LCH Group Holdings Limited

Report and Consolidated Financial Statements

For the year ended 31 December 2022

Company Registration Number 04743602

LCH GROUP HOLDINGS LIMITED
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LCH GROUP HOLDINGS LIMITED

DIRECTORS AND OFFICERS

BOARD OF DIRECTORS

Name	Type of director	Note
Daniel Maguire (CEO)	Executive	
Diane Michele Bouwmeester	Executive	
John Horkan	Executive	
Charlotte De Crozals	Executive	Appointed 23 March 2022

COMPANY SECRETARY

Simon Tutton

REGISTERED OFFICE

10 Paternoster Square
London
EC4M 7LS

INDEPENDENT AUDITORS

Ernst & Young LLP
25 Churchill Place
London
E14 5EY

Telephone: +44 (0) 20 7426 7000

LCH Group Holdings Limited (the "Group" or "the LCH Group") is a majority owned subsidiary of London Stock Exchange Group plc ("LSEG") and is the parent of the LCH group of companies.

BUSINESS MODEL

The LCH Group ("LCH" or the "Group") is a leading multinational clearing house, with clearing operations in the UK, Eurozone, US, and an expanding presence in the Asia-Pacific region. LCH provides services to mitigate counterparty risk across multiple asset classes for clearing members and their clients, operating through an open access model that clears for the Group's markets and other major exchanges and platforms as well as a range of over-the-counter ("OTC") markets.

LCH sits in the middle of a trade as the buyer to every seller and the seller to every buyer. If either party defaults on the trade, LCH owns the defaulter's risk and becomes accountable for its liabilities. Fundamental to LCH's risk process is its collection of quality collateral from clearing members and clients as insurance to recover or replace defaulted risk. During the life of a trade, or that of a portfolio of trades, LCH processes all cashflows and marks the trade or book to market, calling variation and initial margin in relation to prevailing risk of the overall portfolio.

LCH earns its revenue in the OTC derivatives markets by charging members either an annual fee for all clearing or a lower annual fee with variable fees based on volume. Additional fees are levied for services such as compression. Clients pay a fee based on OTC volume cleared. In non-OTC markets, all users pay a fee based on volumes or value cleared. Net treasury income is earned on cash held for margin and default funds.

OPERATING SUBSIDIARIES

LCH Limited continues to satisfy the requirements of the Bank of England as a recognised clearing house in the UK and the requirements of all other regulatory bodies to whose rules it is subject (note 25). It provides central counterparty ("CCP") clearing services in respect of a broad range of cash and derivative products traded on or through various exchanges and trading platforms in the UK, Europe, Asia and the US as well as those traded in OTC markets.

LCH SA (Banque Centrale de Compensation SA), regulated by the L'Autorité de Contrôle Prudentiel et de Résolution ("ACPR"), acts as the clearing house for regulated markets in France, the Netherlands, Belgium and Portugal and for fixed income products and credit default swaps ("CDS") traded either on regulated markets or trading platforms located in France, the UK and Italy. Its principal business is the provision of CCP clearing services in respect of equities and bonds, interest rate and commodity futures and options, equity and index futures and options, OTC bonds and repurchase agreements and CDS.

LCH SwapAgent Limited launched in May 2017, and provides processing, margining, and settlement of bilateral, non-cleared derivatives as an agent. The company is not regulated.

STRATEGIC OBJECTIVES

The Group's strategic objectives are to:

- provide market leading risk management and clearing solutions;
- manage our members' and clients' risk by providing effective and efficient clearing services; and
- promote a safe and stable financial market foremost in all that we do.

The CCP's annually set detailed Corporate Strategic Objectives ("CSOs") and use these as a mechanism for monitoring and achieving the Group's objectives. The CSOs focus on the CCP's continuing to offer our proven risk management capabilities across a range of asset classes with a commitment to partner with our members to develop the services that make markets more efficient, resilient and safe.

KEY PERFORMANCE INDICATORS

Non-financial key performance indicators utilised by the directors to measure the Group's progress are as follows:

	2022	2021	Variance
OTC			
SwapClear			
IRS Notional cleared (US$ trillion)	**1,091**	921	18%
SwapClear members	**124**	123	1%
Client trades ('000)	**2,684**	2,180	23%
Client average 10-year notional equivalent (US$ trillion)	**3.7**	4.2	-12%
ForexClear			
Notional cleared (US$ trillion)	**24.7**	21.7	14%
CDSClear			
Notional cleared (€ billion)	**3,367**	2,283	47%
Securities			
EquityClear			
Trades cleared (million)	**2,163**	1,996	8%
Listed Derivatives			
Contracts cleared (million)	**303**	286	6%
RepoClear			
Notional cleared (€ trillion)	**289**	238	21%
Non-cash collateral			
Average non-cash collateral (€ billion)	**168**	166	1%
Net Treasury Income			
Average cash collateral (€ billion)	**141**	107	32%

Discussion of the key performance indicators is included in the development and performance section below.

DEVELOPMENT AND PERFORMANCE

Total income was up 12% to €1,116.3 million (2021: €994.9 million) with good performance from clearing fees and strong growth in non-cash collateral. Net treasury income was €299.4 million (2021: €240.5 million) and up 25% due to higher average cash collateral balances.

Operating expenses were up 6% to €303.9 million (2021: €288.0 million) on an underlying basis.

OTC derivatives clearing revenue was up 17% at €438.1 million (2021: €373.2 million) and non-OTC clearing revenue was €208.3 million (2021: €211.6million). Other fee revenue, which includes compression services, fees for managing non-cash collateral, pass-through cost, and revenue share, increased to €194.4 million (2021: €191.0 million).

DEVELOPMENT AND PERFORMANCE (CONT)

SWAPCLEAR

SwapClear is the global market leader for OTC Interest Rate Swap ("IRS") clearing, offering access to a deep pool of liquidity across 27 currencies.

In 2022, SwapClear continued to support the markets without interruption through significant ongoing market volatility and high trading volumes. Total notional cleared was US$1.1 quadrillion (2021: US$0.9 quadrillion) rising 18% year-on-year, with clearing of inflation swaps reaching a record notional high of $9.3 trillion in 2022. Client trades increased by 23% to 2,684,000 (2021: 2,180,000). In 2022, US$794 trillion (2021: US$608 trillion) in notional, and 6.6 million (2021: 4.9 million) trades were compressed over the period, enabling members and their clients to benefit from capital and operational efficiencies. As testament to the progress made in the transition to risk-free rates (RFRs), cleared swap liquidity has grown considerably over the last 12 months – with over 80% of all new USD swap risk cleared at SwapClear now SOFR-based versus less than 10% in Q2 2021. SwapClear has also supported the move to RFRs in the Nordics by extending clearing eligibility to SWESTR (Swedish krona short-term rate) overnight index swaps (OIS) and is the first to launch the clearing of DESTR (Denmark short-term rate) OIS. Over the year, SwapClear continued to grow across Asia, registering a nearly 30% year-on-year increase in notional cleared in APAC currencies, and welcoming DBS Bank as its first direct member in Singapore.

SWAPAGENT

The SwapAgent Ltd service, which is designed to simplify the processing, margining and settlement of non-cleared derivatives, saw membership increase from 19 to 23 market participant groups during 2022, and the service had registered $7.5 trillion in notional at the end of 2022, up from $3.7 trillion at the end of 2021. During the year, SwapAgent extended its product coverage to include SOFR swaptions, enhanced its legal documentation standardisation to include support for German DRV, and onboarded its first buy-side member.

FOREXCLEAR

ForexClear continued to demonstrate growth in 2022, with US$25 trillion cleared across the service, up from US$22 trillion in 2021. US$1 trillion in deliverable options notional was cleared through ForexClear for the first time in a single calendar year, up 59% from US$0.6 trillion in 2021. Growth is expected to continue with the service having launched clearing for USD/JPY and EUR/JPY FX Options. US$514 billion was cleared by clients in 2022, up 112% from US$243 billion in 2021. In May 2022, ForexClear and its divisional partners within LSEG, announced plans to launch the non-deliverable forwards ("NDF") matching platform in Singapore. The integration of clearing into the design of the NDF matching platform creates a trading platform where market participants can decide on a pre-trade basis to clear their NDFs. The platform is due for launch in H2 2023. ForexClear also processed its first client trades through FXall and FX Connect TradeNeXus. More than 50 clients are now live, including Schroders, the first European asset manager to clear with ForexClear.

CDSCLEAR

The number of CDSClear members is 25 (2021: 25). The total notional amount cleared increased by 48 percent to €1,684 billion (2021: €1,141 billion). Total clearing fee income for the year, driven by higher volumes, increased to €18.2million (2021: €17.4 million).

REPOCLEAR

In 2022, RepoClear processed €289 trillion (2021: €238 trillion) of nominal across 12 million (2021:10.5m) trade sides cleared, both record highs for the service. There are now 32 buy-side sponsored members in RepoClear. RepoClear SA expanded to a broader range of investor CSD settlement connections, introduced an enriched VaR

DEVELOPMENT AND PERFORMANCE (CONT)

initial margin methodology which has improved margin efficiencies and reduced costs for members. Additionally, RepoClear SA launched the award-winning Settlement Monitor, a tool to perform meaningful analysis of settlement fails and improve settlement performance.

EQUITYCLEAR

In LCH Ltd, the EquityClear service cleared a record high 2.2 billion trade sides in 2022, a 15% increase from 2021. In LCH SA, EquityClear further expanded its European equities offering with connections to CBOE Europe BV (including the off-book trade reporting service BXTR) and Aquis Exchange Europe. Enhancements to the service in 2022 included an enriched VaR initial margin methodology to improve margin efficiencies and reduce costs.

SECTION 172 (1) STATEMENT

Section 172 of the Companies Act 2006 requires a director of a company to act in the way he or she considers, in good faith, would most likely promote the success of the Company for the benefit of its members as a whole. In doing this section 172 requires Directors to have regard to, amongst other matters, the:

- likely consequences of any decisions in the long-term;
- interests of the Company's employees;
- need to foster the Company's business relationships with suppliers, customers and others;
- impact of the Company's operations on the community and environment;
- desirability of the Company maintaining a reputation for high standards of business conduct; and
- need to act fairly as between members of the Company.

In discharging our section 172 duties we have regard to the factors set out above. In addition, we also have regard to other factors which we consider relevant to the decision being made. By considering the Group's purpose, vision and values together with its strategic priorities and having a process in place for decision-making, we aim to make sure that our decisions are consistent and appropriate in all the circumstances.

We delegate authority for day-to-day management of the Group to executives and then engage management in setting, approving and overseeing execution of the business strategy and related policies. Board meetings are held periodically where the Directors consider the Group's activities and make decisions. As part of those meetings the Directors receive information on section 172 matters when making relevant decisions. For example, when reviewing and approving the Group's financial statements each year we make an assessment of the strength of the Group's balance sheet and make decisions about the payment of dividends.

As the principal activity of the Company is to act as a holding company for the other entities in the LCH Group, the Company has had no commercial business, and no employees, customers or suppliers other than other LCH Group companies during the period and as such the breadth of stakeholder and other considerations that would often apply in operating or commercial trading companies have generally not applied to the decisions made by the Directors.

The Company's key stakeholders are the workforce, customers and regulators of its subsidiary companies. The Board recognises that building strong relationships with our stakeholders will help to deliver the Company's strategy in line with our long-term values and in a sustainable way. While there are cases where the Board judges that it should engage directly with certain stakeholder groups or on certain issues, the size and spread of both our stakeholders and LSEG means that stakeholder engagement might take place at a subsidiary or LSEG level. For details on some of the engagement that takes place with the Company's stakeholders at a subsidiary level, please refer to the LCH Limited Annual Report for the financial year ended 31 December 2022. For details on some of the engagement that takes place with the Company's stakeholders at a LSEG level, please refer to the London Stock Exchange Group plc Annual Report for the financial year ended 31 December 2022.

In each board pack, the board are provided with a memorandum reminding them of, and providing guidance in connection with, their duties and responsibilities, including those set out in section 172 (1)(a)-(f). We set below some examples of how we have had regard to matters set out in section 172(1)(a)-(f) when discharging our section 172 duty and the effect of that on decisions taken by us.

Workforce

During 2022 the Company had no employees, however its subsidiaries had a combined workforce of over 978 (2021: 920) employees during the financial year. Details on LCH Limited's workforce engagement activities can be found in its Annual report and financial statement for the financial year ended 31 December 2022.

The main workforce engagement activities take place at the London Stock Exchange Group level and these include formal and informal meetings; employee engagement surveys and Townhall meetings. Together, these engagements activities enable the workforce to share its view on working for LSEG, providing management with insight as well as mechanisms to track engagement and sentiment.

For a detailed explanation of the LSEG workforce engagement activities, please see the London Stock Exchange Group plc Annual Report for the financial year ended 31 December 2022.

Customers

The boards of Company's subsidiaries LCH Limited and LCH SA include within their membership representatives of clearing members, and shareholders, thereby allowing these groups of stakeholders to be part of decision making on the design of services, rules, overall strategy and major decisions. In addition, the Risk Committees of LCH Limited and LCH SA include within their members representatives of members and clients. The Risk Committees act as a forum for consultation on recommendations to be made to the relevant boards on risk matters.

Regulators

During the year, members of the board met with the regulators of its subsidiaries to continue to foster its relationships and to better understand their perspective and expectations on matters that are critical to those subsidiaries including Brexit and operational resilience.

Dividend Payments

In 2022, the Board approved the payment of a final dividend of €297.2million (€4.10 per share), to the Group's shareholders. In making our decision we considered a range of factors. These included the long-term viability of the Group and its subsidiaries; its expected cash flow and financing requirements and the expectations of our shareholders.

PRINCIPAL RISKS AND UNCERTAINTIES

The Group's activities expose it to a number of risks, principally market risk (financial market volatility, interest rate risk, foreign exchange risk, sovereign risk, credit risk, liquidity risk, operational risk, regulatory risk, and capital risk. The Group manages these risks through various control mechanisms and its approach to risk management is to be prudent yet responsive to changes in the risk environment.

Note 2 provides descriptions of these risks and details the means by which the Group mitigates them.

Details of the Group's capital management processes are provided in note 25.

By order of the Board:

Daniel Maguire
CEO
LCH Group Holdings Limited
16 June 2023

LCH GROUP HOLDINGS LIMITED
DIRECTORS' REPORT

The directors of LCH Group Holdings Limited (the "Company"), registered in England and Wales with company number 04743602, present their report to the shareholders, together with the audited consolidated financial statements for the year ended 31 December 2022. The principal activity of the Company is the holding of investments in operating subsidiaries.

DIRECTORS

The current directors and changes made during the year ended 31 December 2022 and subsequently are detailed on page 1.

INDEMNITY OF DIRECTORS

Directors are entitled to be indemnified by the group against all costs, charges, losses, and liabilities incurred by them in the proper exercise of their duties. Directors who have resigned during the year may also benefit from the same indemnity arrangement.

TRANSACTIONS WITH DIRECTORS AND RELATED PARTIES

Details of transactions with related parties are set out in note 27 to the consolidated financial statements. There were no transactions, other than those disclosed in note 19, with directors during the year.

STATEMENT OF DIRECTORS' RESPONSIBILITIES

The directors are responsible for preparing the strategic report, directors' report, and financial statements in accordance with applicable United Kingdom law and UK adopted International Accounting Standards (IAS).

Under company law the directors must not approve the financial statements unless they are satisfied that they present fairly the financial position, financial performance and cashflows of the Company for that period. In preparing the financial statements the directors are required to:

- select suitable accounting policies in accordance with IAS 8, Accounting Policies, Changes in Accounting Estimates and Errors, and then apply them consistently;
- present information, including accounting policies, in a manner that provides relevant, reliable, comparable, and understandable information;
- provide additional disclosures when compliance with specific requirements in IAS is insufficient to enable users to understand the impact of particular transactions, other events and conditions on the Company's financial position and financial performance;
- state that the Company has complied with IAS, subject to any material departures disclosed and explained in the financial statements; and
- make judgements and estimates that are reasonable and prudent.

The directors are responsible for keeping adequate accounting records which disclose with reasonable accuracy at any time the financial position of the Company and enable them to ensure that the financial statements comply with the Companies Act 2006. They are also responsible for safeguarding the assets of the Company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities

STAFF

It is the policy of the group as a whole to ensure that no staff members or job applicants face discrimination on the grounds of ethnic origin, colour, religion, gender, sexual orientation, age, or disability. The Group encourages and assists employees with a disability with training, career development and promotion opportunities, and where existing employees become disabled, our policy is to provide continuing employment and training wherever possible. Staff involvement is encouraged through regular meetings and information is shared with staff through web-based communication. The Group recognises its responsibilities to provide a safe working environment for its staff and measures are in place to ensure that the appropriate health and safety at work regulations are strictly observed in all workplaces.

EMPLOYEE AND STAKEHOLDER ENGAGEMENT

For details of the Group's employee and stakeholder engagement, please see the section 172(1) statement in the strategic report on page 5.

CORPORATE RESPONSIBILITY

The Group, as part of LSEG, has a zero-tolerance approach to modern slavery. A 'Slavery and Human trafficking statement' is published on LSEG's website (https://www.lseg.com/about-london-stock-exchange-group/corporate-responsibility/modern-slavery-act-statement) that describes the action plan and future steps to be taken to improve the supply chain management and procurement processes and procedures.

Other policies relating to the Group's corporate responsibility are also published on the website.

During the year, the Group made charitable donations of €0.8 million (2021: €0.6 million) to organisations based in the UK.

DIVIDENDS

On 16 June 2023, the directors of the Company recommended a full year dividend for the year ended 31 December 2022 of €268.2 million (€3.70 per ordinary share), subject to appropriate regulatory review and shareholder approval.

EVENTS AFTER THE REPORTING PERIOD

As expected, on 16 January 2023, Euronext served a termination notice to LCH SA regarding the Derivatives Clearing Agreement signed in 2017. In accordance with the Derivatives Clearing Agreement, LCH SA is entitled to a termination fee of €30 million and a migration fee of €6 million. These fees are clearly predefined in the agreement (with an indexation mechanism for the migration fee). They shall be the sole payment from Euronext to LCH in respect of all termination and migration related costs and are payable in 2024 both.

On the 16 June 2023 the LCH Group Board approved the acquisition of the remaining 11.1% minority interest share of LCH SA from Euronext for a total consideration of €111 million.

The Company has determined that these events are non-adjusting subsequent events. Accordingly, the financial position and results of operations as of and for the year ended 31 December 2022 have not been adjusted to reflect their impact.

FINANCIAL INSTRUMENTS

Details of the Group's financial instruments are provided in note 20.

GOING CONCERN AND LIQUIDITY RISK

The directors have made an assessment of the Group's and Company's ability to continue as a going concern and to meet current and future regulatory capital. This has been done using the Group's Budget and Medium Term Financial Plan ("MTFP"), sensitivity analysis and stress and reverse testing scenarios. The impact of the current inflationary market conditions and increased interest rate volatility has been considered as part of this assessment. The Directors have a reasonable expectation that the Group and the Company has adequate resources to continue in operational existence for 12 months from the date when these financial statements are authorised for issue. The Group continues to enjoy profitable trading and have a strong balance sheet with positive net assets. Contracts for the majority of the exchanges for which the Group clears have a notice period of at least 1 year. The Group has a large number of clearing members and is not unduly reliant on any single clearing member or group of clearing members.

On 8 February 2022, the European Commission published in the Official Journal an Implementing Decision (EU) 2022/174 determining that, for a limited period of time, the UK framework applicable to CCPs is equivalent to the EU framework. This equivalence decision extends the current equivalence until 30 June 2025. On this basis, on 25 March 2022, ESMA announced the recognition of LCH Limited as a Tier 2 CCP under the EMIR 2.2 supervisory framework, in line with the temporary equivalence decision. As such LCH Limited will continue to be directly subject to the requirements of EMIR and to ESMA supervision. From a customer perspective, this means no change either in standards or day-to-day operations. All processes and services remain unchanged.

The directors have further considered the impact of continued developments in Europe and the impact of existing and new sanctions that could be placed on Russian businesses in the markets the Group operates in. The directors do not expect these to have a material impact on the Group's or Company's going concern assessment and will continue to monitor the situation closely. From an operational perspective, the Group and the Company have processes in place to ensure compliance with such sanctions.

During 2020, LCH SA was granted approval to continue to offer services to the UK for up to 3 years under the Temporary Recognition Regime (TRR). The TRR was amended on 22 December 2022 to extend until 31 December 2024, and it remains further extendable by HMT.

On 16 January 2023 Euronext served LCH SA notice that it was terminating its DCA (Derivatives Clearing Agreement) with effect from June 2024. This will adversely impact the revenues of LCH SA from July 2024, so no negative impact is expected in 2023. In addition, Euronext will have to pay a termination fee of €30m and a migration fee of €6m, which will be recognised across 2023 and 2024 (From January 23 until June 2024). In addition, a couple of new initiatives such as the launch of Digital Asset Clear launch, and the CDSClear expansion to the US will generate incremental revenues in the coming years.

Furthermore, the directors are not currently aware of any material uncertainties that may cast significant doubt upon the Group's and Company's ability to continue as a going concern. Therefore, the financial statements continue to be prepared on a going concern basis.

OVERSEAS BRANCHES

The Group's CCP companies have a number of overseas branches. LCH Limited has four branches/representative offices in the following locations; US, Australia, Japan, and Singapore. LCH SA has a branch in the Netherlands and a representative office in Portugal.

GOVERNMENT GRANTS

The Group receives government grants in the form of tax credits in both the UK and France for research and development work carried out. The amounts have been recognised in the results of the Group when it is deemed likely that the credits will be received (note 28). The Group carries out research and development into software for future use.

DISCLOSURE OF INFORMATION TO THE AUDITORS

Each of the persons who is a director at the date of approval of this report confirms that:

- so far as the director is aware there is no relevant audit information of which the Group's auditors are unaware; and
- the director has taken all steps that they ought to have taken as director in order to make themselves aware of any relevant audit information and to establish that the Group's auditors are aware of that information.

AUDITORS

Ernst & Young LLP are deemed to have been reappointed as the Group & Company's auditor under the provisions of the Companies Act 2006.

By order of the Board:

Daniel Maguire
CEO
LCH Group Holdings Limited
16 June 2023

OPINION

We have audited the financial statements of LCH Group Holdings Limited ('the "Parent Company" or the "Company") and its subsidiaries (the 'Group') for the year ended 31 December 2022 which comprise the Consolidated Income Statement, the Consolidated Statement of Comprehensive Income, the Consolidated Statement of Financial Position, the Consolidated Statement of Cashflows, the Consolidated Statement of Changes in Equity, the Company Statement of Financial Position, the Company Statement of Cash Flows, the Company Statement of Changes in Equity and the related notes 1 to 37, including a summary of significant accounting policies. The financial reporting framework that has been applied in their preparation is applicable law and UK adopted International Accounting Standards and as regards the Parent Company financial statements, as applied in accordance with section 408 of the Companies Act 2006.

In our opinion:

- the financial statements give a true and fair view of the Group's and of the Parent Company's affairs as at 31 December 2022 and of the Group's profit for the year then ended;
- the Group financial statements have been properly prepared in accordance with UK adopted International Accounting Standards;
- the Parent Company financial statements have been properly prepared in accordance with UK adopted International Accounting Standards as applied in accordance with section 408 of the Companies Act 2006; and
- the financial statements have been prepared in accordance with the requirements of the Companies Act 2006.

BASIS FOR OPINION

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report. We are independent of the Group in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the FRC's Ethical Standard, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

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

CONCLUSIONS RELATING TO GOING CONCERN

In auditing the financial statements, we have concluded that the directors' use of the going concern basis of accounting in the preparation of the financial statements is appropriate. Our evaluation of the directors' assessment of the Group and Parent Company's ability to continue to adopt the going concern basis of accounting included:

- Obtaining an understanding of management's basis for use of the going concern basis of accounting through reviewing the going concern assessment and underlying forecasts and assumptions, and through inquiries of management and those charged with governance.
- Assessing the appropriateness of key assumptions made by management in the Group's business plan by comparing them to historical performance and challenging the achievability of budgeted growth. In assessing the reasonableness of management's key assumptions, we considered the trading environment, including the current state of the macro-economic environment, principal risks, uncertainties, and appropriate mitigating factors.
- Testing the clerical accuracy of management's going concern model including the data used in stress testing scenarios.
- Evaluating the reasonableness of management's adverse forecasts by benchmarking the stress testing scenario assumptions against external data and evaluating the plausibility of management actions available to mitigate the impact.
- Evaluating the level of liquidity of the Group to support ongoing requirements.

- Assessing the appropriateness of the going concern disclosures and their compliance with UK adopted International Accounting Standards.

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the Group and Parent Company's ability to continue as a going concern for a period up to 30 June 2024, being not less than twelve months from when the financial statements are authorised for issue.

Our responsibilities and the responsibilities of the directors with respect to going concern are described in the relevant sections of this report. However, because not all future events or conditions can be predicted, this statement is not a guarantee as to the Group's ability to continue as a going concern.

OTHER INFORMATION

The other information comprises the information included in the annual report, other than the financial statements and our auditor's report thereon. The directors are responsible for the other information contained within the annual report.

Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in this report, we do not express any form of assurance conclusion thereon.

Our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the course of the audit or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether this gives rise to a material misstatement in the financial statements themselves. If, based on the work we have performed, we conclude that there is a material misstatement of the other information, we are required to report that fact.

We have nothing to report in this regard.

OPINIONS ON OTHER MATTERS PRESCRIBED BY THE COMPANIES ACT 2006

In our opinion, based on the work undertaken in the course of the audit:

- the information given in the strategic report and the directors' report for the financial year for which the financial statements are prepared is consistent with the financial statements; and
- the strategic report and directors' report have been prepared in accordance with applicable legal requirements.

MATTERS ON WHICH WE ARE REQUIRED TO REPORT BY EXCEPTION

In the light of the knowledge and understanding of the Group and the Parent Company and its environment obtained in the course of the audit, we have not identified material misstatements in the strategic report or directors' report.

We have nothing to report in respect of the following matters in relation to which the Companies Act 2006 requires us to report to you if, in our opinion:

- adequate accounting records have not been kept by the Parent Company, or returns adequate for our audit have not been received from branches not visited by us; or
- the Parent Company financial statements are not in agreement with the accounting records and returns; or
- certain disclosures of directors' remuneration specified by law are not made; or
- we have not received all the information and explanations we require for our audit.

RESPONSIBILITIES OF DIRECTORS

As explained more fully in the directors' responsibilities statement set out on page 7, the directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the directors determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the directors are responsible for assessing the Group's and the Parent Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Group or the Parent Company or to cease operations, or have no realistic alternative but to do so.

AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. 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.

Explanation as to what extent the audit was considered capable of detecting irregularities, including fraud

Irregularities, including fraud, are instances of non-compliance with laws and regulations. We design procedures in line with our responsibilities, outlined above, to detect irregularities, including fraud. The risk of not detecting a material misstatement due to fraud is higher than the risk of not detecting one resulting from error, as fraud may involve deliberate concealment by, for example, forgery or intentional misrepresentations, or through collusion. The extent to which our procedures are capable of detecting irregularities, including fraud is detailed below. However, the primary responsibility for the prevention and detection of fraud rests with both those charged with governance of the entity and management.

- We obtained an understanding of the legal and regulatory frameworks that are applicable to the Company and determined that the most significant are the Companies Act 2006, Financial Services and Markets Act 2000, European Markets Infrastructure Regulations, the Autorité de Contrôle Prudentiel et de Résolution in France, and relevant tax legislation.
- We understood how the Company is complying with those frameworks by making enquiries of senior management, including the Group Chief Financial Officer, the Group General Counsel, the Group Chief Risk Officer, the Group Head of Compliance, and the Group Head of Internal Audit. We also reviewed significant correspondence between the Company and regulatory bodies, reviewed minutes of the Board, and other relevant committee meetings, and gained an understanding of the Company's approach to governance, demonstrated by the Board's approval of the Company's governance framework and the Board's review of the Company's risk management framework and internal control processes.
- We assessed the susceptibility of the Company's financial statements to material misstatement, including how fraud might occur by considering the risk of management override to be a fraud risk. We considered the controls that the Company has established to address risks identified by the Company, or that otherwise seek to prevent, deter or detect fraud.
- Based on this understanding we designed our audit procedures to identify noncompliance with such laws and regulations. Our procedures involved journal entry testing and inquiries of senior management, internal audit, and those responsible for legal, risk and compliance at the Company. We then corroborated our enquiries through review of board and committee minutes, whistleblowing log, Group policies and correspondence with relevant regulatory authorities.
- The companies within the Group operate within the financial services sector. As such, the Senior Statutory Auditor reviewed the experience and expertise of the engagement team to ensure that the team had the appropriate competence and capabilities.

A further description of our responsibilities for the audit of the financial statements is located on the Financial Reporting Council's website at https://www.frc.org.uk/auditorsresponsibilities.This description forms part of our auditor's report.

USE OF OUR REPORT

This report is made solely to the Company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the Company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Company and the Company's members as a body, for our audit work, for this report, or for the opinions we have formed.

Ernst & Young LLP

Stephen Littler (Senior statutory auditor)
for and on behalf of Ernst & Young LLP, Statutory Auditor
London
16 June 2023

LCH GROUP HOLDINGS LIMITED

CONSOLIDATED INCOME STATEMENT

Year ended 31 December 2022

		2022			2021		
		Underlying	**Non-underlying**	**Total**	Underlying	Non-underlying	Total
	Note	**€m**	**€m**	**€m**	€m	€m	€m
Clearing fees	4	**646.4**	-	**646.4**	584.8	-	584.8
Other fee income	4	**194.4**	-	**194.4**	191.0	-	191.0
Net settlement fees	4	**14.2**	-	**14.2**	13.5	-	13.5
Revenue sharing arrangements	4	**(38.6)**	-	**(38.6)**	(35.8)	-	(35.8)
Net revenue		**816.4**	-	**816.4**	753.5	-	753.5
Treasury income	20	**525.9**		**525.9**	490.6		490.6
Treasury expense	20	**(226.5)**		**(226.5)**	(250.1)		(250.1)
Net treasury income		**299.4**	-	**299.4**	240.5	-	240.5
Other income	4	**0.5**	-	**0.5**	0.9	-	0.9
Total income		**1,116.3**	-	**1,116.3**	994.9	-	994.9
Cost of sales		**(179.8)**	-	**(179.8)**	(146.0)	-	(146.0)
Gross profit		**936.5**	-	**936.5**	848.9	-	848.9
Operating expenses	5	**(303.9)**	**(2.3)**	**(306.2)**	(288.0)	(4.7)	(292.7)
Earnings before interest, tax, depreciation, amortisation and impairment		**632.6**	**(2.3)**	**630.3**	560.9	(4.7)	556.2
Depreciation, amortisation and impairment	5	**(88.4)**	-	**(88.4)**	(79.5)	-	(79.5)
Operating profit/(loss)		**544.2**	**(2.3)**	**541.9**	481.4	(4.7)	476.7
Finance income	7	**12.3**	-	**12.3**	3.6	-	3.6
Finance expense	7	**(7.9)**	-	**(7.9)**	(5.6)	-	(5.6)
Net finance expense		**4.4**	-	**4.4**	(2.0)	-	(2.0)
Profit/(loss) before tax		**548.6**	**(2.3)**	**546.3**	479.4	(4.7)	474.7
Taxation	8	**(117.2)**	**0.4**	**(116.8)**	(105.9)	0.2	(105.7)
Profit/(loss) for the year		**431.4**	**(1.9)**	**429.5**	373.5	(4.5)	369.0
Profit/(loss) attributable to:							
Equity holders		**420.3**	**(1.9)**	**418.4**	361.0	(4.5)	356.5
Non-controlling interests		**11.1**	-	**11.1**	12.5	-	12.5
		431.4	**(1.9)**	**429.5**	373.5	(4.5)	369.0

The transactions in the current and prior years were derived from continuing operations.

The notes on pages 21 to 84 form an integral part of these consolidated financial statements.

LCH GROUP HOLDINGS LIMITED
CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME
Year ended 31 December 2022

	Note	2022 €m	2021 €m
Profit for the year		**429.5**	369.0
Items that may be subsequently reclassified to profit or loss:			
Net (losses) on the revaluation of financial assets through OCI		**(16.6)**	(5.6)
Net (gains)/losses on amounts reclassified to the income statement		**0.9**	(4.7)
Exchange gain/(loss) on retranslation of foreign operations		**-**	0.6
Tax on revaluation of financial assets that may be reclassified to profit or loss	8	**2.6**	1.5
		(13.1)	(8.2)
Items that will not be subsequently reclassified to profit or loss:			
Remeasurement (losses)/gains on UK defined benefit plan		**(47.4)**	14.7
Deferred tax relating to remeasurement of the UK defined benefit plan		**14.8**	(3.3)
Exchange gains/(losses) on translation of deferred tax on UK defined benefit plan		**1.7**	(1.8)
Remeasurement gains on overseas defined benefit plans		**1.8**	0.7
Deferred tax relating to the remeasurement of overseas defined benefit plans		**(0.4)**	(0.2)
		(29.5)	10.1
Total comprehensive income for the year		**386.9**	370.9
Total comprehensive income attributable to:			
Equity holders		**376.1**	358.4
Non-controlling interests		**10.8**	12.5
Total comprehensive income for the year		**386.9**	370.9

The transactions in the current and prior years were derived from continuing operations.

The notes on pages 21 to 84 form an integral part of these consolidated financial statements.

LCH GROUP HOLDINGS LIMITED

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

As at 31 December 2022

	Note	2022 €m	2021 €m
Non-current assets			
Intangible assets	9	**421.3**	400.7
Property, plant and equipment	11	**18.5**	11.7
Trade and other receivables	13	**1.3**	1.2
Employment benefits	19	**43.6**	89.1
Deferred tax assets	8	**5.0**	13.9
Total non-current assets		**489.7**	516.6
Current assets			
Trade and other receivables	13	**332.4**	132.8
Group relief receivable		**-**	0.1
Current tax asset		**66.7**	8.4
Loans and borrowings	17	**368.6**	362.5
Balances with clearing members	12	**754,392.4**	776,416.3
Clearing business investments in financial assets	20	**21,009.5**	16,433.5
Clearing business cash and cash equivalents	20	**118,016.8**	99,900.4
Cash and cash equivalents	14	**951.4**	856.4
Total current assets		**895,137.8**	894,110.4
Total assets		**895,627.5**	894,627.0
Liabilities			
Current liabilities			
Trade and other payables	15	**(476.1)**	(458.0)
Current tax liabilities		**(7.0)**	(16.0)
Group relief payable		**(110.1)**	-
Provisions	21	**(0.6)**	(1.4)
Balances with clearing members	12	**(878,458.2)**	(876,505.9)
Default funds	18	**(14,886.9)**	(16,027.0)
Total current liabilities		**(893,939.0)**	(893,008.3)
Non-current liabilities			
Trade and other payables	15	**(2.5)**	(6.2)
Deferred tax liabilities	8	**(24.5)**	(31.9)
Retirement benefit obligations	19	**(4.8)**	(6.9)
Total non-current liabilities		**(31.8)**	(45.0)
Total liabilities		**(893,970.8)**	(893,053.3)
Net assets		**1,656.8**	1,573.7
Equity: Capital and reserves attributable to the Company's equity holders			
Ordinary share capital	23	**72.5**	72.5
Share premium	23	**316.1**	316.1
Other reserve		**78.0**	78.0
Translation reserve		**5.3**	5.3
Retained earnings		**1,122.6**	1,043.6
Total shareholders' funds		**1,594.5**	1,515.5
Non-controlling interests		**62.3**	58.2
Total equity		**1,656.8**	1,573.7

The notes on pages 21 to 84 form an integral part of these consolidated financial statements.

The financial statements (Company Registration Number 04743602) were approved by the Board on 16 June 2023 and signed on its behalf by:

Daniel Maguire
CEO
LCH Group Holdings Limited
16 June 2023

LCH GROUP HOLDINGS LIMITED
CONSOLIDATED STATEMENT OF CASH FLOWS
Year ended 31 December 2022

	Note	2022 €m	2021 €m
Cash flows arising from operating activities			
Net cash outflow from operations	29	**5,168.6**	(4,360.9)
Tax paid		**(47.5)**	(99.8)
Net cash flow from operating activities		**5,121.1**	(4,460.8)
Cash flows arising from investing activities			
Investment in intangible assets	9	**(115.7)**	(97.8)
Disposals in intangible assets		**-**	-
Purchase of property, plant and equipment		**(8.6)**	(0.9)
Redemption of clearing business other financial assets		**(4,576.0)**	4,887.3
Net cash flow from investing activities		**(4,700.3)**	4,788.6
Cash flows arising from financing activities			
Interest received		**1.7**	-
Interest paid		**(2.3)**	(5.3)
Loan granted to parent company		**(1.7)**	(111.2)
Dividends paid	24	**(303.8)**	(441.5)
Share-based payments contribution		**(10.9)**	(12.6)
Lease interest payment		**(0.1)**	(0.2)
Finance lease principal payments		**(3.6)**	(5.6)
Net cash flow from financing activities		**(320.7)**	(576.4)
(Decrease)/ increase in cash and cash equivalents		**100.1**	(248.6)
Cash and cash equivalents at 1 January		**856.4**	1,102.8
Effects of foreign exchange movements		**(5.1)**	2.2
Cash and cash equivalents at 31 December		**951.4**	856.4
Cash and cash equivalents at 31 December comprise:			
Short-term deposits		**518.7**	351.3
Cash at bank and in hand		**432.7**	505.1
	14	**951.4**	856.4

The notes on pages 21 to 84 form an integral part of these consolidated financial statements.

LCH GROUP HOLDINGS LIMITED

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

As at 31 December 2022

	Called -up share capital	Share premium	Other reserves	Translation reserve	Retained earnings	Non-controlling interests	Total
	€m	€m	€m	€m	€m	€m	€m
Shareholders' equity at 1 January 2021	72.5	316.1	76.5	4.5	1,121.2	52.3	1,643.1
Profit for the year ended 31 December 2021	-	-	-	-	356.5	12.5	369.0
Other comprehensive income	-	-	-	0.8	1.1	-	1.9
Total comprehensive income	-	-	-	0.8	357.6	12.5	370.9
Dividend approved during the year	-	-	-	-	(434.9)	(6.6)	(441.5)
Contributions received in the year	-	-	1.5	-	-	-	1.5
Share-based payments contribution	-	-	-	-	12.6	-	12.6
Share-based payments expense net of tax	-	-	-	-	(12.9)	-	(12.9)
Shareholders' equity at 31 December 2021	72.5	316.1	78.0	5.3	1,043.6	58.2	1,573.7
Shareholders' equity at 1 January 2022	72.5	316.1	78.0	5.3	1,043.6	58.2	1,573.7
Profit for the year ended 31 December 2022					**418.4**	**11.1**	**429.5**
Other comprehensive (loss)					**(42.3)**	**(0.3)**	**(42.6)**
Total comprehensive income					**376.1**	**10.8**	**386.9**
Dividends approved during the year					**(297.2)**	**(6.7)**	**(303.9)**
Contributions received in the year						**-**	**-**
Share-based payments contribution					**10.8**	**-**	**10.8**
Share-based payments expense net of tax					**(10.7)**	**-**	**(10.7)**
Shareholders' equity at 31 December 2022	**72.5**	**316.1**	**78.0**	**5.3**	**1,122.6**	**62.3**	**1,656.8**

The notes on pages 21 to 84 form an integral part of these consolidated financial statements.

1. BASIS OF PREPARATION AND ACCOUNTING POLICIES

BASIS OF PREPARATION

These consolidated financial statements have been prepared in accordance with UK adopted International Accounting Standards (IAS).

No standards have been early adopted during the year.

The principal accounting policies applied in the preparation of these financial statements are set out below. These policies have been consistently applied to all the periods presented, unless otherwise stated.

The financial statements are prepared under the historical cost convention as modified by the revaluation of assets and liabilities held at fair value and on the basis of the Group's accounting policies.

The Group uses a columnar format for the presentation of its consolidated income statement. This provides the reader with supplemental data relating to the financial condition and results of operations. The Group presents profit for the year before any non-underlying items as these highlights more clearly trends in the Group's business and gives an indication of the Group's ongoing sustainable performance. Items of income and expense that are material by their size and/or nature 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. Underlying profit is reconciled to profit before taxation on the face of the income statement.

Consolidation
The consolidated financial statements comprise the financial statements of the Company and its subsidiary companies with all intercompany balances and transactions eliminated. As permitted by Section 408 of the Companies Act 2006, the Company's income statement has not been included in these financial statements. The Company's financial statements and related notes for the year are disclosed on pages 80 to 84.

Subsidiaries are consolidated from the date on which the Group obtains control and continue to be consolidated until the date that such control ceases. Control comprises the power to direct the activities of the subsidiary so as to obtain a variable return from its activities. This is achieved in general through direct ownership of voting rights.

The financial statements of the subsidiaries are prepared for the same reporting year as the Group using consistent accounting policies. Adjustments are made to bring into line any dissimilar accounting policies that may exist. All significant intra-group balances and transactions have been eliminated on consolidation.

The Group applies a policy of treating transactions with non-controlling interests through the economic entity model. Transactions with non-controlling interests are recognised in equity.

The Company is a private limited company, limited by shares incorporated and domiciled in England and Wales. During the year the Company changed its registered office and principal place of business from 33 Aldgate High Street London, EC3N 1EA to 10 Paternoster Square London EC4M 7LS.

Going concern
The directors have made an assessment of the Group's and Company's ability to continue as a going concern and to meet current and future regulatory capital. This has been done using the Group's Budget and Medium Term Financial Plan ("MTFP"), sensitivity analysis and stress testing possible scenarios. The impact of the current inflationary market conditions and increased interest rate volatility has been considered as part of this assessment. The directors are satisfied that it has the resources to continue in business for the foreseeable future up to 30 June 2024, being no less than twelve months from when the financial statements are authorised for issue. Contracts for the majority of the exchanges for which the Group clears have a notice period of at least 1 year. The Group has a large number of clearing members and is not unduly reliant on any single clearing member or group of clearing members.

BASIS OF PREPARATION (CONT)

On 8 February 2022, the European Commission published in the Official Journal an Implementing Decision (EU) 2022/174 determining that, for a limited period of time, the UK framework applicable to CCPs is equivalent to the EU framework. The equivalence decision extends the current equivalence until 30 June 2025. On this basis, on 25 March 2022, ESMA announced the recognition of LCH Limited as a Tier 2 CCP under the EMIR 2.2 supervisory framework, in line with the temporary equivalence decision. As such LCH Limited will continue to be directly subject to the requirements of EMIR and to ESMA supervision. From a customer perspective, this means no change either in standards or day-to-day operations. All processes and services remain unchanged. From a customer perspective, this means no change either in standards or day-to-day operations. All processes and services remain unchanged.

The directors have further considered the impact of recent developments in Europe and the impact of sanctions that could be placed on Russian businesses in the markets the Group operates in. The directors do not expect these to have a material impact on the Group's or Company's going concern assessment and will continue to monitor the situation closely. From an operational perspective, the Group and Company have processes in place to ensure compliance with such sanctions.

During 2020, LCH SA was granted approval to continue to offer services to the UK for up to 3 years under the Temporary Recognition Regime (TRR). The TRR was amended on 22 December 2022 to extend until 31 December 2024, and it remains further extendable by HMT.

On 16 January 2023 Euronext served LCH SA notice that it was terminating its DCA (Derivatives Clearing Agreement) with effect from June 2024. This will adversely impact the revenues of LCH SA from July 2024, so no negative impact is expected in 2023. In addition, Euronext will have to pay a termination fee of €30m and a migration fee of €6m, which will be recognised across 2023 and 2024 (From January 23 until June 2024). In addition, a couple of new initiatives such as the launch of Digital Asset Clear launch, and the CDSClear expansion to the US will generate incremental revenues in the coming years.

Furthermore, the directors are not currently aware of any material uncertainties that may cast significant doubt upon the Group's and Company's ability to continue as a going concern. Therefore, the financial statements continue to be prepared on the going concern basis.

RECENT ACCOUNTING DEVELOPMENTS

During the year, the following amendments to standards became effective. These do not have a material impact on the Group's financial statements:

- Amendments to IFRS 3 *Business Combinations*: reference to the Conceptual Framework
- Amendments to IAS 16 *Property, Plant and Equipment*: proceeds before intended use
- Amendments to IAS 37 *Provisions, Contingent Liabilities and Contingent Assets*: onerous contracts – cost of fulfilling a contract
- Annual Improvements to IFRS 2018-2020

Standards, interpretations and amendments to published standards which are not yet effective

New and amended standards that have been issued, but are not yet effective, up to the date of the Group's financial statements are disclosed below. The Group intends to adopt these, if applicable, when they become effective. The Group is currently assessing the impact, but they are not expected to have a material impact on the Group's financial statements:

UK adopted International Accounting Standards and interpretations	Effective date
IFRS 17 *Insurance Contracts*, including amendments to IFRS 17 (and initial application of IFRS 17 and IFRS 9 Financial Instruments – comparative information)	1 January 2023
Amendments to IAS 1 *Presentation of Financial Statements*: classification of liabilities as current or non-current	1 January 2024
Amendments to IAS 1 and IFRS Practice Statement 2: disclosure of accounting policies	1 January 2023
Amendments to IAS 8 *Accounting Policies, Changes in Accounting Estimates and Errors*: definition of accounting estimate	1 January 2023
Amendments to IAS 12 *Income Taxes*: deferred tax related to assets and liabilities arising from a single transaction	1 January 2023
Amendments to IFRS 16 *Leases*: lease liability in a sale and leaseback	1 January 2024[1]
Amendments to IAS 1 Presentation of Financial Statements: non-current liabilities with covenants and classification of liabilities as current or non-current	1 January 2024[1]
Amendments to IFRS 10 *Consolidated Financial Statements* and IAS 28 *Investments in Associates and Joint Ventures*: sale or contribution of assets between an investor and its associate or joint venture	Deferred

[1]Not yet endorsed by UK Endorsement Board

Presentation currency

The Group's consolidated financial statements are presented in Euros, which is also the functional currency of the Company. Items included in the financial statements of each of the Group's entities are measured using their functional currency.

Judgements and estimates
Judgements and estimates are regularly evaluated based on historical experience, current circumstances and expectations of future events.

Estimates:
For the year ended 31 December 2022, the following areas require the use of estimates. These are areas identified as having estimation uncertainty that have a significant risk of causing material adjustments to the carrying amounts of assets and liabilities within the next financial year are:

- *The measurement of defined benefit pension obligations:* measurement of defined benefit pension obligations requires estimation of inflation as well as mortality rates, the expected return on assets and the choice of a suitable discount rate (see note 19).

- *The measurement of the clearing member balances.* - The Company nets significant balances where there is a legal right of offset and an intention to settle net and discloses the net balances in the statement of financial position. However, as the Company acts as principal in these trades and has an equal liability for every asset, there is no material risk to the net asset position of the Company, should these estimates prove to be inaccurate (see note 20).

BASIS OF PREPARATION (CONT)

- *The measurement of intangible assets* – The recoverable amounts of relevant assets and cash generating units are based on value in use calculations using management's best estimates of future performance and estimates of the return required by investors to determine an appropriate discount rate (see note 10).

Judgements
In preparing the financial statements for the year ended 31 December 2022, the following judgements have been made:

- The Group uses its judgement to carry out the offsetting within clearing member balances. The carrying values of the balances are offset at what the Group considers an appropriate level to arrive at the net balances reported in the statement of financial position. The Group has an aligned basis of estimation for its CCP businesses and ensures the principles used are applied using a consistent methodology across similar assets and liabilities. The basis will be reviewed from time to time to ensure the approach used is the most appropriate.

- The Group and Company uses its judgement and, where appropriate, engages third party experts to assess any obligations it may have as a result of uncertain tax positions with relevant tax authorities.

- The Group has recognised a pension asset on the LCH Limited section of the UK LSEG pension fund. The Trust Deed provides the Company with an unconditional right to a refund of surplus plan assets on a winding up of the scheme and the Company believes this amount to be recoverable in current circumstances. Should the asset be derecognised, there would be no impact to the income statement, with all movements recognised in the statement of other comprehensive income. The recognition of the asset will be kept under review.

ACCOUNTING POLICIES

Income Statement

Revenue is generated from clearing, settlement and other post trade services.

- **Clearing fee revenue** is generated from fees from transactions or contracts cleared and settled, reporting, risk and financial resources management services. Revenue is recognised when the service is rendered on a per transaction basis, or in cases where there is a fixed annual fee, monthly in arrears, in accordance with the Group's fee scales net of all applicable sales taxes.
- **Other fee revenue** comprises fees charged for compression services, non-cash collateral and other post trade services, which is recognised as revenue on a straight-line basis over the service period as this reflects the continuous transfer of services.

Revenue is shown net of discounts, sales taxes, pass-through costs, and certain revenue share arrangements. Presented within revenue on the face of the income statement are net settlement fees which are considered part of the core business trading operations.

Customer contracts across the group that contain a single performance obligation at a fixed price do not require variable consideration to be constrained or allocated to multiple performance obligations. However, the Group also provides services to customers under a tiered and tariff pricing structure that generates a degree of variability in the revenue streams from the contract. Where the future revenue from a contract varies due to factors that are outside of the Group's control, the Group limits the total transaction price at contract inception and recognises the minimum expected revenue guaranteed by the terms of the contract. Any variable element is subsequently recognised in the period in which the variable factor occurs.

Fee income accrued, but not yet invoiced at the balance sheet date is shown as fees receivable within trade and other receivables.

Net Treasury Income

Total income recognised in the CCP clearing businesses includes net treasury income earned on cash assets lodged with the CCP as margin and default funds as part of the risk management process.

Net treasury income is the result of interest earned on the cash assets lodged with the CCP less interest paid to the members. Net treasury income is shown separately from revenue on the face of the income statement to distinguish it 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.

Revenue sharing arrangements - amounts deducted from revenue

Amounts deducted from revenue include revenue share arrangements whereby, as part of an operating agreement, amounts are due back to the other party to the operating agreement. Where a liability has been created following the recognition of assets used to generate a revenue share, it will be recognised in the income statement on a systematic basis over the useful life of those assets and offset against the related revenue share costs.

Cost of sales
Items of expense that are directly attributable to creating a product or provide a service that directly generates revenue or has the ability to generate revenue are classified as cost of sales.

ACCOUNTING POLICIES (CONT)

Revenue sharing arrangements - cost of sales

Revenue share costs relate to revenue share arrangements with clearing members where the revenue share is not limited to the amount of revenues receivable from the specific clearing members. As such these have been classified within cost of sales, as they arise, rather than as a deduction from revenue.

Where a liability has been created following the recognition of assets used to generate a revenue share, it will be recognised in the income statement on a systematic basis over the useful life of those assets and offset against the related revenue share costs.

Employee benefits

The Group operates defined benefit and defined contribution pension schemes for its employees.

The cost of providing benefits under the defined benefit plans is determined using the projected unit method. Under this method each participant's benefits under the schemes are estimated based on the total pension to which each participant is expected to become entitled at retirement. The liability is the total present value of the individuals' attributed benefits for the valuation purposes at the measurement date and is based on actuarial advice. Past service costs are recognised in the income statement on a straight line basis over the vesting period or immediately if the benefits have vested. When a settlement or a curtailment occurs, the change in the present value of the scheme liabilities and the fair value of the plan assets reflects the gain or loss which is recognised in the income statement.

The net interest amount charged to profit or loss is calculated using actuarial assumptions fixed at the start of the annual report period and the defined benefit liability and asset value at the start of the annual reporting period adjusted for the actual contributions and benefit payments made during the period.

Actuarial gains and losses are recognised in full in the statement of comprehensive income in the period in which they occur. The defined benefit pension liability in the statement of financial position comprises the total for each plan of the present value of the defined benefit obligation (using a discount rate based on high quality corporate bonds that have been rated at AA or equivalent status), less the fair value of plan assets out of which the obligations are to be settled directly. Fair value is based on market price information, and in the case of quoted securities is the published bid market price.

Where the currency of the benefits will be recognised in a different currency from the functional currency of the employing company, any exchange differences arising on the asset or liability will be recognised in the statement of comprehensive income.

The contribution payable to a defined contribution plan is in proportion to the services rendered by the employees and is recorded as an expense in the income statement within employee benefits as incurred.

Share-based compensation

The Group operates share-based compensation plans for employees, settled in shares of the ultimate parent company, LSEG. The charge to the income statement is determined by the fair value of the options granted or shares awarded at the date of grant as an indirect measure of the value of employee services received by the Group and recognised over the relevant vesting period.

ACCOUNTING POLICIES (CONT)

The share-based compensation plans are accounted for as equity-settled. The Group does record a cost for these transactions, representative of the fact that the Group has received a capital contribution from LSEG which has been spent on share-based compensation, with the corresponding credit recorded in equity. A debit will then also be recorded in equity and an intercompany payable recorded reflecting the Group's investment.

Taxation

Deferred and current tax assets and liabilities are only offset when they arise in the same reporting tax group and where there is both a legal right of offset and the intention to settle on a net basis or to realise the asset and settle the liability simultaneously.

Income tax relating to items recognised directly in other comprehensive income is charged or credited as appropriate to other comprehensive income and there is no effect on profit for the year.

Current tax

Current tax assets and liabilities for current and prior periods are measured at the amount expected to be recovered from or paid to relevant taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted on the balance sheet date.

Deferred tax

Deferred income tax is provided using the liability method on temporary differences at the statement of financial position date between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes using tax rates and laws enacted or substantively enacted by balance sheet date.

Deferred tax liabilities are recognised for all temporary differences. Deferred income tax assets are recognised for all deductible temporary differences to the extent that it is probable that taxable profit will be available against which the deductible temporary differences can be utilised, except where the deferred income tax asset arises through investments in subsidiaries and it is not probable that the temporary differences will reverse in the foreseeable future.

Foreign currencies

Monetary assets and liabilities denominated in currencies other than the functional currency of individual entities are translated into the functional currency of the entity at the rates of exchange ruling on the statement of financial position date and the resulting exchange differences are recorded in the income statement, except for differences arising on the pension assets or liabilities which are recognised in other comprehensive income.

Transactions in foreign currencies are recorded at the prevailing foreign exchange rates on the date of the transaction in the income statement and are not revalued.

On consolidation, the results of non-Euro denominated businesses are translated into Euros at the average exchange rates for the period. The assets and liabilities of these businesses are translated into Euros at the exchange rate prevailing at the reporting date; any exchange differences arising are recognised within other comprehensive income.

In the consolidated statement of cashflows, cashflows denominated in foreign currencies are translated into Euros at the average exchange rates for the year or at the rate prevailing at the time of the transaction where more appropriate.

ACCOUNTING POLICIES (CONT)

Non-underlying items

Items of income and expense that are material by size and/or nature or items that are not considered to be incurred in the normal course of business are classified as non-underlying items on the face of the income statement within their relevant category. The separate reporting of these items helps give an indication of the sustainable performance of the Group.

Government grants

Grants or other similar assistance receivable are recognised in the income statement over the period in which the expenses are incurred when there is an expectation that the amounts will be received.

Statement of Financial Position

Investments

In its separate financial statements, the Company recognises its investments in subsidiaries at cost less the value of any impairment provision that may be necessary. Income is recognised from these investments in relation to any distributions received.

Goodwill

Goodwill arising on an acquisition is the fair value of consideration less the fair value of the net assets acquired. Goodwill is capitalised in the statement of financial position within intangible assets. Following initial recognition goodwill is measured at initial value less any accumulated impairment losses.

Intangible assets other than goodwill

Intangible assets other than goodwill are initially recognised at cost and are capitalised on the statement of financial position. Where assets are acquired as a result of a business acquisition or the negotiation of an operating agreement, fair values are attributed to the assets acquired. Following initial recognition, the assets are amortised at rates calculated to write off their cost on a straight line basis over their estimated useful lives.

An internally generated intangible asset arising from the Group's business development is created if the asset can be identified, its cost measured reliably and it is probable that it will generate future economic benefits. Amortisation is charged from the date the developed product, service, process, or system is available for use. Self-developed software is generally amortised on a straight line basis over periods of between 3-5 years, occasionally it will be longer if applicable. Licenses for software acquired are amortised over 7 years.

Property, plant and equipment

Property, plant and equipment is initially recognised at cost and capitalised in the statement of financial position and is stated at cost less accumulated depreciation and accumulated impairment losses. Depreciation is provided on all property, plant and equipment at rates calculated to write off the cost, less estimated residual value based on current prices, of each asset over its expected useful life as follows:

- leasehold refurbishment over the term of the lease (up to a maximum of 10 years)
- computer equipment and purchased software over 3-5 years
- office equipment and other fixed assets over 3-5 years

ACCOUNTING POLICIES (CONT)

An item of property, plant and equipment is derecognised upon disposal or when no future economic benefits are expected to arise from continued use of the asset. Any gain or loss arising on derecognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the item) is included in the income statement in the year the item is derecognised.

Impairment of goodwill, intangible assets, and property, plant and equipment

Goodwill and intangible assets in the course of development are subject to an annual impairment review or a more frequent review if there are events or changes in circumstances that indicate that the carrying amount of the asset may not be fully recoverable. Other intangible assets and property, plant and equipment are subject to an impairment review if there are events or changes in circumstances that indicate that the carrying amount of the asset may not be fully recoverable.

For the purpose of impairment testing, goodwill and other assets are allocated to cash generating units ("CGU") monitored by management. The impairment review involves a comparison of the carrying amount of the goodwill or other asset allocated to the related cash generating units, with its recoverable amount, which is the higher of fair value less costs to sell and value in use. Fair value less costs to sell is calculated by reference to the amount at which the asset could be disposed of less the costs associated with the sale.

Value in use is calculated by discounting the expected future cashflows obtainable as a result of the assets continued use, including those resulting from its ultimate disposal, at a market based discount rate on a pre-tax basis. The carrying values of goodwill, intangible assets or property, plant and equipment are written down by the amount of any impairment and this loss is recognised in the income statement in the year in which it occurs.

The carrying amount of goodwill allocated to a cash generating unit is taken into account when determining the gain or loss on disposal of the unit.

Financial instruments
The Group classifies its financial instruments as fair value through profit or loss ("FVPL"), fair value through other comprehensive income ("FVOCI") or amortised cost. The classification depends on the Group's business model for managing its financial instruments and whether the cashflows generated are "solely payments of principal and interest" ("SPPI").

a) Financial assets at amortised cost are financial assets that are held in order to collect the contractual cashflows and the contractual terms give rise to cashflows that are solely payments of principal and interest. This will include the Group's cash and cash equivalents and trade and other receivables. Clearing member trading balances relating to sale and buy back transactions and other receivables from clearing members of the CCP businesses also fall within this category.

b) Financial assets at FVOCI are assets where the objective is achieved by both collecting the contractual cashflows or selling the asset. The contractual cashflows received are solely payments of principal and interest. This category includes investments in financial assets and quoted debt instruments (predominantly government bonds) held by the CCP businesses of the Group, which are used under the business model to both collect the contractual cashflows and also to benefit from a sale. The assets must also pass the SPPI test to be considered as FVOCI. Any asset which fails this test is immediately transferred to the FVPL classification and treated accordingly. Any profit or loss recognised in other comprehensive income on debt instruments is recycled to the income statement if the asset is sold prior to maturity. Where the Group holds an equity investment at FVOCI, any profit or loss on the investment remains in other comprehensive income and is not recycled on disposal.

ACCOUNTING POLICIES (CONT)

c) Financial assets at FVPL include all other financial assets not classified as amortised cost or FVOCI. This category includes CCP businesses' clearing member trading balances comprising derivatives, equity and debt instruments that are marked to market on a daily basis.

d) Financial liabilities at amortised cost are all financial liabilities that are not included within financial liabilities at FVPL. This comprises the Group's trade and other payables, borrowings, and other payables to clearing members.

e) Financial liabilities at FVPL are liabilities that must be held at fair value. This includes all the CCP businesses' clearing member trading balances, comprising derivatives, equity, and debt instruments, which are marked to market on a daily basis.

The Group adopts a forward-looking approach to estimate impairment losses on financial assets. An expected credit loss ("ECL") is calculated based on the difference between the contractual cashflows due and the expected cashflows. The difference is discounted at the asset's original effective interest rate.

Financial assets at amortised cost – the ECL for trade receivables and cash and cash equivalents is calculated using IFRS 9's simplified approach using lifetime ECL. The provision is based on the Group's historic experience of collection rates, adjusted for forward looking factors specific to each counterparty and the economic environment at large to create an expected loss matrix.

Financial assets held at FVOCI – the Group's financial assets held at FVOCI consist of high quality government bonds that have a low credit risk. The Group's policy is to calculate a 12-month ECL on these assets. If there is a significant increase in credit risk, then a lifetime ECL will be calculated. A significant increase in credit risk is considered to have occurred when contractual payments are more than 30 days past due or there is a significant deterioration in the credit rating of the counterparty.

Financial assets at FVPL – in accordance with IFRS 9, no ECL is required for assets held at FVPL.

Impairment losses on the remaining financial assets are measured using the general approach. The Group calculates a loss allowance based on the 12-month ECL at each reporting date until there is a significant increase in the financial instrument's credit risk, at which point the group will calculate a loss allowance based on the lifetime ECL, as described above for FVOCI assets.

Financial assets and liabilities are offset and the net amount reported in the 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 realise the asset and settle the liability simultaneously.

The Group establishes fair value using recognised valuation techniques. These include the use of externally available market prices, discounted cashflow analysis and other valuation techniques commonly used by market participants. Where discounted cashflow analysis and other valuation techniques are used assumptions are validated against market observable inputs.

Cash and cash equivalents

Cash and cash equivalents comprise cash at bank, short-term deposits, and other instruments and structures that are readily convertible to known amounts of cash and are subject to insignificant risk of changes in value. These amounts relate to funds generated in relation to the operating activities of the Group and can be deposited with banks, including central banks, or invested securely in overnight reverse repurchase contracts ("reverse repos").

ACCOUNTING POLICIES (CONT)

Clearing business cash and cash equivalents represent amounts received from the clearing members to cover initial and variation margins and default fund contributions that are not invested in bonds. These amounts are deposited with banks, including central banks, or invested securely in overnight reverse repos.

Default fund and margin deposits

Clearing members 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. Default fund contributions paid by clearing members are in cash. Clearing members may elect to use cash or securities to cover initial margin requirements; realised variation margin may only be covered in cash. Members may pledge securities directly using a bilateral delivery mechanism. Cash initial margin, variation margin and default fund deposits are reflected in the statement of financial position as assets and liabilities.

The amount of margin deposits on hand will fluctuate over time as a result of, among other things, the extent of open positions held at any point in time by market participants in contracts and the margin rates then in effect for such contract.

Non-cash initial margin is not reflected in the statement of financial position. These non-cash assets are held in safe-keeping, and the Group does not take legal ownership of the assets as the risks and rewards remain with the clearing member, unless and until such time as the clearing member defaults on its obligations to the Group.

Derecognition of financial assets and financial liabilities

A financial asset or liability is generally derecognised when the contract that gives rise to it is settled, sold, cancelled, or expires. Where an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as a derecognition of the original liability and the recognition of a new liability, such that the difference in the respective carrying amounts together with any costs or fees incurred are recognised in the income statement.

Provisions

Provisions are recognised for current obligations arising as consequences of past events where it is probable that a transfer of economic benefits will be necessary to settle the obligation and it can be reliably estimated. All provisions, except for those arising under pension liabilities, are undiscounted where the effect of discounting would be immaterial.

Leases

The Group is a lessee of assets.

Group as lessee

Right-of-use assets are disclosed within property, plant and equipment (note 11).

The Group has applied discount rates specific to the country and entity for all leases of property and other assets. The maturity of the Group's lease commitments is disclosed within the risk management note (note 2). Lease liabilities are included within trade and other payables (note 15).

Variable lease payments are linked to a publicly available index and adjustments to the value of the assets are made accordingly.

ACCOUNTING POLICIES (CONT)

Fair value measurement

The Group measures financial instruments such as derivatives at fair value at each balance sheet date. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants in an arm's length transaction at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either in the principal market for the asset or liability or in the absence of a principal market, in the most advantageous market for the asset or liability. The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

The Group uses valuation techniques that are appropriate in the circumstances and for which sufficient data is available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs. All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy, described in note 20.

For assets and liabilities that are recognised in the financial statements on a recurring basis, the Group determines whether transfers have occurred between levels in the hierarchy by re-assessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period. For the purpose of fair value disclosures, the Group has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of fair value hierarchy as explained above.

Equity and related items

Share capital

Ordinary share capital comprises ordinary shares. Other capital reserves are described in note 23. Other instruments are classified as liabilities if there is an obligation to transfer economic benefits and if not, they are included in shareholder's funds. The finance cost recognised in the income statement in respect of capital instruments other than equity shares is allocated to periods over the term of the instrument at a constant rate on the carrying amount.

The share premium comprises the difference between the issue proceeds of shares and their nominal value.

Dividend distributions

Dividend distributions to the Group's equity holders are recognised as a liability in the Group financial statements in the period in which the dividends are approved by the Group's shareholders. The Group maintains a sustainable progressive dividend policy. The interim dividend will generally be payable each year in October and final dividend in May.

2. RISK MANAGEMENT

The Group's activities expose it to a number of financial risks, principally market risk (financial market volatility, interest rate risk, foreign exchange risk), sovereign risk, credit risk, and liquidity risk. In addition to the financial risks, the Group is also exposed to other risks such as operational, legal, compliance and reputational risk. The Group manages these risks through various control mechanisms and its approach to risk management is to be prudent yet responsive to changes in the risk environment.

Overall responsibility for risk management rests with the Group Board. Day-to-day responsibility is delegated to the Group Chief Risk Officer, who ensures effective delegation to the relevant executives on the basis of risk policies which are calibrated to the Board's risk appetite and are discussed and agreed by the Group's risk committees and Boards. The application of these policies is undertaken by the business functions as the 1st line of defence and by the Group risk management team forming the 2nd line of defence, who control and manage the exposures arising from the various clearing activities. The continued appropriateness of risk policies and key risk data are regularly reviewed by the Group and CCP Boards and the Board risk sub-committees, and audits of processes within risk management are undertaken periodically.

Enterprise risk management framework

Each of the risks identified in this section are governed by the risk governance framework, issued, and refreshed at least annually by the Boards. The framework describes the overall risk appetite of the Group and its CCPs; defines each risk type and specifies ownership and the tolerance levels. The framework also requires that all risks are measured, monitored, and reported periodically via an enterprise risk management framework coordinated by the CCP Chief Risk Officers.

For each of the principal risk types, a description and outline of the risk management approach is provided below.

Financial market volatility (latent market risk)

Risk description
Volatility within the financial markets in which the Group operates can adversely affect its earnings and its ability to meet its business objectives. The Group CCPs run a balanced position in all cleared contracts and run no significant market risk unless a clearing member defaults. In such an event the Group is exposed to the market risk in the defaulter's portfolio as it closes out the contracts.

Risk management approach
The market and credit risk management policies of the Group are reviewed and approved by its risk committees and Boards at least annually. A range of measurement methodologies, including both empirical and analytical margin models and stress testing, are used daily to quantify and assess the levels of credit and market risk to which the Group may be exposed, and hence the amount of resources that should be held to cover such risks.

Potential market risk is reduced by collecting variation margin on marked-to-market positions and by establishing initial margin requirements which are the Group's estimate of market risk. Initial margins for all clearing services are calibrated and back-tested to a 99.7% confidence level. This has the effect of reducing the probability of loss from the default of a clearing member with the worst acceptable credit to the level of an AAA rated credit over a 12-month time horizon.

Initial margin add-ons are calculated, where required, for clearing member specific concentration, liquidity, wrong way risk and credit risk. Both variation and initial margin are collected daily and replenished intraday subject to credit related thresholds.

2. RISK MANAGEMENT (CONT)

The Group CCPs accept both cash in major currencies and high quality liquid non-cash collateral to cover margin requirements. The list of acceptable non-cash collateral issuers is restricted and haircuts are set for each security type taking into account market, credit, foreign exchange, country, and liquidity risks and are calibrated to a 99.7% confidence level. All non-cash collateral is revalued daily.

Total collateral held	2022 €m	2021 €m
Margin received in cash	**143,310.8**	114,168.0
Margin received in non-cash securities	**165,608.0**	160,826.9
Guarantees	**2,429.6**	2,371.9
Total margin liability	**311,348.4**	277,366.8

The maximum margin liability during the year for LCH Limited was €277,903.9 million (2021: €231,723.0 million and for LCH SA €70,668.0 million (2021: €61,972 million).

New applicants for clearing must meet strict credit, financial and operational criteria, which are regularly reviewed as part of the Group's risk policies. All clearing members are assigned an internal credit score ("ICS") and the ICS methodology is subject to independent validation at least annually.

The operating subsidiaries also require all clearing members to contribute to pre-funded default funds to be used should the margins of a defaulted clearing member not fully cover close out costs. Supplementary financial resources include a proportion of the CCPs' own capital and further clearing member contributions to ensure the continuity of ongoing operations. The pre-funded default funds are segregated by clearing service and sized to be sufficient at all times to cover the default of the 2 clearing member groups giving rise to the greatest losses above margin under a wide range of plausible scenarios of extreme market conditions.

As at 31 December 2022 the total of clearing member contributions to the default funds amounted to €14,886.9 million (2021: €16,027.0 million) (note 18). The maximum amount during the year for LCH Limited was €11,540.1 million (2021: €10,800.4 million) and for LCH SA €6,856.9 million (2021: €5,763.9 million). Clearing members are committed to contribute further amounts in the event of a clearing member default equivalent to approximately twice this amount, should they be required.

The models which calculate margins, collateral haircuts, counterparty credit scores, stress losses and default fund contributions are independently validated at least annually and meet all applicable regulatory requirements.

Sovereign risk

Risk description
Distress amongst sovereigns through market concerns over the levels of government debt and the ability of certain governments to service their debts over time could have adverse effects on the value and liquidity of the Group's cleared products, margin collateral and investments, and on the clearing membership, their clients, and the financial industry as a whole.

2. RISK MANAGEMENT (CONT)

Risk management approach
Specific risk frameworks manage sovereign risk for both fixed income clearing and margin collateral, and all clearing members' portfolios are monitored regularly against a suite of sovereign stress scenarios which model escalations in sovereign risk. In addition, investment limits and both counterparty and clearing membership monitoring frameworks are sensitive to changes in economic and financial market indicators, ensuring that the Group is able to measure, monitor and mitigate exposures to sovereign risk and respond quickly to actual or anticipated changes.

The risk committees and Board monitor such risks and the sovereign risk framework continues to protect the Group against potentially severe market volatility in the sovereign debt markets.

The Group has investments in the following sovereigns (or equivalent issuer) as at 31 December 2022:

	2022		2021	
	Investment value	**Proportion of portfolio**	Investment value	Proportion of portfolio
Sovereign (or equivalent)	**€m**	**%**	€m	%
France	**33,682.4**	**40%**	33,934.8	41%
European Union	**22,933.3**	**27%**	20,076.2	24%
USA	**16,794.6**	**20%**	12,654.0	15%
United Kingdom	**8,055.4**	**10%**	14,406.7	17%
Other	**1,293.5**	**2%**	439.7	1%
Switzerland	**713.2**	**1%**	1,035.8	1%
Germany	**353.8**	**0%**	777.0	1%
Finland	**153.1**	**0%**	-	0%
Austria	**149.0**	**0%**	-	0%
Belgium	**-**	**0%**	50.2	0%
	84,128.3	**100%**	83,374.6	100%

The above total includes other financial assets of €20,615.2 million (2021: €16,433.5 million) along with central bank cash deposits.

Credit risk

Risk description
Credit risk arises if a counterparty of the Group is unable or unwilling to meet a financial commitment to the Group. Credit risk exposure arises as a direct result of the reinvestment of the cash which the Group holds, primarily as part of its CCP activities in collecting margin and default fund contributions from its clearing members.

Risk management approach
The Company's investment portfolio is invested in accordance with clear risk policies which require secure investment of a significant portion of the portfolio either via reverse repurchase agreements with credit and financial institutions, receiving high quality government, government guaranteed or supranational securities as collateral; or by investing directly in such securities or by the placement of cash with central banks.

2. RISK MANAGEMENT (CONT)

The investment risk policy requires that securities received as collateral are subject to a haircut on their market value, that the average maturity of the portfolio will not exceed 2 years, and that while cash may be deposited on an unsecured basis, this can only be short term with high quality banking institutions and limited to a 12-month average of 5% and a maximum of 10% of all credit institution investment.

The amount of LCH Limited's capital at risk to the default of a banking institution or the issuer of a debt instrument is limited to €15.0 million by the non-default loss provision to be applied in respect of losses that arise other than from a clearing member's default and which threaten the CCP's solvency. These rules were introduced in response to the revision of UK CCP Recognition Requirements which became effective on 1 May 2014. Treasury default losses in excess of €15.0 million would be allocated among clearing members.

The investment portfolio as at 31 December 2022 was €138,711.0 million (2021: €116,621.0 million), of which 99.8% (2021: 99%) was invested securely. The maximum portfolio size during the year for LCH Limited was €137,020.1 billion (2021: €94,801.3 million) and LCH SA €38,522 million (2021: €33,609.7 million). Note 20 contains further analysis of the investment portfolio including by type and fair value hierarchy.

All counterparties, including clearing members, interoperating CCPs, investment counterparties, custodians and settlement and payment institutions, sovereigns, and central banks, are assessed according to the LCH Group internal credit scoring framework. This framework incorporates elements of the counterparty's financial profile, including funding, liquidity, capital, profitability and asset quality, and a detailed operational capability assessment. The scoring framework is independently validated at least annually. Minimum credit scores are set for joining any clearing service and also for institutions to be eligible for investment or as interoperating CCPs and payment, settlement, and custodial intermediaries. These minimum credit scores are set within the risk policies which are reviewed and approved by the CCP Boards annually. Risk policy also requires that increased margins be applied to clearing members when their credit score deteriorates below the entry level. Other actions may include reduced credit tolerances and forced reduction of exposures. Investment counterparties and intermediaries whose credit score falls below the minimum set by policy will no longer be eligible.

The Group currently interoperates with several other CCPs in Europe for cash cleared products. Interoperability with another CCP poses risks similar to the risks to which the Group is exposed with its clearing members. Credit risk is managed according to the same credit assessment framework applied to clearing members and other counterparties. To cover the latent market risk arising on interoperating exposures, all interoperating CCPs are subject to daily margining. Under European regulations, CCPs are not permitted to contribute to another CCP's default fund but equivalent margin add-ons are applied to interoperating exposures which ensure full protection is pre-funded at all times.

As at 31 December 2022 the total interoperating margin placed with and received under reciprocal arrangements with other CCPs amounted to €5,755 million and €9,419 million (2021: €4,108 million and €5,092 million) respectively. The maximum credit risk exposure relating to financial assets is represented by the carrying value as at the statement of financial position date.

2. RISK MANAGEMENT (CONT)

Analysis by credit rating
The table below shows the Group's clearing member balances and investment portfolio by reference to the credit rating (Fitch) of the counterparties. The treasury portfolio includes cash at bank and other financial assets.

Fair value of transactions with clearing members (ratings assigned with reference to major agencies)	**2022 €m**	2021 €m
Clearing members rated:		
AAA/AA+/AA/AA-	**39,128.3**	91,499.8
A+/A/A-	**473,135.3**	550,776.2
BBB+/BBB/BBB-	**188,293.1**	87,763.2
Other, <BBB-, unrated	**44,880.9**	39,629.2
Total outstanding transactions with clearing members	**745,437.6**	769,668.4

Group investment and cash portfolio (ratings assigned with reference to major agencies)	**€m**	€m
AAA/AA+/AA/AA- Government backed	**83,730.5**	83,374.6
AA/AA+/AAA Secured	**54,967.6**	33,178.8
A/A-/A+/A/A-/BBB+ Secured	**12.6**	-
A/A+/AA- Unsecured	-	67.6
Total investment and cash portfolio	**138,710.7**	116,621.0

The total credit risk of the Group is represented by the total financial assets of the Group as disclosed in note 20.

Concentration risk

Risk description
Concentration risk may arise through having significant exposures to individual markets either through a single large position or a group of positions.

Risk management approach
Direct concentration risk arises in several areas of the Group CCPs' activities, and in order to avoid excessive concentrations of risk, the Group maintains a diversified portfolio of high quality liquid investments and uses a diversified range of custodians, payment and settlement banks and agents.

Indirect concentration risks, conditional upon a clearing member default, are managed under risk policy through various means, including margin add-ons for large concentrated positions, restrictions on certain non-cash collateral issuers and limits on aggregated exposures to member groups across clearing and investment activities.

The largest concentration of investment exposures as at 31 December 2022 was 1.9% of the total investment portfolio to the French government (2021: 41% to the French government).

2. RISK MANAGEMENT (CONT)

Procyclicality

Risk description
Systemically important CCPs recognise that they have an important responsibility towards their clearing members and other market participants to ensure that their actions do not unnecessarily amplify existing market stresses. Indeed, risk mitigating actions that are excessively procyclical are undesirable to the Group CCPs from a narrow risk management perspective as well as from a macro-economic and regulatory perspective.

Risk management approach
The LCH CCPs acknowledge that while some level of procyclicality may be unavoidable, as they must protect themselves by ensuring adequate margins are held against risk, standards have been introduced for ensuring that procyclicality concerns are appropriately addressed in the risk framework and the margin, haircut and credit scoring models. These standards require all models which are used for setting the levels of resources called from participants, and which therefore may be sources of procyclical outputs, to be tested using an extended period of historical inputs.

Interest rate risk

Risk description
The Group is exposed to interest rate risk arising from the cash and investment balances it maintains, the margin and default fund balances it holds from clearing members and the loans and borrowings it has issued.

Risk management approach
Interest bearing assets are generally invested for a longer term than the interest bearing liabilities, whose interest rate is generally reset daily. This makes treasury income vulnerable to volatility in overnight rates and shifts in spreads between overnight and term rates. Interest rate exposures are managed within defined risk appetite parameters against which sensitivities are monitored daily. The risk to the Group's capital is managed within interest rate risk limits expressed as a percentage of each subsidiary's capital and calculated under stressed scenarios. The maximum fixed coupon exposure on any asset in the treasury portfolio is 1 year.

Interest rate sensitivity analysis
The Group aims to minimise its exposure to interest rate fluctuations. Any exposure is predominantly due to the mismatch between the Group's interest bearing assets and interest bearing member liabilities. Since the return paid on member liabilities is generally reset to prevailing market interest rates on an overnight basis the Group is exposed for the time it takes to reset the interest rates on its investments and the shifts in spreads between overnight and term rates.

2. RISK MANAGEMENT (CONT)

The following table shows the estimated impact of the exposure described in the paragraph above on the consolidated profit after tax and on retained earnings within shareholders' equity:

	2022			2021		
	+25bp	**+50bp**	**+100bp**	+25bp	+50bp	+100bp
	€m	**€m**	**€m**	€m	€m	€m
Net exposure of cash and member margin balances	**(7.7)**	**(15.4)**	**(30.8)**	(6.7)	(13.5)	(27.0)
Tax effect of above	**1.5**	**3.0**	**6.0**	1.3	2.7	5.4
Decrease in profit after tax	**(6.2)**	**(12.4)**	**(24.8)**	(5.4)	(10.8)	(21.6)

	-25bp	**-50bp**	**-100bp**	-25bp	-50bp	-100bp
	€m	**€m**	**€m**	€m	€m	€m
Net exposure of cash and member margin balances	**7.7**	**15.4**	**30.8**	6.7	13.5	27.0
Tax effect of above	**(1.5)**	**(3.0)**	**(6.0)**	(1.3)	(2.7)	(5.4)
Increase in profit after tax	**6.2**	**12.4**	**24.8**	5.4	10.8	21.6

Liquidity risk

Risk description
Liquidity risk is the risk that the Group is unable to meet its payment obligations when they fall due.

Liquidity risk exists as a result of day-to-day operational flows such as repayments of cash collateral to clearing members, provision of liquidity to facilitate settlement and cashflows resulting from investment activity. In the case of a clearing member default, the Group must transfer or liquidate the defaulter's portfolio. This default management process may give rise to additional liquidity requirements to meet losses arising from portfolio hedging or close out as well as fulfilling the defaulter's settlement and margin obligations until the portfolio is fully closed out or transferred.

Risk management approach
Liquidity risk is managed by ensuring that the CCPs in the Group have sufficient cash to meet their payment obligations supported by facilities to meet short-term imbalances between available cash and payment obligations. The CCPs maintain liquidity buffers against expected daily operational liquidity needs, based on the maximum relevant liquidity outflow observed from an extensive data history, and against the modelled default of the 2 clearing member groups with the largest liquidity requirements when additional liquidity will be required so that the CCPs can continue to meet their obligations to clearing members and other counterparties.

The Group's liquidity management is subject to strict minimum liquidity targets set by senior executives within its Risk and Collateral & Liquidity Management ("CaLM") departments. These targets are reviewed regularly and reported to the risk committees and Boards. On a day-to-day basis CaLM is tasked with ensuring that each Group CCP can meet its financing needs at all times, in particular to ensure the business continues to operate smoothly even in the event of the default of one or more clearing members.

2. RISK MANAGEMENT (CONT)

The ability to access liquidity under extreme market conditions is modelled daily. Liquid resources include available cash balances, secured financing facilities and for LCH SA, which is a bank within the Eurozone, access to central bank liquidity. LCH uses central bank money where such facilities are available to it as a CCP and are practicable as determined through internal review.

The table below analyses the Group's 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 are the contractual undiscounted cashflows.

As at 31 December 2022	**Less than 3 months €m**	**3 months to 1 year €m**	**1 to 5 years €m**	**Total €m**
Transactions with clearing members	**(729,615.6)**	**(15,822.1)**	**-**	**(745,437.7)**
Initial margin and other clearing member balances	**(133,016.8)**	**-**	**-**	**(133,016.8)**
Default funds	**(6,338.3)**	**(8,548.6)**	**-**	**(14,886.9)**
Trade and other payables	**(332.8)**	**(154.2)**	**(0.6)**	**(487.6)**

As at 31 December 2021	Less than 3 months €m	3 months to 1 year €m	1 to 5 years €m	Total €m
Transactions with clearing members	(745,108.3)	(24,001.0)	(559.1)	(769,668.4)
Initial margin and other clearing member balances	(106,837.4)	-	-	(106,837.4)
Default funds	(5,763.9)	(10,263.1)	-	(16,027.0)
Trade and other payables	(327.5)	(124.3)	(6.2)	(458.0)

Interest due on the financial liabilities is based upon rates set on a daily basis.

For the default funds, the tenor of the liability is matched with the interest reset dates of the asset. The weighted average maturity of the total treasury portfolio is 53 days (2021: 33 days), with strict risk criteria related to interest rate exposure being applied.

Foreign exchange risk

Risk description
Foreign exchange risk arises because Group companies generally incur expenses in their respective local currencies while earning revenues and treasury income in several major currencies. Group companies translate net assets and liabilities arising in other currencies (principally Pounds Sterling and US Dollars within LCH Limited) to their functional currencies.

Risk management approach
LCH Limited converts surplus foreign currency balances to Euros where practicable on a monthly basis. This partially mitigates the impact of exchange rate fluctuations on the Group's financial performance. Any exchange differences on the translation of net assets and liabilities that remain are recorded in the income statement.

The Group has no designated hedges but seeks to manage its risk by matching currency liabilities against monetary assets. Volatility as a result of foreign exchange movements is monitored for all subsidiaries' income statements and, in the case of the CCPs, for regulatory capital as well.

2. RISK MANAGEMENT (CONT)

Foreign exchange sensitivity
The Group reviews sensitivities to movements in exchange rates which are appropriate to market conditions. As at 31 December 2022, the Group has considered movements in LCH Limited in Pounds Sterling and US Dollars during 2022 and has concluded that a 10% movement in rates is a reasonable level to measure the risk to the Group. At 31 December 2022, if the Euro had weakened or strengthened by 10% against Pounds Sterling and/or the US Dollar with all other variables held constant, the impact on LCH Limited's post-tax profit for the year ended 31 December 2022 and on equity as at 31 December 2022 is set out, with comparatives, in the table below. Movements in other currencies and entities are not significant.

In addition, the net assets of the Group are exposed to foreign exchange exposure on the retranslation of subsidiaries net assets at the balance sheet date in US Dollars and Pounds Sterling. This retranslation does not affect the net profit of the Group but passes through other comprehensive income and affects equity.

The table below also includes the impact on equity if the Euro had moved 10% against the US Dollar and Pounds Sterling.

	2022		2021	
	Post-tax profit	**Equity**	Post-tax profit	Equity
	€m	**€m**	€m	€m
Pounds Sterling – Euro strengthens	**(0.2)**	**(4.9)**	1.6	(7.9)
Pounds Sterling – Euro weakens	**0.2**	**4.9**	(1.6)	7.9
US Dollar – Euro strengthens	**(1.8)**	**(2.2)**	(1.2)	(1.6)
US Dollar – Euro weakens	**1.8**	**2.2**	1.2	1.6

If the average Euro exchange rate for the year ended 31 December 2022 had moved 10p against Pounds Sterling and 10 cents against the US Dollar, this would have changed the Group's operating profit for the year by up to €44.8 million (2021: €38.8 million).

Settlement risk

Risk description
Settlement risk is the risk that the Group makes a payment or delivery without simultaneously receiving the delivery or payment from the counterparty.

Risk management approach
The Group materially mitigates this risk through the use of guaranteed and irrevocable delivery versus payment mechanisms where available.

Settlement bank risk

Risk description
The Group is exposed to the risk that a settlement bank could fail, creating credit losses and liquidity pressures for the Group.

2. RISK MANAGEMENT (CONT)

Risk management approach
The Group uses a combination of central bank, payment agent and commercial settlement bank models. The policy requires that only minimal unsecured balances at commercial settlement banks are permitted to remain overnight, with the majority placed with central banks. Any such unsecured balances reduce commercial bank deposit limits. Intraday credit exposures to commercial concentration banks are also monitored and closely controlled.

For monies due from clearing members, if the payment agent or commercial settlement bank is not able to transfer funds to the Group, the clearing members remain liable for the fulfilment of their payment obligations to the Group CCPs.

Risk policies specify minimum credit scores for all payment and settlement intermediaries and that these are monitored continually, with a full counterparty credit review conducted annually and a full due diligence exercise carried out at least every 2 years. The counterparty credit scores are derived from the framework described under credit risk above.

Custody risk

Risk description
Custody risk is the risk of loss on securities in safekeeping as a result of the custodian's insolvency, negligence, misuse of assets, poor administration or inadequate record keeping.

Risk management approach
Although the risk of insolvency of central securities depositories or custodian banks used by the Group is low, the Group mitigates this risk through a due diligence framework which ensures that appropriate legal arrangements and operational processes are in place. In addition, policy sets minimum eligibility requirements, and requires regular credit assessment and back-up contingency arrangements to be in place.

Capital risk

Risk description
Capital risk is the risk that the Group's entities may not maintain sufficient capital to meet their obligations. This includes the risks that regulators may increase capital requirements or that own capital levels may become eroded. Capital is specifically allocated, and therefore at risk ahead of clearing member resources, in the event of either a clearing member or investment counterparty default. In addition, capital may be at risk to operational losses in excess of insurance protection.

Risk management approach
The Group's approach to capital management and a review of the current regulatory requirements are detailed in note 25. In addition:

- the default waterfalls for each clearing service, within each of the subsidiary CCPs, feature LCH capital at the CCP subsidiary level, to be utilised after the defaulted clearing member's collateral and default fund contributions and before the balance of the mutualised default funds and further, non-prefunded, resources available from the clearing members. In aggregate this capital at risk is equivalent to 25% of regulatory capital requirement for each CCP in the Group;
- the non-default loss provision for LCH Limited (as detailed under **Credit risk**) limits the amount of capital at risk to the investment default/loss of a banking institution or the issuer of a debt instrument to €15.0 million for this entity;
- the Group can manage its capital structure by varying returns to shareholders, issuing new shares or increasing or reducing borrowings.

2. RISK MANAGEMENT (CONT)

Pension risk

Risk description
Pension risk arises from the potential deficit in the Group's defined benefit pension plans due to a number of factors such as mortality rates or changes in inflation assumptions. The schemes are exposed to inflation, interest rate risks and changes in the life expectancy for members. As the schemes' assets include a significant investment in equity shares, the Group is exposed to equity market risk.

Risk management approach
The main pension obligation in the Group relates to the LCH section of the London Stock Exchange Group pension scheme in the UK. It is governed under the relevant laws and managed by the trustees who are required to undertake a formal funding valuation every 3 years and, where assets are deemed to be insufficient, to agree a schedule of contributions to be paid by LCH Limited to make good any shortfall over a period of time. Details of the pension scheme and assumptions used in valuing their assets and liabilities are included in note 19.

Operational risk

Risk description
Operational risk is the risk of loss arising through failures associated with personnel, processes, or systems or from external events. It is inherent in every business organisation and covers a wide spectrum of issues. First line operational risk is managed by the business, for example through procedures, documentation of processes, independent authorisation, and reconciliation of transactions.

Risk management approach
The Group has adopted a framework to identify, assess, monitor, and manage operational risks. This is achieved through self-assessment of risks and controls using a Group-wide comprehensive risk and control library and the development of key risk indicators as appropriate, enabling the embedding of operational risk awareness within the corporate culture. An independent department performs second line operational risk management, validating the self-assessments of risks and controls and reporting on operational risk to senior management and both to the Group Board and to the CCP Boards.

Business operations are subject to a programme of internal audit reviews, which are independent of line management, and the results are reported directly to the Group's senior management and audit committees. Following each review, management will put in place an action plan to address any issues identified. Internal audit evaluates the adequacy and effectiveness of the Group's systems of internal control, as well as the level of compliance with policies, and reports, in addition to management's own combined assurance reporting, to the audit committees and senior management. Any significant weaknesses are reported to the relevant Boards.

The Group maintains comprehensive contingency plans to support its operations and ensure business continuity. These facilities are regularly tested.

2. RISK MANAGEMENT (CONT)

Other risks

Legal, compliance and regulatory risk
These categories include the risk that unenforceable contracts, lawsuits, or adverse judgements can disrupt or otherwise negatively affect the operations or condition of the organisation, and the risk of loss of license or other penalties imposed due to non-compliance with regulations governing clearing house activities in each jurisdiction in which LCH operates.

It is the responsibility of the heads of the legal, regulatory and compliance functions to provide assurance to the Boards that these risks are measured and monitored, while the responsibility for any mitigation actions resides with the relevant business and functional heads.

In the normal course of business, the Group receives legal claims in respect of commercial, employment and other matters. Where a claim is more likely than not to result in an economic outflow of benefits from the Group (and is measurable), a provision is made representing the expected cost of settling such claims.

Reputational risk
The maintenance of the Group's strong reputation is key to its continued profitability and is the responsibility of the Boards, management, and staff. In particular the efficiency, reliability, and effectiveness of the day-to-day operations of the Group are paramount to its reputation.

Business and strategic risks
Business risk is the risk of loss or of profit decrease where declining volumes lead to lower revenues which cannot be offset by adjusting variable costs within a reasonable time period, while strategic risk is the risk of reduction in earnings or capital arising from adverse business decisions, improper implementation of decisions, or lack of responsiveness to industry changes. Business heads are responsible for managing these risks and liaising closely with the Boards when issues arise.

Brexit
On 8 February 2022, the European Commission published in the Official Journal an Implementing Decision (EU) 2022/174 determining that, for a limited period of time, the UK framework applicable to CCPs is equivalent to the EU framework. The equivalence decision extends the current equivalence until 30 June 2025. On this basis, on 25 March 2022, ESMA announced the recognition of LCH Limited as a Tier 2 CCP under the EMIR 2.2 supervisory framework, in line with the temporary equivalence decision. As such LCH Limited will continue to be directly subject to the requirements of EMIR and to ESMA supervision. From a customer perspective, this means no change either in standards or day-to-day operations. All processes and services remain unchanged

During 2020, LCH SA was granted approval to continue to offer services to the UK for up to 3 years under the Temporary Recognition Regime (TRR). The TRR was amended on 22 December 2022 to extend until 31 December 2024, and it remains further extendable by HMT.

Project risk and business continuity, information security and cyber risks
These risk categories include the risk to earnings and capital arising from project execution deficiencies, the risk of loss arising from the disruption of critical business or IT processes due to adverse circumstances or events, and the risk that valuable and sensitive LCH data is compromised, lost or misused. The heads of dedicated business functions and of each business are responsible for managing these risks.

2. RISK MANAGEMENT (CONT)

Model risk
This is the risk that, for example, a margin model may not capture the essence of the stress loss/events being modelled, or that there are mistakes in the underlying calculation, which may result in systemic under-margining for the products in question. Model risk management is the responsibility of the heads of business lines which place reliance on the models, and is effected through appropriate testing and maintenance of the models and in particular through the strict governance required for model change, including independent expert validation and senior executive approval. Board approval is required for material changes to important models.

Default management risk
This is the risk arising from not having a well-defined and rehearsed process in place prior to a default event, leading to inefficiencies in the handling of a default such that a material deterioration in the market value of assets held may result in the erosion of CCP capital and the default funds.

For each service, it is the responsibility of the business head to ensure that a functioning default management group is in place in accordance with the Group default management policy and guidelines (owned by the chief risk officer). Fire drill tests are held regularly to assess the CCP default management process and identify any areas for improvement.

Emerging risks
The Group has also included a category of emerging risks which are new and difficult to quantify due to their remote or evolving nature. In most cases, the mitigation for such risks is to establish appropriate contingency plans and monitor the development of the risk until it can be quantified and removed or included as a principal risk.

Climate-related risks
International organisations, governments and regulators are focused on integrating climate risks and opportunities into investment decision making, to enable transition to a low carbon economy. This is an area of emerging and wide-ranging policy making, impacting financial market participants and corporates.

The Group supports consistent global standards and encourage continued alignment between the EU and UK on sustainable finance. The Group has developed climate-related risks scenario over both the medium and longer term, and how these may impact credit, operational, market and liquidity risks.

From the current assessment of climate-related risks management conclude that climate does not have a material impact on these financial statements.

3. EXCHANGE RATES

The most significant exchange rates to the Euro for the Group are as follows:

	2022		2021	
	Closing rate	**Average rate**	Closing rate	Average Rate
Euro to US Dollar	**1.07**	**1.05**	1.13	1.18
Euro to Pounds Sterling	**0.89**	**0.85**	0.84	0.86

4. REVENUE

Further information on the composition of the Group's revenue is given below:

	2022 €m	2021 €m
SwapClear clearing fees	**375.5**	315.3
Other OTC clearing fees	**62.6**	57.9
Non-OTC clearing fees	**208.3**	211.6
Clearing fees	**646.4**	584.8
Settlement fees revenue	**55.7**	53.4
Settlement fees expense	**(41.5)**	(39.9)
Net settlement revenue	**14.2**	13.5
Other fee revenue	**197.5**	199.2
Less pass-through costs recharged	**(3.1)**	(8.2)
Other fee revenue	**194.4**	191.0
Revenue sharing arrangements	**(38.6)**	(35.8)
Revenue	**816.4**	753.5
Treasury income	**525.9**	490.6
Treasury expense	**(226.5)**	(250.1)
Net treasury income	**299.4**	240.5
Other income	**0.5**	0.9
Total income	**1,116.3**	994.9

Other fee revenue comprises fees charged for compression services, non-cash collateral and other post trade services.

The Company's total income from contracts with customers disaggregated by timing of revenue recognition is shown below. The following table includes other income of €0.5 million (2021: €0.9 million), which relates to recharges of services to other Group companies.

	2022 €m	2021 €m
Services satisfied at a point in time	**809.6**	736.4
Services satisfied over time	**7.3**	18.0
Total revenue from contracts with customers	**816.9**	754.4

Although total income includes net treasury income, this is excluded from the disaggregation table as it is outside scope of IFRS 15 because it is not earned through a contract with a customer.

5. OPERATING EXPENSES

The following items are included in operating expenses before depreciation and amortisation (total operating expenses include impairment and non-underlying items; an analysis is given in note 6):

	2022 €m	2021 €m
Staff costs (note 19)	**221.0**	200.6
Foreign exchange (gains)/losses	**(2.9)**	(2.2)
Research expenditure	**11.6**	10.3
Other operating expenses	**76.5**	84.0
Operating expenses before depreciation and amortisation	**306.2**	292.7
Depreciation, amortisation and impairment		
Amortisation - intangible fixed assets	**76.9**	70.4
Depreciation of property, plant and equipment	**4.5**	7.2
Impairment - intangible assets	**7.0**	1.8
Impairment – tangible assets	**-**	0.1
Total depreciation, amortisation and impairment	**88.4**	79.5
Auditor's remuneration		
Fees payable for the audit of the Company	**0.1**	0.1
Fees payable to the auditor of the Company for other services		-
Fees payable for the audit of the Company's subsidiaries	**1.0**	1.0
Total auditor's remuneration	**1.1**	1.1

Other operating expenses include €67.4 million of IT costs (2021: €61.4 million) and €8.8 million of professional fees (2021: €8.3 million).

6. NON-UNDERLYING ITEMS

	2022 €m	2021 €m
Restructuring programme	**(2.3)**	(4.7)
Tax effect of non-underlying items	**0.4**	0.2
Total non-underlying items	**(1.9)**	(4.5)

Restructuring costs comprise of costs arising on from the operating model changes and integration.

7. FINANCE INCOME AND EXPENSE

	2022 €m	2021 €m
Net finance expense on pension liabilities	**(5.3)**	-
Lease interest expense	**(0.1)**	(0.2)
Interest paid on cash and cash equivalents	**(2.5)**	(5.4)
Finance expense	**(7.9)**	(5.6)
Net finance income on pension assets	**7.0**	1.1
Interest received on cash and cash equivalents	**5.3**	2.5
Finance income	**12.3**	3.6
Net finance expense	**4.4**	(2.0)

8. TAXATION

The major components of taxation are as follows:	2022 €m	2021 €m
Current tax		
United Kingdom current tax charge	**(63.8)**	(57.5)
Adjustment in respect of current tax in previous years	**3.0**	0.7
Overseas current tax charge	**(36.5)**	(46.0)
Adjustment in respect of overseas current tax previous years	**0.2**	(0.1)
Total current taxation	**(97.1)**	(102.9)
Deferred tax		
Deferred tax relating to origination and reversal of temporary differences	**(12.3)**	(2.6)
Adjustments in respect of prior years	**(3.2)**	(0.3)
Adjustments arising from changes in tax rates	**(4.2)**	0.1
Tax expense reported in the consolidated income statement	**(19.7)**	(2.8)
Tax expense reported in the consolidated income statement	**(116.8)**	(105.7)

Consolidated statement of comprehensive income	2022 €m	2021 €m
Tax on remeasurement of overseas defined benefit pension plan	**(0.4)**	(0.2)
Tax on remeasurement of UK defined benefit pension plan	**16.5**	(5.1)
Tax on revaluation of financial assets that may be reclassified to profit or loss	**2.6**	1.5
Tax expense	**18.7**	(3.8)
Consolidated statement of changes in equity		
Tax allowance on share awards in excess of expense recognised	**0.3**	(0.2)
Tax credit	**0.3**	(0.2)

8. TAXATION (CONT)

Reconciliation of tax expense

The income statement tax charge for the year differs from the standard rate of corporation tax in the UK as explained below:

	2022 €m	2021 €m
Profit before taxation	**546.3**	474.7
Tax at UK statutory corporation tax rate of 19% (2021: 19.0%)	**(103.8)**	(90.2)
Effect of:		
Expenses not deductible	**4.2**	(0.9)
Adjustments in respect of prior years	**(0.0)**	0.4
Adjustments in respect of changes in tax rates	**(4.2)**	0.1
Higher rate of tax on overseas earnings	**(9.7)**	(15.3)
Foreign exchange adjustment	**(3.3)**	0.2
Total tax charge	**(116.8)**	(105.7)
Effective corporation tax rate	**21.4%**	22.30%

An increase in the UK Corporation tax rate from 19% to 25% (effective from 1 April 2023) was substantively enacted on 24 May 2021. This will increase the company's future tax charge accordingly.

Exchange differences have arisen on the translation of the closing sterling balances which are due to HMRC

8. TAXATION (CONT)

Deferred tax

	Consolidated statement of financial position		Movement	
	2022	2021	**2022**	2021
	€m	€m	**€m**	€m
Post-employment benefits	**(15.1)**	(29.6)	**14.5**	(7.1)
Accelerated tax depreciation	**(10.4)**	3.4	**(13.8)**	(0.8)
Share of profit to be redistributed to employees	**-**	1.4	**(1.4)**	-
IFRS transformation entries (fixed assets and intangibles)	**-**	(0.1)	**0.1**	-
Employee benefits (other comprehensive income)	**-**	0.7	**(0.7)**	(0.2)
Deferred compensation	**-**	1.8	**(1.8)**	1.8
Tax on provisions and other temporary differences	**6.0**	3.5	**2.5**	(1.0)
Tax losses	**-**	0.9	**(0.9)**	(0.5)
Tax on items not recognised in the statement of comprehensive income	**-**	-	**-**	(0.4)
Net deferred tax asset/(liability)	**(19.5)**	(18.0)		
Deferred tax charge			**(1.5)**	(8.2)

	US	**UK**	**France**	**Total**
	€m	**€m**	**€m**	**€m**
Net deferred tax asset/(liability) at 1 January 2022	**0.8**	**(24.0)**	**5.2**	**(18.0)**
Deferred tax recognised in the income statement	**(0.3)**	**(18.9)**	**(0.5)**	**(19.7)**
Deferred tax recognised in the statement of comprehensive income	**-**	**19.1**	**(0.4)**	**18.7**
Deferred tax recognised in equity	**-**	**(0.7)**	**-**	**(0.7)**
Change in group relief in year	**-**	**-**	**-**	**-**
Foreign exchange movements	**0.2**	**-**	**-**	**0.2**
Net deferred tax asset/(liability) at 31 December 2022	**0.7**	**(24.5)**	**4.3**	**(19.5)**

	US	UK	France	Total
	€m	€m	€m	€m
Net deferred tax asset/(liability) at 1 January 2021	1.4	(16.6)	5.4	(9.8)
Deferred tax recognised in the income statement	(0.3)	(2.5)	-	(2.8)
Deferred tax recognised in the statement of comprehensive income	-	(3.7)	(0.2)	(3.9)
Deferred tax recognised in equity	-	(1.5)	-	(1.5)
Change in group relief in year	(0.3)	0.0	-	(0.3)
Foreign exchange movements	-	0.3	-	0.3
Net deferred tax asset/(liability) at 31 December 2021	0.8	(24.0)	5.2	(18.0)

There are losses carried forward of €29.6 million (2021: €27.9 million) on which deferred tax assets have not been recognised due to uncertainty regarding future profits against which these losses can be utilised.

9. INTANGIBLE ASSETS

	2022			2021		
	Self-developed software	Goodwill	Total	Self-developed software	Goodwill	Total
	€m	€m	€m	€m	€m	€m
Cost						
At 1 January	**816.4**	**534.1**	**1,350.5**	737.2	534.1	1,271.3
Additions	**115.7**	**-**	**115.7**	97.8	-	97.8
Asset transfer (note 11)	**(6.2)**	**-**	**(6.2)**	0.2	-	0.2
Disposals and write offs	**(25.4)**	**-**	**(25.4)**	(21.7)	-	(21.7)
Exchange differences	**(2.6)**	**-**	**(2.6)**	2.9	-	2.9
At 31 December	**897.9**	**534.1**	**1,432.0**	816.4	534.1	1,350.5
Accumulated amortisation and impairment						
At 1 January	**526.1**	**423.7**	**949.8**	474.0	423.7	897.7
Amortisation charge for the year	**77.0**	**-**	**77.0**	70.4	-	70.4
Impairment in the year	**7.5**	**-**	**7.5**	1.8	-	1.8
Asset transfer	**-**	**-**	**-**	-	-	-
Disposals and write offs	**(21.9)**	**-**	**(21.9)**	(21.7)	-	(21.7)
Exchange differences	**(1.7)**	**-**	**(1.7)**	1.6	-	1.6
At 31 December	**587.0**	**423.7**	**1,010.7**	526.1	423.7	949.8
Net book value at 31 December	**310.9**	**110.4**	**421.3**	290.3	110.4	400.7

Asset transfer relates to WIP assets being brought into use and transferred to their respective classification.

The portion of capitalised self-developed software costs disclosed above that relates to software not currently brought into use amounted to €108.1 million (2021: €106.2 million). The increase in the year reflects the Company's continued investment in infrastructure and commitment to operational resiliency. No amortisation has been charged during the year against these assets (2021: Nil), but instead they are tested for impairment (see note 10). During the year the Group has written off assets under development amounting to €3.0 million (2021: €1.8 million).

Goodwill consists of the amount arising from the acquisition of LCH SA in 2003 (see note 10). Self-developed software includes the Group's trading systems, which are being continually improved and enhanced.

During the year the Company performed its annual review of assets and recognised disposals and write-offs of assets no longer in use of €25.4 million (2021: €21.7 million) with a net book value of €3.5 million (2021: Nil).

10. IMPAIRMENT TESTING OF INTANGIBLE ASSETS

For intangible assets, impairment is assessed by reviewing the carrying value of the asset against its recoverable amount, which is determined by value in use calculations for the relevant cash generating unit ("CGU") using discounted cashflow projections.

The Group carries out annual impairment testing on goodwill and self-developed software in December of each year, or more often if circumstances show that an impairment may be likely.

- Goodwill is carried in relation to LCH SA, which is also the cash generating unit ("CGU") to which the goodwill is allocated. The recoverable amount associated with this subsidiary is determined based on value-in-use calculations.
- For self-developed software, impairment is assessed by reviewing the carrying value of the asset against its recoverable amount, which is determined by value-in-use calculations for the relevant CGU using discounted cashflow projections.

Assumptions

The key assumptions used in the valuations relate to discounted cashflow projections prepared by management covering a 5-year period. The cashflow projections are based on the Group's budget for 2022 and the Group approved plan for the 2 financial years following the last financial year in the budget. Cashflows beyond this period are extrapolated using the estimated long term growth rates and applying the pre-tax discount rates.

Management has based its value-in-use calculations for each CGU on key assumptions about short and medium term revenue and cost growth, long term economic growth rates (used to determine terminal values) and pre-tax discount rates, as follows:

i) The values assigned to short and medium term revenue and cost growth are based on the 2023 budget and the Group approved plan. The assumptions are derived from an assessment of current trends, anticipated market and regulatory developments, discussions with customers and suppliers and management's experience. These factors are considered in conjunction with the Group's long term strategic objectives to determine appropriate short and medium growth assumptions;

ii) Long term growth rates for LCH Limited of 3.37% (2021: 3.5%) and LCH SA 4.46% (2021: 5.5%) represent management's internal forecasts based on external estimates of GDP and inflation;

iii) The pre-tax discount rate of 13.6% (2021: 10.6%) is based on a number of factors including the risk-free rate, the Group's estimated market risk premium and a premium to reflect inherent risks.

Impairment results

- The following test was carried out on the value of goodwill, which was found not to be impaired:
  - The discounted cashflow approach. The excess of value-in-use over carrying value was found to be €877 million (2021: €1,417 million) at 31 December 2022;
  - A sensitivity analysis showed that reasonable changes in key assumptions and rates (e.g. growth and weighted average cost of capital ("WACC")) would not lead to any impairment.

- Our annual impairment reviews for other intangible assets found that assets of €3.3 million were impaired (2021: €0.3 million) and self-developed software not yet in use of €3.0 million was found to be impaired (2021: €1.5 million).

11. PROPERTY, PLANT AND EQUIPMENT

At 31 December 2022	Property right of use assets €m	Leasehold refurbishment €m	Computer equipment €m	Office equipment and other fixed assets €m	Total €m
Cost					
At 1 January	**15.7**	**0.7**	**17.8**	**2.2**	**36.4**
Additions	-	**6.5**	**0.4**	**1.7**	**8.6**
Lease novation	-	-	-	-	-
Asset transfer (note 9)	-	**3.4**	**0.2**	**(0.9)**	**2.7**
Disposals	-	-	**(0.1)**	**(0.2)**	**(0.3)**
At 31 December	**15.7**	**10.6**	**18.3**	**2.8**	**47.4**
Accumulated depreciation					
At 1 January	**8.2**	**0.2**	**15.3**	**1.0**	**24.7**
Depreciation charge for the year	**2.9**	**0.2**	**1.3**	**0.1**	**4.5**
Lease novation	-	-	-	-	-
Impairment	-	-	-	-	-
Disposals	-	-	**(0.1)**	**(0.2)**	**(0.3)**
At 31 December	**11.1**	**0.4**	**16.5**	**0.9**	**28.9**
Net book value at 31 December 2022	**4.6**	**10.2**	**1.8**	**1.9**	**18.5**

At 31 December 2021	Property right of use assets €m	Leasehold refurbishment €m	Computer equipment €m	Office equipment and other fixed assets €m	Total €m
Cost					
At 1 January	32.7	8.7	35.8	9.1	86.3
Additions	-	0.5	0.9	(0.6)	0.8
Lease novation	(17.0)	-	-	-	(17.0)
Asset transfer	-	-	1.9	(2.1)	(0.2)
Disposals	-	(8.5)	(20.8)	(4.2)	(33.5)
At 31 December	15.7	0.7	17.8	2.2	36.4
Accumulated depreciation					
At 1 January	9.9	8.1	34.8	5.2	58.0
Depreciation charge for the year	5.4	0.5	1.3	-	7.2
Lease novation	(7.1)	-	-	-	(7.1)
Impairment	-	0.1	-	-	0.1
Disposals	-	(8.5)	(20.8)	(4.2)	(33.5)
At 31 December	8.2	0.2	15.3	1.0	24.7
Net book value at 31 December 2021	7.5	0.5	2.5	1.2	11.7

11. PROPERTY, PLANT AND EQUIPMENT (CONTD)

The Group leases a number of properties in countries in which it operates and these are represented above as property right of use assets. Office equipment and other fixed assets includes €0.1m (2021: €0.1m) for right of use assets on motor vehicles.

During 2021 LCH Limited disposed of its sole UK property lease and novated the right of use asset and associated lease liabilities to London Stock Exchange (C) Ltd (LSE C), a fellow Group company in LSEG. The transaction resulted in LCH Limited derecognising the book value of the property right of use assets (€9.9m), associated property dilapidation provisions (€0.6m) and lease liabilities (€11.3m). The LCH Limited and the Group received a €1.5m non-diluting capital contribution from LSE C as a result.

During the prior year, LCH SA extended its property lease located in Paris, France and now expires 31 May 2024.

During the year the Company performed its annual review of assets and recognised disposals and write-offs of assets no longer in use of €0.3 million with nil net book value (2021: €33.5 million). Asset transfer relates to WIP assets being brought into use and transferred to their respective classification.

12. BALANCES WITH CLEARING MEMBERS

	2022	2021
	€m	€m
Assets		
Transactions with clearing members at fair value through profit or loss	**745,437.6**	769,668.4
Transactions with clearing members at amortised cost	-	1,759.9
Other clearing member balances at amortised cost	**8,954.8**	4,988.0
	754,392.4	776,416.3
Liabilities		
Transactions with clearing members at fair value through profit or loss	**(745,437.6)**	(769,668.4)
Transactions with clearing members at amortised cost	-	(1,759.9)
Initial margin and other clearing member balances at amortised cost	**(133,020.6)**	(105,077.6)
	(878,458.2)	(876,505.9)

The transactions with clearing members of €745,437.6 million (2021: €771,428.3 million) are fully secured by collateral held by the Company. As at 31 December 2022 the total of fully collateralised loans in respect of fixed income transactions was €736,937.9 million (31 December 2021: €766,476.7 million). This collateral has in turn been passed on to fixed income counterparties to secure the Company's liabilities in respect of fixed income contracts.

13. TRADE AND OTHER RECEIVABLES

	2022 €m	2021 €m
Non-current		
Other receivables	**1.3**	1.2
Total non-current	**1.3**	1.2
Current		
Trade receivables:		
Fees receivable	**75.3**	64.1
Interest accrued on investment portfolio	**199.5**	3.5
	274.8	67.6
Amounts due from parent companies	**1.7**	1.7
Amounts due from companies under common control	**11.3**	9.7
Other receivables	**26.1**	28.8
Prepayments	**8.8**	5.8
Margin receivable on reverse repurchase contracts	**9.7**	19.2
Total current	**332.4**	132.8

Fees receivable are the Group's rights to consideration for work completed but not invoiced at the reporting date. The balance of €75.3 million arises solely from services provided in 2022 (2021: €64.1 million) and is invoiced shortly after the balance sheet date.

The Group collects virtually all its fees receivable via PPS (Protected Payment System) which members are required to sign up to on admission as a clearing member. More than 99% of fees are collected in this way less than 5 days after the invoice date. The Group does not calculate an expected credit loss allowance on its fees receivable as it expects to receive all amounts due in a timely manner.

14. CASH AND CASH EQUIVALENTS

	2022 €m	2021 €m
Cash at bank and in hand	**432.8**	351.3
Short-term deposits	**518.6**	505.1
Cash and cash equivalents	**951.4**	856.4

Cash and cash equivalents are held with authorised counterparties of a high credit standing. Management does not expect any losses from non-performance by counterparties holding cash and cash equivalents and there are no material differences between book and fair values.

Short-term deposits are fully collateralised by sovereign and investment grade corporate securities in accordance with eligibility criteria approved by the Group's risk committees. The Group defines short-term as less than 90 days, but these deposits are predominantly overnight only.

€133.0 million (31 December 2021: €133.4 million) of the cash and cash equivalents amount is restricted as the Company's own resources to be used in the default waterfall. This is allocated by default fund on a pro-rata basis as follows, as at 31 December 2022: rates derivatives €56.4 million, ForexClear €20.5 million, RepoClear €24.9 million, LCH Limited EquityClear €1.8 million, CDSClear €20.0 million, LCH SA Equity and CommodityClear €9.1 and Euro GC+ 0.3 million.

15 . TRADE AND OTHER PAYABLES

	2022 €m	2021 €m
Non-current		
Accruals	**0.6**	0.8
Lease liabilities	**1.9**	5.4
Total non-current	**2.5**	6.2
Current		
Trade payables	**16.5**	7.4
Amounts owed to companies under common control	**42.7**	10.5
Amounts owed to group undertakings	**3.1**	3.1
Social security and other taxes	**12.7**	30.0
Accruals	**96.6**	84.3
Contract liabilities	**4.5**	2.9
Other payables	**154.5**	130.3
Lease liabilities	**2.7**	2.7
Minority dividends payable	-	2.9
Margin payable on reverse repurchase contracts	**142.8**	183.9
Total current	**476.1**	458.0

Other payables include amounts accrued under the Group's revenue share agreements.

The Group's contract liabilities represent the aggregate amount of transaction prices allocated to performance obligations that are unsatisfied, or partially unsatisfied at the balance sheet date in respect of the Group's RepoClear service. All amounts are expected to be recognised during the 12 months after the reporting date.

16. LEASES

Movements in the lease liabilities during the year were as follows:

	2022 €m	2021 €m
1 January	**8.1**	24.7
Lease term modification	-	-
Interest expense recognised	**0.1**	0.2
Lease payments	**(3.6)**	(5.8)
Lease novation (note 11)	-	(11.3)
Foreign exchange	-	0.3
31 December	**4.6**	8.1

During the year the LCH Limited disposed of its sole UK property lease and novated the right of use asset and associated lease liabilities to London Stock Exchange (C) Ltd (LSE C), a fellow Group company in LSEG. See note 11 for further details

During the prior year, LCH SA extended its property lease located in Paris, France which now expires 31 May 2024.

17. LOANS AND BORROWINGS

	2022 €m	2021 €m
Current		
Loan to parent company	**368.6**	**362.5**

Loan to related company
During 2022, the Group increased its loan to its parent company, LSE (C) Limited, to €368.6 million. The loan is repayable with 5 days' notice and attracts interest at the rate of EURIBOR with a 0% floor +1%. The Group does not calculate an expected credit loss allowance on the loan to parent, as it is repayable on demand and expects to receive all amounts due in a timely manner.

Bank overdraft
In order to assist with day-to-day liquidity management, the Group maintains a number of uncommitted money market and overdraft facilities with a number of major banks. Effective interest rates on these facilities vary depending on market conditions.

18. DEFAULT FUNDS

The purpose of the default funds is to absorb any losses incurred by the Company in the event of clearing member default, if margin collateral is insufficient to cover the management and close out of the positions of the defaulting clearing member. Default funds are segregated to cover the different business lines of the Company. The total default funds held by the Company as at 31 December 2022 were €14,886.9 million (31 December 2021: €16,027.0 million).

19. EMPLOYEE BENEFITS

i) Staff costs

All staff and directors	2022 €m	2021 €m
Salaries and other benefits	**169.3**	149.4
Social security costs	**31.4**	25.8
Pension costs	**7.2**	8.6
Share-based compensation	**10.9**	12.5
Staff costs before non-underlying items	**218.8**	196.3
Staff costs included in non-underlying items	**2.2**	4.3
Total staff costs	**221.0**	200.6

The average number of staff on a full-time equivalent basis during the year was 978 (2021: 924). The Company has no employees.

Employee costs are shown net of amounts capitalised as internal development costs of €61.3 million (2021: €56.5 million)

19. EMPLOYEE BENEFITS (CONT)

Staff costs and the average number of staff include the costs of contract staff who are not on the payroll but fulfil a similar role to employees.

Key management personnel	2022 €'m	2021 €'m
Remuneration and other short-term benefits	**9.0**	9.4
Deferred bonus and other long-term benefits	**0.3**	0.7
Share-based payment costs	**5.4**	5.4
Pension contributions	**0.4**	0.4
Compensation for loss of office	-	0.2
Aggregate emoluments of key management personnel	**15.1**	16.0

The costs above include deferred bonuses, other long-term incentive plan (LTIP) awards and share-based payment costs on an accrued basis.

Key management personnel include the executive director and certain senior staff who manage the business on a day-to-day basis.

Directors' remuneration	2022 €'m	2021 €'m
Remuneration	**7.4**	8.0
Compensation for loss of office	-	0.2
Total directors' remuneration	**7.4**	8.2

Where directors left the Board but have not yet been compensated for loss of employment, the full value of such costs has not been included in remuneration for the year and will only be included when paid. The costs above include deferred bonuses, and other LTIP awards only when they vest or become payable.

From time to time Directors may spend management time on associated Group companies, the cost of which is reflected in the above.

The highest paid director received total remuneration of €4,100,827 in the year (2021: €3,712,117).

In 2022, no director was a deferred member of the LCH section of LSEG's defined benefit pension scheme (2021: Nil). Contributions of €104,641 (2021: €131,826) have been made on behalf of two directors (2021: four directors) to a defined contribution scheme.

Four directors (including the highest paid director) participate in the share-based compensation plans detailed below. Three directors exercised share options during the year (2021: four director).

Independent non-executive directors receive fees for their services. The Board determines fees that reflect the level of individual responsibilities, attendance of meetings and membership of Board committees. Directors representing shareholders (including the parent company) do not receive fees from the Group.

19. EMPLOYEE BENEFITS (CONT)

ii) Share-based payments

LCH Group employees were eligible to participate in one or more of the following LSEG share option based arrangements during the financial year:

a) The LSEG Long Term Incentive Plan 2014 (LSEG LTIP)
b) The LCH Group Long Term Incentive Plan (LCH LTIP)
c) The LSEG SAYE Option Scheme and LSEG International Sharesave Plan 2018 (together SAYE schemes)
d) The LSEG Restricted Share Award Plan 2018 (Restricted Plan)
e) The LSEG International Share Incentive Plan (SIP)
f) The LSEG Deferred Bonus Plan Share Awards (DBP)
g) LSEG SharePurchase Plan

The **LSEG LTIP** has two elements, an award of Performance Shares and a conditional award of Matching Shares, which is linked to a co-investment being made by the executive. Awards are made in the form of nil-cost options. Under the Matching Shares arrangement, selected executives may invest up to the value of 50% of their net-of-tax base salary in LSEG shares (Invested Value). The Invested Value is then matched with a performance related Matching Share award, matched 2:1 on a pre-tax basis (up to a maximum Matching Share award of 100% of pre-tax base salary). The Group has not granted any Matching Share awards during the year.

Vesting of the LSEG LTIP awards is dependent upon LSEG's total shareholder return (TSR) performance and adjusted basic earnings per share growth (EPS) (over a 3-year period. The following targets applied to options granted in 2020.

EPS element (60%): Average growth over 3 years	TSR element (40%): Relative growth over 3 years	Proportion of element that vests
More than 18% p.a.	Upper quartile	100%
8% p.a.	Median	25%*
Less than 8% p.a.	Below median	0%

* Straight line pro-rating applies between this trigger and 100% vesting.

The **LCH LTIP** also has two elements, an award of Performance Shares and a conditional award of Matching Shares, which is linked to a co-investment being made by the executive. The Matching Shares element only applies to selected senior management. The Performance Shares are available to a wider group of executives. Awards are made in the form of nil-cost options. Under the Matching Shares arrangement, selected executives may invest up to the value of 50% of their net-of-tax base salary in LSEG shares (Invested Value). The Invested Value is then matched with a performance related Matching Share award, matched 2:1 on a pre-tax basis (up to a maximum Matching Share award of 100% of pre-tax base salary).

No further LCH LTIP awards will be granted from 2020 onwards.

Vesting of the LCH LTIP award is initially dependent upon the achievement of a risk management gateway. If this is achieved, the degree of vesting of the award is assessed against three conditions, measured independently over 3 years:

19. EMPLOYEE BENEFITS (CONT)

1) **Resiliency metric**: a qualitative assessment of performance on regulatory matters and enterprise risk incorporating operational risk (comprising up to 34% of the award)
2) **Efficiency metric:** a quantitative assessment of earnings before interest, tax, depreciation, and amortisation (EBITDA) margin performance period at the end of the performance period (comprising up to 33% of the award)
3) **Annual growth metric:** a quantitative assessment of earnings before interest and tax (EBIT) performance at the end of the performance period (comprising up to 33% of the award)

For internal audit, risk and compliance participants, the cost/efficiency and EBIT/growth metrics do not apply. Assuming the risk management gateway is achieved, the vesting of the award is assessed against the regulatory/resiliency metric only.

The risk management gateway will be assessed by the LCH Limited and the LCH SA remuneration committees (the committees) who will assess if the risk has been managed effectively over the 3-year period. The award lapses in full if any of the CCPs suffers an aggregate loss of more than €12 million (higher level losses). Equally, if during the performance period any of the CCPs suffers losses below this level, or circumstances arise in the reasonable opinion of the committees that have, or could have, resulted in a significant adverse event which did, or could have, materially damaged future business operations, the committees shall determine whether management could, or should have, taken action to prevent such circumstances and may lapse the award accordingly.

The regulatory metric shall vest at 100% if it is determined that management actions in relation to regulatory matters were wholly effective during the performance period. If it is determined that management actions in relation to regulatory matters were not wholly effective during the performance period, then the committees shall determine a lesser level of vesting as it deems appropriate.

In order for the portion of the Performance Share, or Matching Share Award subject to the cost metric, to vest, the committees must determine the amount of cumulative net consolidated qualifying cost savings achieved over the performance period by reference to specified cost saving projections and adjustments set out in the rules of the plan.

19. EMPLOYEE BENEFITS (CONT)

The cost and EBIT metrics shall vest as follows:

Efficiency metric: EBITDA margin level	Annual Growth Metric: EBIT level	Percentage of shares that vest
2017 award:		
• 53% or more	€337 million or more	100%
• 48%	€306 million	62.5%
• 41%	€275 million	25%
• Below 41%	Below €275 million	0%
2018 award:		
• 53% or more	€393 million or more	100%
• 50%	€357 million	62.5%
• 48%	€321 million	25%
• Below 48%	Below €321 million	0%
2019 award:		
• 55% or more	€400million or more	100%
• 52.5%	€370 million	62.5%
• 50%	€340 million	25%
• Below 50%	Below €340 million	0%

At the end of the performance period, the LCH Group EBIT or EBITDA margin will be assessed for the last financial year in the performance period, as approved by the LCH Group Board. EBIT means earnings before interest, tax, and non-underlying items, as reported in the consolidated financial statements for LCH Group Holdings Limited, subject to such adjustments as the committees consider necessary to take account of matters that it considers to be appropriate. EBITDA margin level means the earnings before interest, tax, depreciation, and amortisation divided by the gross income as reported in the consolidated financial statements of LCH Group Holdings Limited.

If circumstances occur, which, in the reasonable opinion of the committees, justify a reduction to awards granted, the committees may at their discretion reduce an award or not grant future awards. In the event that an award has already vested, the committees may determine that a repayment is made. The circumstances and time frame in which the committees may consider it appropriate to exercise such discretions are covered in the plan rules.

The **SAYE** plan provides for grants of options to employees who enter into a SAYE savings contract; options are granted at 20% below fair market value. The options vest in full after 3 years, providing the employee remains employed by the Group or the wider LSEG group of companies.

The **Restricted Plan** allows for grants to be made in the form of conditional awards over ordinary shares of LSEG, in the form of nil-cost options to certain executives. The vesting of such awards granted to date under the plans are conditional upon tenure and furthermore, in the case of the LCH.C Companies' Retention Plan 2014 (Retention Plan), upon successful achievement of a risk management gateway (included within LSEG LTIP numbers).

19. EMPLOYEE BENEFITS (CONT)

The **SIP** plan gives employees the option to buy LSEG shares monthly via a salary deduction. For every four shares purchased by the employee, the Group awards them one additional share which vests after completion of a three year plan cycle (SIP Matching Share).

The **DBP** plan awards are structured as nil-cost options subject to continued employment and malus and clawback provisions. Such awards usually vest in full on the normal vesting dates.

Movements in the number of share options and awards outstanding and their weighted average exercise price in GBP are as follows:

	LSEG LTIP Number	LCH LTIP Number	SIP Number	SAYE Number	Weighted average exercise price
As at 1 January 2022	275,655	136,858	104	96,389	£54.48
Granted in year	126,606	-	544	19,578	£63.71
Net transfers	(7,831)	(7,862)	-	(3,341)	£115.87
Exercised in year	(44,515)	(116,772)	-	(26,891)	£38.56
Lapsed/forfeited in year	(7,660)	(12,224)	(4)	(6,623)	£59.64
As at 31 December 2022	**342,255**	**-**	**644**	**79,112**	**£62.21**

653 of the options were exercisable as at 31 December 2022 (2021: 232). The weighted average exercise price is nil for all other schemes except the SAYE. The weighted average share price of LSEG plc shares during the year was £64.94 (2021: £77.96). Transfers in or out relate to staff who are either newly employed or no longer employed directly by the Group, but whose options have not been forfeited as they were or remain employees of other LSEG companies.

The range of exercise prices and weighted average remaining contractual life of awards and options outstanding are as follows:

As at 31 December 2022	Number outstanding	Weighted average remaining contractual life (years)
LSEG LTIP - nil	342,255	1.1
LCH LTIP - nil	-	-
SIP Matching – nil	644	1.9
SAYE - between £30.00 and £50.00	-	-
SAYE - more than £50.00	79,112	1.7
Total	**422,011**	**4.7**

19. EMPLOYEE BENEFITS (CONT)

The fair value of share options granted during the year was determined using a stochastic valuation model. The key assumptions used in the valuation were as follows:

	Performance Shares	Restricted Share Award Plan	
Grant date	06-Apr-22	06-Apr-22	13-Sep-22
Grant date share price (£)	83.6	83.6	80.98
Expected life (years)	3	0.4-4.0	1-3.01
Dividend yield	0.94%	0.94%-1.05%	0.96%-1.16%
Risk-free interest rate	1.59%	1.28%-1.59%	2.75%-2.99%
Volatility	32.15%	27.56%-32.86%	28.43%-31.57%
Fair value (£)	-	80.34-83.22	78.67-80.05
Fair value TSR (£)	63.5	-	-
Fair value EPS (£)	81.29	-	-

	Share save Plan	Deferred Bonus Plan	ESPP Matching Shares
Grant date	29-Sep-22	06-Apr-22	Offer period 1 Jan 2022 to 31 Dec 2022
Grant date share price (£)	£76.96	£83.60	£65.72 to £85.39
Expected life (years)	3.3 years	1 years to 3 years	2.45 years to 3.09 years
Exercise price	£63.71	-	-
Dividend yield	1.11%	-	0.998% to 0.926%
Risk-free interest rate	4.28%	1.28% to 1.59%	1.01% to 3.06%
Volatility	32.1%	28.25% to 32.2%	28.56% to 34.68%
Fair value (£)	£26.07	£83.60	£74.58
Fair value TSR (£)	-	-	-
Fair value EPS (£)	-	-	-

The volatility is based on a statistical analysis of LSEG's weekly share price since its flotation in July 2001.

19. EMPLOYEE BENEFITS (CONT)

The fair value for LSEG LTIP performance and matching shares granted during the year is based on a TSR pricing model which takes into account the TSR vesting conditions. All other fair values of options granted are based on a Black-Scholes model. Holders of share awards and share options are entitled to receive dividends declared during the vesting period.

iii) Pension commitments

Defined contribution scheme

The LCH Group pays fixed contributions to a defined contribution pension scheme in the UK and there is no legal or constructive obligation to pay further contributions. The assets of the plan are held separately from those of the LCH Group in a fund under the control of the trustees. The total expense charged in the income statement of €5.9 million (2021: €6.6 million) represents contributions payable to the plan by the LCH Group at rates specified in the rules of the plan. Defined contribution schemes are also operated by the overseas branches of LCH Limited and €0.3 million contributions were made during the year (2021: €0.3 million).

Defined benefit schemes

The Group operated a defined benefit pension scheme for its employees in the UK (now the LCH defined benefit section of the LSEG Pension Scheme), which required contributions to be made to a separate trustee administered fund. This was closed to new members from 30 September 2009 and closed to further employee contributions on 31 March 2013. The LCH Pension Scheme underwent a sectionalised merger into a new London Stock Exchange Group Pension Scheme on 5 September 2016. The scheme maintains separate LCH and LSE sections with LCH Limited sponsoring only the LCH section.

The valuations of the UK scheme conducted for financial reporting purposes are based on the triennial actuarial valuation as at 31 December 2017 carried out by an independent qualified actuary. The next triennial actuarial valuation is due with an effective date of 31 December 2023. The Group is not aware of any events subsequent to 31 December 2022, which would have a material impact on the results of the valuation.

The overseas schemes were subject to full valuations as follows:

The Group has obligations in respect of retirement indemnity and long-service award schemes in Paris. The provisions have been calculated by a qualified independent actuary as at 31 December 2022.

The obligations in respect of certain staff in an independent defined benefit scheme in Porto were assumed in 2006. An updated valuation of these funds was carried out at 31 December 2022 by a qualified independent actuary.

19. EMPLOYEE BENEFITS (CONT)

A summary of the principal assumptions used is detailed below.

Weighted-average assumptions to determine benefit obligations

	UK	France	Porto
Discount rate	4.80%	3.80%	3.80%
Rate of salary increase	n/a	2.50%	2.50%
Rate of price inflation	3.20%	2.30%	2.30%
Rate of pension increases in payments	2.20%	N/A	1,5%
Implied life expectancy at age 60			
Male currently aged 60	27.2	23.3	20.6
Male currently aged 45	28.2	23.3	20.6
Female currently aged 60	29.7	27.5	20.6
Female currently aged 45	30.5	27.5	20.6

The discount rate for the UK scheme has been determined from a curve of AA corporate bond rates by duration which is consistent with the estimated weighted average duration of the scheme's liabilities at around 24 years. Scheme assets are stated at their market value at the respective statement of financial position dates.

Changes in the present value of the defined benefit obligations during the year

	2022			2021		
	UK €m	France €m	Porto €m	UK €m	France €m	Porto €m
Benefit obligation as at 1 January	(293.6)	(6.9)	(0.3)	(288.0)	(7.3)	(0.3)
Pension expense:						
Current service cost	-	0.7	-	-	(0.8)	-
Past service loss	-	(0.7)	-	-	0.2	-
Net interest	(5.2)	-	-	(4.2)	-	-
Re-measurement losses/(gains):						
Effect of changes in demographic assumptions	4.6			(3.8)	0.4	-
Effect of changes in financial assumptions	123.6	2.5	0.2	14.5	0.6	0.1
Effect of experience adjustments	(17.2)	(0.4)	-	(1.4)	-	-
Other actuarial gains	-	-	-	-	-	-
Reduction in obligation due to settlement:						
Benefits paid	13.8	-	-	10.9	-	-
Foreign exchange	13.7	-	-	(21.6)	-	-
Benefit obligation as at 31 December	(160.3)	(4.8)	(0.1)	(293.6)	(6.9)	(0.2)

19. EMPLOYEE BENEFITS (CONT)

Changes in scheme assets

	2022			2021		
	UK	**France**	**Porto**	UK	France	Porto
	€m	**€m**	**€m**	€m	€m	€m
Fair value of scheme assets as at 1 January	**382.7**	**0**	**0.4**	358.0	-	0.3
Pension income:						
Net interest	**6.8**	-	-	5.3	-	-
Re-measurement gains:						
Return on plan assets (excluding interest income)	**(153.7)**	-	-	0.1	-	-
Employer contributions	**1.0**	-	-	4.5	-	-
Benefits paid	**(13.8)**	-	-	(10.9)	-	-
Admin expenses	**(1.1)**	-	-	(0.9)	-	-
Foreign exchange	**(18.0)**	-	-	26.6	-	-
Fair value of scheme assets as at 31 December	**203.9**	-	**0.4**	382.7	-	0.3

Fair value of scheme assets with a quoted market price

	2022		2021	
	UK	**Porto**	UK	Porto
	€m	**€m**	€m	€m
Cash and cash equivalents	**3.3**	-	4.9	-
Equity instruments - quoted	**12.8**	-	50.0	-
Equity instruments - not quoted	-	-	-	-
Debt / LDI instruments - quoted	**51.0**	-	74.4	0.3
Debt / LDI instruments - not quoted	**136.8**	**0.4**	253.4	-
Total fair value of assets	**203.9**	**0.4**	382.7	0.3
Present value of funded obligations	**(160.3)**	**(0.4)**	(293.6)	(0.3)
Surplus	**43.6**	-	89.1	-

The Group has recognised a net surplus of €43.6 million (2021: €89.1 million) in relation to the LCH UK scheme on the basis that the Group has access to the surplus in the event of wind up of the scheme. No asset ceiling has been applied to the net surplus recognised as no minimum funding commitments are associated to the plan.

19. EMPLOYEE BENEFITS (CONT)

Sensitivity analysis

The sensitivity of the value of the benefit obligation to the discount rate is shown below:

	2022			2021		
	Impact on scheme obligations			Impact on scheme obligations		
	UK	**France**	**Porto**	UK	France	Porto
	€m	**€m**	**€m**	€m	€m	€m
Discount rate - increase by 0.5%	**(13.7)**	**(0.4)**	-	(30.9)	-	-
Revaluation in deferment (CPI) and salary increases - increase by 0.5%	**11.2**	-	-	18.0	-	-
Pension increases in payment - increase by 0.5%	**9.2**	-	-	23.5	-	-
Life expectancy - increase by 1 year	**4.1**	-	-	9.8	-	-

The sensitivity analyses above have been determined based on a method that extrapolates the impact on the benefit obligation as a result of reasonable changes in key assumptions occurring at the end of the reporting period.

Payments from the defined benefit schemes

The following payments are expected to be made in future years out of the defined benefit plans' obligations:

	UK	**France**	**Porto**
	€m	**€m**	**€m**
Within the next 12 months	**3.9**	**0.1**	-
Between 2 and 5 years	**16.6**	**1.1**	-
Following 5 years	**23.2**	**1.8**	-
	43.7	**3**	-

Contributions

During 2022 a contribution of €1.0 million (2021: €4.5 million) was made to the LCH section of the defined benefit pension plan in the UK. As part of the triennial valuation as at 31 December 2017, the Company had agreed a funding plan with the trustee, consisting of annual contributions of £3m (€3.6m) a year for the years 2019 to 2022 inclusive, provided a trustee valuation deficit exists at the prior year end. However, as part of the triennial valuation as at 31st December 2020, it was agreed that due to a surplus, the deficit funding contributions were no longer required, and therefore no further annual contributions were made during 2022.

20. FINANCIAL INSTRUMENTS

Financial assets and liabilities

The financial instruments of the Group are categorised as follows:

	Note	2022 €m	2021 €m
Financial assets at fair value through profit or loss			
Transactions with clearing members at fair value through profit or loss	12	**745,437.6**	769,668.4
Financial assets at fair value through other comprehensive income			
Government bonds		**21,009.5**	16,433.5
Financial assets at amortised cost			
Transactions with clearing members at amortised cost	12	-	1,759.9
Trade and other receivables *	13	**324.9**	128.2
Short-term loans	17	**368.6**	362.5
Other balances with clearing members	12	**8,954.8**	4,988.0
Clearing business cash and cash equivalents		**118,016.8**	99,900.4
Cash and short-term deposits	14	**951.4**	856.4
Financial liabilities at fair value through profit or loss			
Transactions with clearing members at fair value through profit or loss	12	**(745,437.6)**	(769,668.4)
Financial liabilities at amortised cost			
Transactions with clearing members at amortised cost	12	-	(1,759.9)
Trade and other payables *	15	**(476.2)**	(458.0)
Initial margin and other balances with clearing members	12	**(133,020.6)**	(105,077.5)
Default funds	18	**(14,886.9)**	(16,027.0)

*Prepayments within trade and other receivables are not classified as financial assets. Other taxes and contract liabilities and the liability in respect of the renegotiated operating agreements within trade and other payables are not classified as financial liabilities.

All financial assets held at fair value through profit or loss are designated as such on initial recognition by the Group. Other assets were tested for impairment, but no expected credit loss provisions are necessary.

Fair value hierarchy

The Group uses the following hierarchy for determining and disclosing the fair value of financial instruments by valuation technique:

- Level 1: quoted (unadjusted) prices in active markets for identical assets or liabilities;
- Level 2: other techniques for which all inputs, which have a significant effect on the recorded fair value are observable, either directly or indirectly;
- Level 3: techniques which use inputs which have a significant effect on the recorded fair value that are not based on observable market data. The Group has no financial instruments in this category.

20. FINANCIAL INSTRUMENTS (CONT)

The Group held the following significant financial instruments measured at fair value:

	2022			2021		
	Level 1 €m	**Level 2 €m**	**Total €m**	Level 1 €m	Level 2 €m	Total €m
Assets measured at fair value						
Transactions with clearing members - derivatives	**109.9**	**8,387.8**	**8,497.7**	55.4	3,136.3	3,191.7
Transactions with clearing members - non-derivatives	**-**	**736,939.9**	**736,939.9**	-	766,476.7	766,476.7
Treasury bills - Investment in financial assets	**254.3**	**-**	**254.3**	-	-	-
Treasury bills – other financial assets	**614.9**	**-**	**614.9**	-	-	-
Government issued bonds at fair value through other comprehensive income	**20,140.7**	**-**	**20,140.7**	558.8	-	558.8
Liabilities measured at fair value						
Transactions with clearing members - derivatives	**(109.9)**	**(8,387.8)**	**(8,497.7)**	(55.4)	(3,136.3)	(3,191.7)
Transactions with clearing members - non-derivatives	**-**	**(736,939.9)**	**(736,939.9)**	-	(766,476.7)	(766,476.7)

For assets and liabilities classified as level 1, the fair value is based on market price quotations at the reporting date.

For assets and liabilities classified as level 2, the fair value is calculated using valuation techniques with market observable inputs. Frequently applied techniques include forward pricing and swap models using present value calculations. The models incorporate various inputs including foreign exchange spot and forward rates, interest rate curves and forward rate curves.

The Group and the Company does not carry any level 3 assets and there have been no transfer in the current year between the levels (2021: none).

20. FINANCIAL INSTRUMENTS (CONT)

Amounts included in the income statement in relation to financial instruments are as follows:

	2022 €m	2021 €m
Treasury income on assets held at fair value	377.3	27.0
Treasury income on assets held at amortised cost	127.7	-
Treasury income on other financial assets	1,051.9	39.7
Treasury income on liabilities held at amortised cost	(1,031.0)	423.9
Treasury income	**525.9**	490.6
Treasury expense on assets held at fair value	3.3	(12.8)
Treasury expense on assets held at amortised cost	(141.7)	(237.3)
Treasury expense on liabilities held at amortised cost	(88.1)	-
Treasury expense	**(226.5)**	(250.1)
Net treasury income	**299.4**	240.5
Net finance income on pension fund assets	8.6	1.1
Finance income on assets held at amortised cost	3.7	2.5
Finance expense on assets held at amortised cost	(7.8)	(5.4)
Finance expense on loans and borrowings held at amortised cost	(0.1)	(0.2)
Net finance expense	**4.4**	(2.0)

Treasury income on liabilities held at amortised cost represents amounts earned from clearing members' cash collateral deposits which attract negative interest rates. Treasury expense on assets held at amortised cost represents amounts where the Group incurs negative interest on its cash deposits.

20. FINANCIAL INSTRUMENTS (CONT)

Offsetting financial assets and financial liabilities

The Group reports financial assets and financial liabilities on a net basis on the balance sheet where 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 impact of netting arrangements on all financial assets and liabilities that are reported net on the balance sheet.

31 December 2022	**Gross amounts €m**	**Amount offset €m**	**Net amount as reported €m**
Derivative financial assets	**2,710,469.8**	**(2,701,972.1)**	**8,497.7**
Repurchase agreements	**900,385.9**	**(163,446.0)**	**736,939.9**
Total assets	**3,610,855.7**	**(2,865,418.1)**	**745,437.6**
Derivative financial liabilities	**(2,719,826.4)**	**2,711,328.7**	**(8,497.7)**
Reverse repurchase agreements	**(900,385.9)**	**163,446.0**	**(736,939.9)**
Total liabilities	**(3,620,212.3)**	**2,874,774.7**	**(745,437.6)**

31 December 2021	Gross amounts €m	Amount offset €m	Net amount as reported €m
Derivative financial assets	1,533,596.9	(1,530,405.2)	3,191.7
Repurchase agreements	947,254.5	(179,017.9)	768,236.6
Total assets	2,480,851.4	(1,709,423.1)	771,428.3
Derivative financial liabilities	(1,553,208.9)	1,550,017.2	(3,191.7)
Reverse repurchase agreements	(947,254.5)	179,017.9	(768,236.6)
Total liabilities	(2,500,463.4)	1,729,035.1	(771,428.3)

The imbalance between asset and liability for gross and offset amounts is caused by the exclusion of settled to market ("STM") amounts from the gross balance on the grounds that these trades are settled.

As CCPs, the Group's operating companies act as principal and sit in the middle of clearing members' transactions and hold default funds and margin amounts as a contingency against the default of a member and so further amounts are available to offset in the event of a default reducing the asset and liability of €745,437.6 million (2021: €771,428.3 million) to nil.

21. PROVISIONS

	2022		
	Property	**Other**	**Total**
Current	**€m**	**€m**	**€m**
At 1 January	-	1.4	1.4
Provided in year	-	(0.9)	(0.9)
Utilised in the year	-	0.1	0.1
At 31 December	-	**0.6**	**0.6**

	2021		
	Property	Other	Total
Current	€m	€m	€m
At 1 January	-	0.2	0.2
Provided in the year	-	1.2	1.2
At 31 December	-	1.4	1.4
Non-current			
At 1 January	0.6	-	(0.6)
Novated in year (note 11)	(0.6)	-	(0.6)
At 31 December	-	-	-

During 2021 LCH Limited disposed of its sole UK property lease and novated the right of use asset and associated lease liabilities to London Stock Exchange (C) Ltd (LSE C), a fellow Group company in LSEG. See note 11 for further details

Other provisions relate to the expected costs arising from the restructuring programme and integration activities performed in the year.

22. COMMITMENTS AND CONTINGENCIES

Supplier agreements

LCH SA and the ATOS group entered into a new Heads of Terms concerning the 5-year IT service contract, effective from January 2014. This extends the contract until December 2023, with a right to terminate from January 2022. The estimated maximum value of the commitment to January 2022 is €28.4 million from 1st of January 2023 (Until 2023, €43.1 million).

Treasury assets supporting operational facilities

As at 31 December 2022 the Group had assets and collateral in support of the following operational facilities:

	2022	2021
	€m	€m
Collateral deposited with central banks	**2,694.5**	2,973.2
Fixed income settlement	**39,200.1**	18,703.4
	41,894.6	21,676.6

The Company holds collateral as security against tri-party cash loans as well as government debt and government backed bank issued debt, which is used to support RepoClear Settlement activity.

23. SHARE CAPITAL AND SHARE PREMIUM

Ordinary shares

The company has 72,483,217 fully paid-up ordinary shares of €1.00 each in issue as at 31 December 2022 (2021: 72,483,217).

No ordinary shares were issued in the current and prior years.

Non-cumulative callable preference shares (NCPS)

During the year the Company adopted new articles of association which removed the authority to issue NCPS as such authority was a legacy matter that was no longer deemed necessary.

Share premium

The share premium reserve is €316.1 million (2021: €316.1 million).

Other reserves

Other reserves include merger reserve of €15.3 million (2021: €15.3 million), capital redemption reserve of €61.2 million (2021: €61.2 million) and capital contribution reserve of €1.5 million (2021: €1.5 million).

24. DIVIDENDS

	2022	2021
	€m	€m
Final dividend for 31 December 2020, paid 7 June 2021: €5.20 per ordinary share	-	376.9
Interim dividend for 31 December 2021, approved 17 December 2021: €0.80 per ordinary	-	58.0
Full year dividend for 2021, paid 23 June 2023: €4.10 per ordinary share	**297.2**	-

During the year, LCH SA paid a full year dividend for the year ended 31 December 2022 of €60.0 million (2021: €60.0 million), €6.6m (2021: €6.6 million) of which was to non-controlling interests.

On 16 June 2023, the directors of the Company recommended a full year dividend for the year ended 31 December 2022 of €268.2 million (€3.70 per ordinary share), subject to shareholder approval.

25. CAPITAL MANAGEMENT

The Group's approach to capital management is to maintain a strong capital base that will support the development of the business, meet regulatory capital requirements at all times and maintain good credit ratings. This is managed with reference to external capital requirements, including a consideration of future impacts to the Group. Capital plans are included within the Group's medium term financial plan which is presented to the Board annually. The capital plans take into account current and future regulatory requirements and the development of the Group's business. The Group monitors capital resources in relation to its capital requirements.

LCH Limited and LCH SA are considered as qualifying central counterparties ("QCCP") under the European capital requirements regulations ("CRR") LCH Limited as it has received recognition under European markets infrastructure regulations ("EMIR") as a third country CCP, and LCH SA as it has received authorisation under European markets infrastructure regulations ("EMIR"). Both companies are registered as DCOs in the US affording them QCCP status for US members.

Compliance with capital adequacy regulations

LCH SA is regulated as a credit institution by the ACPR and as a CCP and an investment service provider by l'Autorité des marchés financiers (AMF) in Paris, France. It is subject to standard capital adequacy rules under EMIR and Basel III. It is also regulated by the CFTC as a DCO in the USA.

LCH Limited is regulated by the Bank of England as a Recognised Clearing House under the Financial Services and Markets Act 2000 and is subject to capital adequacy rules under EMIR. It is also regulated by the CFTC (Commodity Futures Trading Commission) as a Derivatives Clearing Organisation (DCO) in the USA. In Switzerland the Company is licensed by the Swiss Financial Markets Supervisory Authority ("FINMA") as a CCP. In Canada it is recognised as a Clearing Agency by the Ontario Securities Commission ("OSC") in Ontario, and the AMF in Québec, and in Australia it is recognised as a CCP by the Australian Securities & Investments Commission ("ASIC"). The Company is also subject to oversight by other market regulators and central banks in jurisdictions in which business is carried out.

The Group and its subsidiaries have been fully compliant with the respective capital adequacy regulations throughout the current year.

26. SUBSIDIARY COMPANIES

The Company's subsidiaries are detailed in note 30. All are owned 100% except LCH SA.

Material partly-owned subsidiary

There is a material non-controlling interest in LCH SA of 11.1%. Movement in the non-controlling interest is shown in the statement of changes in equity and includes the attributable share of goodwill and all other assets.

€11.1 million of total comprehensive income was attributable to the non-controlling interest in the current year (2021: €12.5 million).

Summarised balance sheet of LCH SA	2022 €m	2021 €m
Total non-current assets	**131.0**	116.7
Clearing business assets	**579,206.9**	533,252.3
Other current assets	**181.6**	364.4
Balances with clearing members	**(578,957.7)**	(533,210.6)
Other liabilities	**(100.3)**	(98.7)
Net assets	**461.5**	424.1
Goodwill attributable to LCH SA	**101.3**	101.3
Total assets for LCH SA	**562.8**	525.4
Value of assets attributable to non-controlling interest	**62.3**	58.3
Summarised cashflow statement for LCH SA		
Net cash inflow from operating activities	**230.7**	(843.0)
Net cash inflow/(outflow) from investing activities	**(353.0)**	939.2
Net cash outflow from financing activities	**(67.4)**	(65.7)
Net increase in cash and cash equivalents	**(189.7)**	30.5
Cashflow Attributable to non-controlling interest	**(21.1)**	3.4
Summarised total comprehensive income for LCH SA		
Profit after tax	**100.2**	112.8
Other comprehensive income/(loss)	**(2.9)**	0.2
Total comprehensive income	**97.3**	113.0
Attributable to non-controlling interest	**10.8**	12.5

27. RELATED PARTY TRANSACTIONS

Key management compensation personnel

Details of key management personnel and their total remuneration are disclosed in note 19.

Ultimate parent company and Group companies

LSEG is the ultimate parent company of the Group, with a total shareholding of 82.61% (2021: 82.61%) and is the largest group that prepares consolidated accounts. The immediate parent company is London Stock Exchange (C) Limited, which does not prepare consolidated accounts. LCH Group Holdings Limited is the head of the smallest group which prepares consolidated accounts.

Copies of the consolidated financial statements for LSEG for the year ended 31 December 2022 are available from the company secretary, London Stock Exchange Group plc, 10 Paternoster Square, London, EC4M 7LS.

Details of Group companies are set out in note 30. Transactions or balances with Group entities that have been eliminated in these consolidated financial statements are not reported.

Throughout the current year the Group had a number of transactions with various companies within LSEG which are detailed below. All transactions were on an arm's length basis.

	2022	2021
	€m	€m
Income statement		
Interest charged from parent companies	3.7	2.5
	3.7	2.5
Balance sheet		
Short-term loan to parent company	368.6	362.5
Amounts due from parent companies at 31 December	0.9	1.7
Amounts due to parent companies at 31 December	(4.1)	(3.1)
Transactions with companies under common control		
Income statement		
Services recharged to companies under common control	11.2	1.2
Services recharged from companies under common control	(95.9)	(77.5)
	(84.7)	(76.3)

	2022	2021
	€m	€m
Balance sheet		
Amounts due from companies under common control at 31 December	12.5	9.7
Amounts due to companies under common control at 31 December	(41.6)	(10.6)

The amount due to parent companies includes the long-term loan detailed in note 17.

28. GOVERNMENT GRANTS

The Group qualifies for government assistance in the form of research and development tax credits.

In current and prior year, LCH SA did not qualify for government assistance in the form of crédit d'impôt recherche ("CIR") (a research and development tax credit).

LCH Limited received €0.7 million (2021: €0.5 million) and SwapAgent received €0.4 million (2021: Nil) of research and development tax credits from HMRC in 2022. Although this is received as a reduction to the tax charge, the amount claimed is recognised as a credit against staff costs in the year.

The grants are subject to potential tax audit to ensure the eligibility of the expenses claimed. No provision has been made for any repayment of the amounts receivable as this is deemed unlikely to occur.

29. CASHFLOWS ARISING FROM OPERATING ACTIVITIES

	2022 €m	2021 €m
Profit for the year	**429.5**	369.0
Tax expense	**116.8**	105.7
Finance income	**(11.9)**	(4.0)
Finance expense	**8.0**	5.6
Depreciation, amortisation and impairment	**88.4**	79.5
Research and development tax credit	**(2.1)**	(0.5)
Share-based payments expense	**10.8**	12.6
Movement in provisions	**(0.8)**	-
Movement in pension	**0.9**	(3.9)
Decrease/(increase) in trade and other receivables	**(199.7)**	115.3
Increase/(decrease) in trade and other payables	**11.1**	132.1
Revaluation of financial instruments	**-**	-
Increase in clearing business cash and cash equivalents	**(18,116.4)**	(15,059.3)
(Increase) in fair value of member assets	**22,023.9**	(72,671.2)
Increase in fair value of member liabilities	**1,952.3**	81,020.7
Increase/(decrease) in default funds	**(1,140.1)**	1,537.6
Foreign exchange gains and other	**(2.1)**	-
Net cash outflow from operations	**(5,168.6)**	(4,360.9)

30. OTHER STATUTORY INFORMATION

The LCH Group comprises the following entities (all companies are 100% owned except where noted):

Company name	Principal activity	Address	Country of incorporation
LCH Group Holdings Limited	Parent company	10 Paternoster Square London EC4M 7LS	England & Wales
LCH Limited – UK	CCP	10 Paternoster Square London EC4M 7LS	England & Wales
LCH SA – France – (88.9% owned)	CCP	18, Rue de Quatre Septembre, Paris, 75002, France	France
SwapAgent Limited	Clearing agent	10 Paternoster Square London EC4M 7LS	England & Wales
LCH.Clearnet LLC[2]	Dormant	17, State Street, New York City, NY, 10004, USA	USA
BondClear Limited[1]	Dormant	10 Paternoster Square London EC4M 7LS	England & Wales
SwapClear Limited[1]	Dormant	10 Paternoster Square London EC4M 7LS	England & Wales
RepoClear Limited[1]	Dormant	10 Paternoster Square London EC4M 7LS	England & Wales
CommodityClear limited[1]	Dormant	10 Paternoster Square London EC4M 7LS	England & Wales
EquityClear Limited[1]	Dormant	10 Paternoster Square London EC4M 7LS	England & Wales
The London Clearing House Limited[1]	Dormant	10 Paternoster Square London EC4M 7LS	England & Wales
LCH.Clearnet Group Limited[1]	Dormant	10 Paternoster Square London EC4M 7LS	England & Wales
ForexClear Limited[1]	Dormant	10 Paternoster Square London EC4M 7LS	England & Wales
International Commodities Clearing House Limited[1]	Dormant	10 Paternoster Square London EC4M 7LS	England & Wales
The London Produce Clearing House Limited[1]	Dormant	10 Paternoster Square London EC4M 7LS	England & Wales

[1] Indirect holding through the Company's other subsidiaries
[2] Inactive since June 2016

31. EVENTS AFTER THE REPORTING PERIOD

As expected, on 16 January 2023, Euronext served a termination notice to LCH SA regarding the Derivatives Clearing Agreement signed in 2017. In accordance with the Derivatives Clearing Agreement, LCH SA is entitled to a termination fee of €30 million and a migration fee of €6 million. These fees are clearly predefined in the agreement (with an indexation mechanism for the migration fee). They shall be the sole payment from Euronext to LCH in respect of all termination and migration related costs and are payable in 2024 both.

On the 16 June 2023 the LCH Group Board approved the acquisition of the remaining 11.1% minority interest share of LCH SA from Euronext for a total consideration of €111 million.

The Company has determined that these events are non-adjusting subsequent events. Accordingly, the financial position and results of operations as of and for the year ended 31 December 2022 have not been adjusted to reflect their impact.

LCH GROUP HOLDINGS LIMITED

COMPANY STATEMENT OF FINANCIAL POSITION

As at 31 December 2022

	Notes	2022 €m	2021 €m
Assets			
Non-current assets			
Investments	32	**812.4**	812.4
Total non-current assets		**812.4**	812.4
Current assets			
Trade and other receivables	33	**25.5**	19.5
Short-term loan to parent company	34	**368.6**	362.5
Group relief receivable		**-**	0.7
Cash and cash equivalents		**18.5**	4.7
Total current assets		**412.6**	387.4
Total assets		**1,225.0**	1,199.8
Liabilities			
Current liabilities			
Trade and other payables	35	**(366.5)**	(356.6)
Group relief payable		**(2.8)**	-
Total current liabilities		**(369.3)**	(356.6)
Non-current liabilities		**-**	-
Total liabilities		**(369.3)**	(356.6)
Net assets		**855.7**	843.2
Capital and reserves attributable to the Company's equity holders			
Ordinary share capital	23	**72.5**	72.5
Share premium	23	**316.1**	316.1
Capital redemption reserve		**61.2**	61.2
Retained earnings		**405.9**	393.4
Total shareholders' funds		**855.7**	843.2

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LCH GROUP HOLDINGS LIMITED
COMPANY STATEMENT OF CASHFLOWS
Year ended 31 December 2022

	2022 €m	2021 €m
Cashflows arising from operating activities		
Profit for the year	**312.2**	339.4
Taxation	**2.4**	0.1
Finance income	**(5.3)**	(3.5)
Finance expense	**1.2**	-
Decrease/(increase) in trade and other receivables	**(3.0)**	7.0
Increase/(decrease) in trade and other payables	**1.5**	1.5
Dividend income	**(300.3)**	(342.3)
Net cash inflow/(outflow) from operations	**8.7**	2.2
Tax received	-	-
Net cash inflow/(outflow) from operating activities	**8.7**	2.2
Cashflows arising from investing activities		
Dividend income	**300.3**	342.3
Net cash inflow from investing activities	**300.3**	342.3
Cashflows arising from financing activities		
Loan (to)/from parent company	**(1.7)**	(111.1)
Dividends paid	**(297.2)**	(434.9)
Net loan proceeds from subsidiaries	**4.3**	205.6
Net cash outflow from financing activities	**(294.6)**	(340.4)
Increase/(decrease) in cash and cash equivalents	**14.4**	4.1
Cash and cash equivalents at 1 January	**4.7**	0.2
Effects of foreign exchange movements	**(0.6)**	0.4
Cash and cash equivalents at 31 December	**18.5**	4.7

LCH GROUP HOLDINGS LIMITED

COMPANY STATEMENT OF CHANGES IN EQUITY

As at 31 December 2022

	Called-up share capital €m	Share premium €m	Capital redemption reserve €m	Retained earnings €m	Total €m
Shareholders' equity at 1 January 2021	72.5	316.1	61.2	488.9	938.7
Profit for the year	-	-	-	339.4	339.4
Dividends paid in the year	-	-	-	(434.9)	(434.9)
Shareholders' equity at 31 December 2021	**72.5**	**316.1**	**61.2**	**393.4**	**843.2**
Profit for the year	-	-	-	**309.7**	**309.7**
Dividends paid in the year	-	-	-	**(297.2)**	**(297.2)**
Shareholders' equity at 31 December 2022	**72.5**	**316.1**	**61.2**	**405.9**	**855.7**

32. INVESTMENTS

Investment in subsidiaries	2022 €m	2021 €m
Cost		
At 1 January	**999.4**	999.4
At 31 December	**999.4**	999.4
Accumulated impairment		
At 1 January	**(187.0)**	(187.0)
At 31 December	**(187.0)**	(187.0)
Net book value	**812.4**	812.4

Investments in subsidiary companies are stated at cost less impairment. See note 30 for details of subsidiary companies.

33. TRADE AND OTHER RECEIVABLES

	2022 €m	2021 €m
Current		
Short-term loans with subsidiary companies	**19.8**	16.3
Other receivables	**5.7**	3.2
	25.5	19.5

34. INTEREST BEARING LOANS AND BORROWINGS

	2022 €m	2021 €m
Current		
Short-term loan to parent company	**368.6**	362.5

During 2022, the Company increased its loan to its parent company, LSE (C) Limited, to €368.6 million. The loan is repayable with 5 days' notice and attracts interest at the rate of EURIBOR with a 0% floor +1%. The Company does not calculate an expected credit loss allowance on the loan to parent, as it is repayable on demand and expects to receive all amounts due in a timely manner.

35. TRADE AND OTHER PAYABLES

	2022 €m	2021 €m
Current		
Trade payables	**0.4**	0.1
Amounts owed to Group companies	**365.3**	353.4
Other payables	**-**	2.2
Accruals	**0.8**	0.9
	366.5	356.6

Amounts owed to Group companies include short-term loans that are repayable on demand and incur interest at market rates.

36. FINANCIAL INSTRUMENTS

The Company's financial assets and liabilities are as follows:

	Note	2022 €m	2021 €m
Financial assets at amortised cost			
Short-term loans due from subsidiary companies	33	**19.8**	16.3
Short-term loans due from parent company	34	**368.6**	362.5
Other receivables		**5.7**	3.1
Cash and short-term deposits		**18.5**	4.7
Financial liabilities at amortised cost			
Trade and other payables		**(9.6)**	(4.7)
Short-term loans due to subsidiary companies		**(356.9)**	(351.9)

Loan agreements between the Company and its subsidiaries were signed in January 2022. The loans are revolving credit facilities valid for 5 years and are repayable with 5 days' notice. Interest is charged at SONIA or EURIBOR as appropriate. In some cases, the loan amount is subject to negative interest rates.

A loan agreement was signed with the Company's parent company in 2018. The loan is repayable with 5 days' notice and attracts interest at the rate of EURIBOR with a 0% floor +1%.

37. RELATED PARTY TRANSACTIONS

During the year the Company charged €9.9 million (2021: €12.8 million) in management charges to subsidiary companies. The Company paid interest of €1.2 million (2021: €nil million) to a subsidiary company and €nil million (2021: €nil) to its parent company and received interest of €5.3 million (2021: €3.5 million) from subsidiary and parent companies.

Balances at the year end with subsidiary and parent companies are shown in notes 32, 33, 34 and 35.