, the Group disposed its interests in subsidiaries Centevo AB and Oslo Market Solutions AS. The combined proceeds from these disposals amounted to €5.9 million (net of cash), whereas the combined net assets disposed of amounted to €3.2 million (net of cash). This resulted in a combined result from disposal of €2.7 million.

Note 15. Income tax expense

In thousands of euros	Year ended 31 December 2022	31 December 2021
Current tax expense	(178,921)	(195,448)
Deferred tax expense	15,316	36,804
Total	**(163,605)**	**(158,644)**

The actual tax charge incurred on the Group's profit before income tax differs from the theoretical amount that would arise using the weighted average tax rates applicable to profit before income tax of the consolidated entities as follows:

Reconciliation of effective tax charge

In thousands of euros	Year ended 31 December 2022	31 December 2021
Profit before income tax	614,246	580,732
Income tax calculated at domestic tax rates applicable to profits in the respective countries	(148,079)	(143,371)
Tax effects of:		
(De) recognition tax losses (a)	(543)	(5,596)
Non-deductible expenses (b)	(204)	(5,259)
Other tax exempt income (c)	(15)	2,035
Over/(under) provided in prior years (d)	(4,450)	1,903
Other (e)	(10,314)	(8,356)
Total	**(163,605)**	**(158,644)**

(a) De-recognition of tax losses relates to tax losses in the UK, US, Hong Kong and Singapore as it is not considered probable at this moment that these deferred tax assets can be used to offset future taxable income.
(b) In 2022 and 2021, non-deductible expenses mainly relate to non-deductible M&A expenses.
(c) In 2022 and 2021, other tax exempt income mainly relates to dividends and sales proceeds from investments.
(d) In 2022, 'over/(under) provided in prior years' relates to adjustments to tax following the filing of tax returns. In 2021, 'over provided in prior years' relates to release of tax following the filing of tax returns.
(e) As from 2014, the Company applies the statutory tax rates without surcharges (in Portugal. Italy and France) to the profit before income tax to calculate tax at domestic rates. The surcharges (€11.5 million) have been included in the line 'Other'. Furthermore, the line 'Other' includes, amongst others,,Italian tax on dividends (€3.1m), the Italian notional interest deduction (€2.3m) and an R&D credit (€1m).

The effective tax rate decreased from 27.3% for the year ended 31 December 2021 to 26.6% for the year ended 31 December 2022.

Note 16. Property, plant and equipment

In thousands of euros	**Land & Buildings**	**Hardware & IT**	**Other Equipment (a)**	**Total**
As at 31 December 2020				
Cost	52,454	55,115	59,767	167,336
Accumulated depreciation and impairment	(14,985)	(46,527)	(49,800)	(111,312)
Net book amount	**37,469**	**8,588**	**9,967**	**56,024**
As at 1 January 2021 net book amount	**37,469**	**8,588**	**9,967**	**56,024**
Exchange differences	404	168	163	735
Additions	4,908	21,824	6,635	33,367
Disposals & other	(11)	264	(180)	73
Transfers	—	—	—	—
Acquisitions of subsidiaries	1,528	15,386	6,591	23,505
Depreciation charge (Note 10)	(2,084)	(11,083)	(2,957)	(16,124)
As at 31 December 2021 net book amount	**42,214**	**35,147**	**20,219**	**97,580**
As at 31 December 2021				
Cost	57,025	143,246	76,140	276,411
Accumulated depreciation and impairment	(14,811)	(108,099)	(55,921)	(178,831)
Net book amount	**42,214**	**35,147**	**20,219**	**97,580**
As at 1 January 2022 net book amount	**42,214**	**35,147**	**20,219**	**97,580**
Exchange differences	(1,078)	(17)	(66)	(1,161)
Additions	9,782	13,818	8,266	31,866
Disposals & other	(1,189)	3,228	(2,116)	(77)
Transfers	—	12,301	(12,301)	—
Depreciation charge (Note 10)	(1,230)	(15,106)	(2,483)	(18,819)
As at 31 December 2022 net book amount	**48,499**	**49,371**	**11,519**	**109,389**
As at 31 December 2022				
Cost	60,528	164,215	69,771	294,514
Accumulated depreciation and impairment	(12,029)	(114,844)	(58,252)	(185,125)
Net book amount	**48,499**	**49,371**	**11,519**	**109,389**

(a) Other Equipment includes building fixtures and fitting, lease improvements and work in progress.

In 2022, the increase in Property Plant and Equipment was primarily related to the investments made to the Oslo Børs building and purchases of Hardware and IT in relation to the new data centre in Bergamo.

The transfer of €12.3 million from other equipment to hardware & IT mainly related to work in progress that was put into use at the go-live of the data centre in Bergamo in June 2022.

Note 17. Leases

The Group leases offices in the various locations from which the Group operates its business, IT-hardware equipment such as data servers, racks and mainframes and leases of other equipment for use by its staff in offices. Lease of offices generally have an average lease term of 4 years, while hardware IT equipment generally have an average lease term of 3 years. Rental contracts are typically made for fixed periods, but may occasionally have extension options. Furthermore, the Group has very limited leases that contain variable lease payments and has no leases that are exposed to residual value guarantees. Payments associated wit short-term leases (containing a lease term of 12 months or less) and leases of low-value assets are recognised on a straight-line basis as an expense in profit or loss.

17.1 Amounts recognised in the balance sheet

Set out below are the carrying amounts of right-of-use assets recognised and the movements during the period:

In thousands of euros	Right-of-use assets Building	Equipment	Other	Total
At 1 January 2021	**46,442**	**481**	**—**	**46,923**
Additions (a)	7,762	14,155	—	21,917
Acquisition of subsidiary	19,343	2,428	—	21,771
Depreciation charge (see Note 10)	(24,252)	(323)	—	(24,575)
Transfers	689	(689)	—	—
Exchange impacts and other	206	(74)	—	132
At 31 December 2021	**50,190**	**15,978**	**—**	**66,168**
Additions	1,068	1,122		2,190
Acquisition of subsidiary	—	—		—
Depreciation charge (see Note 10)	(21,127)	(4,888)		(26,015)
Transfers	—	—		—
Exchange impacts and other	(12)	(41)		(53)
At 31 December 2022	**30,119**	**12,171**	**—**	**42,290**

a) The additions in the comparative period were adjusted by reclassifying an amount of €13.7 million from 'Building' to 'Equipment', as the amount related to the data centre in Bergamo and this classification better reflects the nature of the lease agreement.

Set out below are the carrying amounts of lease liabilities and the movements during the period:

In thousands of euros	2022	2021
At 1 January	**71,684**	**50,951**
Additions	1,171	22,948
Acquisition of subsidiary	—	20,629
Accretion of interest	733	718
Payments	(23,417)	(23,762)
Exchange impacts and other	(57)	200
At 31 December	**50,114**	**71,684**
Of which are:		
Non-current lease liabilities	21,648	50,691
Current lease liabilities	28,466	20,993

The maturity analysis of the lease liabilities are as follows:

In thousands of euros	Less than 1 year	between 1 and 3 years	between 3 and 5 years	More than 5 years	Total
2022					
Lease liabilities	28,466	14,489	5,094	2,065	50,114
2021					
Lease liabilities	20,993	30,204	14,429	6,058	71,684

17.2 Amounts recognised in the statement of profit or loss

The statement of profit or loss shows the following amounts related to leases:

In thousands of euros	2022	2021
Depreciation charge of right-of-use assets		
Building	(21,127)	(22,419)
Equipment	(4,888)	(323)
Other	—	—
Interest expense (included in finance cost)	(733)	(718)
Expenses related to short-term leases (included in other operational expenses)	(289)	(218)
Expenses related to leases of low-value asset (included in other operational expenses)	(920)	(692)
Total	**(27,957)**	**(24,370)**

The total cash outflow for leases in 2022 was €24.6 million (2021: €24.6 million). The Group's exposure to potential future cash outflows related to variable lease payments, extension or termination options and residual value guarantees was not material.

Note 18. Goodwill and other intangible assets

				Fair value adjustment Intangible assets recognised on acquisition of subsidiaries			
In thousands of euros	**Goodwill**	**Internally developed software**	**Purchased softw. Constr. in Pr. Patents & TrMr**	**Software**	**Customer Relations**	**Brand Names (b)**	**Total**
As at 31 December 2020							
Cost	1,153,753	172,229	55,574	82,982	327,916	16,387	1,808,841
Accumulated amortisation and impairment	(54,323)	(122,715)	(49,854)	(20,543)	(25,269)	—	(272,704)
Net book amount	**1,099,430**	**49,514**	**5,720**	**62,439**	**302,647**	**16,387**	**1,536,137**
As at 1 January 2021 net book amount	**1,099,430**	**49,514**	**5,720**	**62,439**	**302,647**	**16,387**	**1,536,137**
Exchange differences	31,675	399	70	1,753	11,787	587	46,271
Additions	—	29,082	5,141	—	—	—	34,223
Impairment charge / write off	—	219	88	—	—	—	307
Transfers and other (a)	—	(3,052)	3,052	—	—	—	—
Acquisitions of subsidiaries (a)	2,853,176	14,661	16,229	85,500	1,707,297	20,700	4,697,563
Sales of subsidiaries	(1,090)	(182)	—	(2,955)	(557)	—	(4,784)
Amortisation charge (Note 10) (a)	—	(15,481)	(8,527)	(18,238)	(44,413)	(7,214)	(93,873)
As at 31 December 2021 net book amount	**3,983,191**	**75,160**	**21,773**	**128,499**	**1,976,761**	**30,460**	**6,215,844**
As at 31 December 2021							
Cost	4,037,560	184,136	220,022	171,228	2,048,011	37,675	6,698,632
Accumulated amortisation and impairment	(54,369)	(108,976)	(198,249)	(42,729)	(71,250)	(7,215)	(482,788)
Net book amount	**3,983,191**	**75,160**	**21,773**	**128,499**	**1,976,761**	**30,460**	**6,215,844**
As at 1 January 2022 net book amount	**3,983,191**	**75,160**	**21,773**	**128,499**	**1,976,761**	**30,460**	**6,215,844**
Exchange differences	(18,425)	(30)	(4)	(1,094)	(7,792)	205	(27,140)
Additions	—	66,348	1,302	—	—	—	67,650
Impairment charge / write off	—	—	—	—	—	—	—
Transfers and other	—	372	295	—	—	—	667
Acquisitions of subsidiaries (Note 5)	60,257	—	—	448	5,621	—	66,326
Sales of subsidiaries	(2,163)	—	—	—	—	—	(2,163)
Amortisation charge (Note 10)	—	(24,923)	(6,871)	(21,541)	(60,276)	(1,747)	(115,358)
As at 31 December 2022 net book amount	**4,022,860**	**116,927**	**16,495**	**106,312**	**1,914,314**	**28,918**	**6,205,826**
As at 31 December 2022							
Cost	4,077,182	268,349	218,380	157,923	2,044,521	31,829	6,798,184
Accumulated amortisation and impairment	(54,322)	(151,422)	(201,885)	(51,611)	(130,207)	(2,911)	(592,358)
Net book amount	**4,022,860**	**116,927**	**16,495**	**106,312**	**1,914,314**	**28,918**	**6,205,826**

a) In the comparative period, the lines 'Transfers and other' and 'Acquisitions of subsidiaries' were adjusted by reclassifying €15.6 million and €4.5 million respectively from 'Purchased software' to 'Internally developed software', as this classification better reflects the nature of these assets. Related amortisation was reclassified consistently in the line 'Amortisation charge' for an amount of €4.2 million.

b) As per 31 December 2022, brand names include brands with a finite useful live for an amount of €3.6 million (2021: €4.2 million).

In 2022, the increase in internally developed software investments primarily related to the ongoing implementation of Borsa Italiana Group to Euronext's trading platform Optiq®, the expansion of clearing activities to all Euronext markets by Euronext Clearing, the pan-Europeanisation of Euronext CSDs, and several digital ambition projects within the Group. Furthermore, no indicators of impairment of intangible assets with a finite useful life were identified and as such no detailed impairment test was performed. For intangible assets with an indefinite useful life the impairment test did not lead to an/any impairment.

Goodwill impairment test

Goodwill is monitored and tested for impairment at the lowest CGU Group level of the Group to which goodwill acquired in a business combination is allocated (see Note 3). Following the acquisitions of Euronext FX (former FastMatch Inc.) in 2017 and Nord Pool Holding AS in 2020 and the allocation of goodwill from those transactions to respectively the "FX Trading" CGU and the "Nord Pool" CGU, the Group tests goodwill at the level of three CGUs (Groups): "Euronext", "FX Trading" and "Nord Pool". The acquisition of Borsa Italiana Group is included in the Euronext CGU.

Euronext CGU (Group)

The recoverable value of the "Euronext" CGU Group is based on its fair value less cost of disposal, applying a discounted cash flow approach, and corroborated by observation of Company's market capitalisation. The fair value measurement uses significant unobservable inputs and is therefore categorised as a Level 3 measurement under IFRS 13.

Cash flow projections are derived from the 2023 budget and the business plan for 2024. Key assumptions used by management include third party revenue growth, which factors future volumes of European equity markets, the Group's market share, average fee per transaction, and the expected impact of new product initiatives. These assumptions are based on past experience, market research and management expectation of market developments.

For the impairment test performed as of 31 December 2022, revenues have been extrapolated using a perpetual growth rate of 1.4% (2021: 1.2%) after 2023. The weighted average cost of capital applied was 7.2% (2021: 6.7%).

The annual impairment testing of the "Euronext" CGU Group performed at each year-end did not result in any instance where the carrying value of the operating segment exceeded its recoverable amount. Recoverable amount is sensitive to key assumptions. As of 31 December 2022, a reduction to 0% per year of perpetual growth rate, or an increase by 1% per year in discount rate, which management believes are individually reasonably possible changes to key assumptions, would not result in a goodwill impairment. The sensitivity test on the key assumptions defined in 2022 would not result in a goodwill impairment. Possible correlations between each of these parameters were not considered.

FX Trading CGU

The recoverable value of the "FX Trading" CGU is based on its fair value less cost of disposal, applying a discounted cash flow approach. The fair value measurement uses significant unobservable inputs and is therefore categorised as a Level 3 measurement under IFRS 13.

Cash flow projections are derived from the 2023 budget and the business plan for 2024. Key assumptions used by management include third party revenue growth, which factors future volumes on global Foreign Exchange trading markets, the Group's market share, average fee per transaction, and the expected impact of new product initiatives. These assumptions are based on past experience, market research and management expectation of market developments.

For the impairment test performed as of 31 December 2022, revenues have been extrapolated using a perpetual growth rate of 2.0% (2021: 2.0%) after 2023. The discount rate applied was 7.5% (2021: 7.2%).

The annual impairment testing of the "FX Trading" CGU performed at each year-end did not result in any instance where the carrying value of the operating segment exceeded its recoverable amount. Recoverable amount is sensitive to key assumptions. As of 31 December 2022, a reduction to 0% per year of perpetual growth rate, or an increase by 1% per year in discount rate, which management believes are individually reasonably possible changes to key assumptions, would not result in a goodwill impairment. The sensitivity test on the key assumptions defined in 2022 would not result in a goodwill impairment. Possible correlations between each of these parameters were not considered.

Nord Pool CGU

The recoverable value of the "Nord Pool" CGU is based on its fair value less cost of disposal, applying a discounted cash flow approach. The fair value measurement uses significant unobservable inputs and is therefore categorised as a Level 3 measurement under IFRS 13.

Cash flow projections are derived from the 2023 budget and the business plan for 2024. Key assumptions used by management include third party revenue growth, which factors future volumes on day ahead and intraday physical energy markets, the Group's market share, average fee per transaction, and the expected impact of new product initiatives. These assumptions are based on past experience, market research and management expectation of market developments.

For the impairment test performed as of 31 December 2022, revenues have been extrapolated using a perpetual growth rate of 1.3% (2021: 1.5%) after 2023. The discount rate applied was 7.5% (2021: 7.2%).

The annual impairment testing of the "Nord Pool" CGU performed at year-end did not result in any instance where the carrying value of the operating segment exceeded its recoverable amount. Recoverable amount is sensitive to key assumptions. As of 31 December 2022, a reduction to 0% per year of perpetual growth rate, or an increase by 1% per year in discount rate, which management believes are individually reasonably possible changes to key assumptions, would not result in a goodwill impairment. The sensitivity test on the key assumptions defined in 2022 would not result in a goodwill impairment. Possible correlations between each of these parameters were not considered.

Note 19. Deferred income tax

The analysis of deferred tax assets and deferred tax liabilities is as follows:

In thousands of euros	2022	2021
Deferred income tax assets (a)	18,917	37,489
Deferred income tax liabilities (a)	(552,574)	(592,431)
Total net deferred tax assets (liabilities)	**(533,657)**	**(554,942)**

(a) *As shown in the balance sheet, after offsetting deferred tax assets and liabilities related to the same taxable entity.*

In thousands of euros	2022	2021
Deferred tax assets / (liabilities):		
Property, plant and equipment	(2,384)	(2,165)
Intangible assets (a)	(552,237)	(585,163)
Investments (b)	(28,321)	(21,626)
Provisions and employee benefits	12,975	18,770
Other (c)	36,272	34,806
Loss carried forward (d)	38	436
Deferred tax assets (net)	**(533,657)**	**(554,942)**

(a) *The balance mainly relates to the recognition of a deferred tax liability resulting from the intangible assets recognised upon the acquisition of Borsa Italiana Group in 2021.*
(b) *The investments mainly relate to the valuation of assets measured at fair value through other comprehensive income (FVOCI).*
(c) *The line 'Other' primarily relates to the tax impact from contract liabilities of €20.2 million (2021: €24.3 million), currency movements on intercompany loans (NOK, GBP and USD) of €7.4 million (2021: €1.4 million) and intra group accrued unpaid interest of €6.9 million (2021: €5.3 million).*
(d) *Losses carry forward relate mainly to tax losses carry forward recognised by investments in the US and Italy.*

For the year 2022 and onwards, the Netherlands have increased the corporate income tax rate to 25.8% (2021: 25%). For 2022 onwards, the French corporate income tax rate is 25% (2021: 26.5%), whereas the surcharge of 3.3% remains applicable. For the year 2022, the United Kingdom's corporate tax rate was 19%. With effect from 1 April 2023, this will increase to 25%.

The deferred tax assets and liabilities have been recognised at prevailing rates in the various countries.

In thousands of euros	2022	2021
Balance at beginning of the year	**(554,942)**	**(72,016)**
Recognised in income statement	15,316	36,804
Reclassifications and other movements (a)	10,499	(511,974)
Exchange differences and other	4,921	(2,801)
Charge related to other comprehensive income	(9,451)	(4,955)
Balance at end of the year	**(533,657)**	**(554,942)**

(a) *In 2021, the line 'Reclassifications and other movements' was impacted by the acquisition of Borsa Italiana Group for €512.9 million and in 2022 the line relates to rate impacts thereon.*

As per 31 December 2022, tax losses totalling €29.8 million (2021: €27.7 million) were not recognised in the UK, US, Hong Kong and Singapore since it is not considered probable, at this moment, that these deferred tax assets can be used to offset future taxable income.

The majority of the net deferred tax asset is expected to be recovered or settled after more than twelve months.

Note 20. Financial assets at fair value through other comprehensive income

In thousands of euros	As at 31 December 2022	As at 31 December 2021
Equity investments		
Euroclear S.A./N.V.	175,888	148,256
Sicovam Holding S.A.	73,483	59,083
Other	347	354
Debt investments		
Government bonds	28,501	50,375
Total	**278,219**	**258,068**

The Group's financial assets at fair value through other comprehensive income include long-term investments in unlisted equity securities, which the Group has irrevocably elected at initial recognition to recognise in this category. In addition, debt securities allocated to the "hold and sell" business model are included in this category. The classification of the measurement within the fair value hierarchy is presented in Note 35.

Euroclear S.A./N.V. and Sicovam Holding S.A.

As of 31 December 2022, the Group holds a 3.53% ownership interest in Euroclear S.A./N.V. (31 December 2021: 3.53%), an unlisted company involved in the settlement of securities transaction and related banking services. The Group also holds a 9.60% ownership interest in Sicovam Holding S.A. (31 December 2021: 9.60%), resulting in an indirect 1.53% interest in Euroclear S.A./N.V. (31 December 2021: 1.53%). The common stock of Sicovam Holding S.A. and Euroclear S.A./N.V. are not listed.

For measuring fair value of its long-term investments in unlisted equity securities in Euroclear S.A/N.V. and Sicovam Holding S.A., the Group applies a weighted approach, using both the Gordon Growth Model (with return on equity and expected dividend growth rate as key non-observable parameters) and recent observed market transactions taking into account an illiquidity discount for the limited number of transactions.

In 2022, this valuation method resulted in a total valuation of Euroclear S.A./N.V. of €5.0 billion (2021: €4.2 billion), and to an increase in fair value of Euronext N.V./S.A.'s direct- and indirect investments of €42.0 million (2021: €3.2 million) in 2022. This revaluation was recorded in Other Comprehensive Income.

Government bonds

As per 31 December 2022, the Group holds long-term investments in secured assets linked to Euronext Clearing's own funds. These investments consist of Government Bonds issued by the States of Belgium, France, Ireland, Italy, Holland, Portugal and Spain; and Supranational Securities issued by the European Stability Mechanism and the European Financial Stability Facility, as well as by securities issued by Spanish (Instituto de Credito Oficial) and French (Caisse d'Amortissement de la Dette Sociale) government agencies.

These debt investments are valued at public market prices, with changes in fair value recognised through Other Comprehensive Income.

Note 21. Trade and other receivables

In thousands of euros	2022	2021
Trade receivables	271,829	290,726
Contract receivables	32,096	24,695
Allowance for expected credit losses	(7,348)	(4,940)
Trade and contract receivables net	**296,577**	**310,481**
Tax receivables (excluding income tax)	8,214	36,757
Other receivables	13,296	47,748
Total	**318,087**	**394,986**

Trade receivables are non-interest bearing and generally on terms of 30 to 90 days. Contract receivables represent amounts in respect of unbilled revenue, for which the Group has an unconditional right to consideration (i.e. only the passage of time is required before payment of the consideration is due).

The significant changes in trade and contract receivables are disclosed in Note 8.1.2.

Set out below is the movement in the allowance for expected credit losses of trade and contract receivables:

In thousands of euros	2022	2021
As at 1 January	4,940	3,378
Provision for expected credit losses	2,844	2,237
Receivables written off during the year	(436)	(675)
At 31 December	**7,348**	**4,940**

Management considers the fair value of the trade and other receivables to approximate their carrying value. The significant changes in loss allowance provision are disclosed in Note 8.1.2. The information about the credit exposures of trade and other receivables are disclosed in Note 37.5.1.

Note 22. Other current assets and disposal groups held for sale

Other current assets

In thousands of euros	2022	2021
Prepayments	27,585	21,573
Other	—	—
Total	**27,585**	**21,573**

The increase in prepayments mainly relates to deferred charges in Technologies S.A.S.

Disposal groups held for sale

In thousands of euros	2022	2021
Assets from disposal groups	—	6,436
Liabilities from disposal groups	—	(1,321)
Total	**—**	**5,115**

In 2022, the Group disposed its interests in subsidiaries that were classified as held for sale as per 31 December 2021. Substantially all the balances were related to MTS Markets International Inc. The proceeds from the sale were €7.8 million, whereas the combined net assets disposed of amounted to €4.7 million. This resulted in a gain on disposal of €3.1 million (see Note 14).

In 2021, the Group assessed some individually immaterial investments in subsidiaries, acquired as part of the acquisition of Borsa Italiana Group, as disposal groups held for sale on acquisition. Substantially all of the balances related to subsidiary MTS Markets International Inc. The assets from disposal groups held for sale included cash and cash equivalents for €5.0 million as per 31 December 2021.

Note 23. Derivatives financial instruments

The Group may use derivative instruments to manage financial risks relating to its financial positions or risks relating to its ongoing business operations. The Group's risk management strategy and how it is applied to manage risk is further explained in Note 37.

Derivatives designed as hedging instruments

Fair value hedge

Until 3 May 2022, the Group had three interest rate swap agreements in place with a total notional amount of €500.0 million whereby the Group received an annual fixed interest rate of 1% and paid a variable rate of six-month EURIBOR, plus a weighted average spread of 0.3825%. The rate applicable to the floating leg of the swap for the aggregated notional amount of €500.0 million was -0.141%. The swaps were being used to reduce the variability of the fair value of the 1% fixed rate Bond (Senior Unsecured note #1) attributable to the change in interest rate, allowing it to transform the fixed rate exposure to floating rate.

There was an economic relationship between the hedged item and the hedging instrument as the terms of the interest rate swaps matched the terms of the fixed rate Bond (i.e., notional amount, maturity, payment and reset dates). The Group had established a hedge ratio of 1:1 for the hedging relationships as the underlying risk of the interest rate swap was identical to the hedged risk component. To assess the hedge effectiveness, the Group compared the changes in the fair value of the hedging instrument against the changes in fair value of the hedged item attributable to the hedged risk.

The hedge ineffectiveness could arise from:

- Different interest rate curve applied to discount the hedged item and hedging instrument
- Differences in timing of cash flows of the hedged item and hedging instrument
- The counterparties' credit risk differently impacting the fair value movements of the hedging instrument and hedged item

On 3 May 2022, the Group terminated its interest rate swap agreements. On termination, the Group cash settled the swap agreements at a carrying amount of €8.9 million and the hedge relationship was discontinued. The accumulated fair value adjustments of €7.7 million will be amortised over the remaining term of the Senior Unsecured Note #1. As a result, approximately €1.8 million was amortised during the remainder of the year, reducing the amount of accumulated fair value adjustments to €5.9 million as at 31 December 2022 (see Note 29).

The impact of respectively the hedging instrument and the hedged item on the balance sheet immediately before termination of the interest rate swap agreements was as follows:

In thousands of euros	Notional amount	Carrying amount	Line item in the balance sheet	Change in fair value used for measuring ineffectiveness for the period
Interest rate swaps	500,000	(8,886)	Derivative financial instruments	(20,787)

In thousands of euros	Carrying amount	Accumulated fair value adjustments	Line item in the balance sheet	Change in fair value used for measuring ineffectiveness for the period
Senior Unsecured note #1	492,352	(7,648)	Non-current Borrowings	(20,787)

The impact of respectively the hedging instrument and the hedged item on the balance sheet as at 31 December 2021 was as follows:

In thousands of euros	Notional amount	Carrying amount	Line item in the balance sheet	Change in fair value used for measuring ineffectiveness for the period
Interest rate swaps	500,000	11,901	Derivative financial instruments	(11,834)

In thousands of euros	Carrying amount	Accumulated fair value adjustments	Line item in the balance sheet	Change in fair value used for measuring ineffectiveness for the period
Senior Unsecured note #1	513,139	13,139	Non-current Borrowings	(11,136)

As the hedge was effective, no amounts for ineffectiveness were recognised in 'hedging result' in the Statement of Profit or Loss (2021: loss of €0.7 million) (see Note 13).

Hedge of net investment in foreign operations

Until 21 March 2021, the Group had designated a EUR/GBP foreign exchange contract as a hedge of the investment in Commcise Software Ltd., a Group subsidiary in the United Kingdom, due to the uncertainty that was looming in regard to the negative impact of Brexit on GBP.

As Brexit materialised, removing the existing uncertainties, the foreign exchange forward contract was not extended, consistent to the Group's policy not to hedge foreign exchange risk (see Note 37.3). As a result, no value remained on the Consolidated Balance Sheet for this instrument as at 31 December 2021.

As per 31 December 2022, the derivative financial liability balance includes an impact of €19k (2021: €12k asset) in Nord Pool related to the effects of foreign exchange spot transactions made to facilitate electricity settlement.

Impact of hedging on equity

Set out below is the reconciliation of each component of equity and the analysis of Other Comprehensive Income:

In thousands of euros	Foreign currency translation reserve
As at 1 January 2021	(54,492)
Changes in fair value of the hedging instrument	(1,468)
Foreign exchange forward point excluded from the hedge	(53)
Foreign currency revaluation of the net foreign operations a)	45,382
As at 31 December 2021	**(10,631)**
Changes in fair value of the hedging instrument	—
Foreign exchange forward point excluded from the hedge	—
Foreign currency revaluation of the net foreign operations a)	(26,169)
As at 31 December 2022	**(36,800)**

(a) The impact was almost fully attributable to foreign currency translations of net foreign operations in NOK

Note 24. Other current financial assets

In thousands of euros	2022	2021
Deposits > 3 months	67,242	50,091
Government bonds	69,455	65,389
Listed bonds	26,043	42,110
Total	**162,740**	**157,590**

The other current financial assets of the Group consist of short-term deposits with a maturity of more than three months, short-term investments in government bonds linked to Euronext Clearing's own funds (see Note 20) and investments in listed bonds held by Euronext Securities Copenhagen.

Note 25. Cash and cash equivalents

Cash and cash equivalents consist of the following:

In thousands of euros	2022	2021
Cash and bank balances	710,929	714,199
Short term investments	290,153	90,162
Total	**1,001,082**	**804,361**

Short-term investments are presented as cash and cash equivalents if they have a maturity of three months or less from the date of acquisition and are repayable with 24 hours' notice with no loss of interest. Cash and cash equivalents included an amount of €47.6 million (2021: €100.1 million) for the purpose of the settlement of power purchases at Nord Pool.

Note 26. Shareholders' equity

Under the Articles of Association, the Company's authorised share capital amounts to €200,000,001.60 and is divided into 125,000,000 Ordinary Shares and one Priority Share, each with a nominal value of €1.60 per share. All of Euronext's shares have been or will be created under Dutch law.

As of 31 December 2022, the Company's issued share capital amounts to €171,370,070 and is divided into 107,106,294 Ordinary Shares. The Priority Share is currently not outstanding. The fully paid ordinary shares carry one vote per share and rights to dividends, if declared. The Group's ability to declare dividends is limited to distributable reserves as defined by Dutch law.

Number of shares outstanding:

(in numbers of shares)	2022	2021
	107,106,294	107,106,294
Issued shares		
Treasury shares as at 1 January	**(524,629)**	**(329,465)**
Liquidity contract	—	—
Share buy back	—	(350,000)
From share-based payments vesting	146,098	154,836
Treasury shares as at 31 December	**(378,531)**	**(524,629)**
Outstanding as at 31 December	**106,727,763**	**106,581,665**

26.1 Reserve own shares

Treasury shares are accounted for at trade date and all held by Euronext N.V.

The movement on the line 'acquisitions of own shares' in the Consolidated Statement of Changes in Equity consists of the impact from transactions by the liquidity provider of €18k loss (2021: €0.1 million loss), minus the impact from transactions under the share repurchase programme, which was zero in 2022, (2021: €31.8 million). Details of these movements are disclosed below at (i) and (ii).

(i) Liquidity provider

Part of the movement in the reserve during the reporting period relates to the transactions in Euronext N.V. shares conducted by the liquidity provider on behalf of the Group under the liquidity contract established (€18k loss in 2022).

The liquidity Agreement (the "Agreement") has been established in accordance with applicable rules, in particular the Regulation (EC) 2273/2003 of the European Commission of 22 December 2003 implementing the directive 2003/6/EC of the European Parliament and Council as regards exemptions for buyback programs and stabilisation of financial instruments, the provisions of article 2:95 of the Book II of Dutch civil code, the provisions of the general regulation of the French Autorité des Marchés Financiers (the "AMF"), the decision of the AMF dated 21 March 2011 updating the Accepted Market Practice n° 2011-07 on liquidity agreements, the Code of Conduct issued by the French Association française des marchés financiers (AMAFI) on 8 March 2011 and approved by the AMF by its aforementioned decision dated 21 March 2011 (the "AMAFI Code") and as the case maybe the relevant Dutch rules applicable to liquidity agreements in particular the regulation on Accepted Market Practices WFT (Regeling gebruikelijke marktpraktijken WFT) dated 4 May 2011 and Section 2.6 of the Book II – General Rules for the Euronext Amsterdam Stock Market (the "Dutch Rules").

As at 31 December 2022, Euronext N.V. holds nil shares under the programme (2021: nil shares).

The movement schedule for the reported years are as follows:

In 2021:

Transaction date	Buy Euronext N.V. shares	Sell Euronext N.V. shares	Average share price	Total value transaction including commissions
(in euro)				
As at 31 December 2020	—			
Purchases January	39,121		€ 91.44	3,577,034
Sales January		32,871	€ 91.66	(3,013,018)
Purchases February	46,915		€ 93.45	4,384,340
Sales February		44,915	€ 93.30	(4,190,588)
Purchases March	68,638		€ 85.02	5,835,352
Sales March		75,138	€ 84.97	(6,384,652)
Purchases April	63,328		€ 88.45	5,601,114
Sales April		65,078	€ 88.09	(5,732,475)
Purchases May	144,956		€ 84.24	12,211,199
Sales May		143,956	€ 84.25	(12,128,260)
Purchases June	84,357		€ 90.25	7,612,973
Sales June		82,507	€ 90.19	(7,441,697)
Purchases July	58,114		€ 90.71	5,271,408
Sales July		60,964	€ 90.78	(5,534,610)
Purchases August	42,609		€ 95.11	4,052,371
Sales August		41,109	€ 95.05	(3,907,362)
Purchases September	69,811		€ 101.73	7,101,780
Sales September		67,311	€ 101.84	(6,855,152)
Purchases October	56,163		€ 99.40	5,582,378
Sales October		56,413	€ 99.37	(5,605,943)
Purchases November	58,572		€ 94.28	5,522,120
Sales November		52,822	€ 95.32	(5,034,967)
Purchases December	25,550		€ 87.42	2,233,664
Sales December		35,050	€ 87.88	(3,080,323)
Total buy/sell	**758,134**	**758,134**		**76,686**
Total as at 31 December 2021	**—**			

In 2022:

Transaction date	Buy Euronext N.V. shares	Sell Euronext N.V. shares	Average share price	Total value transaction including commissions
(in euro)				
As at 31 December 2021	—			
Purchases January	50,430		€ 86.20	4,346,842
Sales January		50,430	€ 86.16	(4,345,058)
Purchases February	42,459		€ 82.80	3,515,798
Sales February		38,459	€ 82.87	(3,186,915)
Purchases March	51,553		€ 83.06	4,282,240
Sales March		47,553	€ 82.73	(3,933,924)
Purchases April	43,858		€ 80.92	3,549,208
Sales April		43,858	€ 81.96	(3,594,457)
Purchases May	61,210		€ 75.78	4,638,734
Sales May		69,010	€ 76.23	(5,260,289)
Purchases June	48,782		€ 77.14	3,763,233
Sales June		48,982	€ 77.18	(3,780,611)
Purchases July	62,573		€ 76.92	4,813,310
Sales July		62,523	€ 77.04	(4,816,844)
Purchases August	57,942		€ 78.21	4,531,678
Sales August		51,192	€ 78.35	(4,010,797)
Purchases September	31,960		€ 69.97	2,236,211
Sales September		25,160	€ 70.05	(1,762,464)
Purchases October	15,324		€ 64.12	982,635
Sales October		13,923	€ 64.70	(900,879)
Purchases November	30,696		€ 68.35	2,098,224
Sales November		45,197	€ 68.84	(3,111,330)
Purchases December	36,983		€ 71.33	2,638,130
Sales December		37,483	€ 71.37	(2,675,171)
Total buy/sell	**533,770**	**533,770**		**17,504**
Total as at 31 December 2022	**—**			

(ii) Share Repurchase Programme

The Group has entered into a discretionary management agreement with a bank to repurchase Euronext shares within the limits of relevant laws and regulations (in particular EC regulation 2273/2003) and the Group's articles of association to cover the Group's outstanding obligations resulting from employee shares plans for 2019, 2020, 2021 and 2022. The share repurchase programme aims to hedge price risk arising for granted employee share plans. In 2022, the Group repurchased no shares. In 2021, the Group repurchased 350,000 shares for a total consideration of €31.8 million.

The movement schedule for the reported years are as follows:

In 2021:

Transaction date	Buy Euronext N.V. shares	Average share price	Total value transaction including commissions
(in euro)			
Purchases March	350,000	€ 90.83	31,791,301
Total buy/sell	**350,000**		**31,791,301**
Total as at 31 December 2021	**350,000**		**31,791,301**

In 2022:

Transaction date	Buy Euronext N.V. shares	Average share price	Total value transaction including commissions
(in euro)			
Purchases 2022	—		—
Total buy/sell	**—**		**—**
Total as at 31 December 2022	**—**		**—**

(iii) Share-based payments vesting

In 2022, the Group delivered 146,098 shares with a cost of €9.7 million to employees for whom share plans had vested (2021: 154,836 shares with a cost of €8.9 million). This movement is disclosed on the line 'Other' in the Consolidated Statement of Changes in Equity.

26.2 Legal reserve

Retained earnings are not freely available for distribution for an amount of €59.8 million (2021: €40.3 million) relating to legal reserves (see Note 52). The amount related to prior period was subject to restatement, as further disclosed in Note 41.

26.3 Dividend

On 18 May 2022, the Annual General Meeting of shareholders voted for the adoption of the proposed €1.93 dividend per ordinary share, representing a 50% pay-out ratio of net profit. On 25 May 2022, the dividend of €206.0 million was paid to the shareholders of Euronext N.V.

Note 27. Earnings per Share (EPS)

Basic earnings per share is calculated by dividing the profit for the period attributable to the shareholders of the Company by the weighted average number of ordinary shares outstanding during the period.

Diluted earnings per share is calculated by dividing the profit for the period attributable to the shareholders of the Company by the weighted average number of ordinary shares outstanding during the period plus the weighted average number of ordinary shares that would be issued on conversion of all the dilutive potential ordinary shares into ordinary shares.

The following table reflects the income and share data used in the basic and diluted EPS calculations:

In thousands of euros	2022	2021
Profit attributable to the shareholders of the Company	437,827	413,344
In number of shares		
Weighted average number of ordinary shares for basic EPS (a)	**106,669,451**	**96,058,761**
Effects of dilution from:		
Share plans	231,855	238,398
Weighted average number of ordinary shares adjusted for the effect of dilution (a)	**106,901,306**	**96,297,159**

(a) The weighted average number of shares takes into account the weighted average effect of changes in treasury shares during the year.

The impact of share plans is determined by the number of shares that could have been acquired at fair value (determined as the average quarterly market price of Euronext's shares) based on the fair value (measured in accordance with IFRS 2) of any services to be supplied to Euronext in the future under these plans.

There have been no other transactions involving ordinary shares or potential ordinary shares between the reporting date and the date of authorisation of these financial statements.

Note 28. Share-based payments

Euronext Long-Term Incentive Plan 2019 ("LTI Plan 2019")

The Restricted Stock Units (RSUs) granted under LTI Plan 2019 fully cliff-vested in 2022.

Euronext Long-Term Incentive Plans (LTI Plan) 2020, 2021 and 2022

Directors and certain employees of the Group benefited from Restricted Stock Units (RSUs) granted by Euronext N.V. under the LTI Plans on their applicable grant dates. RSUs granted under LTI Plans cliff-vest after 3 years, subject to continued employment and a 'positive EBITDA1' performance condition. These equity awards are measured by reference to the grant-date market price of Euronext's common share (grant-date fair value).

In addition to these RSUs granted to all participants in the LTI Plans, Performance RSUs have been awarded to members of the Managing Board and Senior Leadership team. The vesting of these Performance RSUs is subject to two performance conditions:

- 50% of the performance RSUs vests subject to a Total Shareholder Return (TSR) condition;
- 50% of the performance RSUs vests subject to an EBITDA1-based performance condition.

The grant-date fair value of performance shares with a TSR performance condition was adjusted for the possible outcomes of this condition. This has been assessed by applying a Monte Carlo simulation to model possible share prices of Euronext and its peer companies. At the end of each reporting period, the number of vesting performance shares is reconsidered based on the Group's EBITDA1 performance relative to budgeted EBITDA1 and the total cost for the performance RSUs could be adjusted accordingly. Grant-date fair value of RSUs granted under the LTI Plans 2020, 2021 and 2022 reflect the present value of expected dividends over the vesting period.

Movements in the number of shares granted as awards is as follows:

In 2021:

Plan	Year of grant	1 January 2021	Granted	Adjusted (a)	Vested	Forfeited	31 December 2021	Fair value at grant date per share (in €)
LTI, with performance	2018	77,650	—	92,457	(171,003)	896	—	€ 56.55
LTI, no performance	2018	40,045	—	3,593	(42,294)	(1,344)	—	€ 49.64
LTI, with performance	2019	67,516	—	6,374	—	(1,870)	72,020	€ 68.30
LTI, no performance	2019	51,288	—	4,614	—	(5,043)	50,859	€ 57.94
LTI, with performance	2020	67,421	—	6,376	—	(1,741)	72,056	€ 110.64
LTI, no performance	2020	46,885	—	4,237	—	(4,231)	46,891	€ 81.30
LTI, with performance (b)	2021	—	79,252	—	—	(817)	78,435	€ 74.84
LTI, no performance (b)	2021	—	67,134	—	—	(2,423)	64,711	€ 79.98
LTI, with performance (c)	2021	—	22,963	—	—	—	22,963	€ 71.72
LTI, no performance (c)	2021	—	6,350	—	—	—	6,350	€ 86.64
Total		**350,805**	**175,699**	**117,651**	**(213,297)**	**(16,573)**	**414,285**	

(a) Adjustments related to outperformance and rights issue subscription rights for unvested plans in order to maintain the value of the original awards. Since this value neutral modification took place at the same time as the rights issue, it did not result in any incremental fair value to be recognised.
(b) LTI Plan 2021-A, with grant date 17 May 2021.
(c) LTI Plan 2021-B, with grant date 18 November 2021.

In 2022:

Plan	Year of grant	1 January 2022	Granted	Adjusted (a)	Vested	Forfeited	31 December 2022	Fair value at grant date per share (in €)
LTI, with performance	2019	72,020	—	66,995	(139,015)	—	—	€ 68.30
LTI, no performance	2019	50,859	—	—	(48,807)	(2,052)	—	€ 57.94
LTI, with performance	2020	72,056	—	—	—	(5,413)	66,643	€ 110.64
LTI, no performance	2020	46,891	—	—	—	(5,101)	41,790	€ 81.30
LTI, with performance (b)	2021	78,435	—	—	—	(5,080)	73,355	€ 74.84
LTI, no performance (b)	2021	64,711	—	—	—	(7,239)	57,472	€ 79.98
LTI, with performance (c)	2021	22,963	—	—	—	(1,462)	21,501	€ 71.72
LTI, with performance (c)	2021	6,350	—	—	—	(580)	5,770	€ 86.64
LTI, with performance	2022	—	108,229	—	—	(2,153)	106,076	€ 78.59
LTI, no performance	2022	—	89,187	—	—	(4,293)	84,894	€ 72.72
Total		**414,285**	**197,416**	**66,995**	**(187,822)**	**(33,373)**	**457,501**	

(a) Adjustments related to outperformance.
(b) LTI Plan 2021-A, with grant date 17 May 2021.
(c) LTI Plan 2021-B, with grant date 18 November 2021.

Euronext has taken into consideration the fact that the employees will not receive dividends during the vesting period of 3 years. The fair value has been adjusted taking into account the financial loss for the participants to not receive the payment of the dividends during the vesting period.

Share-based payment expenses recognised in the income statement for shares granted for all plans to directors and selected employees in 2022 amounted to €14.0 million (2021: €10.4 million), see Note 9.

Note 29. Borrowings

In thousands of euros	2022	2021
Non-current		
Borrowings		
Senior Unsecured note #1 (a)	494,048	513,139
Senior Unsecured note #2	750,000	750,000
Senior Unsecured note #3	600,000	600,000
Senior Unsecured note #4	600,000	600,000
Senior Unsecured note #5	600,000	600,000
Discount, premium and issue costs	(21,929)	(21,929)
Amortisation discount, premium and issue costs	5,042	3,181
Other	—	—
Total	**3,027,161**	**3,044,391**
Current		
Borrowings		
Accrued interest	17,370	17,359
Total	**17,370**	**17,359**

(a) The Senior Unsecured Note #1 is carried at amortised cost and was adjusted for fair value movements due to the hedged interest rate risk until 3 May 2022 (see Note 23).

Senior Unsecured Note #1

On 3 May 2022, the Group terminated its interest rate swap agreements which were formally designated and qualified as fair value hedges of Senior Unsecured Note #1. On termination, the Group cash settled the swap agreements and the hedge relationship was discontinued.

As from the moment of discontinuation of the fair value hedge, the accumulated fair value adjustments of Senior Unsecured Note #1 is amortised to profit or loss based on a recalculated Effective Interest Rate over the remaining term of Senior Unsecured Note #1. The accumulated fair value adjustments amounted to a negative €5.9 million as per 31 December 2022.

Extension of Revolving Credit Facility Agreement

On 12 October 2022, the Group executed its two-year extension option to the revolving credit facility agreement (RCF) of €600.0 million. The RCF allows the Group to apply all amounts borrowed by it towards (i) general corporate and/or working capital purposes of the Group, (ii) satisfaction of the consideration payable for an acquisition and/ or (iii) the payment of fees, costs and expense incurred in relation to an acquisition. The revolving credit facility has a remaining maturity of 5 years and bears an interest rate of EURIBOR plus a margin dependent on rating. As per 31 December 2022, the facility remained undrawn.

In case of a downgrading event of Euronext, below BBB- or equivalent by rating agencies, Euronext shall ensure that the leverage ratio (Euronext total gross debt to EBITDA[2]) as defined in the Revolving Credit Facility Agreement would not be greater than 4x.

Note 30. Post-employment benefits

The Group operates defined benefit pension plans for its employees, with the most significant plans being in France, Portugal, Norway and Italy. The Group's plans are funded by contributions from the employees and the relevant Group entities, taking into account applicable government regulations and the recommendations of independent, qualified actuaries. The majority of plans have plan assets held in trusts, foundations or similar entities, governed by local regulations and practice in each country. The assets for these plans are generally held in separate trustee administered funds. The benefits provided to employees under these plans are based primarily on years of service and compensation levels.

The French plans relate almost completely to retirement indemnities. French law stipulates that employees are paid retirement indemnities in form of lump sums on the basis of the length of service at the retirement date and the amount is prescribed by collective bargaining agreements.

The Portuguese plan is for both Euronext Lisbon and Interbolsa and is managed by CGD Pensoes – Sociedade Gestora de Fundos de Pensoes SA. The plan was defined benefit based on final pay. The funds covered payment of pensions to employees with a minimum of 5 year service. Annual contributions were based on actuarial calculations. In 2017, the Portuguese defined benefit plan was frozen and replaced by a new defined contribution plan, with an retroactive impact as from 1 January 2017. The old arrangement remains a defined benefit plan, and is disclosed as such in this Note.

The Norwegian plans relate to Oslo Børs VPS and Nord Pool. The plan in Oslo Børs VPS comprises both defined benefit schemes and defined contribution schemes. The general pension plan for employees in Norway is a defined contribution scheme. The defined benefit schemes are mainly related to lifetime pensions for former CEOs of Oslo Børs and VPS, as well as a voluntary early retirement scheme for Oslo Børs which was closed in 2003. Nord Pool has a defined benefit pension plan involving two former employees for which contributions are made in accordance with actuarial calculations. The Norwegian pension plans are in compliance with the Mandatory Occupational Pensions Act.

The Italian plan relates to the Borsa Italiana Group. Following the entry into force of the 2007 Finance Act and related decrees, the severance indemnity (TFR), maturing 1st January 2007 can no longer be retained by the companies that employ more than 50 employees but must be paid to a pension fund or, alternatively, into an open treasury fund opened at the 'National Institute for Social Security' (INPS), according to the option exercised by the employees themselves. This implies that accruals calculated after 1st January 2007 are part of a defined contribution plan because the company's obligation is satisfied by the payment of contributions to pension funds or INPS. The liability regarding the severance indemnity prior to the date mentioned above shall instead continue to represent a defined benefit plan to be valued applying the actuarial method based on the provisions set forth in IAS 19 and is disclosed as such in this Note.

The movement in the defined obligation over the years presented is as follows:

In thousands of euros	Present value of obligation	Fair value of plan assets	Total
As at 31 December 2020	**49,471**	**(22,994)**	**26,477**
(Income) / expense:			
Current service cost	4,037	—	4,037
Interest expense / (income)	621	(283)	338
	4,658	**(283)**	**4,375**
Remeasurements:			
– Return on plan assets, excluding amounts included in interest expense / (income)	—	(741)	(741)
– (Gain) / loss from change in financial assumptions	(2,120)	—	(2,120)
– Experience (gains) / losses	(520)	—	(520)
– Effect of changes in foreign exchange rates and other	510	(26)	484
	(2,130)	**(767)**	**(2,897)**
Payments:			
– Employer contributions	(805)	(167)	(972)
– Benefit payments	(4,877)	222	(4,655)
– Acquired in business combination	8,888	—	8,888
– Reclassifications and other	907	—	907
As at 31 December 2021	**56,112**	**(23,989)**	**32,123**
(Income) / expense:			
Current service cost	1,431	—	1,431
Interest expense / (income)	730	(306)	424
	2,161	**(306)**	**1,855**
Remeasurements:			
– Return on plan assets, excluding amounts included in interest expense / (income)	—	2,331	2,331
– (Gain) / loss from change in financial assumptions	(12,768)	—	(12,768)
– Experience (gains) / losses	(959)	—	(959)
– Effect of changes in foreign exchange rates and other	(509)	9	(500)
	(14,236)	**2,340**	**(11,896)**
Payments:			
– Employer contributions	(1,796)	—	(1,796)
– Benefit payments	(415)	282	(133)
– Acquired in business combination	—	—	—
– Reclassifications and other	(522)	—	(522)
As at 31 December 2022	**41,304**	**(21,673)**	**19,631**

The defined benefit obligation and plan assets are composed by country as follows:

	2022					
In thousands of euros	Belgium	Portugal	France	Norway	Italy	Total
Present value of obligation	24	16,762	7,630	12,332	4,556	41,304
Fair value of plan assets	—	(17,145)	(3,912)	(616)	—	(21,673)
Total	**24**	**(383)**	**3,718**	**11,716**	**4,556**	**19,631**

	2021					
In thousands of euros	Belgium	Portugal	France	Norway	Italy	Total
Present value of obligation	29	25,088	11,016	13,092	6,887	56,112
Fair value of plan assets	—	(19,621)	(3,782)	(586)	—	(23,989)
Total	**29**	**5,467**	**7,234**	**12,506**	**6,887**	**32,123**

The significant actuarial assumptions were as follows:

	2022				
	Belgium	Portugal	France	Norway	Italy
Discount rate	3.5%	4.0%	4.0%	3.6%	3.9%
Salary growth rate	0.0%	2.0%	2.5%	0.7%	3.0%
Pension growth rate	0.0%	0.0%	0.0%	3.0%	0.0%

	2021				
	Belgium	Portugal	France	Norway	Italy
Discount rate	0.2%	1.3%	1.1%	2.1%	0.8%
Salary growth rate	0.0%	1.7%	2.5%	0.8%	2.2%
Pension growth rate	0.0%	0.0%	0.0%	1.8%	2.4%

The Group derives the discount rate used to determine the defined benefit obligation from yields on high quality corporate bonds of the duration corresponding to the liabilities.

As of 31 December 2022, the sensitivity of the defined benefit obligation to changes in the weighted principal assumptions were:

		Impact on defined benefit obligation	
	Change in assumption	Increase in assumption	Decrease in assumption
Discount rate	0.25%	-3.1%	3.2%
Salary growth rate	0.50%	1.4%	-1.3%
Pension growth rate	0.50%	3.4%	-3.2%

The pension plan assets allocation differs per plan. On a weighted average basis, the allocation was as follows:

	2022		2021	
Plan assets	Fair value of plan assets *in thousands of euros*	Fair value of plan assets *in percent*	Fair value of plan assets *in thousands of euros*	Fair value of plan assets *in percent*
Equity securities	7,189	33.2%	9,184	38.3%
Debt securities	13,362	61.7%	13,719	57.2%
Property	401	1.9%	386	1.6%
Investment funds	619	2.9%	589	2.5%
Cash	102	0.5%	111	0.5%
Total	**21,673**	**100%**	**23,989**	**100%**

The maturity of expected benefit payments over the next ten years is as follows:

As at 31 December 2022	Less than a year	Between 1-2 year	Between 2-5 year	Between 5-10 year	Total
Pension benefits	2,725	1,879	6,061	14,110	**24,775**

The weighted average duration of the defined benefit obligation for retirement plans is 14 years at 31 December 2022.

For 2023, the expected obligations contributions are approximately €2.4 million.

Note 31. Provisions

In thousands of euros	Restructuring	Leases	Jubilee	Legal claims	Plan Agents	Others	Total
Changes in provisions							
As at 1 January 2022	**1,773**	**2,363**	**2,180**	**1,351**	**821**	**2,667**	**11,155**
Additional provisions charged to income statement	345	—	164	615	2	184	1,310
Used during the year	—	—	(176)	(174)	(4)	(412)	(766)
Unused amounts reversed	(1,274)	—	(609)	(67)	—	(948)	(2,898)
Acquisition of subsidiary	—	—	—	—	—	—	—
Reclassifications and other	(568)	(386)	—	(83)	—	14	(1,023)
Exchange differences	(9)	(6)	—	—	—	(55)	(70)
As at 31 December 2022	**267**	**1,971**	**1,559**	**1,642**	**819**	**1,450**	**7,708**
Composition of provisions							
Current	123	—	—	—	—	536	659
Non Current	144	1,971	1,559	1,642	819	914	7,049
Total	**267**	**1,971**	**1,559**	**1,642**	**819**	**1,450**	**7,708**

Restructuring

The restructuring provision relates to employee termination benefits that have an uncertain character. The decrease for the year was primarily related to the use of the restructuring plan in VP Securities.

Leases

The leases provision relates to estimated future dismantling or removing costs, primarily for the lease of its 'Praetorium' office in Paris and the VP Securities office.

Jubilee

The Jubilee provision decreased, mainly due to the increase in discount rates.

Legal claims

The legal claims provision relates to individual litigation settlement cases.

Plan Agents

The provision for Plan Agents relates to a retirement allowance for retired stockbrokers in Belgium, which is determined using actuarial assumptions. No cash outflows are expected for 2023.

Others

The 'Others' provision primarily relates to a compensation scheme in Oslo, that gives employees compensation for a change in their historical DB pension arrangements. The decrease for the year mainly related to a release of provision for interbank fees in Euronext Securities Copenhagen.

Note 32. Trade and other payables

In thousands of euros	2022	2021
Trade payables	162,482	211,124
Social security and other taxes (excluding income tax)	42,524	47,772
Employees' entitlements (a)	92,417	93,291
Accrued expenses	97,614	84,449
Other payables	1,250	3,220
Total	**396,287**	**439,856**

(a) Amounts include salaries payable, bonus accruals, severance (signed contracts) and vacation accruals.

The carrying values of current trade and other payables are reasonable approximations of their fair values. These balances do not bear interest.

Trade payables included an impact of €116.3 million (2021: €188.6 million) related to Nord Pool power purchases.

Note 33. Contract liabilities

In thousands of euros	2022	2021
Listing admission fees	107,427	121,183
Bond lifetime fees	9,887	11,061
Other (a)	21,669	18,578
Total	**138,983**	**150,822**
Current	75,198	80,546
Non Current	63,785	70,276
Total	**138,983**	**150,822**

(a) Includes contract liabilities related to Indices licenses, software maintenance & hosting and corporate services

The contract liabilities primarily relate to received consideration (or an amount of consideration is due) from customers for the initial (or subsequent) listing of equity securities and bond lifetime fees. Contract liabilities are recognised as revenue when the Group performs under the contract.

The significant changes in contract liabilities are disclosed in Note 8.1.2.

Note 34. Geographical information

The geographical information of the Group's revenue from contracts with customers is disclosed in Note 8.1.1. Other geographical information is disclosed below.

In thousands of euros	France	Italy	Netherlands	United Kingdom	Belgium	Portugal	Ireland	United States	Norway	Sweden	Denmark	Finland	Total
2022													
Property, plant and equipment	8,068	26,702	19,551	376	238	9,723	17,928	921	24,551	—	1,331	—	109,389
Intangible assets other than Goodwill (a)	1,174	1,772,795	61,647	4,512	4	3,779	17,452	34,287	223,302	303	63,579	132	2,182,966
2021													
Property, plant and equipment	10,079	26,929	12,360	557	251	10,213	18,547	1,294	16,303	—	1,047	—	97,580
Intangible assets other than Goodwill (a)	1,092	1,814,138	42,380	6,200	—	1,869	19,147	35,139	246,030	391	66,039	227	2,232,652

(a) Goodwill is monitored at the Group level and therefore not allocated by country.

Note 35. Financial instruments

35.1 Financial instruments by category

The financial instruments held by the Group are set out below.

	As at 31 December 2022				
In thousands of euros	Amortised cost	FVOCI equity instruments	FVOCI debt instruments	FVPL	Total
Financial assets					
CCP trading assets at fair value	—	—	—	7,486,731	7,486,731
Assets under repurchase transactions	134,172,307	—	—	—	134,172,307
Other financial assets traded but not yet settled	—	—	—	8,296	8,296
Debt instruments at fair value through OCI	—	—	1,753,811	—	1,753,811
Other instruments held at fair value	—	—	—	12,315	12,315
Other receivables from clearing members	9,795,350	—	—	—	9,795,350
Cash and cash equivalents of clearing members	13,613,729	—	—	—	13,613,729
Total financial assets of the CCP clearing business	**157,581,386**	**—**	**1,753,811**	**7,507,342**	**166,842,539**
Financial assets at fair value through OCI	—	249,718	28,501	—	278,219
Financial assets at amortised cost	2,312	—	—	—	2,312
Trade and other receivables	318,087	—	—	—	318,087
Derivative financial instruments	—	—	—	—	—
Other current financial assets	67,242	—	95,498	—	162,740
Cash and cash equivalents	1,001,082	—	—	—	1,001,082
Total	**158,970,109**	**249,718**	**1,877,810**	**7,507,342**	**168,604,979**
Financial liabilities					
CCP trading liabilities at fair value	—	—	—	7,486,731	7,486,731
Liabilities under repurchase transactions	134,172,307	—	—	—	134,172,307
Other financial liabilities traded but not yet settled	—	—	—	8,296	8,296
Other payables to clearing members	25,191,350	—	—	—	25,191,350
Total financial liabilities of the CCP clearing business	**159,363,657**	**—**	**—**	**7,495,027**	**166,858,684**
Borrowings (non-current)	3,027,161	—	—	—	3,027,161
Lease liabilities (non-current)	21,648	—	—	—	21,648
Borrowings (current)	17,370	—	—	—	17,370
Derivative financial instruments	—	—	—	19	19
Lease liabilities (current)	28,466	—	—	—	28,466
Other current financial liabilities	—	—	—	—	—
Trade and other payables	396,287	—	—	—	396,287
Total	**162,854,589**	**—**	**—**	**7,495,046**	**170,349,635**

The nature and composition of the CCP clearing business assets and liabilities are explained in the accounting policies section in Note 3.

In thousands of euros	Amortised cost	FVOCI equity instruments	FVOCI debt instruments	FVPL	Total
	As at 31 December 2021				
Financial assets					
CCP trading assets at fair value	—	—	—	11,123,682	11,123,682
Assets under repurchase transactions	105,638,953	—	—	—	105,638,953
Other financial assets traded but not yet settled	—	—	—	4,126	4,126
Debt instruments at fair value through OCI	—	—	4,460,408	—	4,460,408
Other instruments held at fair value	—	—	—	1,190	1,190
Other receivables from clearing members	5,857,349	—	—	—	5,857,349
Cash and cash equivalents of clearing members	10,665,176	—	—	—	10,665,176
Total financial assets of the CCP clearing business	**122,161,478**	**—**	**4,460,408**	**11,128,998**	**137,750,884**
Financial assets at fair value through OCI	—	207,693	50,375	—	258,068
Financial assets at amortised cost	2,902	—	—	—	2,902
Trade and other receivables	394,986	—	—	—	394,986
Derivative financial instruments	—	—	—	11,913	11,913
Other current financial assets	50,091	—	107,499	—	157,590
Cash and cash equivalents	804,361	—	—	—	804,361
Total	**123,413,818**	**207,693**	**4,618,282**	**11,140,911**	**139,380,704**
Financial liabilities					
CCP trading liabilities at fair value	—	—	—	11,123,682	11,123,682
Liabilities under repurchase transactions	105,638,953	—	—	—	105,638,953
Other financial liabilities traded but not yet settled	—	—	—	4,126	4,126
Other payables to clearing members	20,965,642	—	—	—	20,965,642
Total financial liabilities of the CCP clearing business	**126,604,595**	**—**	**—**	**11,127,808**	**137,732,403**
Borrowings (non-current)	3,044,391	—	—	—	3,044,391
Lease liabilities (non-current)	50,691	—	—	—	50,691
Borrowings (current)	17,359	—	—	—	17,359
Derivative financial instruments	—	—	—	—	—
Lease liabilities (current)	20,993	—	—	—	20,993
Other current financial liabilities	—	—	—	—	—
Trade and other payables	439,856	—	—	—	439,856
Total	**130,177,885**	**—**	**—**	**11,127,808**	**141,305,693**

The Group's exposure to various risks associated with the financial instruments is discussed in Note 37. The maximum exposure to credit risk at the end of the reporting period is the carrying amount of each class of financial assets mentioned above.

35.2 Fair value measurement

35.2.1 Fair value hierarchy

The table below analyses financial instrument carried at fair value, by valuation method. The different levels have been defined as follows:

- Level 1: quoted prices in active markets for identical assets or liabilities
- Level 2: inputs that are based on observable market data, directly or indirectly
- Level 3: unobservable inputs

In thousands of euros	Level 1	Level 2	Level 3	Total
As at 31 December 2022				
Assets				
Financial assets at FVOCI				
Unlisted equity securities	—	—	249,718	249,718
Quoted debt instruments	123,999	—	—	123,999
Quoted debt instruments of CCP clearing business	1,753,811	—	—	1,753,811
Financial assets at FVPL				
Derivative instruments of CCP clearing business	7,486,731	—	—	7,486,731
Other instruments of CCP clearing business	20,610	—	—	20,610
Total assets	**9,385,151**	**—**	**249,718**	**9,634,869**
Liabilities				
Financial liabilities at FVPL				
Derivative instruments of CCP clearing business	7,486,731	—	—	7,486,731
Other instruments of CCP clearing business	8,296	—	—	8,296
Other derivative instruments (a)	—	19	—	19
Total liabilities	**7,495,027**	**19**	**—**	**7,495,046**

(a) Including foreign exchange spot transactions of €19k in Nord Pool

As at 31 December 2021				
Assets				
Financial assets at FVOCI				
Unlisted equity securities	—	—	207,693	207,693
Quoted debt instruments	157,874	—	—	157,874
Quoted debt instruments of CCP clearing business	4,460,408	—	—	4,460,408
Financial assets at FVPL				
Hedging derivatives - interest rate swaps (a)	—	11,913	—	11,913
Derivative instruments of CCP clearing business	11,123,682	—	—	11,123,682
Other instruments of CCP clearing business	5,316	—	—	5,316
Total assets	**15,747,280**	**11,913**	**207,693**	**15,966,886**
Liabilities				
Financial liabilities at FVPL				
Derivative instruments of CCP clearing business	11,123,682	—	—	11,123,682
Other instruments of CCP clearing business	4,126	—	—	4,126
Total liabilities	**11,127,808**	**—**	**—**	**11,127,808**

(a) Including foreign exchange spot transactions of €12k in Nord Pool

The Group's policy is to recognise transfers into and transfers out of fair value hierarchy levels at the end of the reporting period. There were no transfers between the levels of fair value hierarchy in 2022 and 2021. The Group did not measure any financial assets or financial liabilities at fair value on a non-recurring basis as at 31 December 2022.

35.2.2. Fair value measurements using quoted prices in active markets for identical assets or liabilities (level 1)

The quoted debt instruments primarily relate to investments in listed bonds held by Euronext Securities Copenhagen and Euronext Clearing's own fund investments in government bonds.

The quoted debt instruments of CCP clearing business represent an investment portfolio in predominantly government bonds funded by the margins and default funds deposited by members of the CCP clearing business.

The derivative instruments of CCP clearing business comprise open transactions not settled at the reporting date on the derivatives market in which Euronext Clearing operates as a central counterparty. The other instruments of CCP clearing business include clearing member trading balances for equity and debt instruments that are marked to market on a daily basis.

Fair values of the instruments mentioned above are determined by reference to published price quotations in an active market.

35.2.3. Fair value measurements using observable market data, directly or indirectly (level 2)

The fair value of interest rate swaps was calculated as the present value of the estimated future net cash flows based on observable yield curves at the reporting date.

35.2.4. Fair value measurements using unobservable inputs (level 3)

The following table presents the changes in level 3 instruments for the period ended 31 December 2022:

In thousands of euros	Unlisted equity securities	Contingent consideration payables	Redemption liability	Total
As at 31 December 2020	**204,506**	**(521)**	**—**	**203,985**
Revaluations recognised in OCI	2,995	—	—	2,995
Revaluations recognised in P&L	—	—	—	—
Additions	—	—	—	—
Payments	—	521	—	521
Acquisitions / (incurrences)	—	—	—	—
Exchange differences and other	192	—	—	192
As at 31 December 2021	**207,693**	**—**	**—**	**207,693**
Revaluations recognised in OCI	42,054	—	—	42,054
Revaluations recognised in P&L	—	—	—	—
Additions	—	—	—	—
Payments	—	—	—	—
Acquisitions / (incurrences)	—	—	—	—
Exchange differences and other	(29)	—	—	(29)
As at 31 December 2022	**249,718**	**—**	**—**	**249,718**

Valuation process

Concerning the valuation process for fair value measurement categorised within level 3 of the fair value hierarchy, the Group's central treasury department collects and validates the available level 3 inputs and performs the valuation according to the Group's valuation methodology for each reporting period. The fair value estimates are discussed with-, and challenged by the Group Finance Director and the Chief Financial Officer. Periodically the values of investments categorised in "level 3" are validated by staff with extensive knowledge of the industry in which the invested companies operate. Although valuation techniques are applied consistently as a principle, Management, upon advice from the Group's valuation experts, may decide to replace a valuation technique if such a change would improve the quality or the reliability of the valuation process.

Unlisted equity securities in Euroclear S.A./N.V. and Sicovam Holding S.A.

For measuring fair value of its long-term investments in unlisted equity securities in Euroclear S.A/N.V. and Sicovam Holding S.A., the Group applied applied a weighted approach, using both the Gordon Growth Model (with return on equity and expected dividend growth rate as key non-observable parameters) and recent observed market transactions taking into account an illiquidity discount for the limited number of transactions. In addition, for measuring the fair value of Sicovam Holding S.A, the Group applied an illiquidity discount as an unobservable input for which a sensitivity impact of +10%/(-10%) would amount to a decrease or (increase) of €8.2 million in the fair value (2021: €6.6 million). More information on the investments is further disclosed in Note 20.

The key assumptions used in the Gordon Growth Model valuation model are shown in the tables below. The sensitivity analysis shows the impact on fair value using the most favorable combination (increase), or least favorable combination (decrease) of the unobservable inputs per investment in unlisted equity securities.

2022:

In thousands of euros	Fair value at 31 December 2022	Unobservable inputs *)	Range of inputs (probability-weighted average)	Relationship of unobservable inputs to fair value	
				Increase	**decrease**
Euroclear S.A./N.V.	175,888	Return on equity	9.2% - 10.2% (9.7%)	4,563	(5,039)
		Expected dividend growth rate	0.5% - 1.5% (1.0%)		
Sicovam Holding S.A.	73,483	Return on equity	9.2% - 10.2% (9.7%)	1,775	(1,960)
		Expected dividend growth rate	0.5% - 1.5% (1.0%)		

**) There were no significant inter-relationships between unobservable inputs that materially affect fair value*

2021:

In thousands of euros	Fair value at 31 December 2020	Unobservable inputs *)	Range of inputs (probability-weighted average)	Relationship of unobservable inputs to fair value	
				Increase	decrease
Euroclear S.A./N.V.	148,256	Return on equity	8.5% - 9.5% (9.0%)	4,748	(5,488)
		Expected dividend growth rate	0.5% - 1.5% (1.0%)		
Sicovam Holding S.A.	59,083	Return on equity	8.5% - 9.5% (9.0%)	1,779	(2,202)
		Expected dividend growth rate	0.5% - 1.5% (1.0%)		

**) There were no significant inter-relationships between unobservable inputs that materially affect fair value*

Contingent consideration payables and redemption liability

The contingent consideration payable of €0.5 million related to Black Woodpecker Software was paid in full in 2021.

35.2.5. Fair values of other financial instruments

The Group also has a number of financial instruments which are not measured at fair value in the balance sheet. For these instruments the fair values approximate their carrying amounts.

As per 31 December 2022, trade and other receivables included €70.3 million (2021: €116.5 million) of Nord Pool power sales positions and trade and other payables included €116.3 million (2021: €188.6 million) of Nord Pool power purchases positions.

35.3. Net Treasury Income through CCP business by classification

For the year ended 31 December 2022, net treasury income through CCP clearing business is earned from instruments held at amortised cost or fair value as follows:

- A total €55.3 million gain was earned from financial assets and financial liabilities held at amortised cost (€28.6 million from interest income on liabilities held at amortised cost and €26.7 million on interest expenses on assets held at amortized cost). In 2021, a net €43.6 million was earned from financial assets and financial liabilities held at amortised cost (€93.1 million income and €49.5 million expense).
- A net €11.3 million loss (2021: €8.2 million loss) was incurred from assets held at fair value (€32.3 million income and €43.6 million expense (2021: €30.1 million income and €38.3 million expense)).
- In addition, a revaluation loss of €48.9 million was incurred, following a one–off partial disposal of the debt investment portfolio held at Euronext Clearing. The Group recycled the related loss from Other Comprehensive Income to net treasury income.

35.4. Offsetting within clearing member balances

CCP clearing business financial assets and liabilities are offset and only the net amount is presented in the consolidated balance sheet when there is a legally enforceable right to offset the recognised amounts and there is an intention to settle on a net basis or to realise the asset and settle the liability simultaneously.

The following table shows the offsetting breakdown by products:

	As at 31 December 2022		
In thousands of euros	Gross amounts	Amount offset	Net amount as reported
Derivative financial asset	22,371,041	(14,884,310)	7,486,731
Reverse repurchase agreements	145,460,677	(11,288,370)	134,172,307
Other	17,777	(9,481)	8,296
Total assets	**167,849,495**	**(26,182,161)**	**141,667,334**
Derivative financial liabilities	(22,371,041)	14,884,310	(7,486,731)
Reverse repurchase agreements	(145,460,677)	11,288,370	(134,172,307)
Other	(17,777)	9,481	(8,296)
Total liabilities	**(167,849,495)**	**26,182,161**	**(141,667,334)**

In thousands of euros	31 December 2021 Gross amounts	Amount offset	Net amount as reported
Derivative financial asset	24,913,656	(13,789,974)	11,123,682
Reverse repurchase agreements	118,785,865	(13,146,912)	105,638,953
Other	7,362	(3,236)	4,126
Total assets	**143,706,883**	**(26,940,122)**	**116,766,761**
Derivative financial liabilities	(24,913,656)	13,789,974	(11,123,682)
Reverse repurchase agreements	(118,785,865)	13,146,912	(105,638,953)
Other	(7,362)	3,236	(4,126)
Total liabilities	**(143,706,883)**	**26,940,122**	**(116,766,761)**

Note 36. Related parties

36.1. Transactions with related parties

The Group has related party relationships with its associates and joint ventures (as described in Note 7). Transactions with associates and joint ventures are generally conducted with terms equivalent to arm's length transactions. Transactions between subsidiaries are not included in the description as these are eliminated in the Consolidated Financial Statements. The interests in Group Companies are set out in Note 4.

The transactions with related parties and outstanding year-end balances are reported in the tables below:

In thousands of euros	2022	2021
Sales to related parties	83,515	88,642
Purchases from related parties	36,818	34,535

In thousands of euros	As at 31 December 2022	As at 31 December 2021
Receivables from related parties	3,925	4,287
Payables to related parties	600	227

Euronext Clearing has an interoperability agreement in place with associate LCH SA, covering trades in Italian Government bonds executed on MTS markets. No cross-charges of revenue or expenses are recognized in connection with this agreement.

36.2. Key management remuneration

The other related parties disclosure relates entirely to the key management of Euronext, being represented by the company's Managing Board and Supervisory Board.

The compensation expense recognised for key management is as follows:

In thousands of euros	2022 Managing Board	Supervisory Board	Total
Short term benefits	(6,947)	(1,245)	(8,192)
Share-based payment costs (a)	(3,810)	—	(3,810)
Post-employment benefits	(180)	—	(180)
Termination benefits	—	—	—
Total benefits	**(10,937)**	**(1,245)**	**(12,182)**

(a) Share based payments costs are recognised in accordance with IFRS 2.

In thousands of euros	2021 Managing Board	Supervisory Board	Total
Short term benefits	(6,840)	(992)	(7,832)
Share-based payment costs (a)	(3,896)	—	(3,896)
Post-employment benefits	(169)	—	(169)
Termination benefits	—	—	—
Total benefits	**(10,905)**	**(992)**	**(11,897)**

(a) Share based payments costs are recognised in accordance with IFRS 2.

Note 37. Financial risk management

As a result of its operating and financing activities, the Group is exposed to market risks such as interest rate risk, currency risk and credit risk. The Group has implemented policies and procedures designed to measure, manage, monitor and report risk exposures, which are regularly reviewed by the appropriate management and supervisory bodies. The Group's central treasury team is charged with identifying risk exposures and monitoring and managing such risks on a daily basis. To the extent necessary and permitted by local regulation, the Group's subsidiaries centralise their cash investments, report their risks and hedge their exposures in coordination with the Group's central treasury team. The Group performs sensitivity analyses to determine the effects that may result from market risk exposures. The Group uses derivative instruments solely to hedge financial risks related to its financial position or risks that are otherwise incurred in the normal course of its commercial activities. The Group does not use derivative instruments for speculative purposes.

37.1 Liquidity risk

The Group would be exposed to a liquidity risk in the case where its short-term liabilities become, at any date, higher than its cash, cash equivalents, short-term financial investments and available bank facilities and in the case where the Group is not able to refinance this liquidity deficit, for example, through new banking lines.

Cash, cash equivalents and short-term financial investments are managed as a global treasury portfolio invested in non-speculative financial instruments, readily convertible to cash, such as bank balances, money market funds, overnight deposits, term deposits and other money market instruments, thus ensuring a very high liquidity of the financial assets. The Group's policy is to ensure that cash, cash equivalents and available bank facilities allow the Group to repay its financial liabilities at all maturities, even disregarding incoming cash flows generated by operational activities, excluding the related party loans granted by the Group's subsidiaries to its Parent.

The net position of current financial assets, financial liabilities and available credit facilities, excluding working capital items, as of 31 December, 2022 and 2021 is described in the table below:

In thousands of euros	2022	2021
Cash cash equivalents and short term investments	1,163,822	804,361
Available revolving credit facility (RCF)	600,000	600,000
Financial debt (long term and short term borrowings)	(3,044,531)	(3,061,750)
Net position	**(1,280,709)**	**(1,657,389)**

The Group has a €600 million revolving credit facility (2021: €600 million) that can be used for general corporate or M&A purposes (see Note 29). As of 31 December 2022, the Group did not have any amounts drawn under the facility.

The Group reviews its liquidity and debt positions on an ongoing basis, and subject to market conditions and strategic considerations, may from time to time re-examine the debt structure of its debt and modify the maturity profile and the sources of financing. The Group is able to support short term liquidity and operating needs through existing cash balance and its strong ability to generate adequate cash flow. The Group has generally access to debts markets, including bank facilities, and may be able to obtain additional debt or other sources of financing to finance its strategic development, provided that its financial risk profile allows it to do so.

The table below summarises the maturity profile of the Group's financial liabilities based on contractual undiscounted payments, including principal - and interest amounts, expected throughout the life of the obligations:

In thousands of euros	Maturity < 1 year	Maturity between 1 and 5 years	Maturity > 5 years	Total
2022				
Trade and other payables	396,287	—	—	396,287
Borrowings	27,688	1,191,563	2,119,313	3,338,564
Lease liabilities	28,466	19,583	2,065	50,114
2021				
Trade and other payables	439,856	—	—	439,856
Borrowings	27,688	1,205,750	2,132,813	3,366,251
Lease liabilities	20,993	44,634	6,058	71,685

Liquidity risk - CCP clearing business

The Group's CCP must maintain a level of liquidity (consistent with regulatory requirements) to ensure the smooth operation of its respective markets and to maintain operations in the event of a single or multiple market stress event or member failure. This includes the potential requirement to liquidate the position of a clearing member under a default scenario including covering the associated losses and the settlement obligations of the defaulting member.

The Group's CCP maintains sufficient cash and cash equivalents and has access to intraday central bank refinancing (collateralized with ECB eligible bonds) along with commercial bank credit lines to meet in a timely manner its payment obligations. As at 31 December 2022, the Group's CCP had €420 million (2021: €420 million) credit lines granted by commercial banks serving as liquid recourse to mitigate liquidity risks according to EMIR regulation. None of the credit lines had been used as of 31 December 2022.

Revised regulations requires the CCP to ensure that appropriate levels of back-up liquidity are in place to underpin the dynamics of a largely secured cash investment requirement, ensuring that the maximum potential outflow under extreme market conditions is covered (see credit risk section). The Group's CCP monitors its liquidity needs daily under normal and stressed market conditions. Where possible, the Group employs guaranteed delivery versus payment settlement techniques and manages CCP margin and default fund flows through central bank or long-established, bespoke commercial bank settlement mechanisms. Monies due from clearing members remain the clearing members' liability if the payment agent is unable to effect the appropriate transfer. In addition, the Group's CCP maintains operational facilities with commercial banks to manage intraday and overnight liquidity.

In line with the investment policy and the regulatory requirements, the Group's CCP has partially invested the default funds and margin in government bonds, with an average maturity of around 12 months as per 31 December 2022. Even though these financial assets are generally held to maturity, a forced liquidation of the investment portfolio could lead to losses and lack of required liquidity.

In thousands of euros	**Maturity < 1 year**	**Maturity between 1 and 2 years**	**Maturity between 2 and 3 years**	**Total**
2022				
Investment portfolio	1,753,811	—	—	1,753,811
2021				
Investment portfolio	2,721,944	533,790	1,204,674	4,460,408

The table below analyses the Group's CCP financial liabilities into relevant maturity groupings based on the remaining period from the balance sheet date to the contractual maturity date. The amounts disclosed in the table reflect the contractual undiscounted cash flows.

In thousands of euros	**Maturity < 1 year**	**Maturity between 1 and 5 years**	**Maturity > 5 years**	**Total**
2022				
CCP clearing member liabilities	166,858,684	—	—	166,858,684
2021				
CCP clearing member liabilities	137,732,403	—	—	137,732,403

37.2 Interest rate risk

Substantially all interest-bearing financial assets and liabilities of the Group are either based on floating rates or based on fixed rates with an interest term of less than one year, except for the fixed rated Bonds #1 to #5, which have maturities between 5 and 20 years (see Note 29). The Group entered into interest rate swap contracts in order to hedge the interest rate risk inherent to the fixed rate Bond #1. As a result, the Group is exposed to fair value risk affecting fixed-rate financial assets and liabilities through its remaining fixed rate Bonds #2 to #5. On 3 May 2022, the Group terminated its fixed-to-floating interest rate swap agreements (at an aggregated notional of €500 million) in relation to the fair value hedge of the €500 million Bond #1 (see Note 23).

As at 31 December 2022 and 2021 the interest rate exposure of the Company was as follows:

Currency	Position in EUR		Positions in GBP		Positions in USD		Positions in NOK		Positions in DKK	
Type of rate and maturity *In thousands of euro*	Floating rate with maturity < 1 year	Floating rate with maturity > 1 year	Floating rate with maturity < 1 year	Floating rate with maturity > 1 year	Floating rate with maturity < 1 year	Floating rate with maturity > 1 year	Floating rate with maturity < 1 year	Floating rate with maturity > 1 year	Floating rate with maturity < 1 year	Floating rate with maturity > 1 year
2022										
Interest bearing financial assets (a)	620,734	216	44,557	—	23,749	—	100,312	—	40,540	—
Interest bearing financial liabilities	(8)	—	—	—	—	—	—	—	—	—
Net position before hedging		216	44,557	—	23,749	—	100,312	—	40,540	—
Net position after hedging	620,726	216	44,557	—	23,749	—	100,312	—	40,540	—
2021										
Interest bearing financial assets (a)	489,850	17,434	18,251	—	21,340	—	109,619	—	29,177	—
Interest bearing financial liabilities	—	38,738	112	—	15	—	31,611	—	—	—
Net position before hedging	489,850	(21,304)	18,139	—	21,325	—	78,008	—	29,177	—
Net position after hedging	501,898	(521,305)	18,139	—	21,326	—	78,007	—	29,177	—

Currency	Position in EUR		Positions in GBP		Positions in USD		Positions in NOK		Positions in DKK	
Type of rate and maturity ***In thousands of euro***	Fixed rate with maturity < 1 year	Fixed rate with maturity > 1 year	Fixed rate with maturity < 1 year	Fixed rate with maturity > 1 year	Fixed rate with maturity < 1 year	Fixed rate with maturity > 1 year	Fixed rate with maturity < 1 year	Fixed rate with maturity > 1 year	Fixed rate with maturity < 1 year	Fixed rate with maturity > 1 year
2022										
Interest bearing financial assets (a)	248,226	—	5,657	—	29,105	—	57,242	—	25,953	—
Interest bearing financial liabilities	17,362	3,027,161	—	—	—	—	—	—	—	—
Net position before hedging	230,864	(3,027,161)	5,657	—	29,105	—	57,242	—	25,953	—
Net position after hedging	230,864	(3,027,161)	5,657	—	29,105	—	57,242	—	25,953	—
2021										
Interest bearing financial assets (a)	212,084	—	48,082	—	23,058	—	68,862	—	34,779	—
Interest bearing financial liabilities	17,359	3,033,255	—	—	—	—	—	—	—	—
Net position before hedging	194,725	(3,033,255)	48,082	—	23,058	—	68,862	—	34,779	—
Net position after hedging	186,909	(2,544,391)	48,082	—	23,058	—	68,862	—	34,779	—

(a) Includes cash and cash equivalents and non-current financial assets at amortised cost.

The Group is exposed to cash-flow risk arising from net floating-rate positions.

The Group was a net borrower in Euros exposed to fixed interest rates and a net lender in Euros exposed to floating rates at 31 December 2021 and 2022. Therefore, the sensitivity of net interest income to a parallel shift in the interest curves is that a 0.5% increase/decrease of the rate would have resulted in an increase/decrease of net interest income of €3.1 million based on the positions at 31 December 2022 (2021: nil).

The Group was a net lender in Pound Sterling at 31 December 2022 and 2021. The sensitivity of net interest income to a parallel shift in the interest curves is that a 0.5% increase/decrease of the rate would have resulted in an increase/decrease of net interest income of €0.2 million based on the positions at 31 December 2022 (2021: nil).

The Group was a net lender in US Dollar at 31 December 2022 and 2021. The sensitivity of net interest income to a parallel shift in the interest curves is that a 0.5% increase/decrease of the rate would have resulted in an increase/decrease of net interest income of €0.1 million based on the positions at 31 December 2022 (2021: nil).

The Group was a net lender in Norwegian Kroner at 31 December 2022 and 2021. The sensitivity of net interest income to a parallel shift in the interest curves is that a 0.5% increase/decrease of the rate would have resulted in an increase/decrease of net interest income of €0.5 million based on the positions at 31 December 2022 (2021: €0.4 million).

The fluctuation of the DKK against the EUR is set within the bandwidth +/-2.25% as an exchange rate mechanism established by the Denmark's Nationalbank. Therefore, currency risk sensitivity inherent to the Group exposure to that currency is deemed to be irrelevant.

Interest rate risk - CCP clearing business

The Group's CCP faces interest rate exposure through the impact of changes in the reference rates used to calculate member liabilities versus the yields achieved through their predominantly secured investment activities.

In the Group's CCP, interest bearing assets are generally invested in secured instruments or structures and for a longer term than interest bearing liabilities, whose interest rate is reset daily. This makes investment revenue vulnerable to volatility in overnight rates and shifts in spreads between overnight and term rates. On daily basis the interest rate risk associated to investments is monitored via capital requirements.

The Group's CCP has an investment policy, mitigating market risks. The Group's CCP investments have an average duration of around one year and are generally held until maturity. Losses will not materialise unless the investment portfolio is liquidated before maturity or in an event of portfolio rebalancing before maturity. In case of a forced liquidation of the CCP's financial investment portfolio before maturity to provide necessary liquidity, the CCP may face higher interest rate exposure on its financial investment portfolio. The interest rate exposure of the investment portfolio is predominantly at fixed rates (only a negligible part is at floating rates) at the amounts and maturities as disclosed in Note 37.1. As per 31 December 2022, an increase/decrease of the rate by 100 basis points would have an increasing/decreasing impact on the investment portfolio market value of €3.8 million or 0.20% (2021: €47 million or 1.03%).

37.3 Currency risk

Foreign currency translation risk:

The Group's net assets are exposed to the foreign currency risk arising from the translation of assets and liabilities of subsidiaries with functional currencies other than the euro. The following table summarises the assets and liabilities recorded in respectively GBP, USD and NOK functional currency and the related impact of a 10% in/decrease in the currency exchange rate on balance sheet:

In thousands		2022		2021
Assets	£	71,760	£	85,603
Liabilities	£	(12,465)	£	(11,243)
Net currency position	**£**	**59,295**	**£**	**74,360**
Net currency position after hedge	**£**	**59,295**	**£**	**74,360**
Absolute impact on equity of 10% in/decrease in the currency exchange rate	**€**	**6,697**	**€**	**8,838**

In thousands		2022		2021
Assets	$	203,405	$	194,921
Liabilities	$	(11,231)	$	(9,506)
Net currency position	**$**	**192,174**	**$**	**185,415**
Absolute impact on equity of 10% in/decrease in the currency exchange rate	**€**	**17,952**	**€**	**16,307**

In thousands		2022		2021
Assets	kr	10,753,715	kr	11,920,093
Liabilities	kr	(2,493,787)	kr	(3,599,549)
Net currency position	**kr**	**8,259,928**	**kr**	**8,320,544**
Absolute impact on equity of 10% in/decrease in the currency exchange rate	**€**	**78,670**	**€**	**83,003**

Most operating revenue and expenses in the various subsidiaries of the Group are denominated in the functional currency of each relevant subsidiary. The Group's consolidated income statement is exposed to foreign currency risk arising from receivables and payables denominated in currencies different from the functional currency of the related entity.

The Group's general policy is not to hedge foreign exchange risk related to its net investments in foreign currency. However, the Group may use derivatives instruments designated as hedge of net investment or foreign denominated debt to manage its net Investment exposures. The decision to hedge the exposure is considered on a case by case basis since the Group is generally exposed to major, well established and liquid currencies. The Group would, by the same token, hedge transaction risk arising from cash flows paid or received in a currency different from the functional currency of the group contracting entity on a case by case basis.

37.4. Equity Market risk

The Group's investment in publicly traded equity securities was insignificant in 2022 and 2021. The Group's investments in non-publicly traded equity securities are disclosed in Note 20.

37.5. Credit risk

The Group is exposed to credit risk in the event of a counterparty's default. The Group is exposed to credit risk from its operating activities (primarily trade receivables), from its financing activities and from the investment of its cash and cash equivalents and short-term financial investments. The Group limits its exposure to credit risk by rigorously selecting the counterparties with which it executes agreements. Most customers of the Group are leading financial institutions that are highly rated. Investments of cash and cash equivalents in bank current accounts and money market instruments, such as short-term fixed and floating rate interest deposits, are governed by rules aimed at reducing credit risk: maturity of deposits strictly depends on credit ratings, counterparties' credit ratings are permanently monitored and individual counterparty limits are reviewed on a regular basis. In addition to the intrinsic creditworthiness of counterparties, the Group's policies also prescribe the diversification of counterparties (banks, financial institutions, funds) so as to avoid a concentration of risk. Derivatives are negotiated with leading high-grade bank.

Credit risk - CCP clearing business

In its role as CCP clearer to financial market participants, the Group's CCP guarantees final settlement of transactions acting as buyer towards each seller and as seller towards each buyer. It manages substantial credit risks as part of its operations including unmatched risk positions that might arise from the default of a party to a cleared transaction.

Clearing membership selection is based upon supervisory capital, technical and organisational criteria. Each member must pay margins, computed and collected at least daily, to cover the exposures and theoretical costs which the CCP might incur in order to close out open positions in the event of the member's default. Margins are calculated using established and internationally acknowledged risk models and are debited from participants' accounts through central bank accounts and via commercial bank payment systems. Minimum levels of cash collateral are required. Non-cash collateral is revalued daily but the members retain title of the asset and the Group only has a claim on these assets in the event of a default by the member.

Clearing members also contribute to default funds managed by the CCP to guarantee the integrity of the markets in the event of multiple defaults in extreme market circumstances. Amounts are determined on the basis of the results of periodic stress testing examined by the risk committees of the CCP. Furthermore, the Group's CCP reinforces its capital position to meet the most stringent relevant regulatory requirements applicable to it, including holding a minimum amount of dedicated own resources to further underpin the protective credit risk framework in the event of a significant market stress event or participant failure.

An analysis of the aggregate clearing member contributions of margin and default funds across the CCP is shown below:

In thousands of euros	**31 December 2022**	**31 December 2021**
Total collateral pledged		
Margin received in cash	17,777,769	12,148,577
Margin received by title transfer	625,779	798,186
Default fund total	5,909,844	6,910,839
Total on balance sheet collateral (a)	**24,313,392**	**19,857,602**
Total member collateral pledged	**24,313,392**	**19,857,602**

(a) *The counterbalance of the total on balance sheet collateral is included in the line 'other payables to clearing members' in the table at Note 35.1*

Investment counterparty risk for CCP margin and default funds is managed by investing the cash element in instruments or structures deemed 'secure', including through direct investments in highly rated, 'regulatory qualifying' sovereign bonds and supra-national debt, investments in tri-party and bilateral reverse repos (receiving high-quality government securities as collateral) in certain jurisdictions and deposits with the central bank of Italy. The small proportion of cash that is invested unsecured is placed for short durations with highly rated counterparties where strict limits are applied with respect to credit quality, concentration and tenor.

In thousands of euros	**31 December 2022**	**31 December 2021**
Investment portfolio	1,753,811	4,460,408
CCP other financial assets (a)	**1,753,811**	**4,460,408**
Clearing member cash equivalents - short term deposits	10,011	175,378
Clearing member cash - central bank deposits	13,601,918	10,479,680
Clearing member cash - other banks	1,800	10,118
Total clearing member cash (b)	**13,613,729**	**10,665,176**

(a) *The CCP other financial assets are included in the line 'Debt instruments at fair value through other comprehensive income' in the table at Note 35.1.*

(b) *The total clearing member cash is included in the line 'Cash and cash equivalents of clearing members'' in the table at Note 35.1.*

Distress can result from the risk that certain governments may be unable or find it difficult to service their debts. This could have adverse effects, particularly on the Group's CCP, potentially impacting cleared products, margin collateral, investments, the clearing membership and the financial industry as a whole.

Specific risk frameworks manage country risk for both fixed income clearing and margin collateral and all clearing members' portfolios are monitored regularly against a suite of sovereign stress scenarios. Investment limits and counterparty and clearing membership monitoring are sensitive to changes in ratings and other financial market indicators, to ensure the Group's CCP is able to measure, monitor and mitigate exposures to sovereign risk and respond quickly to anticipated changes. Risk Committees maintain an ongoing watch over these risks and the associated policy frameworks to protect the Group against potentially severe volatility in the sovereign debt markets. The Group's sovereign exposures at the end of the financial reporting period were:

In thousands of euros	31 December 2022	31 December 2021
Sovereign investments		
Italy	392,962	2,124,637
Spain	609,319	976,955
EU Central (a)	144,737	684,495
Portugal	389,740	677,301
France	166,099	118,289
Germany	14,950	53,789
Ireland	—	—
Netherlands	16,112	320
Belgium	29,903	—
Total for all countries (b)	**1,763,822**	**4,635,786**

(a) 'EU Central' consists of supra-national debts.
(b) The total sovereign investments include the investment portfolio of CCP clearing business assets as disclosed in the line 'Debt instruments at fair value through other comprehensive income' in the table at Note 35.1.

37.5.1 Impairment of financial assets

The Group's trade and contract receivables and other debt financial assets at amortised cost or FVOCI (including CCP clearing business) are subject to the expected credit loss model. While cash and cash equivalents are also subject to the impairment requirements of IFRS 9, the identified impairment loss was considered immaterial.

Trade and contract receivables

The Group applies the IFRS 9 simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all trade and contract receivables.

To measure expected credit losses, trade and contract receivables have been grouped based on shared credit risk characteristics and the days past due. The historical loss rates are based on the payment profiles of the sales over a period of 24 months before reporting date and the corresponding historical credit losses experience within this period. The historical loss rates are adjusted to reflect current and forward-looking factors specific to the debtors and economic environment. Generally trade receivables are written-off if past due more than one year, or when there is no reasonable expectation of recovery. The maximum exposure to credit risk at the reporting date is the carrying value of each class of financial assets disclosed in Note 21. The Group evaluates the concentration of credit risk with respect to trade and contract receivables as low, as most of its customers are leading financial institutions that are highly rated.

Set out below is the information about the credit risk exposure on the Group's trade and contract receivables using a provision matrix as at 31 December 2022 and 2021:

31 December 2022:

In thousands of euros	Contract Receivables	Trade receivables				Total
		Current	30-60 days past due	61-90 days past due	> 91 days past due	
Expected credit loss rate	0.07 %	0.07 %	0.28 %	0.67 %	1.78 %	
Collectively assessed receivables	32,096	175,477	35,980	14,215	39,853	297,621
Expected credit loss collective basis	**21**	**115**	**102**	**96**	**710**	**1,044**
Expected credit loss rate	—	—	—	—	100.0 %	
Individually assessed receivables	—	—	—	—	6,304	6,304
Expected credit loss individual basis	**—**	**—**	**—**	**—**	**6,304**	**6,304**
Total expected credit loss	**21**	**115**	**102**	**96**	**7,014**	**7,348**

31 December 2021:

In thousands of euros	Contract Receivables	Trade receivables Current	30-60 days past due	61-90 days past due	> 91 days past due	Total
Expected credit loss rate	0.09 %	0.09 %	0.37 %	0.93 %	2.33 %	
Collectively assessed receivables	24,695	225,173	29,905	8,013	23,663	311,449
Expected credit loss collective basis	**23**	**209**	**110**	**74**	**552**	**968**
Expected credit loss rate	—	—	—	—	100.0 %	
Individually assessed receivables	—	—	—	—	3,972	3,972
Expected credit loss individual basis	**—**	**—**	**—**	**—**	**3,972**	**3,972**
Total expected credit loss	**23**	**209**	**110**	**74**	**4,524**	**4,940**

In 2022, the increase in loss allowance provision was due to a higher customer base in the highest category of days outstanding, which is partly offset by a mathematical reduction in historical loss rates (caused by a decrease in historical credit losses, relative to a higher amount of sales following the inclusion of the full year impact of Borsa Italiana Group). The increase of individually assessed customers related to specific debtors, which showed a significant increase in credit risk.

Other debt financial assets at amortised cost or FVOCI (including CCP clearing business)

The other debt financial assets comprise i) debt investments at amortised cost, which include short-term deposits with a maturity over three months, ii) debt investments at FVOCI, which include investments in listed bonds and government bonds and iii) CCP clearing business financial assets at amortised cost or FVOCI.

The other debt financial assets at amortised cost or FVOCI (including CCP clearing business) are considered to have low credit risk, as the issuers of the instruments have a low risk of default evidenced by their strong capacity to meet their contractual cash flow obligations in the near term. The Group closely monitors its CCP investment portfolio and invests only in government debt and other collateralised instruments where the risk of loss is minimal. There was no increase in credit risk in the year and none of the assets are past due. The loss allowance recognised during the period was therefore limited to 12 months expected credit losses. The Group did not recognise any material provision for expected credit losses on its other debt financial assets at amortised cost or FVOCI (including CCP clearing business) as per 31 December 2022 (2021: not material). The amount of credit-impaired financial assets is considered not significant.

37.6 Capital management

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern, to comply with regulatory requirements and to maintain an optimal capital structure to reduce the cost of capital and provide return to shareholders. Certain entities of the Group are regulated as Exchanges, as Central Securities Depository (CSD) or as Clearing House and are subject to certain statutory regulatory requirements based on their local statutory financial statements and risks. In general, the financial ratios of the Group's subsidiaries significantly exceed the regulatory requirements and they maintain a safety cushion in order to avoid any concern from the regulators.

Euronext N.V. must comply with prudential requirements, as a result of an agreement reached with the Dutch Finance Ministry in May 2016, which are set forth in three pillars:

- A minimum Total Equity level equal of at least € 250 million; and
- The Group shall take care of stable financing. Long-term assets of the Group will be financed with shareholders equity and long term liabilities, to the satisfaction of the AFM; and
- The Group shall have a positive regulatory capital on a consolidated basis. The regulatory capital is calculated according to the following formula: the paid up share capital plus the freely available reserves less the items listed in section 36 of Regulation (EU) no. 575/201. In deviation to mentioned formula, the value of the intangible fixed assets in connection with Mergers and Acquisitions will be deducted in 10 (default) or more (20 for Oslo Børs ASA) equal instalments (grow in period) from the regulatory capital. Considering a consistent dividend policy, the grow in period can be extended if the P/E ratio would exceed 10 times. If the grow in period and the related dividend policy provide for a negative a regulatory capital for a limited number of years of the gown-in period, then this fact will not prevent the execution of the consistent and prudent dividend policy of the Group in those years.

As per 31 December 2022, Euronext N.V. complied with these requirements.

Euronext Amsterdam N.V. is subject to a minimum statutory capital requirement of €730 thousand, shall have a regulatory capital in the amount of 50% of the direct fixed cost of Euronext Amsterdam N.V. during the preceding financial year and in addition the cash and cash equivalents shall be higher than the required minimum regulatory capital to operate as an exchange in the Netherlands. As per 31 December 2022, Euronext Amsterdam N.V. was in compliance with these requirements.

Euronext Brussels SA/NV shall maintain adequate financial resources at its disposal to ensure orderly functioning of the market. The law mentions that FSMA may, by a regulation, set financial ratios for market operators and determine which financial information they are required to provide. At this date, no quantitative requirements has ever been set either by a regulation or by the Financial Authority FSMA.

Euronext Dublin shall at all time hold a minimum level of capital based on the Basic Capital Requirement and the Systematic Capital Add-on and maintain liquid financial assets at least equal to the sum of these two amounts of required capital. As per 31 December 2022, Euronext Dublin complied with these requirements.

Euronext Lisbon S.A. shall maintain minimum statutory share capital of €3.0 million and shall maintain minimum statutory equity of €6.0 million. In addition, Euronext Lisbon's liabilities must not exceed its own funds (basically the amount of equity). As per 31 December 2022, Euronext Lisbon complied with these requirements.

Euronext Paris S.A. shall maintain statutory regulatory equity at no less than 50% of its yearly expenses and a solvency ratio on operational risks at no less than 8%. As per 31 December 2022, Euronext Paris S.A. complied with these requirements.

Interbolsa S.A. shall maintain minimum statutory share capital of €2.75 million and shall maintain minimum statutory equity of €5.5 million. In addition, as a CSD, Interbolsa S.A. shall hold an amount of capital, including retained earnings and reserves, higher or equal to the sum of CSD'S capital requirements. As per 31 December 2022, Interbolsa S.A. complied with these requirements.

VPS ASA shall comply with the capital requirement regulation for CSDs. As such, it shall hold an amount of capital, including retained earnings and reserves, higher or equal to the sum of CSD's capital requirements. As per 31 December 2022, VPS ASA complied with this requirement.

Oslo Børs ASA must maintain an adequate level of primary capital. In this context, primary capital comprises equity after deducting items including intangible assets such as system development costs and deferred tax assets. Although the Norwegian legislation does not stipulate any specific quantitative level of capital requirements, Oslo Børs ASA maintains at all times sufficient liquid assets and capital resources. As per 31 December 2022, Oslo Børs ASA complied with these requirements.

Euronext Markets Singapore Pte Ltd. shall maintain a minimum regulatory capital requirement (a) 18% of its annual operating revenue, (b) 50% of its annual operating costs, and (c) $500,000 restricted cash deposit. As per 31 December 2022, Euronext Markets Singapore Pte Ltd. complied with these requirements.

VP Securities AS shall comply with the capital requirement regulation for CSDs. As such, it shall hold an amount of capital, including retained earnings and reserves, higher or equal to the sum of CSD's capital requirements. As per 31 December 2022, VP Securities AS complied with this requirement.

Borsa Italiana S.p.A must comply with Article 3 of the Italian CONSOB Markets Regulation. As such, it shall maintain 1) a net equity (share capital, reserves and undistributed profits) at least equal to operating costs necessary to cover six months based on the latest audited Financial statements and 2) an amount of liquid assets sufficient to cover estimated potential losses in stressed but plausible market conditions calculated using a risk-based approach which considers operational risks as well as other risks to which the regulated operator might be exposed to. As per 31 December 20212 Borsa Italiana S.p.A. complied with these requirements.

Monte Titoli S.p.A. shall comply with article 47 of the CSDR regulation. As such, it shall hold capital (inclusive of undistributed profits and "Total Capital Requirement" reserves) which, at any time, is sufficient to guarantee that the CSD is adequately protected against operational, legal, custody, investment and commercial risks, so that it may continue to provide services; ensure a liquidation or an orderly restructuring of the activities of the CSD in an adequate period of at least 6 months, in the context of a series of stress scenarios. The capital thus identified must be invested in secured assets in order to comply with the provisions of Article 46 paragraph 4 of the CSDR Regulation. As per 31 December 2022, Monte Titoli S.p.A. complied with this requirement.

Cassa di Compensazione e Garanzia S.p.A. must comply with Article 2 of EMIR based on which it must have capital (including undistributed profits and reserves) which at all times is sufficient to cover the total exposure to the following risks:

- risks relating to the liquidation or restructuring of assets,
- credit, counterparty's and market risks,
- operational and legal risks, and
- business risks.

The capital thus identified must be invested in secured assets for the purpose of complying with Article 47 of EMIR. As per 31 December 2022, Cassa di Compensazione e Garanzia S.p.A. complied with these requirements.

MTS S.p.A. must comply with Article 3 of the Italian CONSOB Markets Regulation. As such, it shall maintain 1) a net equity (share capital, reserves and undistributed profits) at least equal to operating costs necessary to cover six months based on the latest audited Financial statements and 2) an amount of liquid assets sufficient to cover estimated potential losses in stressed but plausible market conditions calculated using a risk-based approach which considers operational risks as well as other risks to which the regulated operator might be exposed to. As per 31 December 2022, MTS S.p.A. complied with these requirements.

37.7 Changes in liabilities arising from financing activities

The changes in liabilities arising from the Group's financing activities in 2022 and 2021 were as follows:

In thousands of euros	Borrowings due within 1 year	Borrowings due after 1 year	Leases due within 1 year	Leases due after 1 year	Total liabilities from financing activity
As at 1 January 2021	**8,243**	**1,272,510**	**15,900**	**35,051**	**1,331,704**
Cash flows	(88,926)	1,781,694	(23,762)	—	1,669,006
Acquisitions	72,855	—	7,955	12,674	93,484
Additions	—	—	3,263	20,017	23,280
Fair Value adjustments	—	(11,136)	—	—	(11,136)
Accrued interest	25,187	—	718	—	25,905
Amortisation and transfer of issue costs	—	1,323	—	—	1,323
Foreign exchange impacts	—	—	159	297	456
Other	—	—	16,760	(17,348)	(588)
As at 31 December 2021	**17,359**	**3,044,391**	**20,993**	**50,691**	**3,133,434**
Cash flows	(29,565)	—	(23,417)	—	(52,982)
Acquisitions	—	—	—	—	—
Additions	—	—	4,797	(2,926)	1,871
Fair Value adjustments	—	(19,091)	—	—	(19,091)
Accrued interest	29,576	—	733	—	30,309
Amortisation and transfer of issue costs	—	1,861	—	—	1,861
Foreign exchange impacts	—	—	(87)	29	(58)
Other	—	—	25,447	(26,146)	(699)
As at 31 December 2022	**17,370**	**3,027,161**	**28,466**	**21,648**	**3,094,645**

The line 'Other' includes the effect of reclassification of non-current portion of lease liabilities to current due to the passage of time.

Note 38. Contingencies

The Group is involved in a number of legal proceedings that have arisen in the ordinary course of our business. Other than as discussed below, management does not expect these pending or threatening legal proceedings to have a significant effect on the Group's financial position or profitability. The outcome of legal proceedings, however, can be extremely difficult to predict and the final outcome may be materially different from managements' expectation.

Euronext Amsterdam Pension Fund

In the court case between Euronext Amsterdam and approximately 120 retired and/or former Euronext Amsterdam employees, united in an association ("VPGE"), the Higher Court ordered Euronext to restore the pension reduction to the VPGE members and to pay for indexation of the VPGE member's pensions on 28 July 2020. Euronext lodged an appeal in Cassation before the Supreme Court on 23 October 2020.

On 29 October 2021, the Attorney General ("Advocaat-Generaal") advised the Supreme Court to annul the decision of the Higher Court and to reject the cross-appeal filed by VPGE. On 23 September 2022, the Supreme Court has overturned the verdict of the Higher Court. The Supreme Court agreed with Euronext's position on all points raised.

In accordance with Dutch procedural rules, the case will now be reverted back to the Higher Court that has to take the final decision, taking into account the verdict of the Supreme Court. The date of this hearing has not yet been announced.

No provision has been booked in connection with this case.

Note 39. Commitments

39.1 Capital commitments

As of 31 December, capital expenditures contracted but not yet incurred were as follows:

In thousands of euros	2022	2021
No later than one year	3,004	11,428
Later than 1 year and no later than 5 years	3,264	1,522
Later than 5 years	—	—
Total	**6,268**	**12,950**

The decrease in capital expenditures contracted was primarily due to the fact that the previous period was impacted by investments made for the data centre in Bergamo and investments made for improvements to the Oslo Børs building.

39.2 Guarantees given

As per 31 December 2022, Euronext N.V. participates in a number of guarantees within the Group (see Note 58).

39.3 Securities held as custodian

In Portugal, Norway, Denmark and Italy, the Group acts as a National Central Securities Depository, operated by respectively Interbolsa, Verdipapirsentralen ASA (VPS), VP Securities AS and Monte Titoli S.p.A.

Interbolsa

As at 31 December 2022, the value of securities kept in custody by Interbolsa amounted to €386 billion (2021: €397 billion) based on the market value of shares and the nominal value of bonds. The procedures of this National Central Securities Depository are focused on the provision of notary services, central maintenance services and settlement securities services, according to the CSDR (Central Securities Depository Regulation). The settlement services, provided through T2S platform, have its risks mitigated mainly by early warning systems. The reconciliation procedures in place mitigate the major risks related to the registration of securities.

VPS

As at 31 December 2022, the value of securities kept in custody by VPS amounted to €744 billion (2021: €762 billion) based on the market value of shares and the nominal value of bonds.

Under the terms of Section 9-1 the Norwegian Central Securities Depository Act of 15 March 2019, VPS is liable for losses that other parties may incur as a result of errors that occur in connection with registration activities. This does not apply if VPS is able to demonstrate that the error was outside VPS' control. The statutory liability according to Section 9-1, first Paragraph, only applies to direct losses and is limited to NOK 500 million for the same error. In case of gross negligence or wilful misconduct these limitations do not apply. For losses that can be attributed to an account operator, VPS is jointly and severally liable with the account operator for NOK 50 million per error. Above this amount, the central securities depository is not liable for losses that can be attributed to an account operator.

Euronext Nordics Holding AS has taken out errors and omissions insurance for the parent company and its subsidiaries, with an annual limit of NOK 1 billion and a deductible of NOK 10 million per claim. VPS shares this insurance with the other companies in the Group up to a limit of NOK 300 million and is the sole insured party for the balance of NOK 700 million. The insurance is subject to a limit of NOK 500 million for any one claim.

VP Securities

As at 31 December 2022, the value of securities kept in custody by VP Securities amounted to €1,443 billion (2021: €1,638 billion) based on the market value of shares and the nominal value of bonds. The procedures of this National Central Securities Depository are focused on the provision of notary services, central maintenance services and settlement securities services, according to the CSDR (Central Securities Depository Regulation). The settlement services, provided through T2S platform, have its risks mitigated mainly by early warning systems. The reconciliation procedures in place mitigate the major risks related to the registration of securities.

Monte Titoli

As at 31 December 2022, the value of securities kept in custody by Monte Titoli amounted to €3,730 billion (2021: €3,635 billion) based on the market value of shares and the nominal value of bonds. The procedures of this National Central Securities Depository are focused on the provision of notary services, central maintenance services and settlement securities services, according to the CSDR (Central Securities Depository Regulation). The settlement services, provided through T2S platform, have its risks mitigated mainly by early warning systems. The reconciliation procedures in place mitigate the major risks related to the registration of securities.

Note 40. Events after the reporting period

The significant events that occurred between 31 December 2022 and the date of this report that could have a material impact on the economic decisions made based on these financial statements are listed below:

Termination of Derivatives Clearing Contract with LCH SA

During the first weeks of January 2023, Euronext local boards decided to terminate the Derivatives Clearing Agreement with LCH SA. On 16 January 2023, a termination notice was sent to LCH SA.

The event creates a present obligation based on conditions that arose after the end of the reporting period and therefore qualifies as a non-adjusting subsequent event.

Therefore, the Group will recognise a provision for the termination fees and migration fees (including indexation) indicated in the agreement of approximately €36.0 million, in the first quarter of 2023. The amount will be due in 2024.

Following the notification of the early termination of the Agreement, LCH Group has the option to buy back Euronext's 11.1% stake in LCH SA. Further communication related to the stake owned by Euronext in LCH SA will be made when appropriate.

Authorisation of Consolidated Financial Statements

Amsterdam, 30 March 2023

Supervisory Board

Piero Novelli *(Chairman)*

Dick Sluimers

Diana Chan

Rika Coppens

Alessandra Ferone

Manuel Ferreira da Silva

Padraic O'Connor

Nathalie Rachou

Olivier Sichel

Morten Thorsrud

Managing Board

Stéphane Boujnah *(CEO and Chairman)*

Chris Topple

Daryl Byrne

Delphine d'Amarzit

Fabrizio Testa

Isabel Ucha

Øivind Amundsen

Simone Huis in 't Veld

Vincent van Dessel

Euronext N.V.

Company Financial Statements

for the year ended

31 December 2022

Company Income Statement

		Year ended	
In thousands of euros	Note	31 December 2022	31 December 2021
Net turnover	42	—	—
Other operating expenses	43	(15,029)	(40,460)
Total operating (loss)		**(15,029)**	**(40,460)**
Income from equity investments	44	9,306	17,330
Other interest income and similar income	44	18,592	45,667
Other interest expenses and similar charges	44	(47,862)	(37,968)
Result before tax		**(34,993)**	**(15,431)**
Tax	45	5,406	629
Share in result of participations	46	467,414	428,146
Net result for the year		**437,827**	**413,344**

The above Company Income Statement should be read in conjunction with the accompanying notes.

Company Balance Sheet

(Before appropriation of profit)

In thousands of euros	Note	As at 31 December 2022	As at 31 December 2021 (Restated (a))	As at 1 January 2021 (Restated (a))
Assets				
Fixed assets				
Investments in consolidated subsidiaries	46	6,237,933	6,419,938	1,892,156
Investments in associates and joint ventures	46	70,562	68,476	68,051
Related party loans	46	459,408	469,869	459,705
Financial assets at fair value through OCI	47	166,349	140,215	137,374
Other non-current financial and other assets	48	1,013	968	5,101
Total financial fixed assets		**6,935,265**	**7,099,466**	**2,562,387**
Total fixed assets		**6,935,265**	**7,099,466**	**2,562,387**
Current assets				
Trade and other receivables	49	250,635	99,559	66,052
Income tax receivable		32,383	33,674	23,570
Related party loans	50	155,754	161,327	100,621
Total receivables		**438,772**	**294,560**	**190,243**
Derivative financial instruments		—	11,901	23,735
Other current financial assets		10,000	—	—
Total securities	51	**10,000**	**11,901**	**23,735**
Cash and cash equivalents	51	**258,464**	**53,509**	**205,467**
Total current assets		**707,236**	**359,970**	**419,445**
Total assets		**7,642,501**	**7,459,436**	**2,981,832**
Shareholders' equity and liabilities				
Shareholders' equity				
Issued capital		171,370	171,370	112,000
Share premium		2,423,428	2,423,428	107,562
Reserve for own shares		(32,836)	(42,778)	(19,867)
Retained earnings		820,358	601,051	499,437
Legal reserves and other		93,820	81,171	44,132
Profit for the year		437,827	413,344	315,484
Total shareholders' equity	52	**3,913,967**	**3,647,586**	**1,058,748**
Long-term liabilities				
Borrowings	53	3,027,161	3,044,391	1,272,510
Deferred tax liabilities		19,202	15,884	12,700
Total long-term liabilities		**3,046,363**	**3,060,275**	**1,285,210**
Short-term liabilities				
Borrowings	53	17,362	17,359	8,227
Related party borrowings	54	241,007	300,275	378,019
Derivative financial instruments		—	—	298
Trade and other payables	55	423,802	433,941	251,330
Total short-term liabilities		**682,171**	**751,575**	**637,874**
Total shareholders' equity and liabilities		**7,642,501**	**7,459,436**	**2,981,832**

(a) See Note 41 for more details regarding the restatement as a result of an error.

The above Company Balance Sheet should be read in conjunction with the accompanying notes.

Notes to the Company Financial Statements

Note 41. Basis of preparation

Euronext N.V. is a Dutch public company with limited liability (*naamloze vennootschap*) which has its registered office in Amsterdam under Chamber of Commerce number 60234520.

The company financial statements of Euronext N.V. (hereafter: the Company) have been prepared in accordance with Part 9, Book 2 of the Dutch Civil Code. In accordance with sub 8 of article 362, Book 2 of the Dutch Civil Code, the company's financial statements are prepared based on the accounting principles of recognition, measurement and determination of profit, as applied in the consolidated financial statements. These principles also include the classification and presentation of financial instruments, being equity instruments or financial liabilities.

In case no other policies are mentioned, refer to the accounting policies as described in the accounting policies in the Consolidated Financial Statements of this Annual report. For an appropriate interpretation, the Company Financial Statements of Euronext N.V. should be read in conjunction with the Consolidated Financial Statements.

Valuation of investments in consolidated subsidiaries

Investments in consolidated subsidiaries are presented at net asset value. Net asset value is based on the measurement of assets, provisions and liabilities and determination of profit based on the principles applied in the consolidated financial statements. If the valuation of a consolidated subsidiary based on the net asset value is negative, it will be stated at nil. If and insofar the Company can be held fully or partially liable for the debts of the consolidated subsidiary, or has the firm intention of enabling the consolidated subsidiary to settle its debts, a provision is recognised for this. In determining the value of consolidated subsidiaries with a negative equity, any non-current loans, issued to the consolidated subsidiary, that should be seen as part of the net investment are taken into account. Non-current loans are considered to be part of the net investment if these loans are not expected to be settled in the near future nor planned to be settled in the near future.

Correction of an error

In the second half of 2022, management discovered that in prior periods some of the Dutch subsidiaries of Euronext N.V. had incorrectly applied article 365, Book 2 of the Dutch Civil Code, and as a result did not recognise a legal reserve for the carrying amount of capitalised development costs.

As the legal reserve for capitalised development costs is restricted for distribution, this can impact the reserve for "non-distributable retained earnings and other reserves regarding subsidiaries" in the company financial statements of Euronext N.V.

Management recalculated the legal reserve for "non-distributable retained earnings and other reserves regarding subsidiaries" and concluded that the reserve was understated for the 2021 and prior financial years.

The error has been corrected by restating each of the affected financial statement line items for the prior periods, as follows:

Impact on company balance sheet (Increase /(decrease)):

In thousands of euros	31 December 2021 (Originally reported)	Increase / (decrease)	31 December 2021 (Restated)	31 December 2020 (Originally reported)	Increase / (decrease)	1 January 2021 (Restated)
Retained Earnings	619,679	(18,628)	**601,051**	517,566	(18,129)	**499,437**
Legal reserves and other	62,543	18,628	**81,171**	26,003	18,129	**44,132**
Total shareholders' equity	**3,647,586**	**—**	**3,647,586**	**1,058,748**	**—**	**1,058,748**

Impact on company statement of changes in equity (Increase /(decrease))

In thousands of euros	Retained Earnings	Non-distributable retained earnings and other reserves by subsidiaries	Total
As at 31 December 2020 (originally reported)	517,566	29,785	1,058,748
Transfers within equity	(18,129)	18,129	—
As at 1 January 2021 (restated)	**499,437**	**47,914**	**1,058,748**
As at 31 December 2021 (originally reported)	619,679	21,721	3,647,586
Transfers within equity	(18,628)	18,628	—
As at 31 December 2021 (restated)	**601,051**	**40,349**	**3,647,586**

There was no impact on the company statement of profit or loss.

Note 42. Net turnover

In thousands of euros	2022	2021
Market Data revenues	188,899	163,709
Recharge of Market Data revenues	(188,899)	(163,709)
Total	—	—

Euronext N.V. receives market data revenues. The subsidiaries charge Euronext N.V. as market data providers.

Euronext N.V. does not charge its subsidiaries a fee for its role of administering the sale of market data to third parties and as such does not recognise a margin on the sales.

Note 43. Other operating expenses

In thousands of euros	2022	2021
Systems and communications	(57)	(192)
Professional services	(3,962)	(33,529)
Other expenses	(11,010)	(6,739)
Total	**(15,029)**	**(40,460)**

In 2022, Professional services includes €1.2 million of acquisition costs (2021: €27.8 million). Other expenses includes €8.7 million of intercompany service recharges (2021: €4.6 million).

Number of employees

Euronext N.V. had no employees during 2022 and 2021. The remuneration of the Supervisory Board is included in other expenses.

Note 44. Financial income and expenses

In thousands of euros	2022	2021
Income from equity investments	9,306	17,330
Interest and similar income	18,592	20,661
Interest and similar expenses	(36,505)	(37,968)
Exchange differences	(11,357)	25,006
Total	**(19,964)**	**25,029**

In 2022, income from equity investments contains the dividend received from Euroclear S.A./ N.V. In 2021, a double dividend was received from Euroclear S.A./ N.V.

Interest and similar income includes €1.5 million (2021: €5.0 million) of income from interest rate swaps entered into by the Group and the interest income on related party loans for €16.6 million in 2021 (2021: €15.7 million).

In 2022, interest and similar expenses included the full year impact of interest expenses on the Bonds that were issued in May 2021 for the purpose of repayment of the bridge loan facility, which was used to finance the acquisition of Borsa Italiana Group in 2021. The comparative period included €9.9 million of one-off fees related to the bridge loan facility.

In 2022 and 2021, the exchange differences are mainly triggered by revaluations of the related party loans to Euronext Nordics Holding AS, Euronext UK Holdings Ltd., and Euronext US Inc.

Note 45. Tax

In thousands of euros	2022	2021
Result before tax	(34,993)	(15,431)
Corporate income tax current financial year	6,073	132
Corporate income tax previous financial years	(667)	497
Total	**5,406**	**629**

The effective tax rate mainly deviates from the applicable tax rate as a result of the non-deductible expenses. For the year 2022, the statutory corporate income tax rate was 25%. For the year 2023 and onwards, the Netherlands have increased the corporate income tax rate to 25.8%. Reference is made to Notes 15 and 19 of the Consolidated Financial Statements for more information on the tax rate changes.

	2022	2021
Effective tax rate	15%	4%
Applicable tax rate	25%	25%

Note 46. Investments in consolidated subsidiaries, associates, joint ventures and non-current related party loans

In thousands of euros	Investments in consolidated subsidiaries	Investments in associates and joint ventures	Related party loans	Total
Net book amount as at 31 December 2020	**1,892,156**	**68,051**	**459,705**	**2,419,912**
Investments / (disposals)	4,447,337	—	(14,172)	4,433,165
Capital contributions / (settlements)	—	—	—	—
Exchange differences	45,573	—	24,336	69,909
Share-based payments, subsidiaries	10,518	—	—	10,518
Actuarial gains/ losses IAS 19	2,682	—	—	2,682
Revaluation financial assets at FVOCI	(4,711)	—	—	(4,711)
Share in result of participations	420,665	7,481	—	428,146
Dividend received	(321,220)	(6,652)	—	(327,872)
Reclassification	404	(404)	—	—
Other	(73,466)	—	—	(73,466)
Total movements in book value	**4,527,782**	**425**	**10,164**	**4,538,371**
Net book amount as at 31 December 2021	**6,419,938**	**68,476**	**469,869**	**6,958,283**
Investments / (disposals)	(3,282)	—	—	(3,282)
Capital contributions / (settlements)	21,557	—	—	21,557
Exchange differences	(26,173)	—	(10,461)	(36,634)
Share-based payments, subsidiaries	13,994	—	—	13,994
Actuarial gains/ losses IAS 19	10,567	—	—	10,567
Revaluation financial assets at FVOCI	20,352	—	—	20,352
Share in result of participations	458,677	8,737	—	467,414
Dividend received	(662,827)	(6,651)	—	(669,478)
Reclassification	—	—	—	—
Other	(14,870)	—	—	(14,870)
Total movements in book value	**(182,005)**	**2,086**	**(10,461)**	**(190,380)**
Net book amount as at 31 December 2022	**6,237,933**	**70,562**	**459,408**	**6,767,903**

Investments in consolidated subsidiaries

In 2022, Euronext N.V. made a capital contribution in Euronext Paris S.A. of €21.6 million. In 2021, Euronext N.V. acquired and/or increased the interest/investment in Borsa Italiana Group for a total of €4,447.3 million.

The line 'Other' included the cost of employee shares vesting in the subsidiaries for a total of €15.8 million in 2022 (2021: €13.9 million).

Furthermore, in 2021, the line 'Other' included the purchase of additional interests by exercise of call options for the remaining minority shares in iBabs B.V. and Commcise Software Ltd. by respectively Euronext Corporate Services B.V. and Euronext UK Holdings Ltd. for a total amount of €59.3 million. For additional information on these acquired and/or increased interests/investments please refer to Notes 4 and 5 of the Consolidated Financial Statements.

Investments in associates and joint ventures

In 2022, the investment in joint venture Liquidshare was impaired by €1.5 million, which negatively impacted 'share in result of participation' (see Note 7 of the Consolidated Financial Statements).

In 2021, the investment in associate Tokeny Solutions was impaired by €4.3 million, which negatively impacted 'share in result of participation' (see Note 7 of the Consolidated Financial Statements).

Amounts due from subsidiaries

Euronext N.V. has a loan agreement of NOK 3,500 million entered into with Euronext Nordics Holding AS, with a maturity of ten years with a fixed interest rate of 3%.

Furthermore, Euronext N.V. has a loan agreement of £16.3 million entered into with Euronext UK Holdings Ltd. to enable the acquisition of Commcise Software Ltd. in 2018. This loan has a maturity of ten years and bears an interest rate of SONIA plus 0.125%. The interest amount is received monthly and is included in Note 50.

In addition, Euronext N.V. has granted three loan agreements to Euronext US Inc. for a total amount of $115.3 million, of which $110.0 million was granted in order to finance the acquisition of FastMatch Inc. in 2017. These loans have a maturity of ten years and bear a weighted average interest rate of 3.36%.

The interest amounts of these loans are recognised monthly and are included in Note 50. As at 31 December 2022, the total outstanding amount of non-current related party loans are €459.4 million (2021: €469.9 million).

Note 47. Financial assets at fair value through Other Comprehensive Income

The financial assets at fair value through Other Comprehensive Income of €166.3 million (2021: €140.2 million) represent the direct investment in Euroclear S.A./N.V. For additional information on this investment, reference is made to Note 20 of the Consolidated Financial Statements.

Note 48. Other non-current financial and other assets

As per 31 December 2022 the €1.0 million (2021: €1.0 million) of Other non-current financial and other assets includes the issue costs linked to the revolving credit facility.

Note 49. Trade and other receivables

In thousands of euros	As at 31 December 2022	As at 31 December 2021
Trade receivables	14,235	12,360
Contract receivables	11,290	10,402
Allowance for expected credit losses	(17)	(22)
Trade and contract receivables net	**25,508**	**22,740**
Related party receivables	220,311	67,989
Tax receivables (excluding income tax)	1,954	1,827
Prepayments and accrued income	232	191
Other receivables	2,630	6,812
Total	**250,635**	**99,559**

Trade receivables are non-interest bearing and generally on terms of 30 to 90 days. Contract receivables represent amounts in respect of unbilled revenue, for which the Group has an unconditional right to the consideration (i.e. only the passage of time is required before payment of the consideration is due).

As at 31 December 2022, the related party receivables contain a €178.0 million dividend receivable due from Euronext IP & IT Holding B.V.

The fair value of the receivables approximates the book value, due to their short-term character.

Set out below is the movement in the allowance for expected credit losses of trade and contract receivables:

In thousands of euros	2022	2021
As at 1 January	22	19
Provision for expected credit losses	(5)	3
Receivables written off during the year	—	—
At 31 December	**17**	**22**

The Company applies the IFRS 9 simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for its trade and contract receivables. Reference is made to Notes 3 and 37.4 of the Consolidated Financial Statements on the inputs used in establishing the provision matrix used to calculate the loss allowance provision.

Set out below is the information on the credit risk exposure on the Company's trade and contract receivables using a provision matrix:

31 December 2022:

		Trade receivables				
In thousands of euros	Contract Receivables	Current	30-60 days past due	61-90 days past due	> 91 days past due	Total
Expected credit loss rate	0.02%	0.02%	0.08%	0.16%	0.38%	
Collectively assessed receivables	11,290	10,452	838	776	2,169	25,525
Expected credit loss collective basis	**2**	**2**	**1**	**1**	**8**	**14**
Expected credit loss rate	0.00%	0.00%	0.00%	0.00%	100.00%	
Individually assessed receivables	—	—	—	—	3	3
Expected credit loss individual basis	**—**	**—**	**—**	**—**	**3**	**3**
Total expected credit loss	**2**	**2**	**1**	**1**	**11**	**17**

31 December 2021:

In thousands of euros	Contract Receivables	Trade receivables: Current	Trade receivables: 30-60 days past due	Trade receivables: 61-90 days past due	Trade receivables: > 91 days past due	Total
Expected credit loss rate	0.03%	0.03%	0.13%	0.30%	0.64%	
Collectively assessed receivables	10,402	9,088	1,057	656	1,559	22,762
Expected credit loss collective basis	**3**	**3**	**1**	**2**	**10**	**19**
Expected credit loss rate	0.00%	0.00%	0.00%	0.00%	100.00%	
Individually assessed receivables	—	—	—	—	3	3
Expected credit loss individual basis	**—**	**—**	**—**	**—**	**3**	**3**
Total expected credit loss	**3**	**3**	**1**	**2**	**13**	**22**

Note 50. Current related party loans

In thousands of euros	As at 1 January 2022	Loans advanced / (settled)	Interest accrued / (paid)	As at 31 December 2022
Current				
Euronext Corporate Services B.V.	134,486	—	—	134,486
Finance Web Working SAS	228	(228)	—	—
Interest receivable on non current intercompany loans	26,551	—	(5,950)	20,601
Interest receivable on current intercompany loans	62	—	605	667
Total	**161,327**	**(228)**	**(5,345)**	**155,754**

In thousands of euros	As at 1 January 2021	Loans advanced / (settled)	Interest accrued / (paid)	As at 31 December 2021
Current				
Euronext Corporate Services B.V.	78,859	55,628	—	134,487
Finance Web Working SAS	228	—	—	228
Interest receivable on non current intercompany loans	21,478	—	5,073	26,551
Interest receivable on current intercompany loans	56	—	5	61
Total	**100,621**	**55,628**	**5,078**	**161,327**

The fair value of the related party loans receivable approximate their carrying values.

The €134.5 million loan receivable from Euronext Corporate Services B.V. has no maturity and is repayable at lender's or borrower's request upon 48 hours' notice. The interest amounts are paid annually and based on €STER or EURIBOR 3 months reference rates plus 0.125%.

Note 51. Securities and cash and cash equivalents

The movements in derivative financial instruments are disclosed in Note 23 of the Consolidated Financial Statement. The other current financial assets of €10.0 million consist of deposits with a maturity of more than three months on inception date.

Cash and cash equivalents included €119.3 million of deposits with a maturity less than three months on inception date.(2021: nil).

Note 52. Shareholders’ equity

The movements in shareholder’s equity were as follows:

In thousands of euros	Issued capital	Share premium	Reserve for own shares	Retained earnings (a)	Profit for the year	Legal reserves and other: Non-distributable retained earnings and other reserves regarding subsidiaries (a)	Legal reserves and other: Revaluation reserve	Legal reserves and other: Reserve for translation differences	Total
As at 1 January 2021 (restated (a))	**112,000**	**107,562**	**(19,867)**	**499,437**	**315,484**	**47,914**	**52,295**	**(56,077)**	**1,058,748**
Share based payments	—	—	—	10,492	—	—	—	—	10,492
Appropriation of the result of preceding year	—	—	—	158,319	(315,484)	—	—	—	(157,165)
Net result for the period	—	—	—	—	413,344	—	—	—	413,344
Issuance of common stock	59,370	2,315,866	—	—	—	—	—	—	2,375,236
Transfers within equity	—	—	—	8,157	—	(7,565)	(592)	—	—
Exchange rate differences	—	—	—	—	—	—	—	43,861	43,861
Revaluation subsidiaries	—	—	—	(2,029)	—	—	—	—	(2,029)
Other revaluations	—	—	—	—	—	—	1,335	—	1,335
Acquisition of NCI subsidiaries	—	—	—	(59,291)	—	—	—	—	(59,291)
Purchase of shares	—	—	(31,844)	—	—	—	—	—	(31,844)
Other movements	—	—	8,933	(14,034)	—	—	—	—	(5,101)
As at 31 December 2021 (restated (a))	**171,370**	**2,423,428**	**(42,778)**	**601,051**	**413,344**	**40,349**	**53,038**	**(12,216)**	**3,647,586**
Share based payments	—	—	—	13,976	—	—	—	—	13,976
Appropriation of the result of preceding year	—	—	—	207,359	(413,344)	—	—	—	(205,985)
Net result for the period	—	—	—	—	437,827	—	—	—	437,827
Transfers within equity	—	—	—	(19,406)	—	19,406	—	—	—
Exchange rate differences	—	—	—	—	—	—	—	(26,169)	(26,169)
Revaluation subsidiaries	—	—	—	30,919	—	—	—	—	30,919
Other revaluations	—	—	—	—	—	—	19,412	—	19,412
Purchase of shares	—	—	(18)	—	—	—	—	—	(18)
Other movements	—	—	9,960	(13,541)	—	—	—	—	(3,581)
As at 31 December 2022	**171,370**	**2,423,428**	**(32,836)**	**820,358**	**437,827**	**59,755**	**72,450**	**(38,385)**	**3,913,967**

(a) See Note 41 for more details regarding the restatement as a result of an error.

For further information to the shareholder's equity, see Note 26 of the Consolidated Financial Statements.

The movements in the shareholder's equity are before the proposed profit appropriation (see Note 59). The proposed profit appropriation includes the following items: addition to legal reserves for €19.4 million, addition to retained earnings for €181.8 million and proposed dividends of €236.6 million.

Non-distributable retained earnings and other reserves regarding subsidiaries

As at 31 December 2022, retained earnings and other reserves from subsidiaries are not freely available for distribution for an amount of €59.8 million relating to legal reserves (2021: €40.3 million). The amount includes a legal reserve for capitalised development costs in Dutch subsidiaries of €38.5 million (2021: €18.0 million).

Revaluation reserve

The revaluation reserve is maintained for the revaluation for the financial assets at FVOCI, net of tax. This reserve is a non-distributable legal reserve.

Reserve for translation differences

The reserve for translation differences concerns all exchange rate differences arising from the translation of the net investment in foreign entities and the related goodwill. This reserve is a non-distributable legal reserve.

Note 53. Borrowings

For additional information on the borrowing positions, a reference is made to Note 29 of the Consolidated Financial Statements.

Note 54. Related Party Borrowings

In thousands of euros	As at 1 January 2022	Loan settlements made	Loans advanced	Interest accrued/(paid)	As at 31 December 2022
Current					
Euronext Paris S.A.	67,000	—	—	—	67,000
Euronext IP & IT Holding B.V.	84,686	—	—	—	84,686
Euronext Amsterdam N.V.	25,000	—	—	—	25,000
Euronext Brussels S.A./N.V.	60,000	—	—	—	60,000
Euronext Corporate Services B.V.	3,500	—	—	—	3,500
Euronext Lisbon S.A.	30,000	(30,000)	—	—	—
The Irish Stock Exchange Plc.	30,000	(30,000)	—	—	—
Interest payable on intercompany loan	89	—	—	732	821
Total	**300,275**	**(60,000)**	**—**	**732**	**241,007**

In thousands of euros	As at 1 January 2021	Loan settlements made	Loans advanced	Interest accrued/(paid)	As at 31 December 2021
Current					
Euronext Paris S.A.	204,711	(137,711)	—	—	67,000
Euronext IP & IT Holding B.V.	84,686	—	—	—	84,686
Euronext Amsterdam N.V.	25,000	—	—	—	25,000
Euronext Brussels S.A./N.V.	60,000	—	—	—	60,000
Euronext Corporate Services B.V.	3,500	—	—	—	3,500
Euronext Lisbon S.A.	—	—	30,000	—	30,000
The Irish Stock Exchange Plc.	—	—	30,000	—	30,000
Interest payable on intercompany loan	122	—	—	(33)	89
Total	**378,019**	**(137,711)**	**60,000**	**(33)**	**300,275**

The fair value of the related party loans payable approximate their carrying values.

The €67.0 million loan payable to Euronext Paris S.A. has no maturity and is repayable at lender's or borrower's request upon 48 hours' notice. The applicable interest was EONIA OIS plus 0.125% until 31 December 2021 and €STER OIS plus 0.125% thereafter, payable annually. The sensitivity of the related party loan payables to changes in the interest rate is that a 0.5% increase/decrease of the interest rate will result in an increase/decrease of the interest income by €0.3 million (2021: €0.3 million).

The €84.7 million loan payable to Euronext IP & IT Holding B.V. has no maturity and is repayable at lender's or borrower's request upon 48 hours' notice. The interest is Euribor 3 months plus 0.125% payable annually on two loans. The sensitivity of the related party loan payables to changes in the Euribor interest rate is that a 0.5% increase/ decrease of the interest rate will result in an increase/

decrease of the interest income by €0.4 million (2021: €0.4 million).

The €25.0 million loan payable to Euronext Amsterdam N.V. has no maturity and is repayable at lender's or borrower's request upon 48 hours' notice. The interest was EONIA plus 0.125% until 31 December 2021 and €STER OIS plus 0.125% thereafter, payable annually on one loan. The sensitivity of the related party loan payables to changes in the interest rate is that a 0.5% increase/decrease of the interest rate will result in an increase/decrease of the interest income by €0.1 million (2021: €0.1 million).

The €60.0 million loan payable to Euronext Brussels S.A./N.V. has no maturity and is repayable at lender's or borrower's request upon 48 hours' notice. The interest is Euribor 3 months plus 0.125% payable annually on one loan. The sensitivity of the related party loan payables to changes in the interest rate is that a 0.5% increase/decrease of the interest rate will result in an increase/decrease of the interest income by €0.3 million (2021: €0.3 million).

The €3.5 million loan payable to Euronext Corporate Services B.V. has no maturity and is repayable at lender's or borrower's request upon 48 hours' notice. The interest was EONIA plus 0.125% until 31 December 2021 and €STER OIS plus 0.125% thereafter, payable annually on one loan.

The €30.0 million loan payable to Euronext Lisbon S.A. and the €30.0 million loan payable to The Irish Stock Exchange Plc. were repaid in January and May 2022, respectively.

Note 55. Trade and other payables

In thousands of euros	As at 31 December 2022	As at 31 December 2021
Trade payables	59	127
Amounts due to subsidiaries	420,773	430,702
Other	2,970	3,112
Total	**423,802**	**433,941**

The carrying values of current trade and other payables are reasonable approximations of their fair values. These balances do not bear interest.

As at 31 December 2022, the amounts due to subsidiaries contains a €408.4 million cash pool position with the subsidiaries (2021: €419.3 million).

Note 56. Managing Board and Supervisory Board remuneration

56.1 Managing Board remuneration

	2022					
In thousands of euros	Fixed Benefits	Variable Benefits	Share-based payment costs	Post-employment benefits	Termination payments	Total Benefits
Stéphane Boujnah	880	1,237	1,844	—	—	**3,961**
Chris Topple	431	414	500	30	—	**1,375**
Daryl Byrne	295	220	300	32	—	**847**
Delphine d'Amarzit	348	270	144	—	—	**762**
Georges Lauchard (a)	246	—	—	—	—	**246**
Isabel Ucha	248	160	189	34	—	**631**
Simone Huis in 't Veld	323	220	264	26	—	**833**
Fabrizio Testa (b)	255	378	165	8	—	**806**
Øivind Amundsen	293	227	167	12	—	**699**
Vincent van Dessel	402	100	237	38	—	**777**
Total	**3,721**	**3,226**	**3,810**	**180**	**—**	**10,937**

In thousands of euros	2021					
	Fixed Benefits	Variable Benefits	Share-based payment costs	Post-employment benefits	Termination payments	Total Benefits
Stéphane Boujnah	879	1,238	1,628	—	—	**3,745**
Anthony Attia (c)	152	133	380	—	—	**665**
Chris Topple	427	377	760	30	—	**1,594**
Daryl Byrne	309	216	238	32	—	**795**
Delphine d'Amarzit (d)	188	240	53	—	—	**481**
Georges Lauchard	415	360	203	—	—	**978**
Isabel Ucha	249	150	187	35	—	**621**
Simone Huis in 't Veld	298	216	134	24	—	**672**
Øivind Amundsen	289	201	95	11	—	**596**
Vincent van Dessel	372	131	218	37	—	**758**
Total	**3,578**	**3,262**	**3,896**	**169**	**—**	**10,905**

(a) Georges Lauchard decided to resign from his position as Chief Operating Officer and Member of the Managing Board of Euronext N.V. as per 10 June 2022.
(b) At the Annual General Meeting held on 18 May 2022, Fabrizio Testa was appointed as a member of the Managing Board of Euronext N.V.
(c) On 18 January 2021, the Group announced that Anthony Attia would be handing over his position as CEO of Euronext Paris and member of the Managing Board of Euronext N.V..
(d) At the Annual General Meeting held on 11 May 2021, Delphine d'Amarzit was appointed as a member of the Managing Board. Regulatory approval was obtained on 27 May 2021.

The Company has not granted any loans, advanced payments and guarantees to the members of the Managing Board and Supervisory Board.

The fixed compensation components consist of base salary and other benefits in kind like company car and health care insurance, if applicable. These components are linked to the overall job responsibilities of the individual Managing Board member and reflect internal consistency.

The variable salary consists of an annual performance compensation component as a percentage of base salary. The percentages are target percentages of the annual base salary, which are only payable if all objectives are met. Performance criteria are set and reviewed on an annual basis by the Remuneration Committee and the Supervisory Board. For 2022, most of the bonus targets have been met by the Managing Board.

56.2 Euronext Share plans

2022:

in number of RSU	Plan	Year of Granting	Outstanding as at 1 January 2022	Granted	Adjusted shares due to capital increase	Performance Adjustment	Forfeited	Vested	Outstanding as at 31 December 2022
Stéphane Boujnah	LTI	2019	12,461	—	—	12,461	—	(24,922)	—
	LTI	2020	15,397	—	—	—	—	—	15,397
	LTI	2021	19,275	—	—	—	—	—	19,275
	LTI	2022	—	15,684	—	—	—	—	15,684
Fabrizio Testa	LTI	2021 (a)	2,926	—	—	—	—	—	2,926
	LTI	2022	—	3,422	—	—	—	—	3,422
Chris Topple	LTI	2019	4,722	—	—	4,722	—	(9,444)	—
	LTI	2020	3,768	—	—	—	—	—	3,768
	LTI	2021	3,663	—	—	—	—	—	3,663
	LTI	2022	—	4,034	—	—	—	—	4,034
Daryl Byrne	LTI	2019	3,479	—	—	3,479	—	(6,958)	—
	LTI	2020	2,520	—	—	—	—	—	2,520
	LTI	2021	2,365	—	—	—	—	—	2,365
	LTI	2022	—	2,566	—	—	—	—	2,566
Delphine d'Amarzit	LTI	2021	2,628	—	—	—	—	—	2,628
	LTI	2022	—	2,851	—	—	—	—	2,851
Georges Lauchard	LTI	2020	3,360	—	—	—	(3,360)	—	—
	LTI	2021	3,154	—	—	—	(3,154)	—	—
Isabel Ucha	LTI	2019	1,976	—	—	1,976	—	(3,952)	—
	LTI	2020	1,431	—	—	—	—	—	1,431
	LTI	2021	1,343	—	—	—	—	—	1,343
	LTI	2022	—	1,457	—	—	—	—	1,457
Øivind Amundsen	LTI	2020	1,531	—	—	—	—	—	1,531
	LTI	2021	1,576	—	—	—	—	—	1,576
	LTI	2022	—	1,667	—	—	—	—	1,667
Simone Huis in 't Veld	LTI	2020	2,520	—	—	—	—	—	2,520
	LTI	2021	2,365	—	—	—	—	—	2,365
	LTI	2022	—	2,566	—	—	—	—	2,566
Vincent van Dessel	LTI	2019	2,419	—	—	2,419	—	(4,838)	—
	LTI	2020	1,785	—	—	—	—	—	1,785
	LTI	2021	1,692	—	—	—	—	—	1,692
	LTI	2022	—	1,909	—	—	—	—	1,909

(a) Shares not granted in capacity as member of the Managing Board.

2021:

in number of RSU	Plan	Year of Granting	Outstanding as at 1 January 2021	Granted	Adjusted shares due to capital increase	Performance Adjustment	Forfeited	Vested	Outstanding as at 31 December 2021
Stéphane Boujnah	LTI	2018	14,798	—	1,404	16,202	—	(32,404)	—
	LTI	2019	11,381	—	1,080	—	—	—	12,461
	LTI	2020	14,063	—	1,334	—	—	—	15,397
	LTI	2021	—	19,275	—	—	—	—	19,275
Anthony Attia	LTI	2018	4,035	—	383	4,418	—	(8,836)	—
	LTI	2019	3,532	—	335	—	—	—	3,867
	LTI	2020	3,069	—	291	—	—	—	3,360
	LTI	2021	—	3,154	—	—	—	—	3,154
Chris Topple	LTI	2018	13,760	—	1,306	15,066	—	(30,132)	—
	LTI	2019	4,313	—	409	—	—	—	4,722
	LTI	2020	3,442	—	326	—	—	—	3,768
	LTI	2021	—	3,663	—	—	—	—	3,663
Daryl Byrne	LTI	2018 (a)	717	—	68	—	—	(785)	—
	LTI	2019	3,178	—	301	—	—	—	3,479
	LTI	2020	2,302	—	218	—	—	—	2,520
	LTI	2021	—	2,365	—	—	—	—	2,365
Delphine d'Amarzit	LTI	2021	—	2,628	—	—	—	—	2,628
Georges Lauchard	LTI	2020	3,069	—	291	—	—	—	3,360
	LTI	2021	—	3,154	—	—	—	—	3,154
Isabel Ucha	LTI	2018 (a)	717	—	68	785	—	(1,570)	—
	LTI	2019	1,805	—	171	—	—	—	1,976
	LTI	2020	1,307	—	124	—	—	—	1,431
	LTI	2021	—	1,343	—	—	—	—	1,343
Øivind Amundsen	LTI	2020	1,399	—	132	—	—	—	1,531
	LTI	2021	—	1,576	—	—	—	—	1,576
Simone Huis in 't Veld	LTI	2020	2,302	—	218	—	—	—	2,520
	LTI	2021	—	2,365	—	—	—	—	2,365
Vincent van Dessel	LTI	2018	2,472	—	234	2,706	—	(5,412)	—
	LTI	2019	2,210	—	209	—	—	—	2,419
	LTI	2020	1,631	—	154	—	—	—	1,785
	LTI	2021	—	1,692	—	—	—	—	1,692

(a) Shares not granted in capacity as member of the Managing Board.

For additional information on the value of awards granted to the Managing Board reference is made to Note 28 of the Consolidated Financial Statements.

56.3 Supervisory Board Remuneration

In thousands of euros	2022	2021
Piero Novelli *(Chairman)*	253	117
Dick Sluimers *(Vice-Chairman)*	177	212
Diana Chan	116	64
Rika Coppens	113	53
Alessandra Ferone	90	53
Manuel Ferreira da Silva	98	82
Padraic O'Connor	98	82
Nathalie Rachou	109	91
Olivier Sichel	75	41
Morten Thorsrud	116	94
Jim Gollan	—	38
Luc Keuleneer	—	38
Franck Silvent	—	27
Lieve Mostrey	—	—
Total	**1,245**	**992**

During 2022, no changes occurred to the composition of the Supervisory Board.

At the Annual General Meeting held on 11 May 2021, Piero Novelli, Diana Chan, Rika Coppens, Alessandra Ferone and Olivier Sichel were appointed as members of the Supervisory Board, subject to regulator approval. After the same meeting, Jim Gollan, Luc Keuleneer, Lieve Mostrey and Franck Silvent retired from the Supervisory Board. Regulatory approval for the appointment of Piero Novelli had been obtained on 10 May 2021. His appointment became effective immediately. He became chairman on 1 September 2021, succeeding Dick Sluimers who became vice-chairman. The appointments of Diana Chan, Rika Coppens, Alessandra Ferone and Oliver Sichel became effective on 9 September 2021.

Note 57. Audit fees

	EY Accountants	EY Accountants
In thousands of euros	2022	2021
Audit services - group and statutory	2,911	2,721
Other assurance services	119	454
Tax services	—	—
Other non-audit services	—	—
Total	**3,030**	**3,175**

The audit services relate to the financial year to which the financial statements relate, regardless of whether the activities were performed by the external auditor and the audit firm during the financial year. In addition to the performance of the statutory audit of the Group financial statements and other (statutory) financial statements of Euronext N.V. and its subsidiaries, EY provides a number of other assurance services. These other assurance services consist of the review of the half year interim financial statements and work related to the registration document. The comparative figures have been adjusted accordingly, in line with the relevant EU regulation.

The total fees of EY Netherlands, charged to Euronext N.V. and its consolidated group entities amounted to €1.7 million in 2022 (2021: €1.5 million).

Note 58. Commitments and contingencies not included in the balance sheet

Tax group

The Company is the head of a fiscal unity with Euronext Amsterdam N.V., Euronext IP & IT B.V. and Euronext Corporate Services B.V.. Under the standard conditions, the members of the tax group are jointly and severally liable for any taxes payable by the fiscal unity. Each company within the fiscal unity recognises its own tax position on its company balance sheet.

The financial statements of Euronext N.V., Euronext Amsterdam N.V., Euronext IP & IT B.V. and Euronext Corporate Services B.V. recognise a tax liability based on their taxable profit.

Guarantees

The Company participates in a number of guarantees. Within the Group, the Company act in the guarantor for certain liabilities of its subsidiary up to an amount of €7.6 million (2021: €7.7 million). In addition, the Company has provided a 403 statement for the benefit of Euronext Amsterdam N.V. It should be noted that the Group consistently waives guarantee fees for intergroup guarantees, meaning these transactions are not at arm's length.

Note 59. Appropriation of profit

Proposed profit appropriation

The managing board proposes to appropriate the profit of €437.8 million as follows:

In thousands of euros	2022	2021
Addition/(deduction) to/(from) legal reserves	19,406	(7,565)
Addition to retained earnings	181,861	214,237
At the disposal of the Annual General Meeting of Shareholders (Dividend)	236,560	206,672
Total	**437,827**	**413,344**

In respect of the year ended 31 December 2022, a dividend representing a 50% pay out ration on net profit, (adjusted for the net loss realized on the Euronext Clearing Investment portfolio amounting to €35.3 million) amounting to a total of €236.6 million is to be proposed to the annual general meeting on 16 May 2023. This represents a dividend of €2.22 per share based on the number of shares outstanding at 31 December 2022.

In respect of the year ended 31 December 2021, a dividend representing a 50% pay-out ratio of net profit and amounting to a total of €206.7 million is to be proposed at the annual general meeting on 18 May 2022. This represents a dividend of €1.93 per share based on the number of outstanding shares as per 31 December 2021. The dividend per share will change if capital increases or other corporate actions would occur before the record date of the dividend payment.

In 2022, a total amount of €19.4 million was added to the legal reserves, which related to capitalised development costs in Dutch subsidiaries.

In 2021, a total amount of €7.6 million was deducted from the legal reserves, mainly as a result of adjustment in distribution restrictions applied in Euronext Dublin.

Note 60. Events after the reporting period

The events occurred between 31 December 2022 and the date of this report that could have a material impact on the economic decisions made based on these financial statements, are described in Note 40 of the Consolidated Financial Statements.

Authorisation of Company Financial Statements

Amsterdam, 30 March 2023

Supervisory Board	**Managing Board**
Piero Novelli *(Chairman)*	Stéphane Boujnah *(CEO and Chairman)*
Dick Sluimers	Chris Topple
Diana Chan	Daryl Byrne
Rika Coppens	Delphine d'Amarzit
Alessandra Ferone	Fabrizio Testa
Manuel Ferreira da Silva	Isabel Ucha
Padraic O'Connor	Øivind Amundsen
Nathalie Rachou	Simone Huis in 't Veld
Olivier Sichel	Vincent van Dessel
Morten Thorsrud	

9 OTHER INFORMATION

9.1 Profit Appropriation Section

Provisions in the Articles of Association relating to profit appropriation

Article 28.2 of the Articles of Association states that from the profits, as they appear from the adopted annual accounts, first, in the event that the priority share has been issued and is held by a party other than the Company, a dividend of ten per cent (10%) of the par value of the priority share will be paid to the holder of the priority share. The profits which remain after application of the first sentence of this Article 28.2 shall be at the free disposal of the General Meeting, provided that there shall be no further distribution on the priority share, and provided that the General Meeting may only resolve on any reservation or distribution of profits pursuant to and in accordance with a proposal thereto of the Supervisory Board or a proposal of the Managing Board, which proposal has been approved by the Supervisory Board.

9.2 Independent Auditor's Report

To: the shareholders and Supervisory Board of Euronext N.V.

Report on the audit of the financial statements 2022 included in the universal registration document

Our opinion

We have audited the financial statements 2022 of Euronext N.V. (hereinafter: 'Euronext' or 'the company'), based in Amsterdam. The financial statements comprise the consolidated financial statements and the company financial statements.

In our opinion:

- the accompanying consolidated financial statements give a true and fair view of the financial position of Euronext as at 31 December 2022 and of its result and its cash flows for 2022 in accordance with International Financial Reporting Standards as adopted by the European Union (EU-IFRS) and with Part 9 of Book 2 of the Dutch Civil Code
- the accompanying company financial statements give a true and fair view of the financial position of Euronext as at 31 December 2022 and of its result for 2022 in accordance with Part 9 of Book 2 of the Dutch Civil Code.

The consolidated financial statements comprise:

- the consolidated balance sheet as at 31 December 2022
- the following statements for 2022: the consolidated statements of profit or loss, comprehensive income, changes in equity and cash flows
- the notes comprising a summary of the significant accounting policies and other explanatory information.

The company financial statements comprise:

- the company balance sheet as at 31 December 2022
- the company income statement for 2022
- the notes comprising a summary of the accounting policies and other explanatory information.

Basis for our opinion

We conducted our audit in accordance with Dutch law, including the Dutch Standards on Auditing. Our responsibilities under those standards are further described in the Our responsibilities for the audit of the financial statements section of our report.

We are independent of Euronext in accordance with the EU Regulation on specific requirements regarding statutory audit of public-interest entities, the Wet toezicht accountantsorganisaties (Wta, Audit firms supervision act), the Verordening inzake de onafhankelijkheid van accountants bij assurance-opdrachten (ViO, Code of Ethics for Professional Accountants, a regulation with respect to independence) and other relevant independence regulations in the Netherlands. Furthermore, we have complied with the Verordening gedrags- en beroepsregels accountants (VGBA, Dutch Code of Ethics).

We believe the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Information in support of our opinion

We designed our audit procedures in the context of our audit of the financial statements as a whole and in forming our opinion thereon. The following information in support of our opinion and any findings were addressed in this context, and we do not provide a separate opinion or conclusion on these matters.

Our understanding of the business

Euronext is a European market infrastructure group which businesses comprise listing, cash trading, derivatives trading, clearing, fixed income trading, spot FX trading, power trading, investor services, advanced data services, post-trade services as well as technology solutions. The main subsidiaries are located in the Netherlands, France, Italy, Belgium, Ireland, Norway, Portugal and Denmark. The FX trading is operated by a subsidiary in New York.

Materiality

We determined materiality and identified and assessed the risks of material misstatement of the financial statements, whether due to fraud or error in order to design audit procedures responsive to those risks and to obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion.

Materiality	€ 30 million (2021: € 30 million)
Benchmark applied	5% of profit before income tax (2021: 5% of profit before income tax)
Explanation	We consider profit before income tax as the most appropriate basis to determine materiality as it is one of the key performance measures for the users of the financial statements.

We have also taken into account misstatements and/or possible misstatements that in our opinion are material for the users of the financial statements for qualitative reasons.

We agreed with the supervisory board that misstatements in excess of € 1.5 million, which are identified during the audit, would be reported to them, as well as smaller misstatements that in our view must be reported on qualitative grounds.

Scope of the group audit

Euronext is at the head of a group of entities ('components'). The financial information of this group is included in the consolidated financial statements.

Because we are ultimately responsible for the opinion, we are also responsible for directing, supervising and performing the group audit. In this respect we have determined the nature and extent of the audit procedures to be carried out for the components. Decisive were the size and/or the risk profile of the group entities or operations. On this basis, we selected components for which an audit or review had to be carried out on the complete set of financial information or specific items.

Our group audit mainly focused on significant components of Euronext in the Netherlands, France, Italy, Norway, Ireland, Portugal, Denmark and the United States. We have:

- Performed audit procedures ourselves at the components in the Netherlands and France;
- Used the work of other component auditors within our EY network when auditing the components in Italy, Norway, Ireland, Portugal and Denmark;
- Used the work of non-EY auditors for the audit of a component in the United States;

We sent instructions to component auditors, covering the significant areas and the information required to be reported to us. Based on our risk assessment, we determined the level of involvement in component audits. We have visited the component teams in Italy and Norway. Our site visits encompassed some, or all, of the following activities: reviewing key local working papers and conclusions, meeting with local management teams and obtaining an understanding of key processes. We interacted regularly with the component teams during various stages of the audit, using videoconferencing facilities. We reviewed key working papers of component auditors using the EY electronic audit file platform, screen sharing or by the provision of copies of work papers submitted to the group audit team.

In total, with these procedures we covered 95% of profit before income tax and 92% of the group's total assets.

By performing the procedures mentioned above at components, together with additional procedures at group level we have been able to obtain sufficient and appropriate audit evidence about the group's financial information to provide an opinion about the consolidated financial statements.

Teaming and use of specialists

We ensured that the audit teams both at group level and at component level included the appropriate skills and competences which are needed for an audit of a listed client in the market infrastructure industry. We included team members with specialized knowledge in the areas of IT audit, forensics and sustainability and have made use of our own specialists in the areas of valuation of financial investments, employee benefits, income tax, legal, purchase price accounting and impairment analyses of goodwill and other intangibles.

Our focus on climate risks and the energy transition

Climate change and the energy transition are high on the public agenda and lead to significant change for many businesses and society. The managing board of Euronext has reported in chapter 3 'Empower sustainable finance' of the universal registration document how the company is addressing climate-related and environmental risks. Euronext has identified 11 key issues that impact its sustainable development goals that it considers most relevant per impact area: our markets, our partners, our people our society and our environment. We refer to chapter 3.4 'Euronext five ESG impact areas and the sustainable development goals' of the universal registration document where the managing board discloses its progress made against its key ESG issues, supporting Euronext's five material impact areas.

As part of our audit of the financial statements, we evaluated the extent to which climate-related risks and the effects of the energy transition and Euronext's development goals are taken into account in estimates and significant assumptions as well as in the design of relevant internal control measures. Furthermore, we read the universal registration document and considered whether there is any material inconsistency between the non-financial information in chapter 3 'Empower sustainable finance" and the financial statements.

Based on the audit procedures performed, we do not deem climate-related risks to have a material impact on the financial reporting judgements, estimates or significant assumptions as at 31 December 2022.

Our focus on fraud and non-compliance with laws and regulations

Our responsibility

Although we are not responsible for preventing fraud or non-compliance and we cannot be expected to detect non-compliance with all laws and regulations, it is our responsibility to obtain reasonable assurance that the financial statements, taken as a whole, are free from material misstatement, whether caused by fraud or error. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

Our audit response related to fraud risks

We identified and assessed the risks of material misstatements of the financial statements due to fraud. During our audit we obtained an understanding of the company and its environment and the components of the system of internal control, including the risk assessment process and the managing board's process for responding to the risks of fraud and monitoring the system of internal control and how the supervisory board exercises oversight, as well as the outcomes. We refer to chapter 2 'Risk management & control structure' as included in the universal registration document of Euronext for managing board's risk assessment, including potential fraud risks.

We evaluated the design and relevant aspects of the system of internal control and in particular the fraud risk assessment, as well as the code of business conduct and ethics, the Euronext anti-fraud and anti-bribery policies, whistleblower policy and incident registration.

We evaluated the design and the implementation and, where considered appropriate, tested the operating effectiveness, of internal controls designed to mitigate fraud risks.

As part of our process of identifying fraud risks, we evaluated fraud risk factors with respect to financial reporting fraud, misappropriation of assets and bribery and corruption in close co-operation with our forensic specialists. We evaluated whether these factors indicate that a risk of material misstatement due to fraud is present.

We incorporated elements of unpredictability in our audit. We also considered the outcome of our other audit procedures and evaluated whether any findings were indicative of fraud or non-compliance.

As in all of our audits, we addressed the risks related to management override of controls. For these risks we have performed procedures among others to evaluate key accounting estimates for management bias that may represent a risk of material misstatement due to fraud, in particular relating to important judgment areas and significant accounting estimates as disclosed in the "critical accounting estimates and judgements" section of the accounting policies in the notes to the financial statements. We have also used data analysis to identify and address high-risk journal entries and evaluated the business rationale (or the lack thereof) of significant extraordinary transactions, including those with related parties.

When identifying and assessing fraud risks we presumed that there are risks of fraud in revenue recognition. We evaluated that revenues for the access to Euronext's market data information services as part of the revenues from advanced data services in particular give rise to this fraud risk, given inherent limitations in Euronext's revenue calculation system. We designed and performed our audit procedures relating to revenue recognition responsive to this presumed fraud risk and we sent out confirmations to customers and used data analysis procedures to recalculate the advanced data services revenue.

We considered available information and made enquiries of the managing board, relevant executives, internal audit, legal, compliance, risk management and the supervisory board.

The fraud risks we identified, enquiries and other available information did not lead to specific indications for fraud or suspected fraud potentially materially impacting the view of the financial statements.

Our audit response related to risks of non-compliance with laws and regulations

We performed appropriate audit procedures regarding compliance with the provisions of those laws and regulations that have a direct effect on the determination of material amounts and disclosures in the financial statements. Furthermore, we assessed factors related to the risks of non-compliance with laws and regulations that could reasonably be expected to have a material effect on the financial statements from our general industry experience, through discussions with the managing board, relevant executives, internal audit, legal, compliance and risk management, and the supervisory board, reading minutes, inspection of internal audit and compliance reports, and performing substantive tests of details of classes of transactions, account balances or disclosures.

We also inspected lawyers' letters and correspondence with regulatory authorities and remained alert to any indication of (suspected) non-compliance throughout the audit.in particular relating to indications for non-compliance with the European Markets in Financial Instruments Directive (MIFID), the Central Securities Depositories Regulation (CSDR), Market Abuse Regulation (MAR) and the European Market Infrastructure Regulation (EMIR). Finally, we obtained written representations that all known instances of non-compliance with laws and regulations have been disclosed to us.

Our audit response related to going concern

As disclosed in section 3. A). 'Basis of preparation' of the notes to the consolidated financial statements, the financial statements have been prepared on a going concern basis. When preparing the financial statements, the managing board made a specific assessment of the company's ability to continue as a going concern and to continue its operations for at least twelve months from the date of preparation of the financial statements and confirmed this in section 4.2 "In Control Statement" of the universal registration document.

We discussed and evaluated the specific assessment with the managing board exercising professional judgment and maintaining professional skepticism. We considered whether the managing board's going concern assessment, based on our knowledge and understanding obtained through our audit of the financial statements or otherwise, contains all relevant events or conditions that may cast significant doubt on the company's ability to continue as a going concern, with a focus on whether the company will continue to comply with regulatory liquidity and solvency requirements. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion.

Based on our procedures performed, we did not identify material uncertainties about going concern. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause a company to cease to continue as a going concern.

Our key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements. We have communicated the key audit matters to the supervisory board. The key audit matters are not a comprehensive reflection of all matters discussed.

The key audit matter 'Accounting for acquired businesses and measurement of clearing assets, liabilities and revenues' is not considered a key audit matter for this year as the acquisition of Borsa Italiana Group was completed in the previous year.

Following the ongoing IT transformation at Euronext and the significant increase in capitalized internally developed software costs in 2022, we defined a new key audit matter.

Impairment of goodwill and other purchased intangible assets	
Risk	Euronext accounts for a significant amount of goodwill and customer relationships on its consolidated balance sheet. As described in note 18, goodwill amounts to € 4 billion as at 31 December 2022 while other intangible assets have a value of € 2.2 billion mostly consisting of acquired customer relationships which have a finite useful life. Management is required to perform annually an impairment test of goodwill. Where indicators of impairment of other intangible assets are identified, a detailed impairment test is performed. These impairment tests involve judgement in applying assumptions in the valuation models. Key judgements and estimates used in the valuation models include cash flow projections, revenue growth, discount rates, amortization periods for intangible assets and customer retention rates. The goodwill impairment test is disclosed in note 18 with reference to note 3 and did not result in recognition of an impairment. As disclosed in note 18, no indicators of impairment of other intangible assets with a finite useful life were identified. We have determined the impairment of goodwill and other purchased intangibles to be a key audit matter due to the size of the goodwill and intangible assets as at 31 December 2022 and the use of judgement by management in their impairment tests.
Our audit approach	Our audit procedures included, amongst others, evaluating the appropriateness of Euronext's accounting policies related to the impairment testing in accordance with IAS 36 'Impairment of assets'. We obtained an understanding of the impairment process, evaluated the design of internal controls in respect of impairment testing and adopted a substantive audit approach. We performed substantive procedures, including the reconciliation of the data used in the impairment calculations and disclosures to source systems. With involvement of our own specialists we evaluated the model used by Euronext and tested key inputs such as the discount rates and growth rates assigned to each of the cash generating units and we evaluated these key inputs by comparing them to a range of economic and industry forecasts. We assessed the accuracy of forecasts included in the model by comparing the forecasts with the 2023 budget and 2024 business plan as approved by the managing and supervisory boards and evaluated the reasonableness of cash flow forecasts by analysing the revenue growth rates used. We performed sensitivity analysis on the key assumptions (including the model inputs, cash flow forecasts and customer retention rates) used in the model, to understand the impact that reasonably possible changes to these key inputs would have on the overall carrying amount of the goodwill and purchased intangible assets at the balance sheet date. Finally, we evaluated the adequacy of the relevant disclosures made in the financial statements.
Key observations	Based on our procedures performed we consider the valuation of the goodwill and other intangible assets to be reasonable and the related disclosures in accordance with EU-IFRS.

Recognition of internally developed software	
Risk	The capitalization of expenses for internally developed software involves judgement in assessing the capitalization against the recognition criteria set out in IAS 38 'Intangible assets'. Euronext's accounting policy for capitalizing software development costs is disclosed in section 3, under H). (ii) 'Internally generated intangible assets'. The risk exists that expenses related to internally developed software are capitalized inappropriately. We have determined the recognition of internally developed software as an intangible asset to be a key audit matter for this year following the increase in internally developed software investments related to among others the ongoing implementation of trading platform Optiq at Borsa Italiana and the expansion of the clearing activities to all Euronext markets, the use of judgement by management in determining whether the recognition criteria were met and the audit effort required to address the matter. The internally developed software recognised is disclosed in note 18 'Goodwill and other intangible assets' to the financial statements.
Our audit approach	We evaluated Euronext's accounting polices related to the recognition of internally developed software in accordance with IAS 38, and whether assumptions and the criteria applied for capitalization are appropriate and have been applied consistently. We also obtained an understanding of the recognition process, evaluated the design and implementation of internal controls. We adopted a substantive audit approach and performed procedures in respect of the capitalized software development costs, including the reconciliation of the data used in the calculations and disclosures to source systems. For a sample of additions, we have agreed amounts recognized to supporting documentation to confirm that the costs were incurred and the internally developed software meets the definition of an intangible asset and the recognition criteria of IAS 38. For all intangible assets we have tested the appropriateness of the amortization period based on historic trends of economic lives and management's best estimate of future performance. Finally, we evaluated the adequacy of the relevant disclosures made in the financial statements.
Key observations	Based on our procedures performed we consider the recognition of internally developed software to be reasonable and in accordance with EU-IFRS.

Measurement of financial assets at fair value through other comprehensive income	
Risk	Euronext holds a direct and an indirect minority interest in Euroclear S.A. As described in note 20 to the financial statements this investment is classified as a financial asset at fair value through other comprehensive income. As Euroclear is a non-listed company, Euronext developed an internal model to estimate the fair value, as disclosed in note 35 to the financial statements. A weighted approach is applied which is based on the return on equity, expected dividend growth rate (non-observable parameters) and cost of capital of comparable regulated entities and market observable transactions less a discount for illiquidity. In 2022, Euronext revalued its total interest by € 42 million, increasing the fair value to € 249 million. The determination of the fair value of the interest in Euroclear involves significant management judgment and assumptions as certain unobservable inputs are used. The use of different valuation techniques and assumptions can produce significantly different estimate of fair value. Given the inherent subjectivity we determined this a key matter for our audit.

Our audit approach	Our audit procedures comprised, amongst others, evaluating the appropriateness of Euronext's accounting policies related to the fair valuation of an interest in a non-listed company according to IFRS 9 'Financial Instruments' and IFRS 13 'Fair value measurement'. The procedures performed included an evaluation of the methodology and the appropriateness of the valuation model for consistency and an assessment against generally accepted market practice and inputs used to value the investments. We also obtained an understanding of the valuation process, evaluated the design and implementation of internal controls and adopted a substantive audit approach. We used our valuation specialists to independently evaluate the valuation performed. As part of these audit procedures, we tested the reasonableness of key inputs used in the valuation such as the market observable transfers, and the non-observable parameters, the return on equity and expected dividend growth rates. Finally, we evaluated the adequacy of the disclosures related to financial assets at fair value through other comprehensive income. In particular we evaluated whether disclosures adequately convey the degree of estimation uncertainty and the range of possible outcomes.
Key observations	We consider the measurement of and disclosures on the financial assets at fair value through other comprehensive income to be reasonable and in accordance with EU-IFRS.

Reliability and continuity of the IT environment	
Risk	The activities and financial reporting of Euronext are highly dependent on the reliability and continuity of the IT environment. Effective general IT controls with respect to change management, logical access, infrastructure and operations, support the integrity and continuity of the electronic data processing as well as the operating effectiveness of the automated controls. As described in the risk management section 2 in the universal registration document, the IT environment and the IT organization of Euronext continue to be strengthened. There is a risk that the general IT control measures may not always operate as intended and, as a result, internal controls are ineffective. Therefore, we identified the reliability and continuity of the IT environment insofar in scope of our audit of the financial statements, to be a key audit matter.
Our audit approach	IT audit specialists are an integral part of the engagement team and assess the reliability and continuity of the IT environment to the extent necessary for the scope of our audit of the financial statements. In this context, we evaluated the design of the IT processes and tested the operating effectiveness of general IT controls, as well as application controls over data processing, data feeds and interfaces where relevant for the financial reporting. We performed additional procedures on access management, cyber security, security event monitoring and segregation of duties for the related systems. We also assessed the possible impact of changes in IT during the year resulting from the internal transformation activities and remedial measures on the operating effectiveness of general IT controls and the automated controls. Where applicable, we tested internal controls related to cloud computing and third-party service providers
Key observations	Our testing of the general IT controls and the substantive tests performed, provided sufficient evidence to enable us to rely on the adequate and continued IT environment relevant for our audit of the financial statements.

Report on other information included in the universal registration document

The universal registration document contains other information in addition to the financial statements and our auditor's report thereon.

Based on the following procedures performed, we conclude that the other information:

- is consistent with the financial statements and does not contain material misstatements
- contains the information as required by Part 9 of Book 2 of the Dutch Civil Code for the management report and the other information as required by Part 9 of Book 2 of the Dutch Civil Code and as required by Sections 2:135b and 2:145 sub-section 2 of the Dutch Civil Code for the remuneration report.

We have read the other information. Based on our knowledge and understanding obtained through our audit of the financial statements or otherwise, we have considered whether the other information contains material misstatements. By performing these procedures, we comply with the requirements of Part 9 of Book 2 and Section 2:135b sub-Section 7 of the Dutch Civil Code and the Dutch Standard 720. The scope of the procedures performed is substantially less than the scope of those performed in our audit of the financial statements.

The managing board is responsible for the preparation of the other information, including the management report in accordance with Part 9 of Book 2 of the Dutch Civil Code and other information required by Part 9 of Book 2 of the Dutch Civil Code. The managing board and the supervisory board are responsible for ensuring that the remuneration report is drawn up and published in accordance with Sections 2:135b and 2 145 sub-section 2 of the Dutch Civil Code.

Report on other legal and regulatory requirements and ESEF

Engagement

We were engaged by the general meeting of shareholders as auditor of Euronext on 19 May 2017, as of the audit for the year 2017 and have operated as statutory auditor since that date.

No prohibited non-audit services

We have not provided prohibited non-audit services as referred to in Article 5(1) of the EU Regulation on specific requirements regarding statutory audit of public-interest entities.

European Single Electronic Reporting Format (ESEF)

Euronext has prepared the universal registration document in ESEF. The requirements for this are set out in the Delegated Regulation (EU) 2019/815 with regard to regulatory technical standards on the specification of a single electronic reporting format (hereinafter: the RTS on ESEF).

In our opinion, the universal registration document, prepared in the XHTML format, including the partially marked-up consolidated financial statements, as included in the reporting package by

Euronext, complies in all material respects with the RTS on ESEF.

The managing board is responsible for preparing the universal registration document, including the financial statements, in accordance with the RTS on ESEF, whereby the managing board combines the various components into a single reporting package.

Our responsibility is to obtain reasonable assurance for our opinion whether the universal registration document in this reporting package complies with the RTS on ESEF.

We performed our examination in accordance with Dutch law, including Dutch Standard 3950N 'Assurance-opdrachten inzake het voldoen aan de criteria voor het opstellen van een digitaal verantwoordingsdocument' (assurance engagements relating to compliance with criteria for digital reporting). Our examination included amongst others:

- obtaining an understanding of the company's financial reporting process, including the preparation of the reporting package
- identifying and assessing the risks that the annual report does not comply in all material respects with the RTS on ESEF and designing and performing further assurance procedures responsive to those risks to provide a basis for our opinion, including:
- obtaining the reporting package and performing validations to determine whether the reporting package containing the Inline XBRL instance document and the XBRL extension taxonomy files, has been prepared in accordance with the technical specifications as included in the RTS on ESEF
- examining the information related to the consolidated financial statements in the reporting package to determine whether all required mark-ups have been applied and whether these are in accordance with the RTS on ESEF.

Description of responsibilities regarding the financial statements

Responsibilities of the managing board and the supervisory board for the financial statements

The managing board is responsible for the preparation and fair presentation of the financial statements in accordance with EU-IFRS and Part 9 of Book 2 of the Dutch Civil Code. Furthermore, the managing board is responsible for such internal control as the managing board determines is necessary to enable the preparation of the financial statements that are free from material misstatement, whether due to fraud or error.

As part of the preparation of the financial statements, the managing board is responsible for assessing the company's ability to continue as a going concern. Based on the financial reporting frameworks mentioned, the managing board should prepare the financial statements using the going concern basis of accounting unless the managing board either intends to liquidate the company or to cease operations, or has no realistic alternative but to do so. The managing board should disclose events and circumstances that may cast significant doubt on the company's ability to continue as a going concern in the financial statements.

The supervisory board is responsible for overseeing the company's financial reporting process.

Our responsibilities for the audit of the financial statements

Our objective is to plan and perform the audit engagement in a manner that allows us to obtain sufficient and appropriate audit evidence for our opinion.

Our audit has been performed with a high, but not absolute, level of assurance, which means we may not detect all material errors and fraud during our audit.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements. The materiality affects the nature, timing and extent of our audit procedures and the evaluation of the effect of identified misstatements on our opinion.

We have exercised professional judgment and have maintained professional skepticism throughout the audit, in accordance with Dutch Standards on Auditing, ethical requirements and independence requirements. The 'Information in support of our opinion' section above includes an informative summary of our responsibilities and the work performed as the basis for our opinion. Our audit further included among others:

- Performing audit procedures responsive to the risks identified, and obtaining audit evidence that is sufficient and appropriate to provide a basis for our opinion

- Obtaining an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control
- Evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the managing board
- Evaluating the overall presentation, structure and content of the financial statements, including the disclosures
- Evaluating whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation

Communication

We communicate with the supervisory board regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant findings in internal control that we identify during our audit.

In this respect we also submit an additional report to the audit committee of the supervisory board in accordance with Article 11 of the EU Regulation on specific requirements regarding statutory audit of public-interest entities. The information included in this additional report is consistent with our audit opinion in this auditor's report.

We provide the supervisory board with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with the supervisory board, we determine the key audit matters: those matters that were of most significance in the audit of the financial statements. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, not communicating the matter is in the public interest.

Amsterdam, 30 March 2023

Ernst & Young Accountants LLP

Signed by J.G. Kolsters

9.3 Limited assurance report of the independent auditor on Euronext N.V.'s selected ESG Key Performance Indicators

To: the shareholders and supervisory board of Euronext N.V.

Our conclusion

We have performed a limited assurance engagement on selected ESG Key Performance Indicators (hereinafter ESG KPIs) in the Universal Registration Document for the year 2022 of Euronext N.V. at Amsterdam.

Based on our procedures performed and the evidence obtained, nothing has come to our attention that causes us to believe that the selected ESG KPIs are not prepared, in all material respects, in accordance with the reporting criteria as included in the 'Reporting criteria' section of our report.

The selected ESG KPIs are included in chapter "3.5 Summary ESG KPI" and consist of:

Impact areas	KPIs
Our markets	1. Number of serious incidents on the regulated markets reported to the College of Regulators 2. Number of operational alerts treated by EMS 3. Availability time of the system Optiq® 4. Proportion of revenues linked to ESG products and services in the global revenues of the group
Our partners	5. Net Promoter Score 6. Percentage of suppliers signing the Code of conduct
Our people	7. Percentage of women in the Senior Leadership Team
Our society	8. Use of the Whistleblower mechanism 9. Data Protection training by new joiners to the company 10. Personal Data breaches
Our environment	11. Carbon footprint (location based

Basis for our conclusion

We have performed our limited assurance engagement on the selected ESG KPIs in accordance with Dutch law, including Dutch Standard 3000A 'Assurance-opdrachten anders dan opdrachten tot controle of beoordeling van historische financiële informatie (attest-opdrachten)' (Assurance engagements other than audits or reviews of historical financial information (attestation engagements)). Our responsibilities under this standard are further described in the 'Our responsibilities for the assurance engagement on the selected ESG KPIs' section of our report.

We are independent of Euronext N.V. in accordance with the "Verordening inzake de onafhankelijkheid van accountants bij assurance-opdrachten" (ViO, Code of Ethics for Professional Accountants, a regulation with respect to independence). This includes that we do not perform any activities that could result in a conflict of interest with our independent assurance engagement. Furthermore, we have complied with the "Verordening gedrags- en beroepsregels accountants" (VGBA, Dutch code of ethics).

We believe that the assurance evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.

Reporting criteria

The reporting criteria used for the preparation of the selected ESG KPIs are the reporting criteria developed by Euronext N.V. and are disclosed in chapter "3.5 Summary ESG KPI" of the Universal Registration Document.

The absence of an established practice on which to draw, to evaluate and measure the selected ESG KPIs allows for different, but acceptable, measurement techniques and can affect comparability between entities and over time.

Consequently, the selected ESG KPIs need to be read and understood together with the reporting criteria used.

Limitations to the scope of our assurance engagement

Our assurance engagement is restricted to the selected ESG KPIs. We have not performed assurance procedures on any other information as included in the Universal Registration Document in light of this engagement.

Our conclusion is not modified in respect to this matter.

Responsibilities of the managing board and the supervisory board for the selected ESG KPIs

The managing board is responsible for the preparation of the selected ESG KPIs in accordance with the reporting criteria as included in the 'Reporting criteria' section of our report. The managing board is solely responsible for selecting and applying these reporting criteria, taking into account applicable law and regulations related to reporting. In this context, the managing board is responsible for the identification of the intended users and the criteria being applicable for their purposes. The choices made by the managing board regarding the scope of the selected ESG KPIs and the reporting policy are summarized in chapter "3.5 Summary ESG KPI" of the Universal Registration Document.

Furthermore, the managing board is responsible for such internal control as it determines is necessary to enable the preparation of the selected ESG KPIs that are free from material misstatement, whether due to error or fraud.

The supervisory board is responsible for overseeing the reporting process of the selected ESG KPIs of Euronext N.V.

Our responsibilities for the assurance engagement on the selected ESG KPIs

Our responsibility is to plan and perform our limited assurance engagement in a manner that allows us to obtain sufficient and appropriate assurance evidence for our conclusion.

Procedures performed to obtain a limited level of assurance are aimed to determine the plausibility of information and vary in nature and timing from, and are less in extent, than for a reasonable assurance engagement. The level of assurance obtained in a limited assurance engagement is therefore substantially less than the assurance obtained in a reasonable assurance engagement.

We apply the 'Nadere voorschriften kwaliteitssystemen' (NVKS, Regulations for quality management systems) and accordingly maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and other relevant legal and regulatory requirements.

The procedures of our limited assurance engagement included among others:

- Performing an analysis of the external environment and obtaining an understanding of the sector, insight into relevant sustainability themes and issues, relevant laws and regulations and the characteristics of the company as far as relevant to the selected ESG KPIs
- Evaluating the appropriateness of the reporting criteria used, their consistent application and related disclosures on the selected ESG KPIs.
- Obtaining through inquiries a general understanding of internal control, reporting processes and information systems relevant to the preparation of the selected ESG KPIs, without testing the operating effectiveness of controls
- Obtaining an understanding of the procedures performed by the internal audit department of Euronext N.V.
- Identifying areas of the selected ESG KPIs with a higher risk of misleading or unbalanced information or material misstatements, whether due to error or fraud. Designing and performing further assurance procedures aimed at determining the plausibility of the selected ESG KPIs responsive to this risk analysis. These further assurance procedures consisted amongst others of:
  - Interviewing management and relevant staff at corporate level responsible for the strategy, policy and results relating to the selected ESG KPIs
  - Interviewing relevant staff responsible for providing the information for, carrying out internal control procedures on, and consolidating the data in the selected ESG KPIs

  - Obtaining assurance information that the selected ESG KPIs reconcile with underlying records of the company
  - Reviewing, on a limited test basis, relevant internal and external documentation
  - Performing an analytical review of the data and trends in the information submitted for consolidation at corporate level
- Reconciling the relevant financial information with the financial statements
- Evaluating the consistency of the selected ESG KPIs with the information in the Universal Registration Document which is not included in the scope of our assurance engagement

The Hague, 30 March 2023

Ernst & Young Accountants LLP

Signed by R.J. Bleijs