CREDIT SUISSE

Basel III
2017 Pillar 3 Disclosures

Credit Suisse Investments (UK)

2017

Abbreviations are explained in the List of abbreviations in the back of this report.

Publications referenced in this report, whether via website links or otherwise, are not incorporated into this report.

In various tables, use of "–" indicates not meaningful or not applicable.

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Cautionary statement regarding forward-looking information

This report contains statements that constitute forward-looking statements. In addition, in the future we, and others on our behalf, may make statements that constitute forward-looking statements. Such forward-looking statements may include, without limitation, statements relating to the following:

- our plans, objectives or goals;
- our future economic performance or prospects;
- the potential effect on our future performance of certain contingencies; and
- assumptions underlying any such statements.

Words such as "believes," "anticipates," "expects," "intends" and "plans" and similar expressions are intended to identify forward-looking statements but are not the exclusive means of identifying such statements. We do not intend to update these forward-looking statements except as may be required by applicable securities laws.

By their very nature, forward-looking statements involve inherent risks and uncertainties, both general and specific, and risks exist that predictions, forecasts, projections and other outcomes described or implied in forward-looking statements will not be achieved. We caution you that a number of important factors could cause results to differ materially from the plans, objectives, expectations, estimates and intentions expressed in such forward-looking statements. These factors include:

- the ability to maintain sufficient liquidity and access capital markets;
- market volatility and interest rate fluctuations and developments affecting interest rate levels;
- the strength of the global economy in general and the strength of the economies of the countries in which we conduct our operations, in particular the risk of continued slow economic recovery or downturn in the US or other developed countries or in emerging markets in 2018 and beyond;
- the direct and indirect impacts of deterioration or slow recovery in residential and commercial real estate markets;
- adverse rating actions by credit rating agencies in respect of sovereign issuers, structured credit products or other credit-related exposures;
- the ability to achieve our strategic objectives, including cost efficiency, net new asset, pre-tax income/(loss), capital ratios and return on regulatory capital, leverage exposure threshold, risk-weighted assets threshold, and other targets and ambitions;
- the ability of counterparties to meet their obligations to us;
- the effects of, and changes in, fiscal, monetary, exchange rate, trade and tax policies, as well as currency fluctuations;
- political and social developments, including war, civil unrest or terrorist activity;
- the possibility of foreign exchange controls, expropriation, nationalization or confiscation of assets in countries in which we conduct our operations;
- operational factors such as systems failure, human error, or the failure to implement procedures properly;
- the risk of cyber-attacks on our business or operations;
- actions taken by regulators with respect to our business and practices and possible resulting changes to our business organization, practices and policies in countries in which we conduct our operations;
- the effects of changes in laws, regulations or accounting policies or practices in countries in which we conduct our operations;
- the potential effects of proposed changes in our legal entity structure;
- competition in geographic and business areas in which we conduct our operations;
- the ability to retain and recruit qualified personnel;
- the ability to maintain our reputation and promote our brand;
- the ability to increase market share and control expenses;
- technological changes;
- the timely development and acceptance of our new products and services and the perceived overall value of these products and services by users;
- acquisitions, including the ability to integrate acquired businesses successfully, and divestitures, including the ability to sell non-core assets;
- the adverse resolution of litigation, regulatory proceedings, and other contingencies; and
- other unforeseen or unexpected events and our success at managing these and the risks involved in the foregoing.

We caution you that the foregoing list of important factors is not exclusive. When evaluating forward-looking statements, you should carefully consider the foregoing factors and other uncertainties and events, including the information set forth in our Annual Report 2017.

Introduction

This document comprises the Pillar 3 disclosures for the consolidated situation of Credit Suisse Investments (UK) ('CSIUK') as at 31 December 2017. It should be read in conjunction with CSIUK's 2017 Annual Report which is available from Companies House, Crown Way, Cardiff, Wales, CF14 3UZ.

These Pillar 3 disclosures are prepared to meet the regulatory requirements set out in Part Eight of the Capital Requirements Regulation ('CRR'). Pillar 3 aims to promote market discipline and transparency through the publication of key information on capital adequacy, risk management and remuneration.

BASIS AND FREQUENCY OF DISCLOSURES

Where disclosures have been withheld, as permitted, on the basis of confidentiality, immateriality, or being proprietary in nature, this is indicated. Pillar 3 disclosures are published annually, although key capital adequacy ratios are disclosed more frequently and may be found on the Credit Suisse website at www.credit-suisse.com

The Annual Report is prepared under International Financial Reporting Standards ('IFRS') and accordingly, certain information in the Pillar 3 disclosures may not be directly comparable.

This Pillar 3 document has been verified and approved in line with internal policy. It has not been audited by CSIUK's external auditors.

BASIS OF CONSOLIDATION

The CSIUK regulatory consolidation group contains CSIUK, its subsidiary Credit Suisse Investment Holdings (UK) ('CSIHUK') and its indirect subsidiary Credit Suisse Securities (Europe) Limited ('CSSEL'). CSSEL is authorised by the Prudential Regulation Authority ('PRA') and regulated by the Financial Conduct Authority ('FCA').

As the ultimate parent of a UK sub-group, CSIUK is the top holding company of a regulatory consolidation group. CSIUK and CSIHUK are both holding companies and neither are regulated.

As required by CRR Article 13, Pillar 3 disclosures are required in respect of the CSIUK group on a consolidated basis, and in respect of CSSEL, on a solo basis, as it represents the principal operating ('significant') subsidiary in the group. The disclosures for the CSIUK group are contained in the main body of this document while supplementary disclosures in respect of the CSSEL can be found in Appendix 1. The quantitative Pillar 3 disclosures for CSSEL are presented only where they differ materially from the disclosures of the CSIUK group.

CSIUK prepares its IFRS financial statements on a consolidated basis ('CSIUK group'), including a number of subsidiaries that do not fall within the regulatory scope of consolidation per the CRR.

RESTRICTIONS ON TRANSFER OF FUNDS OR REGULATORY CAPITAL WITHIN THE CSIUK GROUP

In general, the restrictions around the repayment of liabilities and transfer of regulatory capital within the CSIUK group are related to constraints that are imposed on entities by local regulators. The movement of capital may also be subject to tax constraints where there are cross-border movements or thin capitalisation rules.

REMUNERATION DISCLOSURES

The remuneration disclosures required by CRR Article 450 can be found in a separate document ('Pillar 3 – UK Remuneration Disclosures 2017') on the Credit Suisse website at: www.credit-suisse.com.

Capital management

OVERVIEW

The Credit Suisse group ('CS group') considers a strong and efficient capital position to be a priority. Consistent with this, the CSIUK group closely monitors its capital adequacy position on a continuing basis to ensure ongoing stability and support of its business activities. This monitoring takes account of the requirements of the current regulatory regime and any forthcoming changes to the capital framework.

Multi-year business forecasts and capital plans are prepared by the CSIUK group, taking into account its business strategy and the impact of known regulatory changes. These plans are subjected to various stress tests as part of the Internal Capital Adequacy Assessment Process ('ICAAP'). Within these stress tests, potential management actions, that are consistent with both the market conditions implied by the stress test and the stress test outcome, are identified. The results of these stress tests and associated management actions are updated, as part of the ICAAP, with results documented and reviewed by the Board of Directors. The ICAAP is used for the SREP ('Supervisory Review and Evaluation Process') that the PRA conducts when assessing an institution's level of regulatory capital.

OWN FUNDS

Article 437 of the CRR requires disclosure of the main features of Common Equity Tier 1 ('CET1'), Additional Tier 1 ('AT1') and Tier 2 instruments. CSIUK's CET1 comprises permanent share capital of ordinary shares and reserves. The ordinary shares carry voting rights and the right to receive dividends. CSIUK has no AT1 capital and the terms of its Tier 2 capital instruments are disclosed in Appendix 2.

The CSIUK's group capital composition and principal capital ratios are presented in the tables below. No amount shown in 'own funds' is subject to CRD IV transitional provisions.

Capital composition

end of		**2017**	2016
	Note	Own funds	Own funds
USD million			
Tier 1 (and CET1) capital			
Ordinary shares		3,045	3,045
Share premium		8,336	8,336
Other Reserves/ Capital contribution		3,329	3,306
Retained earnings		(7,823)	(7,318)
Accumulated other comprehensive income		(9)	(27)
Tier 1 (and CET1) before prudential filters and regulatory adjustments		**6,878**	**7,342**
Prudential filters and regulatory adjustments			
Cash flow hedge reserve		–	–
Elimination of losses / (gains) on fair valued liabilities		–	–
Elimination of losses / (gains) on derivative liabilities		–	–
Prudent valuation adjustments	(1)	(132)	(125)
Intangible assets	(2)	(1)	(1)
Excess of expected losses over credit risk adjustments	(3)	(34)	(41)
Securitisation positions (Trading Book)	(4)	(21)	(3)
DTA on non temporary differences	(5)	(21)	–
Defined benefit pension fund	(6)	(813)	(729)
Total Tier 1 (and CET1) capital		**5,856**	**6,443**
Tier 2 capital			
Subordinated loans	(7)	3,390	3,500
General credit risk adjustments		–	–
T2 instruments (issued by subsidiaries)	(8)	–	529
T2 instruments (issued by subsidiaries) – transitional adjustments	(8)	–	289
Total Tier 2 capital		**3,390**	**4,318**
Total capital ('own funds')		**9,246**	**10,761**

Capital ratios

end of	**2017**	2016
Common Equity Tier 1	21%	21%
Tier 1	21%	21%
Total Capital	**33%**	**35%**

Notes:

(1) A prudent valuation adjustment is applied in respect of fair valued instruments as required under CRDIV [CRR Articles 34, 105].

(2) Intangible assets and goodwill do not qualify as capital for regulatory purposes under CRDIV [CRR Articles 36(1)(b), 37].

(3) For institutions using the AIRB Approach, represents shortfall of credit risk adjustments to expected losses.

(4) Securitisation positions which can alternatively be subject to a 1,250% risk weight [CRR Articles 36(1)(k)(ii), 243(1)(b), 244(1)(b),258].

(5) Deferred tax assets that rely on future profitability and do not arise from temporary differences net of associated tax liabilities are to be reduced from regulatory capital under Articles 36(1) point (c) and 38 of CRR.

(6) CRD IV does not permit pension fund assets to be treated as regulatory capital [CRR Articles 36(1)(e), 41].

(7) Subordinated debt is either accrual accounted or fair valued under IFRS (eg. including accrued interest) whereas 'own funds' recognises it at nominal value.

(8) T2 instruments issued by subsidiaries represent subordinated loans to CSSEL in year 2016. These are subject to a minority interest adjustment to which a transitional arrangement applies. At the end of the transitional period, 1 January 2019, the amount shown above as "transitional adjustments" will have reduced to nil.

COUNTERCYCLICAL CAPITAL BUFFER

The Financial Policy Committee ('FPC') of the Bank of England is responsible for setting the UK Countercyclical Capital Buffer ('CCB') rate, ie. the CCB rate that applies to UK exposures of banks, building societies and large investment firms incorporated in the UK. In setting the CCB, the FPC considers a number of core indicators such as credit to GDP ratios. CRD IV , as implemented in the UK, includes a transitional period, during which the FPC is responsible for deciding whether CCB rates set by EEA States should be recognised and for taking certain decisions about third country rates, including whether a higher rate should be set for the purposes of UK institutions calculating their CCBs.

CCBs can be applied at a CS group, sub-consolidated or legal entity basis. CRD IV also includes the potential for a Systemic Risk Buffer ('SRB') which could be similarly applied.

No CCB rates were set for 2017 by the FPC to apply to UK exposures. CCB rates have been set by Hong Kong, Norway, Sweden, Czech Republic, Iceland & Slovakia for 2017 that apply to exposures to those countries. No further disclosures are made on CCB on the basis of materiality.

CAPITAL RESOURCES REQUIREMENT

The Pillar 1 capital requirements of the CSIUK group are summarised below, along with the relevant risk-weighted asset ('RWA') values. Credit risk capital requirements and RWAs are further broken down by risk-weight methodology and exposure class

OV1 – Overview of RWAs

	RWAs		Minimum capital requirements
end of	**2017**	2016	**2017**
USD million			
Credit risk (excluding CCR)	3,221	2,785	258
Of which the standardised approach	385	438	31
Of which the foundation IRB (FIRB) approach	–	–	–
Of which the advanced IRB (AIRB) approach	2,796	2,323	224
Of which equity IRB under the simple risk-weighted approach or the IMA	40	24	3
Counterparty credit risk	10,575	13,511	846
Of which mark to market	9,317	10,926	745
Of which original exposure	–	–	–
Of which the standardised approach	–	–	–
Of which internal model method (IMM)	–	–	–
Of which risk exposure amount for contributions to the default fund of a CCP	68	128	5
Of which CVA	1,190	2,457	95
Settlement risk	34	50	3
Securitisation exposures in the banking book (after the cap)	–	–	–
Of which IRB approach	–	–	–
Of which IRB supervisory formula approach (SFA)	–	–	–
Of which internal assessment approach (IAA)	–	–	–
Of which standardised approach	–	–	–
Market risk	6,497	8,165	520
Of which the standardised approach	435	121	35
Of which IMA	6,062	8,044	485
Large exposures	4,482	2,061	359
Operational risk	3,187	3,503	255
Of which basic indicator approach	3,187	3,503	255
Of which standardised approach	–	–	–
Of which advanced measurement approach	–	–	–
Amounts below the thresholds for deduction (subject to 250% risk weight)	307	559	25
Floor adjustment	–	–	–
Total	**28,303**	**30,634**	**2,264**

The decrease in RWA over the year was a result of business reduction in the Strategic Resolution Unit (SRU) and business migration out of the Prime Services and Asia Pacific divisions.

Risk management

OVERVIEW

CSIUK group has a distinct risk management framework for its regulated subsidiary Credit Suisse Securities (Europe) Limited ('CSSEL'), as detailed below. The CSIUK group relies upon the individual subsidiary's risk management framework.

CSSEL's risk management framework is based on transparency, management accountability and independent oversight. Risk management plays an important role in CSSEL's business planning process and is strongly supported by senior management and the Board of Directors. The primary objectives of risk management are to protect CSSEL's financial strength and reputation, while ensuring that capital is well deployed to support business activities and increase shareholder value. CSSEL has implemented risk management processes and control systems and it works to limit the impact of negative developments by monitoring all relevant risks including credit, market, liquidity, operational and reputational as well as managing concentrations of risks.

BOARD OF DIRECTORS

The CSSEL Directors are responsible for reviewing the effectiveness of CSSEL's risk management and systems of financial and internal control. These are designed to manage rather than eliminate the risks of not achieving business objectives, and, as such, offer reasonable but not absolute assurance against fraud, material misstatement and loss. The CSSEL Board of Directors considers that adequate systems and controls are in place with regard to CSSEL's risk profile and strategy and an appropriate array of assurance mechanisms, properly resourced and skilled, have been established to avoid or minimise loss.

In addition, the CSSEL Board of Directors has established a Board Risk Committee, as discussed below. Ordinary meetings of the Board Risk Committee are required to take place at least four times each year.

Recruitment to CSSEL's Board of Directors is governed by a nominations policy that is applied consistently to all subsidiaries within the CS group. At local level, this policy is implemented by a nominations committee that is required to evaluate the balance of skills, knowledge and experience of the CSSEL Board of Directors by reference to CSSEL's requirements, and similarly to consider the skills, knowledge and experience of individual candidates for appointment. Consistent with the fact that CSSEL is an Equal Opportunities Employer, recruitment at all levels is based on consideration of a diverse range of candidates without discrimination or targets on the basis of any protected category. In addition the CSSEL Board has adopted a Diversity Policy, setting out the approach to diversity, including consideration of differences in skills, regional and industry experience, background, race, gender and other distinctions between Directors. Details of directorships held by CSSEL Board Members are shown in Appendix 3.

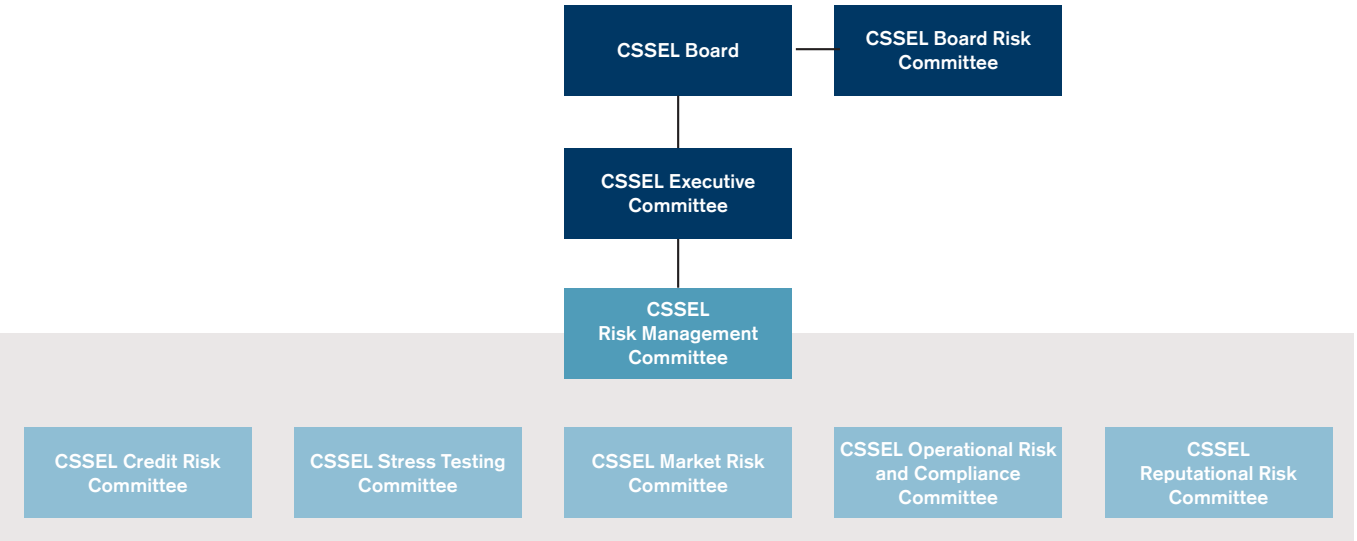
RISK ORGANISATION AND GOVERNANCE

Risks are monitored and managed as part of the Risk Appetite Framework. CSSEL's risk management organisation reflects its risk profile to ensure risks are managed in a transparent and timely manner. CSSEL's independent risk management function is headed by CSSEL's Chief Risk Officer ('CRO'), who reports jointly to CSSEL's CEO and the CRO of the CS group.

The CRO is responsible for overseeing CSSEL's risk profile and for ensuring that there is an adequate independent risk management function. This responsibility is delegated from the Board of Directors, via the ExCo, to the CRO, who in turn has established a risk governance framework and supporting organisation.

- **The CSSEL Board of Directors:** responsible to shareholders for the strategic direction, supervision and control of the entity and for defining the overall tolerance for risk;
- **The CSSEL Board Risk Committee:** responsible for assisting the Board of Directors in fulfilling their oversight responsibilities by providing guidance regarding risk governance and the development of the risk profile and capital adequacy, including the regular review of major risk exposures and recommending approval by the Board of overall risk appetite limits; and
- **The CSSEL Executive Committee:** this is the primary management committee of CSSEL and is charged with managing all aspects including strategy, culture, revenue, risk and control, costs and employees.

Committee Hierarchy



The Board of Directors approves the overall framework for risk appetite. The authority to establish more granular limits within the bounds of the overall risk appetite is delegated to the CSSEL Risk Management Committee ('RMC'), which is chaired by CSSEL's CRO and comprises members of senior risk and business managers. The purpose of the RMC is to:

- Ensure that proper standards for risk oversight and management are in place;
- Make recommendations to the CSSEL Board on risk appetite;
- Review the Internal Capital Adequacy Assessment Process ('ICAAP') and the Individual Liquidity Adequacy Assessment Process ('ILAAP') and make recommendations to the CSSEL Board;
- Define and establish risk limits for individual businesses and at the portfolio level within authorities delegated by the CSSEL Board; and
- Review and implement appropriate controls over remote booking risk relating to CSSEL.

In addition to this, and aligned with the organisation structure, CSSEL's CRO has implemented several sub-committees of the RMC:

- **The CSSEL Credit Risk Committee:** chaired by the CSSEL Chief Credit Officer, defines and implements the CSSEL Credit Risk Framework. It is responsible for reviewing emerging risks and assessing the impact of any issues that impact the UK IB credit portfolio including counterparty, sector, and concentration. This process is supported by the Credit Risk Management department, which is responsible for approving credit limits, monitoring and managing individual exposures, and assessing and managing the quality of credit portfolios and allowances;
- **The CSSEL Market Risk Committee:** chaired by the CSSEL Head of Market Risk, defines and implements the CSSEL Market Risk Framework. It is responsible for reviewing emerging risks and assessing any issues that impact on the CSSEL market risk profile. This process is supported by the Market & Liquidity Risk Management department ('MLRM') which is responsible for assessing and monitoring the market and liquidity risk profile of the Company and recommends corrective action where necessary;
- **The CSSEL Operational Risk & Compliance Committee:** co-chaired by the CSSEL Head of Enterprise & Operational Risk Management with the CSSEL Chief Compliance Officer, is responsible for ensuring that proper standards for management of operational, conduct and compliance risks are established for CSSEL and provide effective oversight over the risk profiles. It is also responsible for defining and implementing operational risk management strategies. This process is supported by the Enterprise & Operational Risk Management ('EORM') department which is responsible for the identification, assessment, and monitoring of operational risks;
- **The CSSEL Stress Testing Committee:** chaired by the CSSEL Head of Enterprise & Operational Risk, is responsible for identifying, developing and maintaining appropriate stress scenarios which are relevant for CSSEL based on material risk factors. This process is supported by the Enterprise & Operational Risk Management ('EORM') department which is responsible for covering cross-divisional and cross-functional approaches towards identifying and measuring risks as well as defining and managing risk appetite levels;
- **The CSSEL Reputational Risk Committee:** co-chaired by the CSSEL CRO, CSSEL Chief Compliance Officer and CSSEL Deputy CEO, is responsible for reviewing and approving transactions that pose a material risk to the company's reputation and are escalated as having potential to have a negative impact on CSSEL's reputation. This process is supported by the Reputational Risk Management ('RRM') department which is responsible for assessing actions or transactions which may pose a reputational risk to the Company's reputation as escalated by both the First and Second Lines of Defence, providing independent appraisal and facilitating the calibration of such risk.

The departments which support the CSSEL Risk Heads form part of a matrix management structure with reporting lines into both the CSSEL CRO and the relevant Global Risk Head. Furthermore, these departments are supported by a global infrastructure and data process which is maintained by the central Risk and Finance Data and Reporting ('RFDAR') group as well as the CRO Change team which is responsible for the delivery of the strategic and regulatory change portfolio sponsored by the Risk division. Support is also provided by the Global Risk functions in areas such as model development and credit analytics.

RISK APPETITE

Risk appetite represents the aggregate level and types of risk CSSEL is willing to assume to achieve the strategic objectives and business plan. The Risk Appetite Framework is the overall approach including policies, processes and controls through which risk appetite is established, communicated and monitored. This includes:

- Risk Appetite Statements;
- Risk limits and/or metrics; and
- Roles and responsibilities of those overseeing the implementation and monitoring of the Risk Appetite Framework.

The Risk Appetite Framework incorporates all material risks facing CSSEL and aligns to the strategy through use of the forward-looking business plan and is owned by the Board. In order to ensure alignment to the strategy CSSEL uses the following processes:

- Risk Capacity (capital and liquidity) is evaluated and quantified;
- Risks arising from the business strategy are identified (quantitative and qualitative) and assessed;
- Board Tolerance for these risks is defined using both enterprise-wide and individual measures; and
- Should the business strategy result in risk outside of Board tolerance, there is a feedback loop into the business planning process to ensure corrective action is taken.

The Risk Appetite is approved by the Board of Directors on an annual basis as part of the strategic planning process. The Risk Appetite is expressed through both qualitative statements and quantitative measures. It is underpinned by the strategic risk objectives which include:

- **Managing and controlling Conduct Risk:** Conduct business practices in line with the Credit Suisse code of conduct and proactively identify sources of risk that may negatively impact clients or markets and/or lead to reputational risk and/or regulatory sanctions;
- **Capital Adequacy:** Sufficient capital must be held to maintain capital ratios above both regulatory and stressed capital requirements;
- **Earnings Stability:** Limit earnings volatility to support the ability to achieve stated financial objectives;
- **Sound management of Funding Liquidity Risk:** Manage liquidity and funding liquidity risk by maintaining sufficient funds to meet all obligations on both a BAU basis, and in periods of liquidity stress;
- **Minimizing Reputational Risk:** Avoid any transaction or service that brings with it the risk of an unacceptable level of damage to our reputation;
- **Managing Operational Risk:** Ensure sustainable performance through the sound management ERCF Risks (including Operational, Compliance and other non-financial risks) in our day to day operations and forward looking business strategy; and
- **Controlling Concentration Risk:** Proactively control concentrations within risk positions or revenues which pose a material risk to Firm-wide capital adequacy and/or earnings stability while maintaining a well diversified funding base.

RISK LIMITS

Based on these principles, the Board approves limits by key risk type. These limits are then used as a basis for defining a more granular framework of risk limits. The RMC and CRO are responsible for setting specific limits deemed necessary to manage the risk within individual lines of business and across counterparties as follows:

- Enterprise risk limits are based on portfolio level measures (RWA etc) and are calibrated for both normal and stressed conditions. The overall risk limit calibration is recommended by the Head of Enterprise & Operational Risk who has responsibility for development and calibration of the full suite of enterprise risk limits;
- Market risk limits are based on a variety of sensitivity, portfolio and stress measures including, for example, VaR and portfolio stress loss metrics. The overall market risk limit calibration is recommended by the Head of Market Risk who has responsibility for development and calibration of the full suite of market risk limits;
- Credit risk limits are based on a variety of exposure and stress measures including, for example, counterparty exposure and portfolio loss stress metrics. The overall credit risk limit calibration is recommended by CSSEL's Chief Credit Officer and is designed to control overall credit quality and mitigate concentration risks (such as single name and industry type) within the portfolio;
- Operational risk thresholds are based on a series of metrics designed to assess control effectiveness. The overall calibration is recommended by the Head of Enterprise & Operational Risk and is designed to identify areas of potential control weakness and drive development of programmes to reduce operational risk. These thresholds are set in both quantitative (considering historical losses and gains) and qualitative (CS group-wide statements linked to risk and control indicators) terms; and
- Liquidity risk limits are based on regulatory and internal requirements for monitoring funding under a range of conditions. The overall liquidity risk limit calibration is recommended by the Head of Liquidity Risk who has responsibility for development and calibration of the full suite of liquidity risk limits.

The limits define CSSEL's maximum risk appetite given management resources, the market environment, business strategy and financial resources available to absorb potential losses.

CSSEL's risk management objectives and policies and the exposure of CSSEL to market risk, credit risk, liquidity risk and currency risk are also considered in the 2017 Annual Report, Note 39 – 'Financial Risk Management'.

STRESS TESTING

These individual risk type limits are supplemented by an enterprise-wide stress testing programme which is designed to provide an aggregate view of CSSEL's financial risks. The enterprise-wide stress testing process begins with a scenario setting process, with the choice of scenarios being approved by the Stress Testing Committee. The scenarios are designed to be severe, but plausible, and relevant to CSSEL's business. The stress test process is based on both models and expert judgement. These stress test results are reported to the Board Risk Committee at each meeting and form a key input to the ICAAP and Internal Liquidity Adequacy Assessment Process.

Current and emerging Risks

The Company has a global portfolio, which is dominated by exposures to counterparties in financial sectors, including banks, central counterparties, traditional "real money" funds and hedge funds. The strength of the Company's credit portfolio has been supported by changes in the CSSEL Credit Risk Framework.

CSSEL's principal activities are the arranging of financing for clients in the international capital markets, the provision of financial advisory services and acting as a dealer in securities, derivatives and foreign exchange on a principal and agency basis. There were no material changes in portfolio composition during the reporting period.

EUROPE

Despite widespread concern in early 2017 that elections in several large and influential European countries would see a wave of populist anti-EU leaders voted into power, promoting fears over the long-term future of the EU, the outlook for the Europe in general is positive and economic forecasts have been revised upwards. In contrast, the UK's decision to leave the EU has resulted in a weaker outlook for economic growth. While the initial shock from the June 2016 vote has diminished, there remains significant uncertainty around future trade and political relationships after the UK leaves the EU. The Company has a material UK credit portfolio which continues to perform, and we have not observed any deterioration in credit quality as a result of the Brexit vote. However, we remain vigilant in considering the impact of Brexit in all credit decisions.

REPUBLIC OF KOREA ('SOUTH KOREA')

CSSEL has assigned a country credit rating of AA- to South Korea, with a stable outlook. This view is based on South Korea's macro-economic resilience, which is supported by its diversified and competitive manufacturing industries, its fiscal prudence, healthy balance sheet with manageable levels of government debt and sufficient current surplus account. However, uncertainty remains over North Korea and the risks it poses to the South Korean economy and while CSSEL expects the status quo to prevail, we also anticipate occasional episodes of elevated tension. South Korea's export-driven economy could also be challenged by a possible rise in protectionism and anti-globalisation. Exposure to South Korea is made up of short-term listed derivatives, securities borrowing and lending, and money market transactions in CSSEL's Seoul Branch. In 2017 the central counterparty Korea Exchange ("KRX") changed its rules, enabling foreign members to separate client and house exposures. As a clearing member of KRX, CSSEL, Seoul Branch has reduced its exposure to the CCP by adopting a new account structure for client activity.

CYBER RISK

The financial industry continued facing rapidly evolving cyber threats from a variety of actors who are driven by monetary, political and other motivations. The Company continues to invest significantly in the CSSEL information and cybersecurity program to strengthen abilities to anticipate, defend, detect and recover from cyber-attacks. The Company regularly assesses the effectiveness of key controls and conducts ongoing employee training and awareness activities in order to embed a strong cyber risk culture.

Linkages between financial statements and regulatory exposures

LI1 – Differences between accounting and regulatory scopes of consolidation and the mapping of financial statement categories with regulatory risk categories

		Carrying values of items				
end of 2017	Carrying values under scope of regulatory consolidation	Subject to the credit risk framework	Subject to the CCR framework	Subject to the securitisation framework	Subject to the market risk framework	Not subject to capital requirements or subject to deduction from capital
Assets (USD million)						
Cash and due from banks	2,806	2,373	–	–	–	434
Interest bearing deposits with bank	20,272	20,272	–	–	–	–
Securities purchased under resale agreements and securities borrowing transactions	22,725	–	22,725	–	–	–
Trading financial assets at fair value through profit or loss	23,132	1	3,956	–	23,131	–
Financial assets designated at fair value through profit or loss	25,272	1,416	23,856	–	107	–
Financial assets available for sale	39	–	–	–	39	–
Securities received as collateral	–	–	–	–	–	–
Investment securities	–	–	–	–	–	–
Goodwill	–	–	–	–	–	–
Current Tax Assets	180	180	–	–	–	–
Deferred Tax Assets	10	6	–	–	–	4
Other assets	8,050	1,357	3,236	–	1,083	3,156
Property and equipment	1	1	–	–	–	–
Intangible Fixed Assets	1	–	–	–	–	1
Assets Held for Sale	21,440	93	16,783	–	6,313	–
Total assets	**123,928**	**25,699**	**70,556**	**–**	**30,673**	**3,595**
Liabilities (USD million)						
Due to banks	–		–			–
Deposits	62	–	–	–	–	62
Securities sold under repurchase agreements and securities lending transactions	14,268	–	14,268	–	–	–
Trading financial liabilities at fair value through profit or loss	12,616	1,965	4,185	–	10,652	–
Financial liabilities designated at fair value through profit or loss	28,455	–	28,111	–	–	344
Short-term borrowings	5,512	–	–	–	–	5,512
Current Tax Liabilites	30	–	–	–	–	30
Deferred Tax Liabilites	127	–	–	–	–	127
Other liabilities	17,566	–	8,080	–	–	9,485
Provisions	2	–	–	–	–	2
Long-term debt	21,683	–	–	–	–	21,683
Liabilities Held for Sale	15,884	–	10,348	–	6,640	226
Total liabilities	**116,205**	**1,965**	**64,992**	**–**	**17,292**	**37,471**

LI2 – Main sources of differences between regulatory exposure amounts and carrying values in financial statements

		Items subject to			
end of	**Total**	Credit risk framework	CCR framework	Securitisation framework	Market risk framework
2017 (USD million)					
Asset carrying value amount under scope of regulatory consolidation (as per template LI1)	120,333	25,698	70,555	–	30,673
Liabilities carrying value amount under regulatory scope of consolidation (as per template LI1)	78,733	1,965	64,993	–	17,291
Total net amount under regulatory scope of consolidation	41,600	23,733	5,562	–	13,382
Off-balance sheet amounts	279	279	–	–	–
Differences in valuations due to standardised approach (SA)	–	–	–	–	–
Differences due to different netting rules due to standardised approach (SA), other than those already included in row 2	–	–	–	–	–
Differences due to consideration of provisions	–	–	–	–	–
Differences due to application of potential future exposures	–	–	–	–	–
Derivative transactions – Differences due to application of Standard Rules (SR)	10,548	–	10,548	–	–
SFT – differences due to application of Standard Rules (SR) (Repo-Var)	19,566	–	19,566	–	–
Other differences not classified above	–	2,221		–	(13,382)
Exposure amounts considered for regulatory purposes	**71,993**	**26,233**	**35,676**	**–**	**–**

The reasons for differences between accounting and regulatory exposures are as follows:

(1) Notional for sold CDS trades are off balance sheet items as per accounting rules, however for regulatory purposes, sold CDS trades in the regulatory banking book are considered as regulatory exposures for credit risk;

(2) The accounting balance sheet only records the default fund deposited with central counterparties, whereas for regulatory purposes, RWA is calculated in line with the prescribed regulatory default fund calculation;

(3) RWA is calculated on the securities pledged to the firm's UK pension fund. These securities pledged are booked as off balance sheet for accounting and are not part of the LI1.

LI3 – Outline of the differences in the scopes of consolidation (entity by entity)

		Method of regulatory consolidation				Description of the entity
end of 2017	Method of accounting consolidation	Full consolidation	Proportional consolidation	Neither consolidated nor deducted	Deducted	
Name of the entity						
Credit Suisse First Boston Trustees Limited	Full consolidation			x		Special purpose entity
Credit Suisse First Boston PF (Europe) Limited	Full consolidation			x		Special purpose entity
Credit Suisse Client Nominees (UK) Limited	Full consolidation			x		Special purpose entity
Credit Suisse AF Trust	Full consolidation			x		Special purpose entity
CSSEL Bare Trust	Full consolidation			x		Special purpose entity
CSSEL Guernsey Bare Trust	Full consolidation			x		Special purpose entity
Credit Suisse Guernsey AF Trust	Full consolidation			x		Special purpose entity
Redwood – Master Client Trust	Full consolidation			x		Special purpose entity
Redwood Master Trust I	Full consolidation			x		Special purpose entity
Redwood Master Trust II	Full consolidation			x		Special purpose entity
Redwood Trust I	Full consolidation			x		Special purpose entity
Redwood Trust II	Full consolidation			x		Special purpose entity
Redwood Funding Trust I	Full consolidation			x		Special purpose entity
Redwood Funding Trust II	Full consolidation			x		Special purpose entity
Redwood Guernsey I Master Trust	Full consolidation			x		Special purpose entity
Redwood Guernsey II Master Trust	Full consolidation			x		Special purpose entity
Redwood Guernsey I Funding Trust	Full consolidation			x		Special purpose entity
Redwood Guernsey II Funding Trust	Full consolidation			x		Special purpose entity
Redwood Guernsey I SPIA Trust	Full consolidation			x		Special purpose entity
Redwood Guernsey II SPIA Trust	Full consolidation			x		Special purpose entity
Sail Master Trust I	Full consolidation			x		Special purpose entity
Sail Master Trust II	Full consolidation			x		Special purpose entity
Sail Trust I	Full consolidation			x		Special purpose entity
Sail Trust II	Full consolidation			x		Special purpose entity
Sail Funding Trust I	Full consolidation			x		Special purpose entity
Sail Funding Trust II	Full consolidation			x		Special purpose entity
Sail Guernsey I Master Trust	Full consolidation			x		Special purpose entity
Sail Guernsey II Master Trust	Full consolidation			x		Special purpose entity
Sail Guernsey I Funding Trust	Full consolidation			x		Special purpose entity
Sail Guernsey II Funding Trust	Full consolidation			x		Special purpose entity
Sail Guernsey I SPIA Trust	Full consolidation			x		Special purpose entity
Sail Guernsey II SPIA Trust	Full consolidation			x		Special purpose entity
Positive – Master Client LLC	Full consolidation			x		Special purpose entity
Credit Suisse Securities (Europe) Limited	Full consolidation	x				Regulated entity
Credit Suisse Investment Holding (UK)	Full consolidation	x				Special purpose entity

Credit risk

OVERVIEW

For regulatory purposes, exposures to borrowers or counterparties are categorised into exposure classes according to the framework set out in the CRR.

The majority of Pillar 1 credit and counterparty risk capital requirements are calculated using the Advanced Internal Ratings Based Approach to risk weights ('AIRB'). Certain exposure classes are treated under the Standardised Approach to risk weights.

Credit risk in CSSEL is managed by the CSSEL Credit Risk Management department, which is headed by the CSSEL Chief Credit Officer, who in turn reports to the CSSEL Chief Risk Officer. CSSEL Credit Risk Management is a part of the wider Credit Risk Management department, which is an independent function with responsibility for approving credit limits, monitoring and managing individual exposures and assessing and managing the quality of the segment and business areas' credit portfolios and allowances. CSSEL Credit Risk Management's processes and policies cover credit risk arising from exposures to borrowers and counterparty credit risk. Counterparty credit risk arises from OTC and exchange-traded derivatives, repurchase agreements, securities lending and borrowing and other similar products and activities. The related credit risk exposures depend on the value of underlying market factors (e.g. interest rates and foreign exchange rates), which can be volatile and uncertain in nature. CSSEL enters into derivative contracts in the normal course of business principally for market-making and positioning purposes, as well as for risk management needs, including mitigation of interest rate, foreign currency, credit and other risks.

Effective credit risk management is a structured process to assess, quantify, measure, monitor and manage risk on a consistent basis. This requires careful consideration of proposed extensions of credit, the setting of specific limits, monitoring during the life of the exposure, active use of credit mitigation tools and a disciplined approach to recognising credit impairment.

Credit limits are used to manage concentration to individual counterparties. A system of limits is also established to address concentration risk in the portfolio, including country limits, industry limits and limits for certain products. In addition, credit risk concentration is regularly supervised by credit and risk management committees, taking current market conditions and trend analysis into consideration.

A primary responsibility of CSSEL Credit Risk Management is to monitor the exposure to and creditworthiness of a counterparty, both at the initiation of the relationship and on an ongoing basis. Part of the review and approval process is an analysis and discussion to understand the motivation of the client and to identify the directional nature of the trading in which the client is engaged. Credit limits are agreed in line with CSSEL's Risk Appetite Framework, taking into account the strategy of the counterparty, the level of disclosure of financial information and the amount of risk mitigation that is present in the trading relationship (e.g. level of collateral). All credit exposure is approved, either by approval of an individual transaction or facility (e.g. lending facilities), or under a system of credit limits (e.g. OTC derivatives). Credit exposure is monitored daily to ensure it does not exceed the approved credit limit. These credit limits are set either on a potential exposure basis or on a notional exposure basis. Potential exposure means the possible future value that would be lost upon default of the counterparty on a particular future date, and is taken as a high percentile of a distribution of possible exposures computed by CSSEL's internal exposure models. Secondary debt inventory positions are subject to separate limits that are set at the issuer level.

A system of limits is also established to address concentration risk in the portfolio, including country limits, industry limits and limits for certain products. In addition, credit risk concentration is regularly supervised by credit and risk management committees, taking current market conditions and trend analysis into consideration. A credit quality review process provides an early identification of possible changes in the creditworthiness of clients and includes regular asset and collateral quality reviews, business and financial statement analysis and relevant economic and industry studies. Regularly updated watch lists and review meetings are used for the identification of counterparties where adverse changes in creditworthiness could occur.

Counterparty credit limits are governed by the Credit Risk Appetite Framework, which establishes a set of ratings-based appetite limits for specific counterparty classes. Appetite limits have been calibrated to the Company's capital through scenario-based approach which serves the dual purpose of protecting the strategic diversification of the portfolio while promoting an efficient usage of the available capital. Credit Risk Management does not explicitly manage internal capital at the level of individual counterparties. However, all counterparty limits are managed within the Credit Risk Appetite Framework. Credit Risk Management reviews CSSEL's credit risk appetite at least annually and considers historical information, forward-looking risk assessments, stress-testing results as well as business and capital plans when proposing or affirming appetite limits. The formulation of appetite is anchored to the capital base of CSSEL in order to protect the firm's capital resources in the event of large credit losses. An ongoing risk identification process includes regular review and challenge of portfolio MI, credit officer interviews, review of business strategy and new business proposals, and may result in the development of new operating limits to protect CSSEL's capital resources. The CSSEL Credit Risk Committee monitors compliance with the Credit Risk Appetite Framework and reports any appetite breaches to the CSSEL Risk Management Committee on a monthly basis and, as needed, to the CSSEL Board Risk Committee.

CREDIT HEDGES AND RISK MITIGATION

Counterparty credit risk may be reduced through various forms of mitigation, including: credit default swaps, third-party guarantees, credit insurance, letters of credit and other written assurances (unfunded credit risk mitigation); and collateral or fully-collateralised derivatives (forms of funded protection).

For risk management purposes, the use of unfunded credit risk mitigation is subject to a risk transference guideline which sets out the roles and responsibilities of Credit Risk Management, General

Counsel, and the Regulatory Reporting function in ensuring risk mitigation is effective and is given the correct capital treatment. In circumstances where the borrower is heavily reliant on the protection provider in order to secure the credit, Credit Risk Management will require the protection provider to be internally-rated higher than the borrower. The main types of guarantors are investment-grade rated insurers, mainly A-rated and above, that are active providers of risk mitigation to the CS Group on a global basis. The providers of credit default swap ('CDS') contracts for risk mitigation are mainly investment-grade rated international banks and CCPs. On a semi-annual basis, the residual risk associated with risk transference and concentration to specific protection providers is considered within the Risk Management Framework. The amount of credit risk arising from the concentration to protection providers is not considered to be material.

Taking of financial collateral is a key risk management tool for securities financing transactions, derivatives, FX, other OTC products and share-backed financing. Subject to legally enforceable agreements, collateral may be accepted in many different currencies and jurisdictions, and the collateral process creates potentially significant legal, tax, credit, regulatory and operational issues, in addition to the liquidity issues involved in running a large portfolio of collateral assets and liabilities. CSSEL's strategy with respect to collateral is subject to a robust collateral policy, which details standards of acceptable collateral (including collateral type, liquidity, quality and jurisdiction), valuation frequency, haircuts and agreement type (most agreements are two-way arrangements, meaning CSSEL may post as well as receive collateral). Additionally, limits and thresholds are established for the management of collateral concentrations to ensure there is no significant build-up of specific collateral types on a portfolio basis.

However, concentration with respect to cash collateral in major currencies is deemed acceptable from a risk management perspective. Similarly, high-quality liquid sovereign bonds are preferred over other less liquid or less stable collateral types. The majority of CSSEL's collateral portfolio is made up of cash and liquid securities which are subject to daily valuations.

The policies and processes for collateral valuation and management are driven by a legal document framework that is bilaterally agreed with clients, and a collateral management risk framework enforcing transparency through self-assessment and management reporting. For portfolios collateralised by marketable securities, the valuation is performed daily. Exceptions are governed by the calculation frequency described in the legal documentation. The mark-to-market prices used for valuing collateral are a combination of internally-modelled and market prices sourced from trading platforms and service providers, where appropriate. The management of collateral is standardised and centralised to ensure complete coverage of traded products.

WRONG-WAY EXPOSURES

Wrong-way risk arises when CSSEL enters into a financial transaction in which exposure is adversely correlated to the creditworthiness of the counterparty. In a wrong-way trading situation, the exposure to the counterparty increases while the counterparty's financial condition and its ability to pay on the transaction diminishes. Capturing wrong-way risk ('WWR') requires the establishment of basic assumptions regarding correlations for a given trading product. The management of WWR is integrated within CSSEL's overall credit risk assessment approach and is subject to a framework for identification and treatment of WWR, which includes governance, processes, roles and responsibilities, methodology, scenarios, reporting, review and escalation.

A conservative treatment for the purpose of calculating exposure profiles is applied to material trades with WWR features. The WWR framework applies to OTC, securities financing transactions and centrally cleared trades.

In instances where a material WWR presence is detected, limit utilisation and default capital are accordingly adjusted through more conservative exposure calculations. These adjustments cover both transactions and collateral and form part of the daily credit exposure calculation process, resulting in correlated transactions utilising more of the counterparty credit limit. In addition, WWR is considered in both the country and scenario risk reporting processes as follows:

- **Country exposure reporting:** exposure is reported against country limits established for emerging market countries. Exposures that exhibit wrong-way characteristics are given higher risk weighting than non-correlated transactions, resulting in a greater amount of country limit usage for these trades; and
- **Scenario risk reporting:** in order to identify areas of potential WWR within the portfolio, a set of defined scenarios is run on a monthly basis by RFDAR. The scenarios are determined by Credit Risk Management for each counterparty, taking into account aspects such as revenue sources, systemic relevance of the counterparty and other considerations.

Scenario analysis is also produced for hedge funds which are exposed to particular risk sensitivities and also may have collateral concentrations due to a specific direction and strategy. The Front Office is responsible as a first line of defence for identifying and escalating trades that could potentially give rise to WWR. Any material WWR at portfolio or trade level would be escalated to senior Credit Risk Management executives and risk committees.

CREDIT RISK REPORTING AND MEASUREMENT

The Credit Risk Reporting group is responsible for the production of regular and ad hoc reporting of credit and counterparty risk, country, industry and scenario exposures, in support of internal clients such as the senior management of the Company, CRO management, and various risk management committees, as well as external stakeholders such as regulators.

CSSEL's credit exposures are captured in its INSIGHT system, where exposures are calculated from various inputs including trade data, mark-to-market valuations, economic sensitivities, legal documentation and jurisdiction, collateral and other forms of risk mitigation. The Credit Analytics group is responsible for the development and maintenance of exposure calculation methodologies.

EFFECT OF A CREDIT RATING DOWNGRADE

CSSEL is subject to contractual and contingent commitments in derivative documentation which can be triggered by a credit rating

downgrade. The additional collateral calls or settlement payments arising from ratings downgrade (2 or 3 notch) are quantified according to the terms included in the respective legal agreements. Downgrades under market, idiosyncratic and combined scenarios are considered in the stress assumptions. A liquidity pool made up of 'high quality liquid assets' ('HQLA') is held to mitigate these risks. Collateral outflows are based on CSA thresholds and individual terms agreed with counterparts and SPVs.

NETTING

Credit risk mitigation processes under the AIRB and Standardised Approaches include on- and off-balance sheet netting and utilising eligible collateral, as defined in the CRR.

CSSEL transacts bilateral OTC derivatives mainly under ISDA master agreements. These agreements provide for the net settlement of all transactions under the agreement through a single payment in the event of default or termination.

Reverse repurchase and repurchase agreements are generally covered by global master repurchase agreements with netting terms similar to ISDA master agreements. In addition, securities lending and borrowing transactions are generally executed under global master securities lending agreements, with netting terms also similar to ISDA master agreements. In certain situations, for example in the event of default, all contracts under the agreements are terminated and are settled in one single net payment.

EQUITY TYPE EXPOSURES IN THE BANKING BOOK

The classification of equity type exposures into Trading Book and Banking Book is made for regulatory reporting purposes. The Banking Book includes all items that are not classified in the Trading Book, for example, on the basis that there is no trading intent or on the basis of valuation approach or frequency.

For equity type exposures in the Banking Book, risk weights are determined using the IRB Simple Risk Weight Approach, which differentiates by equity sub-asset types (qualifying private equity, listed equity and all other equity positions). The significant majority of CSSEL's Banking Book equity exposures are in the Fund-Linked Product ('FLP') business area. These instruments are fair valued for accounting purposes, but fall within the regulatory Banking Book category as valuations are not available sufficiently frequently to meet the standards required for Trading Book eligibility. In the context of business objectives and trading activity, the Banking Book positions are indistinguishable from FLP instruments that fall within the regulatory Trading Book category, and the positions are actively traded and risk-managed.

No further disclosure is made concerning cumulative realised gains or losses from sales or liquidations in the period and total latent revaluation gains or losses on the basis of materiality.

STANDARDISED APPROACH TO RISK WEIGHTS

Under the Standardised Approach to risk weights, ratings published by External Credit Assessment Institutions ('ECAIs') are mapped to Credit Quality Steps ('CQS') according to mapping tables laid down by the European Banking Authority ('EBA'). The CQS value is then mapped to a risk weight percentage.

The ECAIs used by CSIUK are Standard & Poor's and Moody's.

INTERNAL RATINGS BASED APPROACH

The Basel Framework permits banks a choice between two broad methodologies in calculating their capital requirements for credit risk by exposure class, the IRB Approach (within which there are two variants, Foundation and Advanced) or the Standardised Approach, and CSSEL has received approval from the PRA to use the AIRB Approach.

Under the AIRB Approach, risk weights are determined using internal models and risk parameters, whereas under the Standardised Approach, the risk weights are based on regulatory prescribed parameters. Credit risk models are reviewed and updated on an ongoing basis, reflecting more recent data, changes to methodologies, and updated regulatory requirements. For those portfolios where CSSEL has not received approval from the PRA to use the AIRB approach, the Standardised Approach is applied.

Currently, the AIRB Approach is used for the majority of exposures whereby internal estimates for probability of default ('PD') and loss given default ('LGD') are used when calculating credit risk capital requirements. As prescribed in its AIRB permission, CSSEL calculates the credit risk capital requirement for equity exposures using the Simple Risk Weight Approach.

RATING MODELS

The majority of the credit rating models used by CSSEL are developed internally by Credit Analytics, a specialised unit within CS Group Credit Risk Management. These models are independently validated by Model Risk Management prior to use in the regulatory capital calculation and thereafter on a regular basis (see below). CSSEL also uses models purchased from recognised data and model providers (eg. credit rating agencies).

All new or material changes to rating models are subject to a robust governance process. After development and validation of a rating model or model change, the model is reviewed by a number of committees where model developers, validators and users of the models consider the technical and regulatory aspects of the model. The relevant committees consider the information provided and decide to either approve or reject the model or model change.

MODEL DEVELOPMENT

The techniques to develop models are carefully selected by Credit Analytics to meet industry standards in the banking industry as well as regulatory requirements. The models are developed to exhibit 'through-the-cycle' characteristics, reflecting a probability of default in a 12-month period across the credit cycle.

All models have clearly defined model owners who have primary responsibility for development, enhancement, review, maintenance and documentation. The models are required to pass statistical performance tests, where feasible, followed by usability tests by designated Credit Risk Management experts to proceed to formal approval and implementation. The development process of a new model is documented and foresees a separate schedule for model updates.

The level of calibration of the models is based on a range of inputs, including internal and external benchmarks where available. Additionally, the calibration process ensures that the estimated calibration level accounts for variations of default rates through the economic cycle and that the underlying data contains a representative mix of economic states. Conservatism is incorporated in

the model development process to compensate for any known or suspected limitations and uncertainties.

MODEL VALIDATION

Model validation within CSSEL is performed by an independent function subject to clear and objective internal standards as outlined in the validation policy. This ensures a consistent and meaningful approach for the validation of models across all areas within CSSEL and over time. All models whose outputs fall into the scope of the Basel internal model framework are subject to regular independent model validation. Where used, externally developed models are subject to the same governance and validation standards as internal models.

Newly-developed models in scope for the Basel internal model framework must be validated and approved before 'go-live'; a similar process is followed for changes to an existing model. Existing models are subject to a regular review process which requires each model to be periodically revalidated and its performance to be monitored at least annually. Each validation review is a comprehensive quantitative and qualitative assessment aiming:

- to confirm that the model remains conceptually sound and the model design is suitable for its intended purpose;
- to verify that model assumptions are still supported and that limitations are known and mitigated;
- to confirm that model outputs are in line with realised outcomes;
- to establish whether the model is accepted by the users and is used as intended;
- to check whether a model is implemented correctly; and
- to ensure that the model is sufficiently transparent and is well documented.

To meet these goals, models are validated against a series of quantitative and qualitative criteria, and each validation is reviewed by the model governing committees. Quantitative analyses may include a review of model performance (comparison of model output against realised outcome), calibration accuracy against appropriate time series, assessment of a model's ability to rank order risk and performance against available benchmarks. Qualitative assessment includes a review of the appropriateness of the key model assumptions, the identification of the model limitations and their mitigation, and further review to ensure appropriate model use. The modelling approach is reassessed in light of developments in the academic literature and industry practice.

Results and conclusions are presented to senior risk management; shortcomings and required improvements identified by the independent validation process must be remediated within an agreed deadline.

DESCRIPTIONS OF THE RATING PROCESSES

Credit Risk Management policy requires that all credit-bearing transactions are approved by Credit Risk Management prior to trading. Generally, this approval takes the form of a credit analysis of the counterparty, which includes the assignment of a credit rating. In some cases Credit Risk Management approval may take the form of a transaction approval, which may include an indicative rating or no rating. At the time of initial credit approval and review, relevant quantitative data (such as financial statements and financial projections) and qualitative factors relating to the counterparty are used by Credit Risk Management in the models and result in the assignment of a credit rating or PD, which measures the counterparty's risk of default over a one-year period.

COUNTERPARTY AND TRANSACTION RATING PROCESS

Where rating models are used, the models are an integral part of the rating process, and the outputs from the models are complemented with other relevant information from credit officers via a model-override framework. CSSEL has a PD model (PD-Masterscale), which applies to the following types of exposure: Banking Book bonds, commercial lending, exchange-traded derivatives, OTC derivatives, secured financing, open trades, and uncollateralised loans. The Masterscale PDs are estimated through reference to an external database, which contains the rating history of issuers over 30 years to the present. Annual default rates are calculated for each rating category, with default rates forming the basis of the PD calculation. For higher quality ratings, where there is relatively little default experience on which to base estimates, a low default portfolio ('LDP') estimator is used. All PDs are floored at 0.03% for all exposure classes with the exception of central governments and central banks, where no floor applies. The overrides by credit officers are intended to incorporate information not captured by the approved counterparty rating models. In addition to the information captured by the rating models, credit officers make use of peer analysis, industry comparisons, external ratings and research and the judgment of credit experts to support their fundamental credit analysis and determine model inputs. This analysis emphasises a forward-looking approach, concentrating on economic trends and financial fundamentals. Where rating models are not used, the assignment of credit ratings is based on a well-established expert judgement process which captures key factors specific to the type of counterparty.

The exposures in scope of CSSEL's LGD model are the same as those in the PD model. The main sources of information for LGD estimation purposes are data on experienced losses and recoveries. The CS group participates in data-pooling in which lending institutions contribute historical information on defaulted loans. LGDs are discounted and therefore reflect economic losses. They also include recovery cost and downturn effects. LGD estimates are annually backtested against internal experience.

EAD for loan products is calculated following the CCF approach. In particular, the scope of the CCF model is irrevocable commitments under regular loans. Under this approach, a scalar CCF is used to convert an undrawn but committed amount into a loan equivalent. Specifically, EAD is modelled for each facility as the sum of the drawn exposure at reference date plus a percentage (CCF) of the undrawn portion of the commitment. The CCF estimate is obtained using historical information on realised CCFs. This type of calculation requires information on exposures for defaulted counterparties both at default and at a given date prior to default (ie. 12 months prior to default). This information is sourced from CSSEL's default and loss database. CCFs include downturn and conservative add-ons. CCF estimates are annually backtested against recent internal experience.

For PD, LGD and CCF parameters, there are no deviations from the Regulatory definition of default and all are applied in the

same way for central banks and central governments, institutions and corporates.

Credit Risk Management has established guidelines for the analysis and rating of all significant counterparty types. Analysis guidelines include the following requirements for specific IRB exposure classes:

- **Central governments and central banks:** the analysis of central governments and central banks must consider the connection to the sovereign. The legal enforceability, economic structure and level of development can vary vastly from one country to another, in addition to other factors that can drive the credit risk of an individual sovereign counterparty. Credit analysis includes an assessment of connection to the sovereign (for central banks), the legal basis on which the counterparty is established, the level of sovereign support (implicit or explicit), and a discussion of economic factors, including revenue generation (both current and future), the ability to collect additional revenue, current and future financial liabilities, access to capital markets, and quality of governance and administration. Analysis must also include a review of the current credit portfolio, including a summary of risk mitigation used to reduce credit exposure.
- **Institutions:** analysis of institutions is founded on a review of capital adequacy, asset quality, management, earnings, liquidity and funding. Analysis must also consider the counterparty's risk management (eg. credit, market, interest rate and operational risk), the counterparty's industry and franchise, and its operating environment, including regulatory environment. The credit review must include both quantitative and qualitative factors. The review must cover reported financials, ratios, and financial trends both in relation to historical performance and relative to peers. Peer analysis provides context for the analysis and is required in all reviews unless suitable peers are unavailable. Banks and bank holding companies are generally reviewed at the consolidated entity level, as well as at the legal entity level with which CSSEL is trading. This approach helps to uncover any particularly strong or weak entities within a group. To the extent that external ratings and research exist (rating agency and/or fixed income and equity), these must be reflected in the assessment if relevant. The analysis must also encompass relevant media information. As part of the counterparty review, Credit Risk Management is responsible for classifying whether certain institutions are 'regulated' per specific regulatory definitions and, if so, for capturing the financial institution's group asset value.
- **Corporates:** analysis of corporates includes an overview of the company including main business segments, sources of revenue, and financial sponsor ownership. Corporate credit analysis is a function of the industry in which a company operates. Therefore industry and peer analysis is to be included in the review; if the counterparty competes in a global industry, global competitors may be the most appropriate. The comparisons should include credit ratings as well as financial metrics appropriate for the industry. Analysis must also include an assessment of specific financial factors, including profitability, cash flow adequacy, capital structure (leverage) and liquidity. As a minimum, review and peer analyses must include the following ratios: debt to earnings before interest, taxation, depreciation and amortisation ('EBITDA'), senior debt to EBITDA (if applicable) and net debt to EBITDA; interest coverage based on industry; and debt to capitalisation or debt to assets. Finally, where CSSEL extends loan facilities containing financial covenants, the review must include an analysis of those covenants.

For structured and asset finance deals, the focus is on the performance of the underlying assets which represent the collateral of the deal. The ultimate rating is dependent upon the expected performance of the underlying assets and the level of credit enhancement of the specific transaction. Additionally, a review of the originator and/or servicer is performed. External ratings and research (rating agency and/or fixed income and equity), where available, are incorporated into the rating justification, as is any available market information (eg. bond spreads, equity performance).

Transaction ratings are based on the analysis and evaluation of both quantitative and qualitative factors. The specific factors analysed include seniority, industry and collateral. The analysis emphasises a forward-looking approach.

USE OF INTERNAL RATINGS

Internal ratings play an essential role in the decision-making and credit approval processes. CSSEL's internal counterparty ratings system has a 22-grade ratings scale. Ratings are reviewed regularly (at least annually), and consideration is given to external credit ratings during the review process. The portfolio credit quality is set in terms of the proportion of investment and non-investment grade exposures. Investment or non-investment grade is determined by the internal rating assigned to a counterparty.

Internal counterparty ratings (and associated PDs), transaction ratings (and associated LGDs) and CCFs for loan commitments are inputs to RWA calculations. Model outputs are the basis for risk-adjusted pricing or assignment of credit competency levels.

The internal ratings are also integrated into CSSEL's risk management reporting infrastructure and are reviewed in senior risk management committees.

To ensure ratings are assigned on a consistent basis, the Credit Risk Review function, which is an independent team, performs periodic portfolio reviews which cover, inter alia:

- accuracy and consistency of assigned counterparty/transaction ratings;
- transparency of rating justifications (both the counterparty rating and transaction rating);
- quality of the underlying credit analysis and credit process; and
- adherence to CSSEL and CS group policies, guidelines, procedures, and documentation checklists.

Credit Risk Review is an independent control function of the Board of Directors Risk Committee of the CS Group. Credit Risk Review presents the findings of its reviews of the CSSEL portfolio to the CSSEL Risk Committee at least semi-annually.

CREDIT EXPOSURES RWAS AND CAPITAL REQUIREMENTS

The tables in this section contain analyses of credit exposures in both the Trading Book and Banking Book

CRB-B – Total and average net amount of exposures

	2017	
	Net value of exposures at the end of the period	Average net exposures over the period
USD million		
Central governments or central banks	206	166
Institutions	1,202	1,379
Corporates	3,473	3,539
Of which: Specialised lending	–	–
Of which: SMEs	–	–
Retail	–	–
Secured by real estate property	–	–
SMEs	–	–
Non-SMEs	–	–
Qualifying revolving	–	–
Other retail	–	–
SMEs	–	–
Non-SMEs	–	–
Equity	14	27
Total IRB approach	**4,895**	**5,111**
Central governments or central banks	–	54
Regional governments or local authorities	–	–
Public sector entities	–	–
Multilateral development banks	–	–
International organisations	–	–
Institutions	307	439
Corporates	272	474
Of which: SMEs	–	–
Retail	–	–
Of which: SMEs	–	–
Secured by mortgages on immovable property	–	–
Of which: SMEs	–	–
Exposures in default	–	–
Items associated with particularly high risk	–	–
Covered bonds	–	–
Claims on institutions and corporates with a short-term credit assessment	–	5
Collective investments undertakings	–	–
Equity exposures	–	–
Other exposures	123	103
Total standardised approach	**702**	**1,075**
Total	**5,597**	**6,186**

CRB-C – Geographical breakdown of exposures

end of 2017	UK	Europe	Americas	of which the United States [e]	Asia	Africa & Middle East	Other geographical areas	**Total**
Net value (USD million)								
Central governments or central banks	199	7	–	–	–	–	–	206
Institutions	531	129	385	369	149	8	–	1,202
Corporates	884	69	2,064	1,982	435	21	–	3,473
Retail	–	–	–	–	–	–	–	–
Equity	–	14	–	–	–	–	–	14
Total IRB approach	**1,614**	**219**	**2,449**	**2,351**	**584**	**29**	**–**	**4,895**
Central governments or central banks	–	–	–	–	–	–	–	–
Regional governments or local authorities	–	–	–	–	–	–	–	–
Public sector entities	–	–	–	–	–	–	–	–
Multilateral development banks	–	–	–	–	–	–	–	–
International organisations	–	–	–	–	–	–	–	–
Institutions	183	101	15	15	8	–	–	307
Corporates	86	14	168	54	4	–	–	272
Retail	–	–	–	–	–	–	–	–
Secured by mortgages on immovable property	–	–	–	–	–	–	–	–
Exposures in default	–	–	–	–	–	–	–	–
Items associated with particularly high risk	–	–	–	–	–	–	–	–
Covered bonds	–	–	–	–	–	–	–	–
Claims on institutions and corporates with a short-term credit assessment	–	–	–	–	–	–	–	–
Collective investments undertakings	–	–	–	–	–	–	–	–
Equity exposures	–	–	–	–	–	–	–	–
Other exposures	123	–	–	–	–	–	–	123
Total standardised approach	**392**	**115**	**183**	**69**	**12**	**–**	**–**	**702**
Total	**2,006**	**334**	**2,632**	**2,420**	**596**	**29**	**–**	**5,597**

[e] All regions are shown plus any individual country where its exposure is greater than 10% of the total

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CRB-D – Concentration of Exposures by Industry or Counterparty types

end of 2017	Agriculture, forestry and fishing	Mining and quarrying	Manu-facturing	Electricity, gas, steam and air conditioning supply	Water supply	Construction	Wholesale and retail trade
USD million							
Central governments or central banks	–	–	–	–	–	–	–
Institutions	–	–	–	–	–	–	–
Corporates	–	1	256	2	–	–	2
Retail	–	–	–	–	–	–	–
Equity	–	–	–	–	–	–	–
Total IRB approach	**–**	**1**	**256**	**2**	**–**	**–**	**2**
Central governments or central banks	–	–	–	–	–	–	–
Regional governments or local authorities	–	–	–	–	–	–	–
Public sector entities	–	–	–	–	–	–	–
Multilateral development banks	–	–	–	–	–	–	–
International organisations	–	–	–	–	–	–	–
Institutions	–	–	–	–	–	–	–
Corporates	–	–	–	–	–	–	–
Retail	–	–	–	–	–	–	–
Secured by mortgages on immovable property	–	–	–	–	–	–	–
Exposures in default	–	–	–	–	–	–	–
Items associated with particularly high risk	–	–	–	–	–	–	–
Covered bonds	–	–	–	–	–	–	–
Claims on institutions and corporates with a short-term credit assessment	–	–	–	–	–	–	–
Collective investments undertakings	–	–	–	–	–	–	–
Equity exposures	–	–	–	–	–	–	–
Other exposures	–	–	–	–	–	–	–
Total standardised approach	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Total	**–**	**1**	**256**	**2**	**–**	**–**	**2**

Transport and storage	Accommodation and food service activities	Information and communication	Real estate activities	Professional, scientific and technical activities	Administrative and support service activities	Public administration and defence, compulsory social security	Education	Human health services and social work activities	Arts, entertainment and recreation	Financial and insurance activities	Other services	**Total**
–	–	–	–	–	–	206	–	–	–	–	–	206
–	–	–	–	–	–	–	–	–	–	1,202	–	1,202
1	–	4	–	–	–	111	–	–	–	3,096	–	3,473
–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	14	–	14
1	**–**	**4**	**–**	**–**	**–**	**317**	**–**	**–**	**–**	**4,312**	**–**	**4,895**
–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	307	–	307
–	–	–	–	86	–	–	–	–	–	186	–	272
–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	123	–	–	–	–	–	123
–	**–**	**–**	**–**	**86**	**–**	**123**	**–**	**–**	**–**	**493**	**–**	**702**
1	**–**	**4**	**–**	**86**	**–**	**440**	**–**	**–**	**–**	**4,805**	**–**	**5,597**

CRB-E – Maturity of exposures

end of 2017	On demand	<= 1 year	> 1 year <= 5 years	> 5 years	No stated maturity	**Total**
Net exposure value (USD million)						
Central governments or central banks	–	206	–	–	–	206
Institutions	977	225	–	–	–	1,202
Corporates	537	887	103	1,946	–	3,473
Retail	–	–	–	–	–	–
Equity	–	–	–	–	14	14
Total IRB approach	**1,514**	**1,318**	**103**	**1,946**	**14**	**4,895**
Central governments or central banks	–	–	–	–	–	–
Regional governments or local authorities	–	–	–	–	–	–
Public sector entities	–	–	–	–	–	–
Multilateral development banks	–	–	–	–	–	–
International organisations	–	–	–	–	–	–
Institutions	96	211	–	–	–	307
Corporates	5	104	19	144	–	272
Retail	–	–	–	–	–	–
Secured by mortgages on immovable property	–	–	–	–	–	–
Exposures in default	–	–	–	–	–	–
Items associated with particularly high risk	–	–	–	–	–	–
Covered bonds	–	–	–	–	–	–
Claims on institutions and corporates with a short-term credit assessment	–	–	–	–	–	–
Collective investments undertakings	–	–	–	–	–	–
Equity exposures	–	–	–	–	–	–
Other exposures	–	123	–	–	–	123
Total standardised approach	**101**	**438**	**19**	**144**	**–**	**702**
Total	**1,615**	**1,756**	**122**	**2,090**	**14**	**5,597**

CR1-A – Credit quality of exposures by exposure class and instrument

	Gross carrying values of						Net values
end of 2017	Defaulted exposures	Non-defaulted exposures	Specific credit risk adjustment	General credit risk adjustment	Accumulated write-offs	Credit risk adjustment charges of the period	
USD million							
Central governments or central banks	–	206	–	–	–	–	206
Institutions	–	1,202	–	–	–	–	1,202
Corporates	–	3,473	–	–	–	–	3,473
Of which: Specialised lending	–	–	–	–	–	–	–
Of which: SMEs	–	–	–	–	–	–	–
Retail	–	–	–	–	–	–	–
Secured by real estate property	–	–	–	–	–	–	–
SMEs	–	–	–	–	–	–	–
Non-SMEs	–	–	–	–	–	–	–
Qualifying revolving	–	–	–	–	–	–	–
Other retail	–	–	–	–	–	–	–
SMEs	–	–	–	–	–	–	–
Non-SMEs	–	–	–	–	–	–	–
Equity	–	14	–	–	–	–	14
Total IRB approach	**–**	**4,895**	**–**	**–**	**–**	**–**	**4,895**
Central governments or central banks	–	–	–	–	–	–	–
Regional governments or local authorities	–	–	–	–	–	–	–
Public sector entities	–	–	–	–	–	–	–
Multilateral development banks	–	–	–	–	–	–	–
International organisations	–	–	–	–	–	–	–
Institutions	–	307	–	–	–	–	307
Corporates	–	272	–	–	–	–	272
Of which: SMEs	–	–	–	–	–	–	–
Retail	–	–	–	–	–	–	–
Of which: SMEs	–	–	–	–	–	–	–
Secured by mortgages on immovable property	–	–	–	–	–	–	–
Of which: SMEs	–	–	–	–	–	–	–
Exposures in default	–	–	–	–	–	–	–
Items associated with particularly high risk	–	–	–	–	–	–	–
Covered bonds	–	–	–	–	–	–	–
Claims on institutions and corporates with a short-term credit assessment	–	–	–	–	–	–	–
Collective investments undertakings	–	–	–	–	–	–	–
Equity exposures	–	–	–	–	–	–	–
Other exposures	–	123	–	–	–	–	123
Total standardised approach	**–**	**702**	**–**	**–**	**–**	**–**	**702**
Total	**–**	**5,597**	**–**	**–**	**–**	**–**	**5,597**
Of which: Loans	–	3,619	–	–	–	–	3,619
Of which: Debt securities	–	–	–	–	–	–	–
Of which: Off- balance-sheet exposures	–	320	–	–	–	–	320

CR1-B – Credit quality of exposures by industry or counterparty types

	Gross carrying values of						Net values
end of 2017	Defaulted exposures	Non-defaulted exposures	Specific credit risk adjustment	General credit risk adjustment	Accumulated write-offs	Credit risk adjustment charges of the period	
USD million							
Agriculture, forestry and fishing	–	–	–	–	–	–	–
Mining and quarrying	–	1	–	–	–	–	1
Manufacturing	–	256	–	–	–	–	256
Electricity, gas, steam and air conditioning supply	–	2	–	–	–	–	2
Water supply	–	–	–	–	–	–	–
Construction	–	–	–	–	–	–	–
Wholesale and retail trade	–	2	–	–	–	–	2
Transport and storage	–	1	–	–	–	–	1
Accommodation and food service activities	–	–	–	–	–	–	–
Information and communication	–	4	–	–	–	–	4
Real estate activities	–	–	–	–	–	–	–
Professional, scientific and technical activities	–	86	–	–	–	–	86
Administrative and support service activities	–	–	–	–	–	–	–
Public administration and defence, compulsory social security	–	440	–	–	–	–	440
Education	–	–	–	–	–	–	–
Human health services and social work activities	–	–	–	–	–	–	–
Arts, entertainment and recreation	–	–	–	–	–	–	–
Financial and insurance activities	–	4,805	–	–	–	–	4,805
Other services	–	–	–	–	–	–	–
Total	**–**	**5,597**	**–**	**–**	**–**	**–**	**5,597**

CR1-C – Credit quality of exposures by geography

	Gross carrying values of						Net values
end of 2017	Defaulted exposures	Non-defaulted exposures	Specific credit risk adjustment	General credit risk adjustment	Accumulated write-offs	Credit risk adjustment charges	
USD million							
UK	–	2,006	–	–	–	–	2,006
Europe	–	334	–	–	–	–	334
Americas	–	2,632	–	–	–	–	2,632
of which the United States [e]	–	2,420	–	–	–	–	2,420
Asia	–	596	–	–	–	–	596
Africa & Middle East	–	29	–	–	–	–	29
Other geographical areas	–	–	–	–	–	–	–
Total	**–**	**5,597**	**–**	**–**	**–**	**–**	**5,597**

[e] All regions are shown plus any individual country where its exposure is greater than 10% of the total

CR1-D – Ageing of past-due exposures

							Gross carrying values
	(USD million)	≤ 30 days	> 30 days ≤ 60 days	> 60 days ≤ 90 days	> 90 days ≤ 180 days	> 180 days ≤ 1 year	> 1 year
1	Loans	–	-	-	-	-	-
2	Debt securities	–	-	-	-	-	-
3	**Total exposures**	–	-	-	-	-	-

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CR1-E – Non-performing and forborne exposures

(USD million)		Of which performing but past due > 30 days and <= 90 days	Of which performing forborne		Of which defaulted
	010		020	060	090
10 Debt securities	2,525	-	-	-	-
20 Loans and advances	3	-	-	-	-
30 Off-balance-sheet exposures – (Loan commitments given)	–	-	-	-	-

Gross carrying amount of performing and non-performing exposures				Accumulated impairment and provisions and negative fair value adjustments due to credit risk		Collaterals and financial guarantees received	
	Of which non-performing					On non-performing exposures	Of which forborne exposures
Of which impaired	Of which forborne	On performing exposures		On non-performing exposures			
		Of which forborne		Of which forborne			
100	110	120	130	140			170 + 180
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

CSIUK had no general or specific credit risk adjustments at the start or end of year

CR2-B – Changes in the stock of defaulted and impaired loans and debt securities

end of 2017	Gross carrying value defaulted exposures
USD million	
Opening balance	**–**
Loans and debt securities that have defaulted or impaired since the last reporting period	23
Returned to non-defaulted status	–
Amounts written off	–
Other changes	(23)
Closing balance	**–**

CR3 – CRM techniques – Overview

			Exposures secured by		
end of 2017	Exposures unsecured – Carrying amount	Exposures secured – Carrying amount	Collateral	Financial guarantees	Credit derivatives
USD million					
Total loans	3,619	–	–	–	–
Total debt securities	–	–	–	–	–
Total exposures	**3,619**	**–**	**–**	**–**	**–**
Of which defaulted	–	–	–	–	–

CR4 – Standardised approach – Credit risk exposure and CRM effects

	Exposures before CCF and CRM		Exposures post CCF and CRM		RWAs and RWA density	
Exposure classes	On-balance-sheet amount	Off-balance-sheet amount	On-balance-sheet amount	Off-balance-sheet amount	RWAs	RWA density
end of 2017 (USD million, except where indicated)						
Central governments or central banks	–	–	–	–	–	–
Regional government or local authorities	–	–	–	–	–	–
Public sector entities	–	–	–	–	–	–
Multilateral development banks	–	–	–	–	–	–
International organisations	–	–	–	–	–	–
Institutions	307	–	294	10	158	52%
Corporates	223	49	218	49	227	85%
Retail	–	–	–	–	–	–
Secured by mortgages on immovable property	–	–	–	–	–	–
Exposures in default	–	–	–	–	–	–
Higher-risk categories	–	–	–	–	–	–
Covered bonds	–	–	–	–	–	–
Institutions and corporates with a short-term credit assessment	–	–	–	–	–	–
Collective investment undertakings	–	–	–	–	–	–
Equity	–	–	–	–	–	–
Other items	123	–	123	–	307	250%
Total	**653**	**49**	**635**	**59**	**692**	**100%**

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CR5 – Exposures by asset classes and risk weights

Exposure classes	0%	2%	4%	10%	20%	35%
2017 (USD million)						
Central governments or central banks	–	–	–	–	–	–
Regional government or local authorities	–	–	–	–	–	–
Public sector entities	–	–	–	–	–	–
Multilateral development banks	–	–	–	–	–	–
International organisations	–	–	–	–	–	–
Institutions	–	10	–	–	103	–
Corporates	–	–	–	–	49	–
Retail	–	–	–	–	–	–
Secured by mortgages on immovable property	–	–	–	–	–	–
Exposures in default	–	–	–	–	–	–
Higher-risk categories	–	–	–	–	–	–
Covered bonds	–	–	–	–	–	–
Institutions and corporates with a short-term credit assessment	–	–	–	–	–	–
Collective investment undertakings	–	–	–	–	–	–
Equity	–	–	–	–	–	–
Other items	–	–	–	–	–	–
Total	**–**	**10**	**–**	**–**	**152**	**–**

										Risk weight		
	50%	70%	75%	100%	150%	250%	370%	1250%	Others	Deducted	**Total**	Of which unrated
	–	–	–	–	–	–	–	–	–	–	–	–
	–	–	–	–	–	–	–	–	–	–	–	–
	–	–	–	–	–	–	–	–	–	–	–	–
	–	–	–	–	–	–	–	–	–	–	–	–
	–	–	–	–	–	–	–	–	–	–	–	–
	188	–	–	–	–	–	–	3	–	–	304	25
	–	–	–	218	–	–	–	–	–	–	267	127
	–	–	–	–	–	–	–	–	–	–	–	–
	–	–	–	–	–	–	–	–	–	–	–	–
	–	–	–	–	–	–	–	–	–	–	–	–
	–	–	–	–	–	–	–	–	–	–	–	–
	–	–	–	–	–	–	–	–	–	–	–	–
	–	–	–	–	–	–	–	–	–	–	–	–
	–	–	–	–	–	–	–	–	–	–	–	–
	–	–	–	–	–	123	–	–	–	–	123	–
	188	**–**	**–**	**218**	**–**	**123**	**–**	**3**	**–**	**–**	**694**	**152**

CR6 – Credit risk exposures by portfolio and PD range

end of 2Q17	Original on-balance sheet gross exposure	Off-balance sheet exposures pre CCF	Average CCF	EAD post-CRM and post-CCF	Average PD
(USD million, except where indicated)					
CENTRAL GOVERNMENTS & CENTRAL BANKS					
0.00% to <0.15%	206	–	–	206	0.03
0.15% to <0.25%	–	–	–	–	–
0.25% to <0.50%	–	–	–	–	–
0.50% to <0.75%	–	–	–	–	–
0.75% to <2.50%	–	–	–	–	–
2.50% to <10.00%	–	–	–	–	–
10.00% to <100.00%	–	–	–	–	–
100.00% (Default)	–	–	–	–	–
Sub-total	**206**	**–**	**–**	**206**	**0.03**
INSTITUTIONS					
0.00% to <0.15%	1,186	–	–	1,187	0.05
0.15% to <0.25%	2	–	–	2	0.22
0.25% to <0.50%	2	–	–	2	0.37
0.50% to <0.75%	–	–	–	–	–
0.75% to <2.50%	12	–	–	12	1.10
2.50% to <10.00%	–	–	–	–	–
10.00% to <100.00%	–	–	–	–	–
100.00% (Default)	–	–	–	–	–
Sub-total	**1,202**	**–**	**–**	**1,203**	**0.07**
CORPORATES					
0.00% to <0.15%	2,185	231	1.00	2,406	0.06
0.15% to <0.25%	1	–	–	1	0.22
0.25% to <0.50%	77	3	1.00	80	0.37
0.50% to <0.75%	2	–	–	2	0.64
0.75% to <2.50%	915	37	1.00	951	1.10
2.50% to <10.00%	22	–	–	22	3.34
10.00% to <100.00%	–	–	–	–	–
100.00% (Default)	–	–	–	–	–
Sub-total	**3,202**	**271**	**1.00**	**3,462**	**0.37**
Total (all portfolios)	**4,610**	**271**	**1.00**	**4,871**	**59.91**

Number of obligors	Average LGD	Average maturity	RWAs	RWA density	EL	Value adjustments and provisions
3	0.5173	365	19	9%	–	–
–	–	–	–	0%	–	–
–	–	–	–	0%	–	–
–	–	–	–	0%	–	–
–	–	–	–	0%	–	–
–	–	–	–	0%	–	–
–	–	–	–	0%	–	–
–	–	–	–	0%	–	–
3	**0.5173**	**365**	**19**	**9%**	**–**	**–**
59	0.5491	365	243	20%	–	–
3	0.9629	365	2	97%	–	–
1	0.5550	365	1	76%	–	–
–	–	–	–	0%	–	–
5	0.9504	365	25	217%	–	–
–	–	–	–	0%	–	–
–	–	–	–	0%	–	–
–	–	–	–	0%	–	–
68	**0.5536**	**365**	**271**	**23%**	**–**	**–**
71	0.6377	1,510	1,344	56%	1	–
1	0.5550	1,815	1	122%	–	–
5	0.8677	789	104	130%	–	–
1	0.5150	365	1	72%	–	–
5	0.5553	470	996	105%	5	–
5	0.5583	1,814	57	260%	–	–
–	–	–	–	0%	–	–
–	–	–	–	0%	–	–
88	**0.6198**	**1,209**	**2,503**	**72%**	**6**	**–**
159	**0.5991**	**965**	**2,793**	**57%**	**6**	**–**

CR7 – IRB approach – Effect on the RWAs of credit derivatives used as CRM techniques

	2017	
end of (USD million)	Pre-credit derivatives RWA	Actual RWA
Exposures under FIRB		
Central governments and central banks	–	–
Institutions	–	–
Corporates – SMEs	–	–
Corporates – Specialised lending	–	–
Corporates – Other	–	–
Exposures under AIRB		
Central governments and central banks	19	19
Institutions	272	271
Corporates – SMEs	–	–
Corporates – Specialised lending	–	–
Corporates – Other	2,507	2,503
Retail – Secured by real estate SMEs	–	–
Retail – Secured by real estate non- SMEs	–	–
Retail – Qualifying revolving	–	–
Retail – Other SMEs	–	–
Retail – Other non-SMEs	–	–
Equity IRB	40	40
Other non credit obligation assets	1	1
Total	**2,839**	**2,834**

CR8 – RWA flow statements of credit risk exposures under the IRB approach

2017	RWA amounts	Capital requirements
USD million		
RWAs as at the end of the previous reporting period	**2,347**	**188**
Asset size	439	35
Asset quality	42	3
Model updates	–	–
Methodology and policy	8	1
Acquisitions and disposals	–	–
Foreign exchange movements	–	–
Other	–	–
RWAs as at the end of the reporting period	**2,836**	**227**

CR9 – IRB approach – Backtesting of PD per exposure class

2017	PD range (%)	External rating equivalent	Weighted average PD (%)	Arithmetic average PD by obligors (%)	Number of obligors: End of previous year	Number of obligors: End of the year
CENTRAL GOVERNMENTS & CENTRAL BANKS						
	0.00 to <= 0.021	AAA	0.02%	0.02%	1	1
	> 0.021 to <= 0.027	AA+	0.00%	0.00%	–	–
	> 0.027 to <= 0.034	AA	0.03%	0.03%	2	2
	> 0.034 to <= 0.044	AA-	0.00%	0.00%	1	–
	> 0.044 to <= 0.056	A+	0.00%	0.00%	–	–
	> 0.056 to <= 0.068	A	0.00%	0.00%	–	–
	> 0.068 to <= 0.097	A-	0.00%	0.00%	1	–
	> 0.097 to <= 0.167	BBB+	0.00%	0.00%	–	–
	> 0.167 to <= 0.285	BBB	0.00%	0.00%	–	–
	> 0.285 to <= 0.487	BBB-	0.00%	0.00%	–	–
	> 0.487 to <= 0.839	BB+	0.00%	0.00%	–	–
	> 0.839 to <= 1.442	BB	0.00%	0.00%	–	–
	> 1.442 to <= 2.478	BB-	0.00%	0.00%	–	–
	> 2.478 to <= 4.259	B+	0.00%	0.00%	–	–
	> 4.259 to <= 7.311	B	0.00%	0.00%	–	–
	> 7.311 to <= 12.550	B-	0.00%	0.00%	–	–
	> 12.550 to <= 21.543	CCC+	0.00%	0.00%	–	–
	> 21.543 to <= 100	CCC to C	0.00%	0.00%	1	–
INSTITUTIONS						
	0.00 to <= 0.021	AAA	0.00%	0.00%	–	–
	> 0.021 to <= 0.027	AA+	0.00%	0.00%	–	–
	> 0.027 to <= 0.034	AA	0.00%	0.00%	1	–
	> 0.034 to <= 0.044	AA-	0.04%	0.04%	9	15
	> 0.044 to <= 0.056	A+	0.05%	0.05%	2	4
	> 0.056 to <= 0.068	A	0.06%	0.06%	24	22
	> 0.068 to <= 0.097	A-	0.07%	0.07%	1	12
	> 0.097 to <= 0.167	BBB+	0.13%	0.13%	3	5
	> 0.167 to <= 0.285	BBB	0.22%	0.22%	–	3
	> 0.285 to <= 0.487	BBB-	0.37%	0.37%	2	1
	> 0.487 to <= 0.839	BB+	0.64%	0.64%	1	1
	> 0.839 to <= 1.442	BB	1.10%	1.10%	1	5
	> 1.442 to <= 2.478	BB-	0.00%	0.00%	–	–
	> 2.478 to <= 4.259	B+	0.00%	0.00%	–	–
	> 4.259 to <= 7.311	B	0.00%	0.00%	–	–
	> 7.311 to <= 12.550	B-	0.00%	0.00%	–	–
	> 12.550 to <= 21.543	CCC+	0.00%	0.00%	–	–
	> 21.543 to <= 100	CCC to C	0.00%	0.00%	–	–
CORPORATES						
	0.00 to <= 0.021	AAA	0.00%	0.00%	–	–
	> 0.021 to <= 0.027	AA+	0.00%	0.00%	–	–
	> 0.027 to <= 0.034	AA	0.03%	0.03%	2	3
	> 0.034 to <= 0.044	AA-	0.04%	0.04%	3	3
	> 0.044 to <= 0.056	A+	0.05%	0.05%	25	25
	> 0.056 to <= 0.068	A	0.06%	0.06%	12	14
	> 0.068 to <= 0.097	A-	0.07%	0.07%	10	17
	> 0.097 to <= 0.167	BBB+	0.13%	0.13%	8	9
	> 0.167 to <= 0.285	BBB	0.22%	0.22%	4	1
	> 0.285 to <= 0.487	BBB-	0.37%	0.37%	2	5
	> 0.487 to <= 0.839	BB+	0.64%	0.64%	–	1
	> 0.839 to <= 1.442	BB	1.10%	1.10%	4	5
	> 1.442 to <= 2.478	BB-	0.00%	0.00%	2	–
	> 2.478 to <= 4.259	B+	3.25%	3.25%	5	3
	> 4.259 to <= 7.311	B	5.58%	5.58%	2	2
	> 7.311 to <= 12.550	B-	0.00%	0.00%	1	–
	> 12.550 to <= 21.543	CCC+	0.00%	0.00%	–	–
	> 21.543 to <= 100	CCC to C	0.00%	0.00%	–	–

In the year 2017, there was 1 defaulted obligor which was also a new defaulted obligor.

CR10 – IRB (specialised lending and equities)

end of 2017 (USD million, except where indicated)	On-balance-sheet amount	Off-balance-sheet amount	Risk weight	Exposure amount	RWAs	Capital requirements
Equities under the simple risk-weighted approach						
Regulatory categories						
Private equity exposures	–	–	190%	–	–	–
Exchange-traded equity exposures	13	–	290%	13	38	3
Other equity exposures	1	–	370%	1	2	–
Total	**14**	**–**	–	**14**	**40**	**3**

Counterparty credit risk

OVERVIEW

Counterparty credit risk arises from OTC and exchange-traded derivatives, repurchase agreements, securities lending and borrowing and other similar products and activities. The related credit risk exposures depend on the value of underlying market factors (eg. interest rates and foreign exchange rates), which can be volatile and uncertain in nature. CSSEL enters into derivative contracts in the normal course of business principally for market-making and positioning purposes, as well as for risk management needs, including mitigation of interest rate, foreign currency, credit and other risks.

CSSEL calculates Exposure at Default ('EAD') for derivatives under the Counterparty Credit Risk Mark-to-market Method ('CCRMTM') approach. The CCRMTM calculation takes into account potential future credit exposure ('PFCE') and thus may generate exposures greater than the derivative net replacement values.

CCR1 – Analysis of CCR exposure by approach

end of 2017	Notional	Replacement cost/current market value	Potential future-credit exposure	EEPE	Multiplier	EAD post-CRM	RWAs
2017 (USD million, except where indicated)							
Mark to market	–	2,494	8,000	–	–	4,481	2,141
Original exposure	–	–	–	–	–	–	–
Standardised approach	–	–	–	–	–	–	–
IMM (for derivatives and SFTs)	–	–	–	–	–	–	–
Of which securities financing transactions	–	–	–	–	–	–	–
Of which derivatives and long settlement transactions	–	–	–	–	–	–	–
Of which from contractual cross- product netting	–	–	–	–	–	–	–
Financial collateral simple method (for SFTs)	–	–	–	–	–	–	–
Financial collateral comprehensive method (for SFTs)	–	–	–	–	–	33,954	7,131
VaR for SFTs	–	–	–	–	–	–	–
Total	**–**	**–**	**–**	**–**	**–**	**–**	**9,272**

CCR2 – CVA capital charge

end of 2017	2017 Exposure value	2017 RWAs
USD million		
Total portfolios subject to the advanced method	–	–
(i) VaR component (including the 3× multiplier)	–	–
(ii) SVaR component (including the 3× multiplier)	–	–
All portfolios subject to the standardised method	2,818	1,190
Based on the original exposure method	–	–
Total subject to the CVA capital charge	**2,818**	**1,190**

CCR3 – Standardised approach – CCR exposures by regulatory portfolio and risk

Exposure classes	0%	2%	4%	10%	20%
2017 (USD million)					
Central governments or central banks	–	–	–	–	–
Regional government or local authorities	–	–	–	–	–
Public sector entities	–	–	–	–	–
Multilateral development banks	19	–	–	–	–
International organisations	–	–	–	–	–
Institutions	–	2,224	–	–	892
Corporates	–	–	–	–	3
Retail	–	–	–	–	–
Institutions and corporates with a short-term credit assessment	–	–	–	–	968
Other items	–	–	–	–	–
Total	**19**	**2,224**	**–**	**–**	**1,863**

					Risk weight		
50%	70%	75%	100%	150%	Others	**Total**	Of which unrated
–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–
–	–	–	86	–	–	86	86
–	–	–	–	–	–	19	–
–	–	–	–	–	–	–	–
301	–	–	–	–	–	3,417	2,684
–	–	–	467	–	–	470	406
–	–	–	–	–	–	–	–
128	–	–	–	1	–	1,097	–
–	–	–	–	–	–	–	–
429	**–**	**–**	**553**	**1**	**–**	**5,089**	**3,176**

CCR4 – IRB approach – CCR exposures by portfolio and PD scale

end of 2017	EAD post-CRM	Average PD	Number of obligors	Average LGD	Average maturity	RWAs	RWA density
CENTRAL GOVERNMENTS & CENTRAL BANKS							
PD scale							
0.00% to <0.15%	1,794	0.04	7	0.69	77	248	0.14
0.15% to <0.25%	–	–	–	–	–	–	–
0.25% to <0.50%	–	–	–	–	–	–	–
0.50% to <0.75%	–	–	–	–	–	–	–
0.75% to <2.50%	–	–	–	–	–	–	–
2.50% to <10.00%	–	–	–	–	–	–	–
10.00% to <100.00%	–	–	–	–	–	–	–
100.00% (Default)	–	–	–	–	–	–	–
Sub-total	**1,794**	0.04	**7**	0.69	**77**	**248**	0.14
INSTITUTIONS							
0.00% to <0.15%	14,113	0.06	95	0.56	153	1,973	0.14
0.15% to <0.25%	726	0.22	8	0.56	172	341	0.47
0.25% to <0.50%	45	0.37	4	0.55	103	28	0.62
0.50% to <0.75%	6	0.64	1	1.00	461	9	1.47
0.75% to <2.50%	60	1.10	4	1.00	365	138	2.29
2.50% to <10.00%	61	8.51	5	0.56	40	125	2.03
10.00% to <100.00%	–	–	–	–	–	–	–
100.00% (Default)	–	–	–	–	–	–	–
Sub-total	**15,011**	0.11	**117**	0.56	**154**	**2,614**	0.17
CORPORATES							
0.00% to <0.15%	15,969	0.04	1,415	0.60	220	2,386	0.15
0.15% to <0.25%	390	0.22	82	0.55	271	199	0.51
0.25% to <0.50%	712	0.37	50	0.60	147	502	0.70
0.50% to <0.75%	340	0.64	33	0.55	158	293	0.86
0.75% to <2.50%	1,078	1.37	158	0.58	121	1,377	1.28
2.50% to <10.00%	270	4.30	116	0.59	75	507	1.88
10.00% to <100.00%	–	–	–	–	–	–	–
100.00% (Default)	5	100.00	1	0.56	1,825	5	1.00
Sub-total	**18,764**	0.23	**1,855**	0.60	**210**	**5,269**	0.28
Total (all portfolios)	**35,569**	0.17	**1,979**	0.59	**180**	**8,131**	0.23

CCR5-A – Impact of netting and collateral held on exposure values

	Gross positive fair value or net carrying amount	Netting benefits	Netted current credit exposure	Collateral held	Net credit exposure
2017 (USD million)					
Derivatives	22,110	10,816	11,294	14,984	5,020
SFTs	185,725	19,501	166,224	157,758	27,054
Cross-product netting	–	–	–	–	–
Total	**207,835**	**30,317**	**177,518**	**172,742**	**32,074**

CCR6 – Credit derivatives exposures

	Credit derivative hedges		
end of 2017	Protection bought	Protection sold	Other credit derivatives
Notionals (USD billion)			
Single-name credit default swaps	–	–	2,225
Credit options	–	–	–
Other	–	–	–
Total notionals	**–**	**–**	**2,225**
Fair values (USD billion)			
Positive fair value (asset)	–	–	8
Negative fair value (liability)	–	–	(53)

CCR8 – Exposures to CCPs

	2017	
	EAD post-CRM	RWA
USD million		
Exposures to QCCPs (total)	**–**	**113**
Exposures for trades at QCCPs (excluding initial margin and default fund contributions)	1,240	45
of which OTC derivatives	–	–
of which exchange-traded derivatives	361	27
of which SFTs	879	18
of which netting sets where cross-product netting has been approved	–	–
Initial margin	983	–
Pre-funded default fund contributions	271	68
Alternative calculation of own funds requirements for exposures	–	–
Exposures to non-QCCPs (total)	**–**	**–**
Exposures for trades at non-QCCPs (excluding initial margin and default fund contributions)	–	–
of which OTC derivatives	–	–
of which exchange-traded derivatives		–
of which SFTs	–	–
of which netting sets where cross-product netting has been approved	–	–
Initial margin	–	–
Pre-funded default fund contributions	–	–
Unfunded default fund contributions	–	–

Securitisation

OVERVIEW

A traditional securitisation is a structure where an underlying pool of assets is sold to a special purpose entity ('SPE') which issues tranched securities that are collateralised by, and which pay a return based on the underlying asset pool.

A synthetic securitisation is a tranched structure where the credit risk of an underlying pool of exposures is transferred, in whole or in part, through the use of credit derivatives or guarantees that serve to hedge the credit risk of the portfolio. In both traditional and synthetic securitisations, risk is dependent on the seniority of the retained interest and the performance of the underlying asset pool.

OBJECTIVES IN RELATION TO SECURITISATION ACTIVITY AND CSIUK'S ROLE

Although CSSEL has no securitisations in the Banking Book, it has previously acted as derivative counterparty for securitisation SPEs. CSSEL does hold securitisation positions in its Trading Book. CSSEL's key objective in relation to Trading Book securitisation is to meet clients' investment and divestment needs through its market making role in securitised products across all major collateral types.

CSSEL's exposure resulting from continuing involvement in transferred financial assets is generally limited to beneficial interests typically held in the form of instruments issued by SPEs that are senior, subordinated or equity tranches or derivative instruments.

Beneficial interests, which are valued at fair value, include rights to receive all or portions of specified cash inflows received by an SPE, including, but not limited to, senior and subordinated shares of interest, principal, or other cash inflows to be 'passed through' or 'paid through' residual interests, whether in the form of debt or equity. Any changes in the fair value of these beneficial interests are recognised in CSSEL's financial statements.

RISKS ASSUMED AND RETAINED

The key risks retained are related to the performance of the underlying assets. These risks are summarised in the securitisation pool level attributes: PDs of underlying loans (default rate), severity of loss (LGD) and prepayment speeds.

The transactions may also be exposed to general market risk, credit spread and counterparty credit risk (see below).

Financial models project risk drivers based on market interest rates and volatility and macro-economic variables.

For re-securitisation risk, models take a 'look through' approach where they model the behaviour of the underlying securities based on their own collateral and then transmit that to the re-securitised position.

The impact of liquidity risk for securitisation products is embedded within CSSEL's historical simulation model through the incorporation of market data from stressed periods, and in the scenario framework through the calibration of price shocks to the same period.

Correlation and first-to-default products are valued using a correlation model which uses the market implied correlation and detailed market data such as constituent spread term structure and constituent recovery. The risks embedded in securitisation and re-securitisations are similar and include spread risk, recovery risk, default risk and correlation risk. The risks for different seniority of tranches will be reflected in the tranche price sensitivities to each constituent in the pools. The complexity of the correlation portfolio's risk lies in the level of convexity and inherent cross risk, for example, the risk of large spread moves, and the risk of spread and correlation moving together. The risk limit framework is designed to address the key risks for the correlation trading portfolio.

MANAGEMENT OF CREDIT AND MARKET RISK

CSSEL has in place a comprehensive risk management process whereby the Front Office and Risk monitor positions and position changes, portfolio structure and trading activity and calculate a set of risk measures on a daily basis using risk sensitivities and loss modelling methodologies.

CSSEL has set limits for the purpose of managing its risk in relation to securitisations and re-securitisations. These limits cover exposure measures, risk sensitivities, VaR and capital measures with the majority monitored on a daily basis.

Retained Banking Book exposures for transactions are risk managed on the same basis as similar Trading Book transactions. Other transactions are managed in line with their individual structural or parameter requirements.

Where counterparty credit risk exposure is identified for a particular transaction, there is a requirement for it to be approved through normal credit risk management processes with collateral taken as required. CSSEL may also use various proxies including corporate single name and index hedges to mitigate the price and spread risks to which it is exposed. Hedging decisions are made by the trading desk based on current market conditions and will be made in consultation with Risk, requiring approval under CSSEL's pre-trade approval governance process.

Risk monitors portfolio composition by capital structure and collateral type on a daily basis with subordinate exposure and each collateral type subject to separate risk limits. In addition, the internal risk methodology is designed such that risk charges are based on the seniority the particular security holds in the capital structure, the less senior the bond the higher the risk charges.

CREDIT RISK MITIGATION

There are no instances where CSSEL has applied credit risk mitigation approaches to Banking Book securitisation or re-securitisation exposures. CSSEL does not typically retain material servicing responsibilities from securitisation activities.

In the normal course of business, CSSEL may hold tranches which have a monoline guarantee. No benefit from these guarantees is currently included in the calculation of regulatory capital.

CALCULATION OF RWAS

Securities are classified by the nature of the collateral (eg. commercial mortgages and corporate loans) and the seniority each security has in the capital structure (eg. senior, mezzanine, subordinate), which in turn will be reflected in the transaction risk assessment.

For Trading Book securitisations, specific risk of securitisation transactions is calculated using the IRB or Standardised Approach as applicable to the underlying asset type of the securitisation position; general market risk in securitisations is captured in market risk models.

For Banking Book securitisations, the RWAs are calculated under the available IRB approaches.

ACCOUNTING POLICIES

The accounting policy with respect to special purpose entities and recognition of gains on sale for securitisations is described in the Significant Accounting Policies Note of the CSSEL 2017 Annual Report, with further information provided in the Interests in Other Entities Note.

The accounting policy with respect to valuation of securitisation positions is described in the Financial Instruments Note of the CSSEL 2017 Annual Report. The valuation of assets awaiting securitisation follows the same policies as for other assets, as described in the above Note. The assignment of those assets awaiting securitisation to the banking or trading book follows the same policies as for other assets, further described in the Notes to the CSSEL 2017 Annual Report.

The policies for recognising liabilities on the balance sheet for arrangements that could require the institution to provide financial support for securitised assets follow the same policies as for other provisions and financial guarantees. These policies are described in the Significant Accounting Policies Note of the CSSEL 2017 Annual Report.

TRADING BOOK SECURITISATION EXPOSURES

There was USD 21m of traditional securitisation positions outstanding at 31 December 2017 that was held in the Trading Book at that date. These were classified as residential mortgages. They were all unrated positions and deducted from capital.

There were no losses, impairments or past due items in relation to securitisation positions in the Trading Book exposures as at 31 December 2017.

BANKING BOOK SECURITISATION EXPOSURES

The amount of exposures securitised by CSIUK and which were outstanding at 31 December 2016 and securitisation positions held in the Banking Book at that date was equal to zero.

There were no losses, impairments or past due items in relation to securitisation positions in the Banking Book exposures as at 31 December 2017.

Market risk

OVERVIEW

CSSEL has policies and processes in place to ensure that market risk is captured, accurately modelled and reported, and effectively managed. Trading and non-trading portfolios are managed at various organisational levels, from the overall risk positions at entity level down to specific portfolios. CSSEL uses market risk measurement and management methods in line with industry standards. These include general tools capable of calculating comparable exposures across CSSEL's many activities and focused tools that can specifically model unique characteristics of certain instruments or portfolios. The tools are used for internal market risk management, internal market risk reporting and external disclosure purposes. The principal measurement methodologies are VaR and scenario analysis. The risk management techniques and policies are regularly reviewed to ensure they remain appropriate.

MARKET RISK CAPITAL REQUIREMENTS

The following tables detail the components of CSSEL's capital requirement for market risk (Trading Book unless otherwise stated):

MR1 – Market risk under standardized approach

end of	RWAs	Capital requirements
Risk-weighted assets (USD million)		
Outright products		
Interest rate risk (general and specific)	–	–
Equity risk (general and specific)	–	–
Foreign exchange risk	435	35
Commodity risk	–	–
Options		
Simplified approach	–	–
Delta-plus method	–	–
Scenario approach	–	–
Securitisation (specific risk)	–	–
Total risk-weighted assets	**435**	**35**

MR2-A – Market risk capital requirements under IMA

	2017		2016	
(USD million)	RWAs	Capital requirements	RWAs	Capital requirements
1 VaR (higher of values a and b)	**565**	**45**	**889**	**71**
(a) Spot VaR	204	16	259	21
(b) Average of the daily VaR preceding 60 business days * multiplication factor	565	45	889	71
2 SVaR (higher of values a and b)	**1,812**	**145**	**2,239**	**179**
(a) Spot SVaR	722	58	652	52
(b) Average of the daily SVaR preceding 60 business days * multiplication factor	1,812	145	2,239	179
3 IRC (higher of values a and b)	**1,742**	**139**	**1,145**	**92**
(a) Spot IRC	1,284	103	1,145	92
(b) Average of the IRC number over the preceding 12 weeks	1,742	139	829	66
4 Other [1]	1,943	155	3,770	302
5 Total	**6,062**	**485**	**8,044**	**644**

[1] Risk not in VaR addon

The following table details the RWA flow statement of market risk exposures (Trading Book unless otherwise stated):

MR2-B – RWA flow statements of market risk exposures under the IMA

(USD million)	VaR	SVaR	IRC	Compre-hensive risk measure	Other	Total RWAs	Total capital requirements
1 RWAs at previous yea end	889	2,239	1,145	n/a	3,770	8,044	644
(1a) Regulatory adjustment	45	109	-	n/a	-	154	12
(1b) RWAs at the previous year-end (end of the day)	934	2,349	1,145	n/a	3,770	8,198	656
2 Movement in risk levels	(305)	39	136	n/a	(1,324)	(1,454)	(116)
3 Model updates/changes	241	222	-	n/a	-	463	37
4 Methodology and policy	(135)	(9)	3	n/a	(325)	(466)	(37)
5 Acquisitions and disposals	-	-	-	n/a	-	-	-
6 Foreign exchange movements	-	-	-	n/a	-	-	-
7 Other	(82)	(289)		n/a	(178)	(548)	(44)
(8a) RWAs at the end of the reporting period (end of the day)	654	2,311	1,284	n/a	1,943	6,193	495
(8b) Regulatory adjustment	(90)	(499)	458	n/a	-	(130)	(10)
8 RWAs at the end of the reporting period	565	1,812	1,742	n/a	1,943	6,062	485

RISK MEASUREMENT AND MANAGEMENT

Internal Models Approach ('IMA') models are used to quantify market risk capital requirements in the trading portfolio, which includes those financial instruments treated as part of the Trading Book for regulatory capital purposes. The trading portfolio includes a majority of trading assets and liabilities, selected fair-valued positions of investment securities, other investments, other assets (mainly derivatives used for hedging, loans and real estate held-for-sale), short-term borrowings, long-term debt and other liabilities (mainly derivatives used for hedging).

CSSEL is mainly active in the Credit and Equity trading markets of the world, using the majority of common trading and hedging products in these markets, including derivatives such as credit default swaps, futures and, to a lesser extent, options. CSSEL conducts its Trading Book activities primarily through the Global Markets and Asia Pacific divisions.

CSSEL provides access to equity market products such as equity swaps, index futures, exchange traded funds and participatory-notes, participates as market maker on global stock exchanges and facilitates underwriting and syndication activities. It participates as market maker in fixed income bonds for EMEA, provides issue underwriting and bridge loan services and portfolio advisory solutions. It also trades in structured notes and provides secured financing using swaps and repos.

SCOPE OF IMA CALCULATIONS: CRITERIA FOR INCLUSION IN THE TRADING BOOK

CSSEL falls within the scope of the CS group's Trading Book Policy. The policy sets out the principles for the classification of products between Trading and Banking Book for the purpose of regulatory capital and market risk measurement. Specifically, it sets out the criteria which must be met in order to allocate positions to the Trading Book. The policy is common to all entities within the CS group and adherence to its requirements is mandatory.

The criteria for Trading Book classification are, broadly, that the position must be a transferable or hedgeable financial instrument; that there must be trading intent or a hedging relationship with another Trading Book item; and that daily fair value methodology must be applied for regulatory and risk management purposes. The fair value methodology is itself the subject of policies, procedures and controls that exist separately as part of the overall valuation process operated across the CS group.

In addition to the policy document, the governance arrangements relating to the Trading Book classification, management and control incorporate a number of components. These include a Trading Book Eligibility Committee which is responsible for i) reviewing and approving (or rejecting) proposed transfers between Trading and Banking Books, and ii) reviewing complex Trading/Banking Book classification decisions. Trading Book status is subject to re-validation by Product Control each year, and additionally on an ad-hoc basis when required.

Trading Book classification is one of the criteria for inclusion of positions in the scope of calculations for regulatory capital requirements under the IMA as defined in the IMA waiver.

INTERNAL MODELS APPROACH (IMA) FRAMEWORK

The key components of the market risk IMA framework are VaR (intended as both regulatory VaR and stressed VaR) and IRC. This is complemented by a Risks Not In VaR ('RNIV') Framework.

Within CSSEL's model-based calculations of market risk, values measured during the period are summarised as follows:

MR3 – Regulatory VaR, stressed VaR and Incremental Risk Charge

in / end of	2017	2016
(USD million)		
Regulatory VaR (10 day 99%)		
Maximum value	25	48
Average value	15	31
Minimum value	11	15
Period end	16	21
Stressed VaR (10 day 99%)		
Maximum value	60	106
Average value	40	65
Minimum value	27	41
Period end	58	52
IRC (99.9%)		
Maximum value	172	94
Average value	119	50
Minimum value	79	30
Period end	103	92

CSSEL received permission from the PRA to use internal models to calculate Trading Book market risk capital requirements under the IMA permission. CSSEL applies the IMA models to the majority of the positions in its Trading Book. CSSEL continues to seek regulatory approval for ongoing enhancements to the IMA methodologies where applicable. The VaR model does not cover all identified market risk types, and as such CSSEL also captures Risks-Not-In-VaR (RNIV) through capital add-ons. Credit correlation products (including ABS positions) are not fully covered by the VaR model approval. These positions are permitted to remain in VaR, but CSSEL is additionally required to hold capital under standard rules for specific risk as set out in the CRR.

CSSEL uses a historical simulation approach in modelling VaR. The VaR model used for both Regulatory and Risk Management purposes is calculated as a 99th percentile measure using a 10-day holding period. Both measures use a 2-year data period which is updated weekly and apply exponential weighting with a time decay factor of 0.994 to provide sufficient responsiveness to market regime changes. For Regulatory Stressed VaR, CSSEL uses a 99th percentile, one tailed confidence interval for a 1-year data period of financial stress without a time decay factor. No difference exists between the Stressed VaR (SVaR) model used for management purposes and the model used for regulatory purposes.

The 10-day VaR is modelled directly using overlapping 10-day returns. There are two approaches used to incorporate Specific Risk:

- **Full Simulation approach:** This approach uses an individual risk factor for each security. Therefore, for each security, this approach incorporates both Specific Risk and General Risk within the same risk factor.
- **Regression approach:** This approach uses a common risk factor across related securities in conjunction with additional specific risk add-ons for each security. This modelling approach divides historical price variations into Specific and General market risk components.

Under the Full Simulation approach, scenario P&Ls incorporating both specific and general risk are aggregated in the Historical Simulation VaR. Under the Regression approach, scenario P&Ls corresponding to general risk are aggregated in the Historical Simulation VaR, while for each specific risk, a VaR is calculated by applying either a 1st or a 99th percentile historical move (depending on the direction of the position). Specific risk VaR components are aggregated with Historical Simulation VaR under a zero correlation assumption (square root sum of squares).

The CSSEL VaR model uses Full Revaluation, Partial Revaluation or Taylor Series approximation, depending on the individual portfolios and their respective degree of non-linearity. Full Revaluation and Partial Revaluation are the most accurate approaches and use the same Front Office valuation models that are used for fair value purposes:

- Under Full Revaluation, scenario P&L is calculated by re-evaluation for every historical scenario. Given the resulting computational cost, Full Revaluation is generally reserved for non-linear products with material dependence on multiple risk factors, or vanilla hedges against such products.
- Under Partial Revaluation, P&L is calculated by re-evaluation at the nodes of a grid of possible market moves. Scenario P&L is then calculated by interpolation over the grid. Partial Revaluation is an efficient and accurate approach for products with low dimensionality (in terms of the number of material risk drivers). Typically the grid has two dimensions, representing spot price and volatility.

The methods used to simulate the potential movements in risk factors are primarily dependent on the risk types. For risk types pertaining to equity prices, FX rates and volatilities, the returns are modelled as a function of proportional historical moves. For certain spread risks, the returns are modelled as a function of absolute historical moves. For some risk types, such as interest rates, swap spreads and EM credit spreads, a mixed approach is used.

The SVaR is calculated as a 10-day 99th percentile with no time decay factor and uses a 1-year time period corresponding to significant financial stress for the legal entity's current portfolio. The SVaR measure is identical to the Regulatory VaR in the following aspects:

- 10-day VaR is modelled directly using overlapping 10-day returns;
- Use of the same individual VaR risk types and aggregation methodology;
- The same coverage of the positions/underlying securities using time series market data;
- The same set of relevant trading book positions;
- The same IT infrastructure; and
- The same valuation approach.

The stress period chosen is reviewed on a monthly basis and includes all possible SVaR windows from 2006 on, staggered by one month. Regulatory SVaR is maximised for the average of the preceding 60 days of actual positions for all stressed windows

within the review. The valuation approach used in selecting the maximising SVaR window is generally the same as for calculating Regulatory VaR. The only exception concerns Equity positions where the Regulatory VaR calculation uses Full Revaluation. Given the computational cost of calculating Full Revaluation over the twelve-year period from 2006 during SVaR window selection, Full Revaluation is used for the most recent two-year period and also a two-year period around the current SVaR window, and a sensitivity-based approximation is used in other periods. The appropriateness of this approach is monitored on a monthly basis by calculating the Full Revaluation and sensitivity-based approaches over the full twelve-year history for a single portfolio date.

The SVaR window for the CSSEL legal entity as of the December 2017 month-end assessment is 'January 2008 – December 2008'.

CSSEL imposes robust requirements around minimum data standards which ensure the accuracy and reliability of data and parameters used in the VaR model. CSSEL operates a global function responsible for data validation, aggregation & reporting, and has established operational procedures which are based on the policies outlined in the Market Risk and Operational Risk Framework. The procedures describe the business process and controls applied to verify the completeness and accuracy of the system feeds received for sensitivities and key risk data attributes. These controls include verifying the Market Risk data inputs received from upstream systems, validating the Market Risk sensitivities and performing reconciliations. The controls include automated reviews for data completeness, validation checks to ensure report completeness and accuracy, including review of breaches, back testing exception process review, large moves analysis, and report review. The controls are identified, documented, and are subjected to ongoing monitoring for effectiveness including supervisory oversight and control governance.

For any implementation of new/changed models, CSSEL relies on the standard change control processes overseen by a dedicated change function to review and sign-off changes to impacted systems prior to release.

CSSEL executes a T+1 process for validating data. Data delivery agreements are monitored by the Risk and Finance IT teams. The global data validation, aggregation & reporting function may modify the risk data to normalise it across the sources, enrich the data to infer internal model parameter inputs or additional attributes for reporting and MI purposes, etc. The function also makes adjustments for misbooking or valuation errors from front office valuation systems.

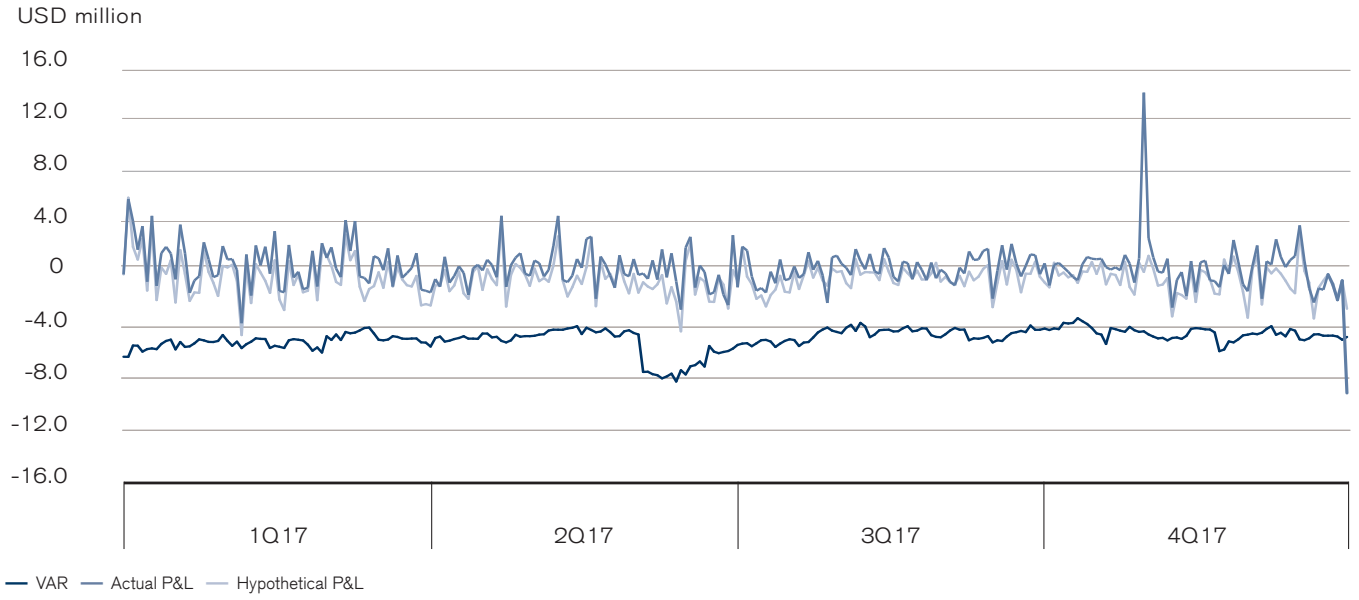
CSSEL employs a range of different control processes to help ensure that the models used for market risk remain appropriate over time. As part of these control processes, both the Market Risk Quant Steering Committee and the UK Model Performance Committee review model performance and approve any new or amended models.

VALUE AT RISK BACKTESTING

Various techniques are used to assess the accuracy of the VaR model used for trading portfolios, including backtesting. In line with industry practice, CSSEL undertakes backtesting using actual and hypothetical daily trading revenues. Actual and hypothetical daily trading revenues are compared with a regulatory 99% VaR calculated using a one-day holding period. A backtesting exception occurs when the daily trading loss exceeds the daily VaR estimate.

For capital purposes, a backtesting multiplier is added for every backtesting exception over four in the prior rolling 12-month period. This is calculated using the higher number of exceptions under either actual or hypothetical daily trading revenues. The backtesting multiplier is equal to zero as CSSEL had one backtesting exception in 2017 (2016: five).

MR4 – Backtesting VaR vs Actual/Hypothetical P&L



Date	Actual P&L	Hypothetical P&L	VaR	Exception Category	Exception Summary
29 Dec 2017	$(9.1)m	$(2.6)m	$4.8m	Actual P&L	The Actual P&L losses were due to month-end valuation adjustments in Prime Services business within Global Markets division.

Incremental risk capital charge

The Incremental Risk Charge (IRC) capitalizes issuer default and migration risk in the trading book, such as bonds or credit default swaps, but excludes securitizations and correlation trading. CSSEL has received PRA approval to use the IRC model within the Specific Risk Capital Framework for the bank. CSSEL continues to hold regulatory approval for ongoing enhancements to the IRC methodology, and the IRC model is subject to regular reviews by PRA.

The IRC model assesses risk at a 99.9% confidence level over a one year time horizon assuming that positions are sold and replaced one or more times, depending on their liquidity which is modelled by the liquidity horizon.

The IRC portfolio model is a Merton-type portfolio model designed to calculate the aggregate loss at the 99.9% confidence level based on aggregated exposures that are obtained from individual transactions according to an aggregation model. Key model feature is that defaults and rating migrations are correlated using a Gaussian copula. The model's design is based on the same principles as industry standard credit portfolio models including the Basel II AIRB model.

IRC parameters are based either on i) the AIRB reference data sets used for the PD and LGD estimation (migration matrix including PDs, LGDs, LGD correlation and volatility), or ii) data used for indices published by CSSEL.

To achieve the required soundness standard, i.e. comparable to those under the IRB approach, CSSEL uses AIRB LGD parameters calibrated to a downturn. The conservatism of this choice is being monitored and reported on a quarterly basis.

The liquidity horizon represents time required to sell the positions or hedge all material risk covered by the IRC model in a stressed market. Liquidity horizons are modelled according to current regulatory requirements.

The IRC model and liquidity horizon methodology have been validated by the Model Risk Management team in accordance with the firm's Model Risk Model Risk Management – Model Validation policy.

As an outcome of these validation reviews CSSEL decided to adopt the Constant Position Assumption, i.e. a single liquidity horizon of one year; this corresponds to the most conservative assumption on liquidity horizons that is available under current IRC regulatory rules. Following regulatory approval, the Constant Position Assumption has been implemented in 2017 for CSSEL.

The IRC model is implemented within the same Market Risk infrastructure that is used for VaR; this in particular ensures a consistent treatment of source data between VaR and IRC.

SCENARIO ANALYSIS

Stress testing complements other risk measures by capturing CSSEL's exposure to unlikely but plausible events, which can be expressed through a range of significant moves across multiple financial markets. The majority of scenario analysis calculations performed are specifically tailored toward the risk profile of particular businesses, and limits may be established if they are considered the most appropriate control. In addition, to identify areas of risk concentration and potential vulnerability to stress events at entity level, a set of scenarios is consistently applied across all businesses to assess the impact of significant, simultaneous movements across a broad range of markets and exposure classes.

Stress testing is a fundamental element of CSSEL's risk control framework, with results used in risk appetite discussions and strategic business planning, and to support the internal capital adequacy assessment ('ICAAP'). Stress test scenarios are conducted on a regular basis and the results, trend information and supporting analysis are reported to the Board of Directors, senior management and business lines.

CSSEL's stress testing framework is governed through a dedicated steering committee that operates across the CS group. Scenarios can be defined with reference to historic events or based on forward-looking, hypothetical events that could impact CSSEL's positions, capital, or profitability. The scenarios are reviewed and updated as markets and business strategies evolve, and new scenarios are designed by the Risk division in collaboration with Global Research and business divisions.

Operational risk

OVERVIEW

The Operational Risk Policy sets out the principles and components for managing operational risk in CSSEL as part of the Enterprise Risk and Control Framework (ERCF). The ERCF provides a systematic and integrated approach to the management of operational risk, including compliance risk. The ERCF comprises a series of interrelated components that CSSEL uses to identify, measure, monitor and control risks in line with its risk appetite across all divisions, regions and legal entities. These components include policies, systems, processes, measurement techniques, reporting mechanisms and governance arrangements that have been designed to provide a robust and comprehensive approach to managing operational risks. The ERCF components are periodically updated and enhanced to ensure they remain effective and that the components work well together.

RISK APPETITE

The ERCF Risk Appetite is a forward-looking view of risk acceptance that articulates the nature, types and levels of operational risk that the Company is willing to assume in pursuit of its business activities. It sets out the boundaries within which senior management is required to operate when pursuing CSSEL's strategy. The Risk Appetite is expressed in both quantitative and qualitative terms where quantitative tolerance levels are based on operational risk incidents and qualitative statements cover risk outcomes that should be avoided. The tolerance levels and statements for CSSEL are approved by the Board. Any breaches of the Operational Risk Appetite trigger actions under the Responses Framework (described below).

RISK REGISTER

The ERCF Risk Register comprises a catalogue of inherent operational risks arising as a consequence of business activities and is the most granular classification of operational risks used by CSSEL. It provides a standardised terminology of inherent risks across CSSEL covering inherent operational risks on a front-to-back basis, ie. risks inherent in business divisions and Corporate Functions. It also provides the basis to identify, assess, mitigate and monitor operational risk throughout the CS group, as well as providing the capability to aggregate and report residual operational risk exposure. As such, it also constitutes the basis for conducting Risk and Control Self-Assessments and identification of Top ERCF Risks.

INTERNAL CONTROLS

Internal controls are designed to ensure that the Company's processes follow agreed policies, these processes operate as intended and that associated risks within CSSEL are appropriately mitigated. ERCF defines the guidance to ensure that controls are executed, assessed and evidenced on a consistent and comprehensive basis, with a focus on CSSEL's key risks and controls. Certain key controls are subject to independent testing to evaluate their effectiveness. The results of these tests are considered in other ERCF components, such as in the Risk and Control Self-Assessment process.

METRICS

Metrics are risk and control indictors that provide information on operational risk exposures and the effectiveness of controls, respectively. From their monitoring, trends in indicator performance can be used to assess whether risks or controls are improving or deteriorating. Metrics form a part of measuring ERCF Risk Appetite and assessing the Top ERCF Risks, as well as being used by business divisions and Corporate Functions to inform the Risk and Control Self-Assessment process.

INCIDENT DATA

CSSEL uses the output of investigations into internal and relevant external incidents to inform its risk measurement and management processes. This includes both incidents that result in economic losses or those which provide information on potential control gaps, even if no losses occurred. Internal and external incidents are subject to separate review and assessment processes that reflect differences in the amounts of available information and degree of applicability to CSSEL.

RISK AND CONTROL SELF-ASSESSMENT PROCESS

The Risk and Control Self-Assessment (RCSA) process is a comprehensive, bottom-up assessment of the key operational risks in each business division and Corporate Function. It comprises a self-assessment for all applicable inherent risks, an evaluation of the effectiveness of the controls in place to mitigate these risks and a decision to either accept or remediate any residual risks. The RCSA process utilises other components of the ERCF, such as metrics and incident data, and generates outputs that are used to manage and monitor CSSEL's residual risks. The self-assessments are subject to rigorous second line review and challenge by the independent risk oversight functions, including Operational Risk Management, along with quality assurance to ensure that they have been conducted appropriately. At a minimum, business divisions and Corporate Functions must conduct an RCSA within each calendar year though more frequent updates may be triggered by material changes to the business environment or risk profile.

REVERSE STRESS TESTING

Reverse stress testing is a complementary tool that introduces a more forward-looking element into the RCSA process. It assumes that a business has suffered an adverse outcome, such as a large operational risk loss, and requires consideration of the events that could have led to the result. As such, it allows for the consideration of risks beyond normal business expectations and it challenges common assumptions about the risk profile, the emergence of new risks or interactions between existing risks, as well as the performance of expected control and mitigation strategies.

TOP OPERATIONAL RISKS AND REMEDIATION PLANS

Top ERCF Risks are defined as the most significant residual operational risks that require executive level management oversight to avoid occurrence or prevent re-occurrence of significant incidents, significant regulatory scrutiny, enforcement or legal action, substantial damage to CSSEL's reputation or franchise or significant unmitigated risk in excess of Risk Appetite. Top ERCF Risks are generated using both a top-down assessment by senior management and a bottom-up process that collates the main themes arising from the RCSA process.

CAPITAL MODELLING AND SCENARIOS

CSSEL uses the Basic Indicator Approach to determine its Pillar 1 capital requirement in respect of operational risk.

Incremental capital requirements are determined as part of Pillar 2A through the use of an internal model which is based on the Advanced Measurement Approach used by CS Group. The operational risk ICAAP model estimates the capital required for operational risk at the 99.9% confidence level over a one-year period using a combination of internal loss data, external loss data, business environment and internal control factors, and scenario analysis. This scenario analysis includes an evaluation of CSSEL's potential exposure to infrequent but high-severity 'tail' events, such as unauthorised trading or severe business disruption.

The results from the model provide management with a more forward looking view of the operational risk profile in order to determine capital adequacy.

ISSUES AND ACTIONS MANAGEMENT

The Issues and Actions Management component within ERCF provides a governance structure and process for how CSSEL responds to operational risk incidents and breaches of risk appetite. The purpose of Issues and Actions Management is to ensure that operational risk incidents and risk appetite breaches of various types and severity are reviewed at appropriate levels of governance and to provide guidance on the range of possible management responses.

CHANGE ASSESSMENTS

Operational risks associated with major change initiatives are identified, assessed and managed throughout the life of each program using the relevant components of the ERCF. These assessments also consider the fact that even initiatives that are expected to deliver operational risk benefits upon completion may result in increased risks during the implementation phase. Outsourcing initiatives may be considered for assessment where Operational Risk Management has determined that certain materiality criteria are met.

CONDUCT AND ETHICS

The six Conduct and Ethics Standards establish group-wide standards and further embed clear expectations of Conduct and Ethics in Credit Suisse's employees. They ensure that the right things are done in the right way. The global, divisional, Corporate Functions and Legal Entity Conduct and Ethics Boards (CEBs) provide oversight and drive the implementation of the standards within their corresponding areas.

TECHNOLOGY RISK

Ensuring that the confidentiality, integrity and availability of information assets are protected is critical to the Company's operations, given the complex technological landscape that covers CSSEL's business model.

Technology risk is the risk that technology-related failures, such as service outages or information security incidents, may disrupt business. As a component of operational risk, technology risk is inherent not only in CSSEL's IT assets, but also in the people and processes that interact with them including through dependency on third party suppliers and the worldwide telecommunications infrastructure. The Company seeks to ensure that the data used to support key business processes and reporting is secure, complete, accurate, available, timely and meets appropriate quality and integrity standards. The Company requires our critical IT systems to be identified, secure, resilient and available and support our ongoing operations, decision making, communications and reporting. CSSEL's systems must also have the capability, capacity, scalability and adaptability to meet current and future business objectives, the needs of the Company's customers and regulatory and legal expectations. Failure to meet these standards and requirements may result in adverse events that could subject CSSEL to reputational damage, fines, litigation, regulatory sanctions, financial losses or loss of market share.

Cyber risk, which is part of technology risk, is the risk that the Company will be compromised as a result of cyber-attacks, security breaches, unauthorized access, loss or destruction of data, unavailability of service, computer viruses or other events that could have an adverse security impact. Any such event could subject CSSEL to litigation or cause the Company to suffer a financial loss, a disruption of businesses, liability to CSSEL clients, regulatory intervention or reputational damage. The Company could also be required to expend significant additional resources to modify our protective measures or to investigate and remediate vulnerabilities or other exposures.

Technology risks are managed through the technology risk management program, business continuity management plan and business contingency and resiliency plans and feature in CSSEL's overall operational risk assessment.

Reputational risk

OVERVIEW

The Credit Suisse ('CS') Code of Conduct states that 'Our most valuable asset is our reputation'. CS' reputation is driven by the perception of key stakeholders such as clients, shareholders, the media and the public. The CS Global Policy on Reputational Risk ('the Policy') states that each employee is responsible for assessing the potential reputational impact of all businesses in which they engage, and for determining whether any actions or transactions should be formally submitted through the Reputational Risk Review Process ('RRRP') for review.

Reputational risk may arise from a variety of sources, including, but not limited to, the nature or purpose of a proposed transaction, action or client relationship, the identity or nature of a potential client, the regulatory or political climate in which the business will be transacted or significant public attention surrounding the transaction itself.

PROCESS AND GOVERNANCE

The Company's Board has formally delegated reputational risk issues to the CSSEL RRRP which includes an overview of the transaction or action being considered, the risks identified and relevant mitigating factors and views from internal subject matter experts. All formal submissions in the RRRP require review by the UK Senior Manager in the relevant division, and assuming they are supportive of the proposal are then subsequently referred to one of CSSEL Reputational Risk Approvers ('RRA'), each of whom is independent of the business divisions and has the authority to approve, reject, or impose conditions on the Company's participation. If the RRA considers there to be a material reputational risk associated with a submission, it is escalated to the CSSEL Reputational Risk Committee ('the Committee') for further discussion, review and final decision. The Committee is comprised of senior Company entity management across divisions and corporate functions.

Reputational risk is assessed on an entity based approach whereby the region of the RRRP submission is driven by the location of the booking entity. Where a submission relates to a Remote Booking, a submission will be made through to CSSEL RRRP and the RRAs in other regions will be consulted as appropriate, which may include escalation to the Committee.

Liquidity risk

OVERVIEW

Liquidity Risk is referred to in this document as the risk that the Company will not be able to efficiently meet both expected and unexpected current and future cash flow and collateral needs without affecting either daily operations or the financial condition of the firm. Liquidity at Credit Suisse is managed primarily by Treasury with independent oversight by MLRM Liquidity Risk.

RISK APPETITE

The following Strategic Risk Objective has been approved by the management body.

- **Sound management of Funding Liquidity Risk:** Manage liquidity and funding liquidity risk by maintaining sufficient funds to meet all obligations on both an ongoing business as usual basis, and in periods of liquidity stress.

The CSSEL Risk Management Committee (RMC) has approved quantitative controls and qualitative statements to complement this strategic objective.

The overall liquidity risk limit calibration is recommended by the CSSEL Head of Treasury & Liquidity Risk who has responsibility for development and calibration of the full suite of liquidity risk limits.

THE ADEQUACY OF LIQUIDITY RISK MANAGEMENT

An Internal Liquidity Adequacy Assessment Process (ILAAP) document sets out CSSEL's approach to liquidity and funding and is approved by the management body. The assessment of the liquidity needs of CSSEL has been made in consideration of the relevant guidance and requirements set out by regulatory bodies, in particular the PRA Supervisory Statement SS24/15 and Internal Liquidity Adequacy Assessment part of the PRA Rulebook (ILAA rules). The most recent assessment concludes that CSSEL was in compliance with the internal controls in place and with the Board approved Risk Appetite.

The entity was also in compliance with the regulatory minimum liquidity requirements under the Liquidity Coverage Requirement (LCR) and held surplus liquidity above both the Board approved LCR Risk Appetite and internal risk controls.

STRATEGIES AND PROCESSES IN THE MANAGEMENT OF THE LIQUIDITY RISK

The liquidity and funding strategy is approved by the Capital Allocation & Risk Management Committee (CARMC) and overseen by the Board of Directors. The implementation and execution of the liquidity and funding strategy is managed by Treasury. Treasury ensures adherence to the funding policy and the efficient coordination of the secured funding desks. This approach enhances Treasury's ability to manage potential liquidity and funding risks and to promptly adjust the entity's liquidity and funding levels to meet stress situations. The liquidity and funding profile are regularly reported to CARMC and the Board of Directors, who set parameters for the balance sheet and funding usage of the businesses. The Board of Directors is responsible for defining the Company's overall risk tolerance in the form of a risk appetite statement.

CSSEL has a liquidity and funding policy which is designed to ensure that funding is available to meet all obligations in times of stress, whether caused by market events or issues specific to CSSEL. This is achieved through a conservative asset/liability management strategy aimed at maintaining long-term funding, including stable deposits, in excess of illiquid assets. To address short-term liquidity stress, a liquidity pool is maintained, that covers unexpected outflows in the event of severe market and idiosyncratic stress.

The liquidity risk controls set by MLRM Liquidity Risk and approved by the CSSEL Risk Management Committee reflect various liquidity stress assumptions that are conservative. Treasury manages the liquidity profile at a sufficient level such that, in the event that CSSEL was unable to access unsecured funding, there would be sufficient liquidity to sustain operations for a period of time in excess of the minimum limit. This includes potential currency mismatches, which are not deemed to be a major risk but are monitored and subject to limits, particularly in the significant currencies of US Dollar, Euro, Pound Sterling, Swiss Franc and Japanese Yen.

STRUCTURE AND ORGANISATION OF THE LIQUIDITY RISK MANAGEMENT FUNCTION

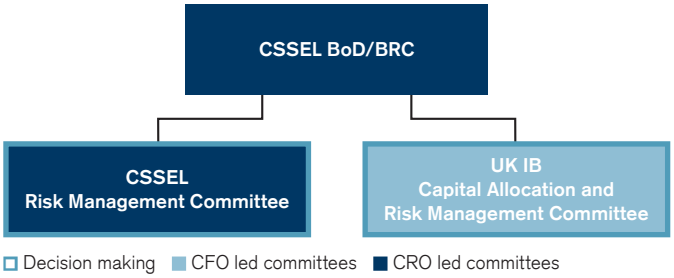
The MLRM Liquidity Risk function is part of the overall Global MLRM Liquidity organisation with supporting functions from the Global MLRM Liquidity roles to oversee and manage liquidity risk for CSSEL. It is led by the UK Head of Treasury & Liquidity Risk with dual reporting lines to the Global Head of Treasury & Liquidity Risk and UK CRO.

The three lines of defence model is adopted by the firm for managing liquidity risks. The current operating model for liquidity risk establishes a clear delineation between Treasury and LMR as the 1st line of defence and MLRM Liquidity Risk as the 2nd line of defence.

MLRM Liquidity Risk challenges EMEA Treasury, Liquidity Measurement and Reporting (LMR) as well as the business divisions for their liquidity risk measurement and management responsibilities.

Liquidity Risk Management Local Governance

Each committee within the governance structure has terms of reference, which lays out its roles and responsibilities and outlines membership, quorum and documentation requirements.



Committee Descriptions

Committee	Key Liquidity Risk Mandate
CSSEL BoD/Board Risk Committee	■ Review and approve the liquidity risk appetite ■ Review and approve the liquidity and funding position of CSSEL ■ Consider and assess the systems and controls in relation to the incurring of risk on behalf of CSSEL ■ Review and assess the integrity, independence and adequacy of the liquidity risk management function
UK IB Capital Allocation and Risk Management Committee (CARMC) – Monthly	■ Monitor and challenge liquidity positions vs internal and external regulatory limits ■ Monitor and challenge the impact of current and future regulatory changes on the liquidity positions ■ Monitor and challenge the adequacy of the systems and controls related to the ALM management framework
CSSEL Risk Management Committee – Monthly	■ Define liquidity risk appetite framework and approve liquidity risk limits ■ Ensure that risk controls standards for liquidity risk are established

CENTRALISATION OF LIQUIDITY MANAGEMENT AND INTERACTION BETWEEN THE GROUP'S UNITS

Overview of the liquidity management function

All liquidity management functions have regional presence outside head offices to ensure regional liquidity risk requirements are met.

The regional liquidity management functions have dual reporting lines to the regional treasurers and functionally to the Global Head of Liquidity management. The teams are responsible for managing liquidity positions at the local level in conjunction with regulatory and senior management requirements.

Overview of the Group governance structure

All functions involved in the liquidity risk management governance and risk management framework have regional presence to ensure liquidity risk management governance is implemented locally and satisfies local liquidity requirements, local rules and regulations.

The Regional and Global committee governance are aligned in terms of CSSEL's operating model. This setup is mirrored locally in the regions. This application ensures that risk control frameworks are developed and adhered to consistently at the Group and local entity levels while allowing for a nuanced approach to region specific business lines and regulations.

LIQUIDITY RISK REPORTING AND MEASUREMENT SYSTEMS

The CRR, as supplemented by the Commission Delegated Regulation (EU) 2015/61 (CDR), defines the liquidity regulatory requirement, including the calculation methodology for a Liquidity Coverage Ratio (LCR) and a Net Stable Funding Ratio (NSFR) and additional liquidity monitoring metrics.

The LCR addresses liquidity risk over a 30 day period. The LCR aims to ensure the bank/firm has unencumbered high quality liquid assets (HQLA) available to meet short term liquidity needs under a stress scenario. The LCR is comprised of two components, the value of HQLA in stressed conditions and the total net outflows calculated according to specified scenario parameters. Under the CDR, the ratio of liquid assets over net cash outflows shall be maintained at a minimum of 80% (90% for PRA) and rising to 100% in 2018).

The NSFR establishes criteria for a minimum amount of stable funding based on the liquidity of the bank/firm's on and off balance sheet activities over a one year horizon. The NSFR is a complementary measure to the LCR and is structured to ensure that illiquid assets are funded with an appropriate amount of stable long term funds. The NSFR is defined as the ratio of available stable funding over the amount of required stable funding and, once in effect, should be at least 100%.

The LCR is used as one of the bank's/firm's primary tools, in parallel with the internal liquidity model (Barometer), and the Net Stable Funding Ratio, to monitor the structural liquidity position and plan funding.

The internal liquidity model is used to manage liquidity to internal targets and as a basis to model both the company specific and market-wide stress scenarios and their impact on liquidity and funding. The internal Barometer framework supports the management of the company's funding structure. It allows the management of the time horizon over which the stressed market value of unencumbered assets (including cash) exceeds the aggregate value of contractual outflows of unsecured liabilities plus a conservative forecast of anticipated contingent commitments. This

internal Barometer framework allows the management of liquidity to a desired profile under stress in order to be able to continue to pursue activities for a period of time without changing business plans during times of bank/firm specific or market-wide stress. Under this framework, there are also short-term targets based on additional stress scenarios to ensure uninterrupted liquidity for short time frames.

PROCESSES FOR HEDGING AND MITIGATING THE LIQUIDITY RISK

The internal Barometer framework supports the management of our funding structure. It allows Treasury to manage the time horizon over which the stressed market value of unencumbered assets (including cash) exceeds the aggregate value of contractual outflows of unsecured liabilities plus a conservative forecast of anticipated contingent commitments.

The internal Barometer framework also allows Treasury to manage liquidity to a desired profile under stress in order to be able to continue to pursue activities for a period of time, without changing business plans during times of stress.

Under this framework, Treasury also has short-term targets based on additional stress scenarios to ensure uninterrupted liquidity for short time frames.

The Barometer and LCR are produced and reviewed on a daily basis. These daily reports are available to be compared versus forecasts, ensuring ongoing monitoring of the liquidity position of the entities.

LCR DISCLOSURE TEMPLATE

The table in this section discloses level and components of the LCR.

LIQ1: LCR

	Total unweighted value (average)				Total weighted value (average)			
Scope of consolidation – CSIUK consolidated								
USD million								
Quarter ending on (DD Month YYY)	**31.03.17**	**30.06.17**	**30.09.17**	**31.12.17**	**31.03.17**	**30.06.17**	**30.09.17**	**31.12.17**
Number of data points used in the calculation of averages	**12**	**12**	**12**	**12**	**12**	**12**	**12**	**12**
HIGH-QUALITY LIQUID ASSETS								
Total high-quality liquid assets (HQLA)					19,984	19,592	19,420	18,941
CASH – OUTFLOWS								
Retail deposits and deposits from small business customers,	–	–	–	–	–	–	–	–
of which stable deposits	–	–	–	–	–	–	–	–
of which less stable deposits	–	–	–	–	–	–	–	–
Unsecured wholesale funding	2,003	2,192	2,152	2,021	2,003	2,192	2,152	2,021
Operational deposits (all counterparties) and deposits in networks of cooperative banks	–	–	–	–	–	–	–	–
Non-operational deposits (all counterparties)	2,003	2,192	2,152	2,021	2,003	2,192	2,152	2,021
Unsecured debt	–	–	–	–	–	–	–	–
Secured wholesale funding					29,616	28,205	26,916	25,664
Additional requirements	2,897	3,373	4,158	4,811	2,534	2,808	3,420	3,959
Outflows related to derivative exposures and other collateral requirements	2,897	3,373	4,158	4,811	2,534	2,808	3,420	3,959
Outflows related to lossof funding on debt products	–	–	–	–	–	–	–	–
Credit and liquidity facilities	–	–	–	–	–	–	–	–
Other contractual funding obligations	13,279	13,654	14,929	15,515	1,848	844	1,282	1,725
Other contingent funding obligations	1,428	1,454	1,406	1,172	823	828	804	687
TOTAL CASH OUTFLOWS					**36,825**	**34,879**	**34,574**	**34,056**
CASH – INFLOWS								
Secured lending (e.g. reverse repos)	96,579	94,444	92,350	90,750	24,702	23,350	22,498	22,411
Inflows from fully performing exposures	3,843	3,958	4,140	3,909	3,843	3,958	4,140	3,909
Other cash inflows	1,236	375	395	325	1,229	368	381	311
(Difference between total weighted inflows and total weighted outflows arising from transactions in third countries where there are transfer restrictions or which are denominated in non-convertible currencies)					–	–	–	–
(Excess inflows from a related specialised credit institution)					–	–	–	–
TOTAL CASH INFLOWS	**101,658**	**98,777**	**96,885**	**94,984**	**29,774**	**27,676**	**27,019**	**26,631**
Fully exempt inflows	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Inflows subject to 90% cap	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Inflows subject to 75% cap	**55,638**	**56,023**	**57,338**	**55,429**	**29,774**	**27,676**	**27,019**	**26,631**

LIQ1: LCR

	Total adjusted value			
USD million				
Quarter ending on (DD Month YYY)	**31.03.17**	**30.06.17**	**30.09.17**	**31.12.17**
Number of data points used in the calculation of averages	**12**	**12**	**12**	**12**
Liquidity buffer	**19,984**	**19,592**	**19,420**	**18,941**
Total net cash outflows	**9,360**	**8,746**	**8,696**	**8,547**
Liquidity converage ratio (%)	**213%**	**225%**	**224%**	**222%**

There are elements of liquidity risk management that are not covered in the LCR disclosure template. The Pillar 2 framework considers the liquidity risks not captured, or not fully captured, under Pillar 1. For example debt buyback risk that may arise in the absence of a contractual buyback obligation, intraday liquidity risk and the risk from early termination of non-margined derivatives.

The internal liquidity model, Barometer, adequately addresses those risks not captured by the LCR. The Individual Liquidity Adequacy Assessment Process (ILAAP) document details how and why these risks are considered and how they are modelled.

CONCENTRATION OF FUNDING AND LIQUIDITY SOURCES

Funding is managed by EMEA Treasury and the structure is designed to ensure that funding is available to meet all obligations under both business as usual (BAU) and stressed market conditions. CSSEL has a conservative asset/liability management strategy aimed at maintaining a funding structure with long-term funding consistent with the CSSEL Board Risk tolerance.

Funding profile

CSSEL holds a mix of term unsecured funding supplied by CS AG London Branch, which mitigates its short-term funding risk. The entity also has a diverse funding strategy through third party repo, prime services term accounts, equity and subordinated debt. A mix of 120-day and 400-day evergreen funding is also employed. EMEA Treasury review the funding profiles on a regular basis and manage the funding accordingly.

Funding Concentration Framework

Concentration risk is addressed in the Liquidity Risk Control Framework. The funding strategy is to ensure that there is access to a diversified range of funding sources. For example, by customer base and geography, to cover short-term and medium to long-term requirements, without any significant reliance on a particular funding source, counterparty, tenor or product.

The established governance supports the identification of concentration risks, as well as a forward-looking approach to concentration risk management. Limits and/or tolerances are defined by Risk governance bodies or its delegated authority e.g. Head of CSSEL Treasury & Liquidity Risk. Concentration risk exposures are discussed, at the CSSEL RMC when relevant, Liquidity Review Board and Treasury UK Liquidity Committee meetings.

DERIVATIVE EXPOSURES AND POTENTIAL COLLATERAL CALLS

The LCR is used as one of the primary tools, in parallel with the internal liquidity Barometer and the Net Stable Funding Ratio, to monitor CSSEL's structural liquidity position and to plan funding. The internal liquidity Barometer is used to manage liquidity to internal targets and as a basis to model both the Company specific and market-wide stress scenarios and their impact on liquidity and funding.

The internal Barometer framework supports the management of the funding structure. It allows Treasury to manage the time horizon over which the stressed market value of unencumbered assets (including cash) exceeds the aggregate value of contractual outflows of unsecured liabilities plus a conservative forecast of anticipated contingent commitments. This internal Barometer framework further allows Treasury to manage liquidity to a desired profile under stress in order to be able to continue to pursue activities for a period of time without changing business plans during times of bank/firm specific or market-wide stress. Under this framework, there are short-term targets based on additional stress scenarios to ensure uninterrupted liquidity for short time frames.

Derivatives exposure and collateral calls are part of this overarching framework and cover anticipated mark to market (MtM) changes and collateral calls related to this (variation and initial margin) and other items (such as downgrade/additional termination events).

CURRENCY MISMATCH IN THE LCR

Currency coverage is monitored locally for CSSEL via an internal measure based on the LCR, the currency coverage ratio (CCR).

Internal risk controls by currency have been set in order to control liquidity risks by material currency. The CCR is based on an LCR calculation, with the main difference, however, that FX swaps are treated on a contractual unwind basis without capping the inflows.

The setting of the currency risk controls has been based on the balance sheet size of underlying currency positions (material currencies), with a risk control set for any balance >5% (as per EBA requirements). MLRM has the right to determine currencies below 5% as material. The defined material currencies for CSSEL are US Dollar, Euro, Pound Sterling, Swiss Franc and Japanese Yen.

Interest rate risk in the Banking Book

OVERVIEW

CSSEL manages the interest rate risk in the Banking Book which includes monitoring the potential impact of changes in interest rates. CSSEL's interest rate risk exposures in non-trading positions arise primarily from treasury and funding activity, with the majority of interest rate risk transferred to and centrally managed by CS Group Treasury on a portfolio basis within approved limits using appropriate hedging instruments. The CS Group Board of Directors defines interest rate risk appetite for the group and its subsidiaries, including CSSEL, on an annual basis. Furthermore, the CSSEL Board of Directors and the Risk Management Committee set risk limits for interest rate risk the banking book which are monitored on at least a monthly basis.

RISK MEASUREMENT

The risks associated with the non-trading interest rate-sensitive portfolios are measured using a range of tools, including the following key metrics:

- **interest rate sensitivity ('DV01'):** expresses the linear approximation of the impact on a portfolio's fair value resulting from a one basis point (0.01%) parallel shift in yield curves, where the approximation tends to be closer to the true change in the portfolio's fair value for smaller parallel shifts in the yield curve. The DV01 is a transparent and intuitive indicator of linear directional interest rate risk exposure, which does not rely on statistical inference. The interest rate sensitivity is measured and reported on a daily basis;
- **VaR:** a statistical indicator of the potential fair value loss, taking into account the observed interest rate moves across yield curve tenors and currencies. In addition, VaR takes into account yield curve risk, spread and basis risks, as well as foreign exchange and equity risk; and
- **economic value scenario analysis:** expresses the impact of a pre-defined scenario (eg. instantaneous changes in interest rates) on a portfolio's fair value. This metric does not rely on statistical inference.

These measures focus on the impact on a fair value basis, taking into account the present value of all future cash flows associated with the current positions. More specifically, the metrics estimate the impact on the economic value of the current portfolio, ignoring dynamic aspects such as the time schedule of how changes in economic value materialise in profit and loss (since most non-trading books are not marked-to-market) and the development of the portfolio over time.

CSSEL's Banking Book does not include any replicated non-maturing deposits or loans with replicated prepayment options.

MONITORING AND REVIEW

The economic impacts of adverse parallel shifts in interest rates of 200 basis points were significantly below the threshold of 20% of eligible regulatory capital used by regulators to identify excessive levels of non-trading interest rate risk. This risk is not capitalised within the Pillar 1 regime, rather, it is analysed within the ICAAP and addressed in the PRA's determination of CSSEL's Pillar 2 capital requirement.

Despite the low interest rate environment, the full downward shock is applied resulting in more conservative impact estimates compared to flooring the downward shocks at zero.

Limits and other interest rate risk metrics are monitored by the Risk division at least monthly or more frequently as deemed necessary with any limit breaches escalated appropriately.

The following tables show the fair value impact of yield curve changes, by currency:

One-basis-point parallel increase in yield curves by currency – non-trading positions (USD million equivalent)

As at 31 December	USD	GBP	EUR	CHF	Other	**Total**
Fair value impact of a one-basis-point parallel increase in yield curves	(0)	–	–	–	–	(0)

Fair value impact of change in interest rates on non-trading positions (USD million equivalent)

As at 31 December	USD	GBP	EUR	CHF	Other	**Total**
Basis points movement + / (-)						
200	(27)	1	(4)	–	2	(28)
100	(10)	(1)	(2)	–	1	(12)
-100	4	4	2	–	(1)	9
-200	2	10	4	–	(2)	14

Leverage

OVERVIEW

In conjunction with other regulatory and capital metrics such as RWA levels, leverage ratios are actively monitored and managed within the CSIUK group's capital management governance processes. Similar to the CS group level, internal targets (including the setting of internal management buffers where required) are developed and monitored and this process is flexible, reflecting changing regulatory expectations.

Consideration is given to the leveraging or deleveraging impacts resulting from both business development and the impact of future regulatory change to ensure CSIUK continues to meet external and internal expectations. The CSIUK group's stress testing framework will consider the impact on leverage ratios of both internal and regulator-prescribed stress tests. The impact on the leverage ratio is also considered as part of the ICAAP.

FACTORS IMPACTING THE LEVERAGE RATIO DURING THE PERIOD

The CSIUK group's leverage ratio decreased to 4.4% by 31 December 2017 from 5.0% at 31 December 2016. This decrease is mainly attributable to an increase in on-balance sheet assets and a decrease in Tier 1 capital.

Table LRCom: Leverage ratio common disclosure

		CRR leverage ratio exposures
On-balance sheet exposures (excluding derivatives and SFTs)		
1	On-balance sheet items (excluding derivatives, SFTs and fiduciary assets, but including collateral)	57,525
2	(Asset amounts deducted in determining Tier 1 capital)	(1,022)
3	**Total on-balance sheet exposures (excluding derivatives, SFTs and fiduciary assets) (sum of lines 1 and 2)**	**56,503**
Derivative exposures		
4	Replacement cost associated with all derivatives transactions (ie net of eligible cash variation margin)	1,449
5	Add-on amounts for PFE associated with all derivatives transactions (mark-to-market method)	7,911
EU-5a	Exposure determined under Original Exposure Method	–
6	Gross-up for derivatives collateral provided where deducted from the balance sheet assets pursuant to the applicable accounting framework	–
7	(Deductions of receivables assets for cash variation margin provided in derivatives transactions)	–
8	(Exempted CCP leg of client-cleared trade exposures)	–
9	Adjusted effective notional amount of written credit derivatives	273
10	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	–
11	**Total derivative exposures (sum of lines 4 to 10)**	**9,633**
Securities financing transaction exposures		
12	Gross SFT assets (with no recognition of netting), after adjusting for sales accounting transactions	53,560
13	(Netted amounts of cash payables and cash receivables of gross SFT assets)	–
14	Counterparty credit risk exposure for SFT assets	4,563
EU-14a	Derogation for SFTs: Counterparty credit risk exposure in accordance with Article 429b (4) and 222 of Regulation (EU) No 575/2013	–
15	Agent transaction exposures	–
EU-15a	(Exempted CCP leg of client-cleared SFT exposure)	–
16	**Total securities financing transaction exposures (sum of lines 12 to 15a)**	**58,123**
Other off-balance sheet exposures		
17	Off-balance sheet exposures at gross notional amount	8,862
18	(Adjustments for conversion to credit equivalent amounts)	–
19	**Other off-balance sheet exposures (sum of lines 17 to 18)**	**8,862**
Exempted exposures in accordance with CRR Article 429 (7) and (14) (on and off balance sheet)		
EU-19a	(Exemption of intragroup exposures (solo basis) in accordance with Article 429(7) of Regulation (EU) No 575/2013 (on and off balance sheet))	–
EU-19b	(Exposures exempted in accordance with Article 429 (14) of Regulation (EU) No 575/2013 (on and off balance sheet))	–
Capital and total exposures		
20	**Tier 1 capital**	**5,856**
21	**Total leverage ratio exposures (sum of lines 3, 11, 16, 19, EU-19a and EU-19b)**	**133,121**
Leverage ratio		
22	**Leverage ratio**	**4.4%**
Capital and total exposures		
EU-23	Choice on transitional arrangements for the definition of the capital measure	–
EU-24	Amount of derecognised fiduciary items in accordance with Article 429(11) of Regulation (EU) NO 575/2013	–

Table LRSpl: Split-up of on balance sheet exposures (excluding derivatives, SFTs and exempted exposures)

		CRR leverage ratio exposures
EU-1	On-balance sheet items (excluding derivatives and SFTs, but including collateral)	57,525
EU-2	Replacement cost associated with all derivatives transactions (i.e. net of eligible cash variation margin)	53,314
EU-3	Add-on amounts for PFE associated with all derivatives transactions	4,211
EU-4	Gross-up for derivatives collateral provided where deducted from the balance sheet assets pursuant to the operative accounting framework	–
EU-5	Deductions of receivables assets for cash variation margin provided in derivatives transactions	175
EU-6	Exempted CCP leg of client-cleared trade exposures	–
EU-7	Adjusted effective notional amount of all written credit derivatives	1,205
EU-8	Adjusted effective notional offsets and add-on deductions for written credit derivatives	–
EU-9	Derivative Exposures	–
EU-10	Securities financing transaction exposures (USD million)	2,710
EU-11	Gross SFT assets (with no recognition of netting), after adjusting for sale accounting transactions	–
EU-12	Netted amounts of cash payables and cash receivables of gross SFT assets	121

Asset encumbrance

OVERVIEW

The main source of asset encumbrance within the CSIUK group relates to securities lending and derivatives transactions. Securities lending transactions encumber assets through a combination of repo and stock loan/borrow activity, with derivatives transactions causing encumbrance through collateralisation of derivative transaction exposures.

COLLATERALISATION AGREEMENTS ENTERED INTO FOR SECURING LIABILITIES

Secured lending and stock borrow/loan transactions are principally governed by Global Master Repurchase Agreements ('GMRAs') and Global Master Stock Lending Agreements ('GMSLAs'). These agreements generally focus on the mechanism of collateral delivery, income on the collateral positions and other impacts (eg. corporate actions occurring on collateral or failure to deliver).

COLLATERAL

Collateral postings on derivatives transactions are principally governed by ISDA agreements, including Credit Support Annex ('CSA') documentation. These agreements determine the asset type used to satisfy collateral obligations and any re-hypothecation restrictions related to derivatives collateralisation. Collateral pledged to the CSIUK group in excess of the minimum requirement, and collateral owed by the CSIUK group to counterparties which has not yet been called is considered as part of the internal monitoring procedures for the management of asset encumbrance.

UNENCUMBERED ASSETS

The amount reported in the first table below as 'other assets' within 'carrying amount of unencumbered assets' comprises mainly derivative assets, intangible assets, deferred tax, tangible fixed assets and various receivable balances (both trade and non-trade). None of these asset types is considered available for encumbrance in the normal course of business.

Assets – encumbered and unencumbered asset analysis

end of 2017	Carrying amount of encumbered assets	Fair value of encumbered assets	Carrying amount of unencumbered assets	Fair value of unencumbered assets	Total asset carrying amount	Total fair value of assets
USD million						
Assets						
Loans on demand	2,105	–	22,066	–	24,171	–
Equity instruments	12,824	12,824	8,367	8,367	21,191	21,191
Debt securities	1,422	1,422	1,103	1,103	2,525	2,525
Loans and advances other than loans on demand	–	–	57,301	–	57,301	–
Other assets	–	–	18,788	–	18,788	–
Total assets	**16,351**	**14,246**	**107,625**	**9,470**	**123,976**	**23,716**

Collateral received

end of 2017	Fair value of encumbered collateral received or own debt securities issued	Fair value of collateral received or own debt securities issued available for encumbrance
USD million		
Collateral received		
Equity instruments	51,217	16,513
Debt securities	75,073	12,325
Other collateral received	–	–
Total collateral received	126,290	28,838
Own debt securities issued other than own covered bonds or ABSs	–	–
Total	**126,290**	**28,838**

Carrying amount of encumbered assets and collateral received and associated liabilities

end of 2017	Carrying amount
USD million	
Matching liabilities, contingent liabilities or securities lent	49,584
Assets, collateral received and own debt securities issued other than covered bonds and ABSs encumbered	50,425

Appendix 1: CSSEL

OVERVIEW

CSSEL is a wholly-owned indirect subsidiary of CSIUK. As a significant subsidiary of the group, certain additional disclosures in respect of CSSEL are reported in this Appendix.

The CSIUK regulatory consolidation group contains CSIUK, its subsidiary CSIHUK, its indirect subsidiary CSSEL. Accordingly, the vast majority of risk and associated capital requirements arise from the activity of CSSEL. For example, at 31 December 2017, CSSEL's total capital requirement was USD 2,198m compared to USD 2,264m for the CSIUK group.

Accordingly, the quantitative Pillar 3 disclosures for CSSEL are presented only where they differ materially from the disclosures of the CSIUK group at 31 December 2017 and are shown in the following tables:

- Capital composition;
- RWAs and capital requirements; and
- Leverage Ratio.

Capital composition

end of				**2017**	2016
	Note	Own funds	Statement of Financial Position (1)	Difference	Own funds
USD million					
Tier 1 (and CET1) capital					
Ordinary shares		3,859	3,859	–	3,859
Share premium		5,661	5,661	–	5,661
Other Reserves/ Capital contribution		5,685	5,685	–	5,662
Retained earnings		(7,478)	(7,478)	–	(7,029)
Accumulated other comprehensive income		(9)	(9)	–	(28)
Tier 1 (and CET1) before prudential filters and regulatory adjustments		**7,718**	**7,718**	**–**	**8,125**
Prudential filters and regulatory adjustments					
Cash flow hedge reserve		–			–
Elimination of losses / (gains) on fair valued liabilities		–			–
Elimination of losses / (gains) on derivative liabilities		–			–
Prudent valuation adjustments	(2)	(132)			(124)
Intangible assets	(3)	(1)			(1)
Excess of expected losses over credit risk adjustments	(4)	(34)			(41)
Securitisation positions (Trading Book)	(5)	(21)			(3)
DTA on non temporary differences	(6)	(21)			–
Defined benefit pension fund	(7)	(812)			(729)
Total Tier 1 (and CET1) capital		**6,697**	**7,718**	**(1,021)**	**7,227**
Tier 2 capital					
Subordinated loans	(8)	2,250	2,250	–	3,501
General credit risk adjustments		–	–	–	–
Total Tier 2 capital		**2,250**	**2,250**	**–**	**3,501**
Total capital ('own funds')		**8,947**	**9,968**	**(1,021)**	**10,728**

Capital ratios

end of	**2017**	2016
Common Equity Tier 1	24%	24%
Tier 1	24%	24%
Total Capital	33%	35%

Notes:

(1) 2017 Statement of Financial Position for (i) Total Equity and (ii) Subordinated Debt values prepared under IFRS.

(2) A prudent valuation adjustment is applied in respect of fair valued instruments as required under CRDIV [CRR Articles 34, 105].

(3) Intangible assets and goodwill do not qualify as capital for regulatory purposes under CRDIV [CRR Articles 36(1)(b), 37].

(4) For institutions using the AIRB Approach, represents shortfall of credit risk adjustments to expected losses.

(5) Securitisation positions which can alternatively be subject to a 1,250% risk weight [CRR Articles 36(1)(k)(ii), 243(1)(b), 244(1)(b),258].

(6) Deferred tax assets that rely on future profitability and do not arise from temporary differences net of associated tax

liabilities are to be reduced from regulatory capital under Articles 36(1) point (c) and 38 of CRR.

(7) CRD IV does not permit pension fund assets to be treated as regulatory capital [CRR Articles 36(1)(e), 41].

(8) Subordinated debt is either accrual accounted or fair valued under IFRS (eg. including accrued interest) whereas 'own funds' recognises it at nominal value.

The Pillar 1 capital requirements of CSSEL are summarised below, along with the relevant RWA values. Credit risk capital requirements and RWAs are further broken down by risk-weight methodology and exposure class.

OV1 – Overview of RWAs

	RWAs		Minimum capital requirements
end of	**2017**	2016	**2017**
USD million			
Credit risk (excluding CCR)	3,187	2,760	255
Of which the standardised approach	380	434	30
Of which the foundation IRB (FIRB) approach	–	–	–
Of which the advanced IRB (AIRB) approach	2,767	2,302	221
Of which equity IRB under the simple risk-weighted approach or the IMA	40	24	3
CCR	10,477	13,409	838
Of which mark to market	9,219	10,824	738
Of which original exposure	–	–	–
Of which the standardised approach	–	–	–
Of which internal model method (IMM)	–	–	–
Of which risk exposure amount for contributions to the default fund of a CCP	68	128	5
Of which CVA	1,190	2,457	95
Settlement risk	34	50	3
Securitisation exposures in the banking book (after the cap)	–	–	–
Of which IRB approach	–	–	–
Of which IRB supervisory formula approach (SFA)	–	–	–
Of which internal assessment approach (IAA)	–	–	–
Of which standardised approach	–	–	–
Market risk	6,497	8,165	520
Of which the standardised approach	435	121	35
Of which IMA	6,062	8,044	485
Large exposures	3,674	1,811	294
Operational risk	3,300	3,640	264
Of which basic indicator approach	3,300	3,640	264
Of which standardised approach	–	–	–
Of which advanced measurement approach	–	–	–
Amounts below the thresholds for deduction (subject to 250% risk weight)	304	554	24
Floor adjustment	–	–	–
Total	**27,473**	**30,389**	**2,198**

Table LRSum: Summary reconciliation of accounting assets and leverage ratio exposures

		Applicable Amounts
1	Total assets as per published financial statements	123,782
2	Adjustment for entities which are consolidated for accounting purposes but are outside the scope of regulatory consolidation	(57)
3	(Adjustment for fiduciary assets recognised on the balance sheet pursuant to the applicable accounting framework but excluded from the leverage ratio exposure measure in accordance with Article 429(13) of Regulation (EU) No 575/2013 "CRR")	–
4	Adjustments for derivative financial instruments	3,917
5	Adjustments for securities financing transactions "SFTs"	1,849
6	Adjustment for off-balance sheet items (ie conversion to credit equivalent amounts of off-balance sheet exposures)	8,862
EU-6a	(Adjustment for intragroup exposures excluded from the leverage ratio exposure measure in accordance with Article 429 (7) of Regulation (EU) No 575/2013)	–
EU-6b	(Adjustment for exposures excluded from the leverage ratio exposure measure in accordance with Article 429 (14) of Regulation (EU) No 575/2013)	–
7	Other adjustments	(5,377)
8	**Total leverage ratio exposure**	**132,976**

Table LRCom: Leverage ratio common disclosure

		CRR leverage ratio exposures
On-balance sheet exposures (excluding derivatives and SFTs)		
1	On-balance sheet items (excluding derivatives, SFTs and fiduciary assets, but including collateral)	57,380
2	(Asset amounts deducted in determining Tier 1 capital)	(1,022)
3	**Total on-balance sheet exposures (excluding derivatives, SFTs and fiduciary assets) (sum of lines 1 and 2)**	**56,358**
Derivative exposures		
4	Replacement cost associated with all derivatives transactions (ie net of eligible cash variation margin)	1,449
5	Add-on amounts for PFE associated with all derivatives transactions (mark-to-market method)	7,911
EU-5a	Exposure determined under Original Exposure Method	–
6	Gross-up for derivatives collateral provided where deducted from the balance sheet assets pursuant to the applicable accounting framework	–
7	(Deductions of receivables assets for cash variation margin provided in derivatives transactions)	–
8	(Exempted CCP leg of client-cleared trade exposures)	–
9	Adjusted effective notional amount of written credit derivatives	273
10	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	–
11	**Total derivative exposures (sum of lines 4 to 10)**	**9,633**
Securities financing transaction exposures		
12	Gross SFT assets (with no recognition of netting), after adjusting for sales accounting transactions	53,560
13	(Netted amounts of cash payables and cash receivables of gross SFT assets)	–
14	Counterparty credit risk exposure for SFT assets	4,563
EU-14a	Derogation for SFTs: Counterparty credit risk exposure in accordance with Article 429b (4) and 222 of Regulation (EU) No 575/2013	–
15	Agent transaction exposures	–
EU-15a	(Exempted CCP leg of client-cleared SFT exposure)	–
16	**Total securities financing transaction exposures (sum of lines 12 to 15a)**	**58,123**
Other off-balance sheet exposures		
17	Off-balance sheet exposures at gross notional amount	8,862
18	(Adjustments for conversion to credit equivalent amounts)	–
19	**Other off-balance sheet exposures (sum of lines 17 to 18)**	**8,862**
Exempted exposures in accordance with CRR Article 429 (7) and (14) (on and off balance sheet)		
EU-19a	(Exemption of intragroup exposures (solo basis) in accordance with Article 429(7) of Regulation (EU) No 575/2013 (on and off balance sheet))	–
EU-19b	(Exposures exempted in accordance with Article 429 (14) of Regulation (EU) No 575/2013 (on and off balance sheet))	–
Capital and total exposures		
20	**Tier 1 capital**	**6,697**
21	**Total leverage ratio exposures (sum of lines 3, 11, 16, 19, EU-19a and EU-19b)**	**132,976**
Leverage ratio		
22	**Leverage ratio**	**5.0%**
Capital and total exposures		
EU-23	Choice on transitional arrangements for the definition of the capital measure	–
EU-24	Amount of derecognised fiduciary items in accordance with Article 429(11) of Regulation (EU) NO 575/2013	–

Table LRSpl: Split-up of on balance sheet exposures (excluding derivatives, SFTs and exempted exposures)

		CRR leverage ratio exposures
EU-1	On-balance sheet items (excluding derivatives and SFTs, but including collateral)	57,380
EU-2	Replacement cost associated with all derivatives transactions (i.e. net of eligible cash variation margin)	53,313
EU-3	Add-on amounts for PFE associated with all derivatives transactions	4,067
EU-4	Gross-up for derivatives collateral provided where deducted from the balance sheet assets pursuant to the operative accounting framework	–
EU-5	Deductions of receivables assets for cash variation margin provided in derivatives transactions	175
EU-6	Exempted CCP leg of client-cleared trade exposures	–
EU-7	Adjusted effective notional amount of all written credit derivatives	1,061
EU-8	Adjusted effective notional offsets and add-on deductions for written credit derivatives	–
EU-9	Derivative Exposures	–
EU-10	Securities financing transaction exposures (USD million)	2,710
EU-11	Gross SFT assets (with no recognition of netting), after adjusting for sale accounting transactions	–
EU-12	Netted amounts of cash payables and cash receivables of gross SFT assets	121

Appendix 2: Tier 2 instruments

Credit Suisse Investments (UK) – Tier 2 instruments

No.	Term		Tier 2 istruments
1	Date of Agreement	14.04.14	19.09.12
2	Original date of issuance	15.04.14	19.09.12
3	Tranche	N/A	N/A
4	Issuer/Lender	DLJ UK Holding	DLJ UK Investment Holdings Limited
5	Governing Law	English	English
Regulatory treatment			
6	Transitional CRR Rules	Tier 2	Tier 2
7	Post-transitional CRR Rules	Tier 2	Tier 2
8	Eligible at solo and / or consolidated basis?	Consolidated	Consolidated
9	Instrument type	Subordinated debt	Subordinated debt
10	Amount recognised in regulatory capital (million)	$1,500.0	$1,889.4
11	Nominal amount of instrument (million)	$1,500.0	$2,000.0
12	Issue price	Par	Par
13	Redemption price	Par	Par
14	Accounting classification	Liability - amortised cost	Liability - amortised cost
15	Perpetual or dated	Dated	Dated
16	Original maturity date	15.04.26	19.09.22
17	Repayment option	Subject to prior PRA approval (from 15 April 2019, tax and regulatory calls)	Optional, not before 19 September 2017, subject to prior PRA approval
Coupons			
18	Fixed or floating dividend/coupon	Floating	Floating
19	Coupon rate and any related index	USD 3-month Libor + 342bps	USD 3-month Libor + 323bps
20	Optional Deferral	None	None
21	Existence of step-up or other incentive to redeem	No	No
22	Convertible or non-convertible	Non-convertible	Non-convertible
23	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument)	Unsecured, ranking pari passu with the claims of other subordinated holders	Unsecured and subordinated to the claims of unsub-ordinated creditors
24	Non-compliant transitional features	No	No

Appendix 3: Directorships

CSIUK's and CSSEL's Board Members hold the following number of directorships as at 30 March 2018:

CSIUK Directorships

P Hare	16
C Horne	5
J Houghton	2
C Waddington	7

CSSEL Directorships

J Devine	4
M Diiorio	2
N Doyle	3
R Endersby	4
A Gottschling	4
A Halsey	3
C Horne	5
P Ingram	2
D Mathers	4
J Moore	3
C Waddington	7

Appendix 4: List of abbreviations and glossary

Term	Definition
A	
AIRB	Advanced Internal Ratings-Based: the AIRB Approach is a method of deriving risk weights using internally assessed, rather than supervisory, estimates of risk parameters (eg. for PD, LGD).
ABS	Asset-backed security.
AT1	Additional Tier 1 capital: a form of capital eligible for inclusion in Tier 1, but outside the definition of CET1.
B	
Banking Book	Classification of assets outside the definition of Trading Book (also referred to as the 'Non-Trading Book').
BCBS	Basel Committee on Banking Supervision.
C	
CCB	Countercyclical capital buffer: prescribed under Basel III and CRD IV and aims to ensure that capital requirements mitigate potential future losses arising from excess credit growth and hence increased system-wide risk.
CCF	Credit conversion factor: represents an estimate of undrawn commitments drawn down at the point of default.
CCP	Central counterparty.
CCR	Counterparty credit risk.
CCRMTM	Counterparty credit risk mark-to-market method: a regulatory prescribed method for calculating exposure values in respect of counterparty credit risk.
CDO	Collateralised debt obligation.
CET1	Common Equity Tier 1: the highest quality level of regulatory capital prescribed under Basel III (and by CRD IV in the EU).
CET 1 ratio	CET1 expressed as a percentage of RWAs.
CQS	Credit quality step: a supervisory credit quality assessment scale, based on the credit ratings of ECAIs, and used to assign risk weights under the Standardised Approach.
CRD	Capital Requirements Directive: EU legislation implementing Basel III (and previously Basel II) in the EU.
CRM	Credit Risk Mitigation
CRR	Capital Requirements Regulation: EU legislation implementing Basel III in the EU.
CVA	Credit valuation adjustment: a capital charge under Basel III (CRD IV) covering the risk of mark-to-market losses on expected counterparty risk on derivative exposure arising from deterioration in a counterparty's credit worthiness.
E	
EAD	Exposure at default: the net exposure prior to taking account of any credit risk mitigation at the point of default.
EBITDA	Earnings before interest, taxation, depreciation and amortisation.
ECAI	External Credit Assessment Institutions.
Expected loss	The downturn loss on any exposure during a 12-month time horizon calculated by multiplying EAD by PD and LGD.
F	
FLP	Fund-linked product.
I	
ICAAP	Internal capital adequacy assessment process: a risk-based assessment of the level of regulatory capital to be held by a bank or firm. This may exceed the Pillar 1 capital requirement.
IFRS	International Financial Reporting Standards.
IMA	Internal Models Approach: used in the calculation of market risk capital requirements.
IRC	Incremental risk charge: a capital add-on to VAR calculated in respect of the potential for direct loss due to an internal or external rating downgrade (or upgrade) as well as the potential for indirect losses arising from a credit mitigation event.
ISDA	International Swaps and Derivatives Association.
ISDA master agreement	Standardised contract developed by ISDA to facilitate bilateral derivatives trading.

Term	Definition
L	
Leverage ratio	A calculation prescribed under Basel III (and CRD IV) to measure the ratio of total exposures to available Tier 1 capital.
LGD	Loss given default: the estimated ratio of loss to the amount outstanding at default (EAD) as a result of any counterparty default.
M	
Master netting agreement	An agreement between two counterparties who have multiple contracts with each other that provides for the net settlement of all contracts in the event of default on, or termination of any one contract.
P	
PD	Probability of default: is the probability of an obligor defaulting within a one-year horizon.
PFCE	Potential future credit exposure.
Pillar 1	Minimum regulatory capital requirements to be held by a bank or investment firm as prescribed by Basel III (and CRD IV).
Pillar 2	Regulator imposed risk-based capital requirements to be held in excess of Pillar 1.
Pillar 3	CRD IV prescribed capital, risk and remuneration disclosure requirements.
PRA	Prudential Regulation Authority.
R	
RBA	Ratings-Based Approach: an AIRB approach to securitisations using risk weights derived from ECAI ratings.
RCSA	Risk and control self-assessment.
RFDAR	Risk and Finance Data and Reporting.
RMC	Risk Management Committee.
RNIV	Risks not in VaR.
RWA	Risk-weighted asset: derived by assigning risk weights to an exposure value.
S	
SFA	Supervisory Formula Approach.
SFT	Securities financing transaction: lending or borrowing of securities (or other financial instruments), a repurchase or reverse repurchase transaction, or a buy-sell back or sell-buy back transaction.
SME	Small and medium-sized enterprise.
SRB	Systemic risk buffer: a capital buffer under CRD IV deployed by EU member states to reduce build-up of macro-prudential risk.
SREP	Supervisory Review and Evaluation Process.
Stressed VaR	A market risk capital charge derived from potential market movements applied over a continuous one-year period of stress to a trading book portfolio.
SRW	Supervisory Risk Weights Approach
T	
Tier 1 capital	A component of regulatory capital, comprising CET1 and AT1 capital.
Tier 1 capital ratio	The ratio of Tier 1 capital to total RWAs.
Tier 2 capital	A lower quality of capital (with respect to 'loss absorbency') also known as 'gone concern' capital.
Trading Book	Positions held with intent to trade or to hedge other items in the Trading Book.
V	
VaR	Value-at-risk: loss estimate from adverse market movements over a specified time horizon and confidence level.
W	
WWR	Wrong-way risk: risk exposure to a counterparty is adversely correlated with a counterparty's credit quality.

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