

LCH SA

Basel III Pillar 3 Disclosures Report

For the year ended 31 December 2018

LCH The Markets'
Partner



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1. Introduction

Figures exhibited are sourced from COREP as of December 31.2018

1.1 LCH SA

The Banque Centrale de Compensation, known under its commercial name “LCH SA” is a clearing house owned by LCH Group Holdings Ltd (88.9%) and Euronext (11.1%), LCH Group Holdings Ltd is majority owned (82.6%) by the London Stock Exchange Group (LSEG).

LCH SA is located in Paris and is:

- Authorised as a central counterparty to offer services and activities in the European Union in accordance with the European Markets Infrastructure Regulation (EMIR). As a Clearing House it is regulated by the three French Authorities : L'Autorité des Marchés Financiers (AMF), L'Autorité de Contrôle Prudentiel et de Résolution (ACPR) and la Banque de France. It is also supervised by a college of 18 national European regulators (EMIR College) plus ESMA.
- Registered as Credit Institution. As such, it is directly regulated by ACPR and indirectly supervised by the ECB.
- Registered as a Derivatives Clearing Organization with the Commodity Futures Trading Commission (CFTC), USA for its CDS business.
- Registered as a Clearing Agency with the Securities Exchange Commission (SEC), USA.
- Recognised as a foreign central counterparty by the Swiss Financial Market Supervisory Authority (FINMA) in May 2017
- Designated as a Securities and Settlement System by the French Authorities to the European Commission

LCH SA also has branches in Amsterdam and Brussels and a representative office in Porto. This international presence means that LCH SA is subject to additional regulatory supervision by the banking authorities of Belgium and The Netherlands.

Both LCH SA and LCH Group Holdings Ltd are subject to Basel III requirements on a standalone and consolidated basis respectively. This Pillar 3 disclosure document covers the disclosures of LCH SA.

1.2 Basel III overview

On 26 June 2013, the European Parliament and Council approved the Capital Requirements Regulation (“CRR”) and Capital Requirements Directive (“CRD”), together known as “CRD IV”, which transposed the new global standards on bank capital (the Basel III agreement) into EU law. The new rules entered into force on 1 January 2014 with the CRR directly binding in all EU Member States while the CRD needed to be transposed into national law. CRD IV replaces the existing capital requirements for credit institutions and investment firms, and is applicable at an entity, sub-consolidated and consolidated basis.

CRD IV introduced a number of changes, including stricter definition of capital resources, increased capital requirements, reporting obligations (COREP), binding liquidity ratios and new requirements on remuneration.

The Basel framework consists of three pillars:

- Pillar 1 defines the minimum capital requirements to cover credit, market and operational risks, the eligible capital instruments, and the rules for calculating RWA (Risk Weighed Assets)
- Pillar 2 states that the credit institutions and investment firms must have an internal capital adequacy assessment process (ICAAP) and that national competent authorities must evaluate each credit institution’s and investment firm’s overall risk profile as well as its risk management and internal control processes
- Pillar 3 encourages market discipline through disclosure requirements that allow market participants to assess the risk and capital profile of credit institutions and investment firm banks. This document is designed to meet LCH SA’s Pillar 3 disclosure obligations.

1.3 Scope of application

The LCH Group structure is set out in the below chart on a simplified manner:

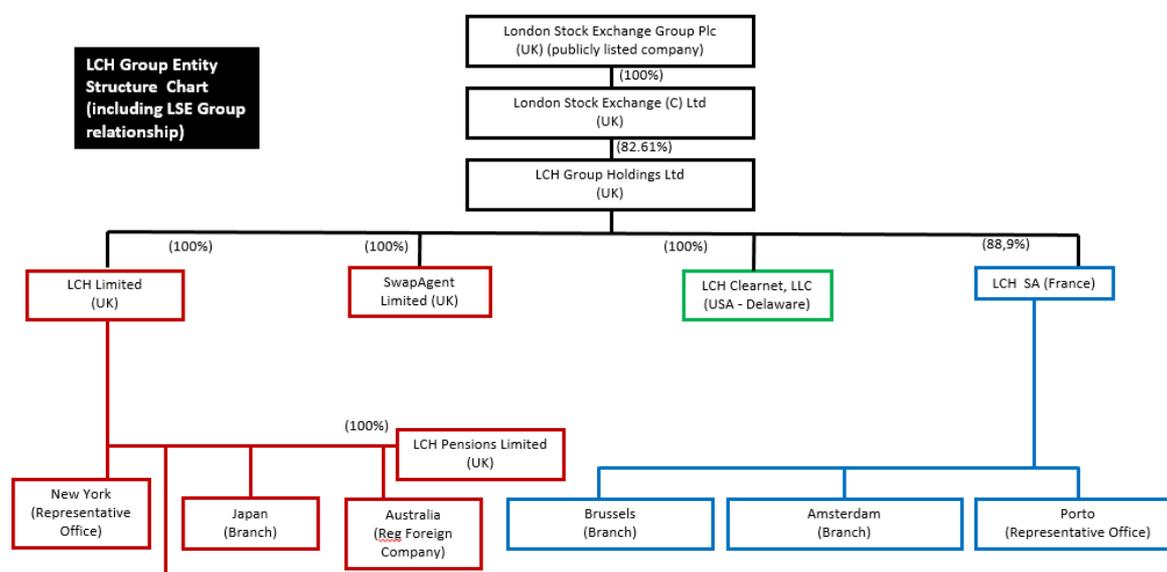


Figure 1 : LCH Group entity structure chart

Dormant companies are not disclosed.

The list of LCH regulators can be found on LCH’s website (<http://www.lch.com/about-us/company-structure>).

1.4 Risk governance

Governance structure

Overall responsibility for risk management rests with the Board. Day-to-day risk management responsibility is delegated to the Chief Risk Officer through the implementation of risk policies and procedures. Risk policies are approved at the Board level and reviewed at least annually. Amendments, updates, changes and revisions to risk policies are proposed by the ERCo and Risk Committees and approved by the Boards.

Key roles and responsibilities of committees

The here below chart set out an overview of the LCH Group Governance:

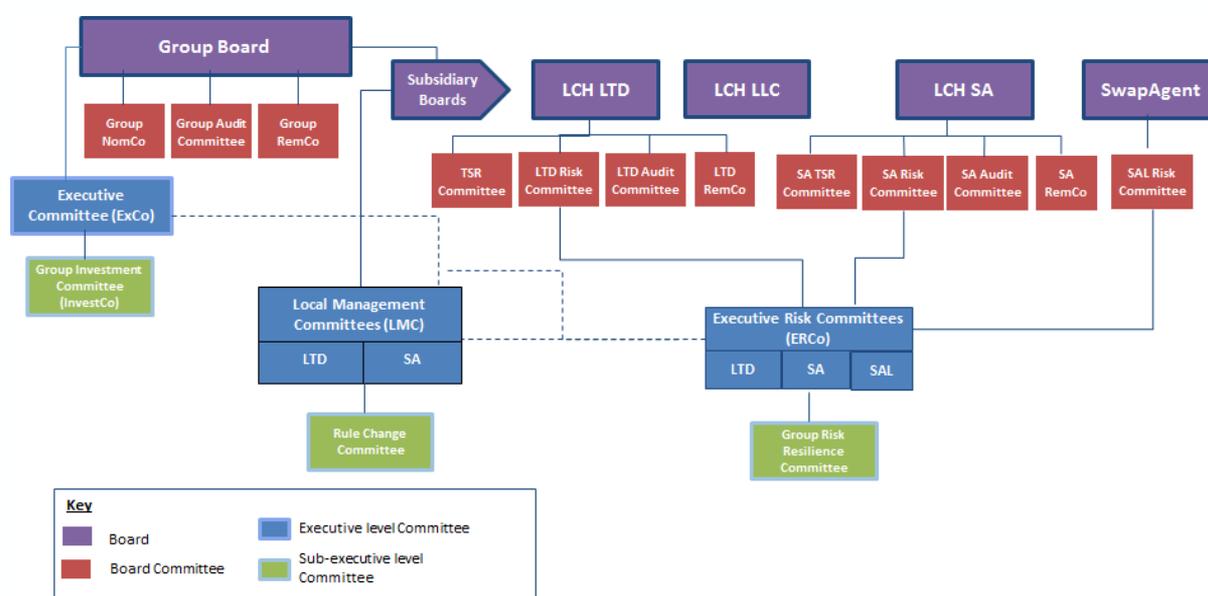


Figure 2: LCH Group Risk governance

a. Board Risk Committees

Chaired by an Independent Non-Executive Director (“INED”), membership of the SA Board Risk Committee is comprised of other INEDs and risk expert representatives of the CCP’s clearing members and their clients. Further representatives from the CCP’s user community and senior CCP executives attend the meetings as risk experts in a non-voting capacity. The Board Risk Committees meets at least six times a year.

The Board Risk Committees addresses matters concerning significant risks faced by LCH and performs regular review of risk tolerance and all risk policies as well as regulatory issues and review of comprehensive risk reporting. Risk policies are ultimately subject to Board approval.

Under powers delegated by the Boards, the Chief Executive Officer (CEO), and in turn the Chief Risk Officer, has responsibility for all risk decisions taken within the framework of agreed risk policies, as supported by the ERCo and its sub-committees.

The CEO ensures consistency of the Company's activities with the objectives and strategy of the Company as determined by the Board, ensures that sufficient resources are devoted to risk management, and more generally, ensures that risks posed to the Company are duly addressed. The CEO is assisted in its role by the Local Management Committee (LMC), which is responsible for decisions relating to local management of the CCP. The LMC meets every two weeks.

The main areas of responsibilities of the LMC cover the activities of the CCP: risk management, strategy and business results, liquidity management, financial managements and reporting, operational management (including projects, IT, human resources, compliance and legal), Internal and external Audit and Governance.

b. Executive Risk Committee (“ERCo”)

Chaired by the Group Chief Risk Officer, the ERCo’s membership comprises the Heads of each clearing business as well as the subsidiary CROs and senior group risk management and compliance executives. It meets at least twice per month.

As an advisory Committee to the CROs, the ERCo oversees, monitors, reviews and challenges the management of all risks arising in pursuit of the stated business objectives and risk appetite pertaining to those risk types specified in the Group’s Risk Governance Framework.

c. Risk Resilience Committee (“ResCo”)

A sub-committee of the ERCo, the Risk Resilience Committee (ResCo) is chaired by the Group Head of Risk Resilience and comprised of the subsidiary CROs and COOs, the heads of operational and technology functions and representatives of all businesses. It meets at least once per month.

The ResCo assists the ERCo by overseeing the implementation of the group policies governing operational risk, business continuity risk, default management risk, information security & cyber risk and technology risk together with their associated frameworks, including reviews of detailed operational risk assessments for all significant change projects, loss and incident reports, risk and control assessments, key risk indicators, scenario analyses, deep dive reviews and risk appetite related actions.

Risk governance framework (RGF)

LCH SA has in place a risk governance framework approved by the LCH SA Board which:

- Lists the universe of risks to which the LCH can potentially be exposed, together with a working definition of each risk type;
- Defines LCH’s appetite or tolerance for each risk;
- Lists the minimum standards for each risk which the Board expects to be met, against which appetite can be measured;
- Designates the individuals/groups/committees who are responsible for measuring, monitoring and managing each risk type and;

- Describes the holistic Risk Management Framework to be used for Enterprise Risk Management and provides guidelines for the minimum information the Chief Risk Officer (CRO) must provide in the periodic evaluation of the Clearing House relative to the Board Statement of Risk Standards/Tolerance.

Due to considerations of systemic risk and the public nature of the LCH mission, the Risk Appetite of the group can broadly be described as low. LCH adheres to high-risk management standards.

Risks should be managed at business unit level but escalated if the impact and/or probability of occurrence is increasing.

The universe of risks comprises 22 risks that are tailored to the specific risk types that might be faced by LCH SA in the performance of its specific function within the market place. The risks in the Risk Governance Framework (RGF) are not equal to the risk types as per Basel III but a translation is made to these risk types for the purposes of this report.

For each identified risk there is:

- An individual who is designated as being responsible for identifying, measuring and monitoring such risk;
- Clear guidance on the Standards expected;
- A specific risk policy approved by the Board or other relevant risk management documentation.

A holistic enterprise risk management framework is in place for the measurement and monitoring of all the risks within the risk universe of LCH SA. A quarterly Enterprise Risk and a dashboard is prepared for review by Senior Management, the Audit Committees and LCH SA Board.

Any risks, which are outside the risk appetite, will immediately be reported and an action plan will be put in place as to bring back the relevant risks within appetite.

Basel risk types & coverage

The below Basel risks are relevant for LCH.

Credit risk

Credit risk is defined as the potential that a bank borrower or counterparty will fail to meet its obligations in accordance with agreed terms.

LCH SA has the following main credit exposures:

- Investment counterparties;
- Clearing members (subject to the default waterfall);
- Interoperating CCPs;
- Occasional overnight exposure as a result of settlement and payment activities (see settlement, payment and custodian risk).

All Counterparties, including sovereigns and interoperating CCPs, are subject to a formal and documented Internal Credit Score assessment (Credit Review) at least annually.

The credit risk on the investment portfolio is mitigated by:

- Setting criteria so that only good quality counterparties are used;
- Setting limits to minimise concentration risk to these counterparties;
- Securing as much as possible the cash portfolio by depositing funds at Banque de France or undertaking “high quality” investments;
- Setting haircuts appropriate to the type of collateral received.

Market risk

It is the role of LCH SA as a central counterparty to interpose itself between counterparties to a trade. As such, it has a balanced book in which, for every long position it has with a counterparty, there is an opposite short position. Consequently, the CCP is exposed to market risk only in the event of a clearing member default.

However, LCH SA must securely invest the cash deposited by clearing members in order to minimise unsecured bank exposures. As a consequence of these investment activities, LCH SA may have an exposure on interest rate changes. In line with EMIR rules the investment portfolio of LCH SA is qualified as a trading book. Consequently, the resulting exposure is qualified as a market risk in Pillar 1.

Market risk exposures as a result of interest rate changes are subject to stringent limits as set out in the investment risk policy approved by the LCH SA Board.

Operational risk

This is the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events.

Operational risks are identified, assessed, managed and monitored in a proactive manner to minimise the impact on LCH SA.

The following processes are in place to manage operational risk:

- Project & new product analysis;
- Risk & control self-assessment;
- Key Risk Analysis;
- Scenario analysis;
- Incident Management procedure;
- Key controls reporting.

A monthly Operational Risk Report is produced quarterly and presented to the Local Management Committee, ResCo, ERCo, and the Audit Committee.

Liquidity risk

Liquidity risk is the risk that LCH SA will be unable to honour its payment obligations. Liquidity risk may arise in the day-to-day operations (i.e. payments and settlements) but also during the stages of the default management process. On a daily basis, close monitoring of the minimum Liquidity Buffer (LCR) is conducted under both operational stress and the simulated default of the two clearing members with the largest liquidity requirements.

Concentration risk

This risk includes (i) large (connected) individual exposures and (ii) significant exposures to groups of counterparties whose likelihood of default is driven by common underlying factors, e.g. sector, economy, geographical location, instrument type.

The management of concentration risk is included within the overall credit risk monitoring and specific indicators are in place for this purpose.

Settlement, payment and custodian risks

- Settlement risk: risk of making a payment or delivery without receiving, at the same time, the delivery or payment from the counterparty.
- Settlement bank risk: risk of loss of funds held with a settlement bank should it become insolvent.
- Custody risk: risk of loss on securities in safekeeping (custody) as a result of the custodian's insolvency, negligence, misuse of assets, fraud, poor administration or inadequate record keeping.

LCH SA has the following generic tools in place to reduce these exposures:

- Direct access to the Banque de France and CSDs;
- Strict capital and quality requirements for other intermediaries;
- Performance of Delivery Versus Payment (DVP) settlement; Risk monitoring & control of related exposures.

2. Own funds: composition of regulatory capital

LCH SA's total regulatory capital is composed of Tier 1 capital which consists primarily of share capital, additional paid-in capital and retained earnings. This is consistent with COREP disclosure as of 31.12.2018.

Table 1: LCH SA regulatory capital and shareholders' funds as at 31 December 2018

€'ms	2018
Share capital	113.1
Share premium	0.7
Other reserves	43.9
Funds for General Banking risk	0.3
Retained earnings	119.7
Common Equity Tier 1 capital	277.7
CET1 capital elements or deductions (skin in the game)	(38.9)
Value adjustments due to the requirements for prudent valuation	0.0
Other Intangible assets	(67.1)
Tier 1 capital/Total regulatory capital	171.7

The prudent valuation is calculated with the standard method (Art 105 CRR).

- As per the default waterfall process, in case of a clearing member default, LCH SA would first use the defaulting member's initial, variation and additional margins as well as the defaulter contribution to the default fund. Should the loss be greater, it will use a share of their capital. As per EMIR, this share of capital, referred to as "skin in the game" (SIG), is calculated as 25% of minimum capital requirement including retained earnings and reserves as defined in Article 35 of regulation EU N°153/2013 of 19 December 2012 (latent market risk).

3. Capital requirements

The institutions calculating the risk-weighted exposure amounts in accordance with Article 153(5) or Article 155(2) shall disclose the exposures assigned to each category in Table 1 of Article 153(5), or to each risk weight mentioned in Article 155(2).

LCH SA capital exceeds its requirements minimum capital ratios. Its Pillar I requirements at 31 December 2018 were as follows:

Table 2: LCH SA regulatory capital requirements as at 31 December 2018

€'ms	Capital Requirement
Credit risk	0.6
Market risk	0.2
Operational risk	23.8
Pillar 1 capital requirements	24.6
Risk weighted assets	308.1
Core Equity capital ratio (2018 minimum 4.5%)	55.7%
Tier 1 Capital ratio (2018 minimum 6.0%)	55.7%
Total Capital ratio (2018 minimum 9.875%*) <i>*including capital conservation buffer</i>	55.7%

An Internal Capital Adequacy Assessment Process (ICAAP) process has been performed using Basel III rules that are applicable from 1 January 2015. The ICAAP has been approved by the Audit Committees and Boards. As an outcome of this process, LCH has concluded that it holds sufficient capital for the relevant risks.

4. Credit risk

LCH SA has the following main credit exposures:

- Investment activities
- Occasional overnight exposure as a result of settlement and payment activities (see settlement, payment and custodian risk)

The LCH SA capital requirement for credit risk is calculated as follows:

Table 3: Credit risk exposure by type of exposure for LCH SA as at 31 December 2018

€'ms	Risk-weighted exposures	Capital requirement
Institutions	3.4	0.3
Corporate	4.1	0.3
Total	7.5	0.6

The counterparty credit risk exposures are related to the investment portfolio (cash margins invested). As per the LCH Group Investment Risk Policy, it can be mainly composed of high quality assets as required by EMIR such as Eurozone/US/UK/Supranational securities and reverse repo transactions/cash deposits with highly rated credit institutions. LCH SA is collateral taker (cash provider) and the reverse repo agreements are not subject to any downgrade clause.

All counterparties, including sovereigns and interoperating CCPs, are subject to a formal and documented Internal Credit Score (ICS) assessment, before on-boarding and then at least annually. The ICS models are models driven by a quantitative assessment based on a set of ratios (e.g. equity ratio, return on assets) and qualitative assessments.

The limits and the eligibility criteria are set in LCH Group investment risk policy. Each review is submitted to the Risk Governance for review and approval of the Internal Credit Score.

As of 31 December 2018, the counterparty risk weighted assets (Standard Method) are set out below:

- Reverse repurchase transactions for €0 million
- Securities purchases for €0 million
- Banque de France deposit for €0 million

As of 31 December 2018, there is no reverse repo transaction.

As of 31 December 2018, the outright purchased portfolio was composed only of French securities (BTF) for €60.2 million (0, 3% of the cash portfolio).

The rest of the cash portfolio was invested in BDF deposit (€16.2 billions euro, 99,7% of the cash portfolio).

5. Market risk

LCH SA is exposed to interest rate risk on the investment portfolio as a consequence of changes in applicable interest rates (including credit spreads) of long term sovereign investments and secured lending transactions.

The exposure to the interest rate risk is measured and monitored daily by currency and maturity, this exposure is determined with the PV01 metric (sensitivity to 1 bp parallel shift of the OIS Curve).

The LCH SA Board determines the risk appetite for Interest Rate Risk (IRR) not exceeding 10% of LCH SA capital. Stress scenarios are set with reference to the capital position and will be updated monthly or upon material downward movement.

Table 4: Market Risk – Standardised approach for Position Risk in Traded Debt instruments

€'ms	Net position	Capital requirement
[0 ; 1 month]		
]1 month; 3 months]		
]3 months; 6 months]	60.0	0.2
]6 months; 12 months]		
Total Maturity based approach – Zone 1	60.0	0.2

6. Operational risk

Operational risk is the risk of loss arising through failures associated with personnel, processes, systems or from external events. It is inherent in every business organisation and covers a wide spectrum of issues.

Operational risks are identified, assessed, controlled and managed in a proactive manner to minimise the impact on LCH SA.

The objectives of the Operational Risk Framework (ORF) developed by LCH Group are to identify measure, control and/or reduce operational risk and to provide an accurate, usable picture of the risk profile of LCH. The ORF organises the qualitative and quantitative management of operational risk.

This framework covers all types of operational risks proposed under Basel III.

For the operational risk capital requirements applicable since 1 January 2008, LCH uses the Basic Indicator Approach (BIA).

7. Unencumbered assets

In the below table, the securities portfolio and reverse repurchases dealt within Clearing activity are not reported as unencumbered assets.

Table 5: Breakdown of unencumbered assets and unencumbered assets

€'ms	Encumbered assets		Unencumbered assets	
	Carrying amount	Fair value	Carrying amount	Fair value
Loans on demand	0	0	16,452.	16,452.
Equity instruments	0	0	0	0
Debt instruments	0	0	60.2	60.2
Other assets	0	0	10,215.	10,215.

€'ms	Fair value of encumbered collateral received or own debt securities issued	Fair value of collateral received or own debt securities issued available for encumbrance
Carrying amount of selected financial liabilities	0.0	4,166.0

8. Remuneration Policy

Governance

LCH SA's Remuneration Committee ("the Committee") works with LCH Group's Remuneration Committee ("Group Committee") to oversee LCH SA's remuneration policies.

During the financial year ended 31 December 2018, the Committee met on two occasions.

The Committee is appointed by the Board of LCH SA and is made up of a majority of independent Non Executive Directors. The Committee's terms of reference detail the duties and responsibilities of the Committee and are available on the Governance section of LCH Group's website (<http://www.lch.com/about-us/governance>).

General

In determining its remuneration policies, LCH Group monitors developments in the wider market place and continues to consult and work with key stakeholders (including, but not limited to the LCH SA regulators, the Group Committee and London Stock Exchange Group's ("LSEG") Remuneration Committee) on any key decisions taken.

LCH SA undertakes to reward all employees fairly, regardless of job function, race, religion, colour, national or ethnic origin, sex, sexual orientation, marital status, pregnancy, maternity, disability or age.

It is the policy of LCH SA to operate competitive remuneration policies so as to attract, retain and motivate an appropriate workforce for its ongoing success. LCH SA is also committed to ensuring that its remuneration practices are aligned to performance and promote sound and effective risk management and do not create incentives to relax risk standards. In all cases, remuneration will be in line with corporate strategy, objectives, corporate competencies and long-term interests of LCH SA, LCH Group and LSEG.

It is the policy of LCH SA to comply with any and all regulatory frameworks which apply to the remuneration of any of its employees.

The remuneration policy aims to encourage responsible business conduct and ensures that employees are not remunerated in a way that conflicts with their duty to act in the best interests of clients, members or participants.

Remuneration

Remuneration arrangements may include a mix of base salary, annual discretionary bonus awards and share based incentives (payable in shares of LSEG plc), in addition to other country specific benefits.

Salary

Base salaries are reviewed annually against general market levels. Increases are discretionary, except where mandated by local law. Salaries are set at an appropriate level to allow a fully flexible policy to be operated in respect of the award of any discretionary bonus (including the possibility to pay a zero bonus).

Profit share

Employees of LCH SA are eligible to receive payments under the profit share scheme ie “*accord de participation*” , as is mandatory by law in France. Profit share payments are treated as variable compensation for the purpose of compliance with the requirements of CRD IV.

Annual discretionary bonus scheme

Variable remuneration is used to reward individual performance in line with a number of factors including risk appetite, departmental and the performance and corporate strategy of LCH SA, LCH Group and LSEG. Employees engaged in risk management, compliance and internal audit are rewarded in a manner that is independent of the business performance.

A proportion of bonus awards to LCH Group Executive Committee members and Managing Directors (including members of LCH SA’s management team) are deferred into cash for three years. Deferrals are also applied to certain other employees in LCH SA who are identified as Material Risk Takers (“MRTs”) in order to meet the requirements of CRD IV.

Long Term Incentive Plan

A Long Term Incentive Plan (“LTIP”) was introduced in 2014 for selected employees of LCH Group. The construct, both in terms of performance conditions and delivery vehicle, of the LTIP was endorsed by the Group’s regulators. Vesting for the 2018 LTIP grant occurs over a three year period subject to the achievement of a risk management gateway and one or more of the following performance measures dependent upon the role undertaken by the participant: Growth, measured by EBIT performance; Efficiency, measured by EBITDA margin performance; and Resiliency, measured by management of the regulatory agenda and enterprise risk (including operational risk) during the performance period. LTIP awards are granted in the form of a nil cost option to acquire LSEG plc shares.

LTIP awards as well as deferred bonus awards may be subject to performance adjustment (including adherence to the risk framework) prior to vesting. Furthermore, in certain circumstances clawback may be exercised, pursuant to which it may be required for deferred variable remuneration to be repaid (or deducted from future payments) for up to three years following the date of payment.

Detailed reporting on Material Risk Takers

Per the regulatory requirements of CRD IV, employees whose activities are deemed to have an impact on the risk profile of LCH SA must be identified as MRTs. For 2018, 15 employees were identified as MRTs for LCH SA.

In line with applicable regulations, LCH SA is required to disclose certain aggregate remuneration information on its MRTs. FY2018 aggregate remuneration information is detailed below:

Table 6: detailed reporting on material risk takers

Category	Value
Number of Material Risk Takers	15
Total Remuneration	€6.6m
<i>of which:</i>	
-Fixed	€2.1m
-Variable ¹	€4.5m
Fixed : variable ratio ²	1 : 1.5
Total Variable ¹	€4.5m
<i>of which:</i>	
-Cash	€3.1m
-Shares	€1.4m
Deferred remuneration	€1.8m
Sign on payments	0
Number of recipients	0
Severance payments	€1.5m
Number of recipients	3
Number of staff remunerated > €1m	1

1. Variable pay includes severance payments.
2. Ratio excludes severance payments.

9. Leverage ratio

As agreed with the ACPR LCH has excluded clearing related balances from its total leverage ratio exposure.

Table 7: leverage ratio of LCH SA as at 31 december 2018

LR Exposure	€'ms
Total leverage ratio exposure	297.0
Capital - Tier 1 capital	171.7
Leverage ratio (minimum 3%)	57.8%

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End of disclosure report

