NORTHERN
TRUST

RISK PROFILE DISCLOSURE

Pillar 3 – Capital Requirements Directive

Northern Trust Global Services SE
(incorporating Northern Trust Global Services SE
and Northern Trust Holdings Limited)

December 2019

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1. OVERVIEW

The Capital Requirements Directive (CRD) came into effect on 1 January 2007 and implemented provisions of the Basel II Accord in the EU, establishing consistent capital adequacy standards and an associated supervisory framework for banks and investments firms incorporating three distinct pillars. Pillar I prescribes the minimum capital requirements for these firms.

On 1 January 2014, the Capital Requirements Regulation (CRR) and the fourth iteration of the Directive (collectively known as "CRD IV") implemented the Basel III Accord across the EU. From this date the Pillar 3 disclosure requirements are contained in Part Eight of the CRR, and supplemented by various Implementing Technical Standards (ITS) and Regulatory Technical Standards (RTS) issued subsequently.

This disclosure has been prepared in accordance with the CRR provisions as they applied on 31 December 2019. In various sections prior year comparatives have been provided for ease of comparison.

Northern Trust Global Services SE (NTGS) a Luxembourg incorporated entity, conducts banking activities, asset servicing and fund administration. NTGS is a wholly owned subsidiary of Northern Trust Holdings Limited (NTHL), together forming a consolidation group (the NTGS Group). The Pillar 3 disclosures provided in this document are on the Group basis, as at 31 December 2019 in accordance with CRR requirements. The disclosures are reported in euros, the reporting currency of the Group. NTGS's ultimate group holding company Northern Trust Corporation (NTC) publishes quarterly Pillar 3 disclosures at a consolidated level on the Northern Trust website.

The financial statements (annual accounts) of NTGS are prepared in compliance with laws and regulations of the Grand Duchy of Luxembourg under the historical cost principle and on the basis of accounting principles generally accepted in the banking sector in the Grand Duchy of Luxembourg (Luxembourg Generally Accepted Accounting Principles). An additional agreed upon procedures report is issued by the external auditor of NTGS in relation to CSSF Circular 2008/340 for the reconciliation between the own funds in the prudential reporting and the equity in the annual accounts.

In preparing this disclosure document, the Group has taken into account CRR requirements allowing firms to omit one or more disclosures if the relevant information is considered immaterial, or where it is regarded as proprietary or confidential. Materiality constitutes omission or misstatement of information likely to change or influence decisions of users relying on that information for making economic decisions. The disclosures provided herein are unaudited and do not constitute any form of financial statements and should not be relied upon in making investment decisions in relation to NTC.

2. LOCATION AND FREQUENCY OF DISCLOSURE

The disclosure is updated at least annually as at the Group's accounting year end date of 31 December and published in the "Investor Relations" section of NTC's website (www.northerntrust.com).

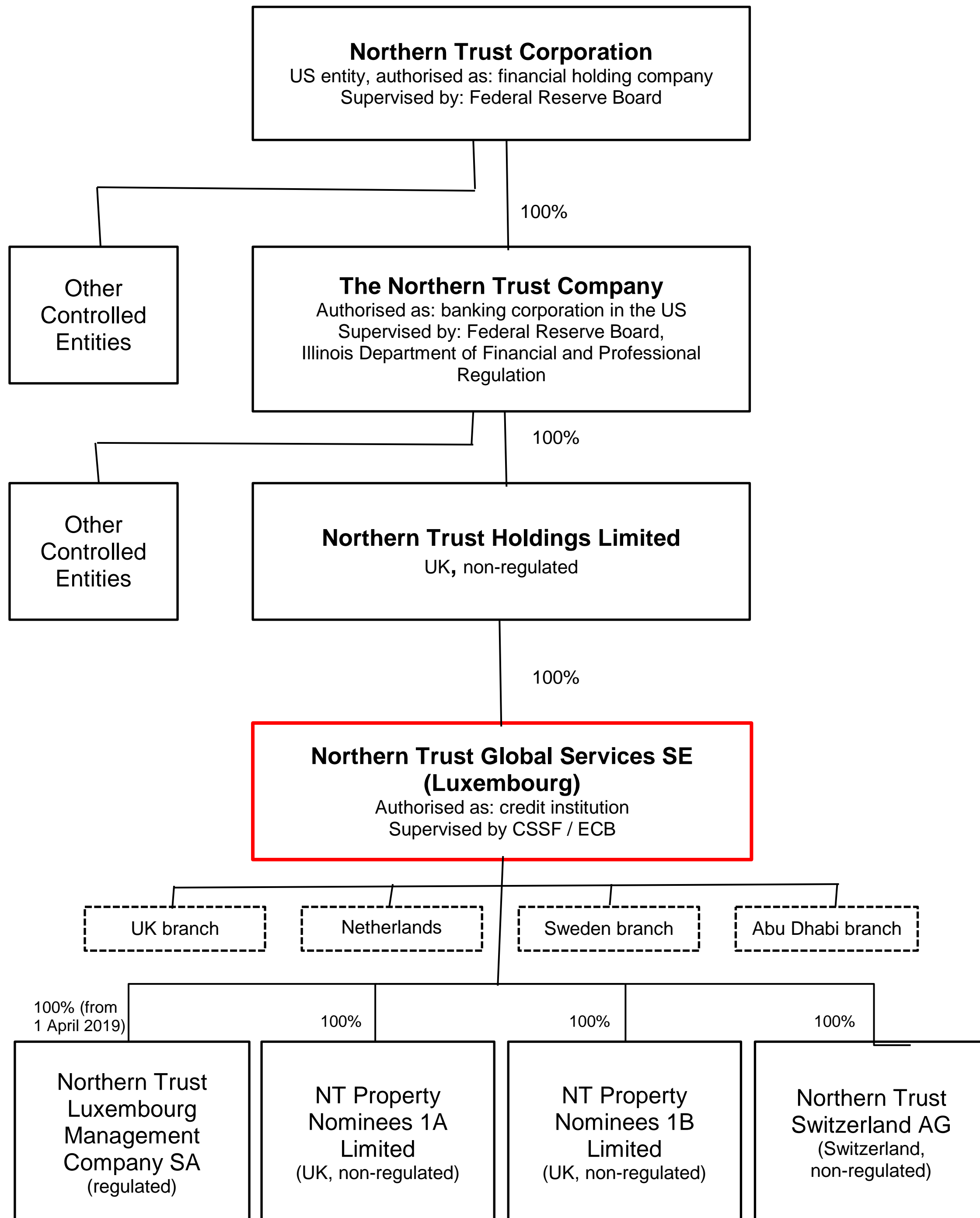
3. SCOPE OF APPLICATION

Northern Trust Global Services SE (NTGS), a Luxembourg incorporated entity, is authorised by the European Central Bank (ECB) to conduct banking activities, directly supervised by the 'Commission de Surveillance du Secteur Financier' (CSSF), indirectly supervised by the ECB and regulated by the European Banking Authority (EBA). NTGS is wholly owned by Northern Trust Holdings Limited (NTHL), a UK incorporated company and itself a wholly owned subsidiary of The Northern Trust Company (TNTC), a US banking institution. Northern Trust Corporation (NTC), a financial holding company based in Chicago is the ultimate parent of TNTC and its subsidiaries.

NTGS was established to provide custody and other banking services to clients which are domiciled in Continental Europe, as well as fund administration services to regulated fund structures.

NTHL's sole activity is to act as a holding company for NTGS. The Group's only operations are those of NTGS. NTGS operates branches in the UK, the Netherlands, Sweden and Abu Dhabi.

The Group structure is shown below.



NTGS reports its regulatory capital position to the CSSF on a stand-alone basis and a consolidated basis for the NTGS Group.

NTGS has undertaken the following to comply with the three pillars of Basel III framework as it applies under the CRR:

- Pillar 1: Minimum Capital Requirements provides the framework for calculating minimum capital requirements for credit, operational and market risk. The Group has adopted the standardised approach for calculating Pillar 1 credit and market risk capital requirements and the basic indicator approach for operational risk capital requirements;

- Pillar 2: The Supervisory Review Process – addresses the need for assessing whether additional capital is required over and above Pillar 1 risk calculations in line with the firm's risk profile. The Group completes an Internal Capital Adequacy Assessment Process (ICAAP) at least annually. Results are reviewed and approved by its Board of Directors and the ICAAP documentation is submitted to the CSSF for review; and

- Pillar 3: Risk Disclosure and Market Discipline – requires qualitative and quantitative public disclosures regarding regulatory capital and risk management practices and process to promote transparency. This Pillar 3 disclosure document provides information on the Group's risk management objectives and policies, its capital position, approach to assessing adequacy of its capital and exposure to key risks. Certain disclosures are also made on a stand-alone basis for NTGS being a significant subsidiary of the Group.

4. Risk Management

4.1 Overview

Risk management is the responsibility of the NTGS Board. In discharging this responsibility the Board leverages the global and regional frameworks, detailed in the below diagram as required. Policies and practices are validated and locally approved and the local risk organisation is structured to provide the Board with the necessary risk reporting and oversight to satisfy its responsibility. The monthly EMEA Risk Committee (ERC) is the senior risk committee for all activities conducted within the EMEA region.

NTGS's Risk Appetite Statement reflects the expectation that risk is consciously considered as part of day-to-day activities and strategic decisions. The risk that NTGS considers in executing its strategy is defined in the "Risk Universe" which provides structure to classify the inherent risks faced by the business.

The risk universe represents the major risk categories and sub-categories to which Northern Trust may be exposed through its business activities. It includes a broader set of risk categories than those dictated by the Pillar 1 regulatory capital requirements (which are restricted to credit, operational and market risk). The risk universe is used to help determine risk exposures within the NTGS Group that should be evaluated from a capital adequacy context and hence considered in this ICAAP.

As part of the ongoing evolution of the Risk Management Framework, the risk categories (i.e. credit, market, liquidity, operational, strategic, compliance and fiduciary) and sub-categories are being augmented by "risk themes". Risk themes are defined groupings that share common characteristics, focus on business outcomes and span across risk categories.

The risk profile of NTGS is determined through a point in time assessment of inherent and residual risks across each of the six risk categories. NTGS actively measures and monitors its risk profile using tools including risk-specific stress testing and integrated scenario analysis to understand how changes in risk profile impact its capital position. The following risk types are included in NTGS's capital adequacy assessment:

- Credit, operational and market risk are included in the calculation of Pillar 1 regulatory capital requirements. Risk-specific testing is used to determine whether the Pillar 1 capital allocation is sufficient to cover those risks within the NTGS Group. If the Pillar 1 capital allocation for a risk category is deemed insufficient then a Pillar 2 allocation of capital will be considered to address the shortfall. Concentration risk, as part of the credit risk, is a Pillar 2 add-ons to Pillar 1;

- Strategic risk (including strategy, business and reputation risk) is challenging to quantify for capital purposes, therefore, it is difficult to apply a measurable standard similar to regulatory capital. These risk types are considered, using relevant experience and expert judgement, in base case projections and integrated scenario analysis to estimate their potential impact on capital resource levels;

- Pillar 2 capital allocations are calculated for Interest Rate Risk in the Banking Book based on the supervisory Outlier Test, as described in the EBA's "Guidelines on the management of interest rate risk arising from non-trading activities"[1]. A Pillar 1 capital requirement is not assessed for IRRBB;

- For NTGS, liquidity effects are not anticipated to drive capital needs but any liquidity impacts are considered in its base case projections and integrated scenario analysis program.

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[1] See https://eba.europa.eu/eba-updates-guidelines-on-interest-rate-risk-arising-from-non-trading-activities; §4.5. & Annex III.

The following sections outline NTGS's key sources of risk as identified in Part Eight of CRR, the strategies and processes used to manage those risks and other key risks from the Northern Risk Universe faced by NTGS.

4.2 Credit Risk

4.2.1 Definition and sources of risk

Credit risk is the risk to interest income or principal from the failure of a borrower or counterparty to perform on an obligation. It is comprised of five sub-risks:

- Obligor risk — failure of a client/borrower to perform;
- Counterparty risk — failure of a counterparty to perform;
- Issuer risk — failure of a securities issuer to perform;
- Concentration risk — concentration of exposures to a particular entity, sector, region, industry or product that could result in a meaningful loss (applies to obligors, counterparties and issuers);
- Country risk — failure of an entity to perform caused by political, economic, military or social conditions, or other acts, laws or regulations prevailing in the country of the entity (applies to obligors, counterparties and issuers).

The primary sources of credit risk for NTGS are:

- Client overdrafts (either intended or unintended, arising inter-alia from bank errors, timing of internal transfers or wire transfers);
- Client credit facilities typically to meet short term bridge financing needs with respect to subscriptions and redemptions;
- Money market placements;
- Settlement balances with sub-custodians and "due from" nostro banks;
- Intra-group lending (mainly to the London branch of TNTC);
- Custody services that have been supplied but for which accrued fees have not been settled;
- Provisional credit arising from credits to client accounts for securities sales and income prior to actual receipt of settlement proceeds or income;
- Credit risk arising from NTGS's securities lending clients with 'enhanced indemnities' as NTGS is liable to pay for the realization of the collateral to meet the indemnifications; and
- Investments permitted within NTGS's 'Liquidity & Investment Policy'.

Other sources of credit risk within NTGS derive from its limited foreign exchange activities and accounts receivable.

4.2.2 Credit Risk Management and monitoring

NTGS benefits from a robust enterprise wide credit risk framework, as well as NTGS specific policies and processes. Broadly, there are six key components to credit risk management at NTGS:

- NTGS Credit Policy;

- A Committee approval process;
- Market specific strategies;
- A standardized credit analysis;
- Credit monitoring and surveillance;
- Credit Mitigation.

4.2.3 Large Exposure Limits

Credit limits are set in accordance with CRR requirements for large exposures. NTGS exposure to TNTC London and other related counterparties are monitored daily against the regulatory limits. Exposures to third parties are managed against the applicable CRR large exposure limits i.e. 25% of eligible capital for non-institutions and €150 million for institutional (i.e. counterparty) exposures.

An intra-group exemption has been granted by the CSSF as of 20th March 2020.

4.3 Interest Rate Risk in the Banking Book

4.3.1. Definition and sources of risk

Interest rate risk in the Banking Book is the risk to earnings or capital due to significant changes in interest rates.

The four risks that are considered to comprise interest rate risk at the enterprise level are:

- Re-pricing — the risk of loss from differences in the maturity and re-pricing terms of assets and liabilities;
- Yield curve — the risk of loss from changes in the shape of the yield curve;
- Basis — the risk of loss from imperfect correlation in the adjustment of the rates earned and paid on different financial instruments with otherwise similar re-pricing characteristics;
- Behavioral characteristics / embedded optionality — the risk of loss from customer or counterparty behavior with respect to optionality embedded in instruments held by the entity (e.g. call, put, conversion features in bond positions). With regards to the embedded optionality, NTGS has not entered into any embedded derivative contracts during the year 2019.

In the case of NTGS, potential interest rate risk in the banking book (IRRBB) arises from the mismatch in maturity or re-pricing terms of customer deposits and asset investments. NTGS maintains a prudent approach to interest rate risk, generating net interest income either through spreads or by a moderate amount of gapping. This risk is somewhat mitigated by a relatively stable base of deposits.

The stability of the deposit base is largely due to the fact that a significant proportion of the deposits are from institutional clients to whom Northern Trust provides services that are ordinarily subject to a minimum termination notice period such as custody or depositary services.

Some investment in highly rated fixed income securities provides liquidity benefits through diversification in investments and scope to quickly sell or repo securities for cash in a liquidity crisis. They can also provide a higher yield. However, term investment in fixed rate securities introduces interest rate risk so there is no active purchasing program at the moment consistent with the prudent risk appetite for such risk.

4.3.2. Interest Rate Risk Management and monitoring

On an operating basis, NTGS's balance sheet activities are managed by the Treasury function with independent oversight from the Market and Liquidity Risk Group within Corporate Risk Management (CRM). Interest rate risk is managed by EMEA Treasury through limits which are specified in the 'NTGS Liquidity and Investment Policy'.

Exceptions to limits and thresholds are escalated to local and/or corporate governance committees depending on the severity of the breach).

4.4 Operational Risk

4.4.1. Definition and sources of risk

Operational risk is the risk of loss from inadequate or failed internal processes, people and systems or from external events. Operational risk reflects the potential that inadequate information systems, operating problems, product design and delivery difficulties, or catastrophes will result in unexpected losses.

At a Group level, the risk universe includes seven operational risk sub-categories (with cyber-risk being integral to considerations of each) inherited from the Basel framework:

- Internal fraud — risk of loss resulting from the intent to defraud, misappropriate property or circumvent regulations, laws or policies. Excludes risk of credit-related fraud;
- External fraud — risk of loss resulting from the intent to defraud, misappropriate property (including identity theft) or circumvent regulations, laws or policies by a third party (non-employees). Excludes risk of credit-related fraud;
- Employment practices and workplace safety — risk of loss from an act inconsistent with employment, health or safety laws or agreements, personal injury claims or from diversity/discrimination events;
- Clients, products and business practices — risk of loss from unintentional or negligent failure to meet a professional obligation to specific clients (including fiduciary and suitability requirements) or from the nature or design of a product;
- Damage to physical assets — risk of loss resulting from damage to physical assets such as a natural disaster or terrorism;
- Business disruption and system failures — risk of loss arising from disruption of business or system failures including foreign operations risk;
- Execution, delivery and process management — risk of loss from failed transaction processing, process management or relations with counterparties and vendors. Includes potential loss associated with use of models in business decisions.

For NTGS, operational risk typically arises when transaction activity is not executed, settled or recorded on an accurate or timely basis, or where there has been a breach of contractual commitments with clients. The root cause may be individual process failures, external events, system failures or business disruption.

NTGS activities range from trade execution, transaction processing, asset servicing and depositary oversight through to fund valuation and client reporting. Consequently, business unit management and the Board of Directors have a key focus on the management of operational risk. These business activities are supported by a global operating model utilizing a Northern Trust-built and supported technology platform, supplemented by third party vended applications.

4.4.2. Operational risk governance and monitoring

The Operational Risk Framework documents a series of programs/procedures to identify, classify and manage events subject to operational risk. These include:

- Loss Event Data Collection and Analysis;
- Risk and Control Self-Assessment (RCSA);
- Scenario Analysis;
- Product & Process Risk Management;
- Business Process Transition Risk Management;
- Technology Risk Management;
- Business Continuity and Disaster;
- Physical Security.

Other elements of the framework include: Operational Risk Regulator Capital Quantification, Outsourcing Risk Management, Model Risk Management, and Insurance Management.

4.5 Compliance Risk

4.5.1. Definition and sources of risk

Compliance risk - is defined as the risk of legal or regulatory sanctions, material financial loss, or loss to reputation a bank may suffer as a result of its failure to comply with laws, regulations, rules, related self-regulatory organization standards, and codes of conduct applicable to its activities.
Northern Trust's risk universe includes two compliance sub-categories:

- Regulatory risk — the risk arising from failure to comply with prudential and business conduct regulatory requirements. Prudential requirements are intended to ensure financial safety and soundness, as well as maintain the stability of the financial system. Conduct requirements seek to protect the interests of customers and the integrity of the market;

- Financial crime risk — risk arising from financial crime (e.g., money laundering, sanctions violations, fraud, insider dealing, theft, etc.) in relation to the products, services, or accounts of the institution, its clients, or others associated with same.

NTGS is authorized to carry out certain businesses in other jurisdictions and, therefore, has to observe not only Luxembourg but other applicable overseas regulations. As a subsidiary of TNTC, NTGS is also subject to certain US regulations. In all instances NTGS must act with integrity and in an open and honest way with its regulators.

Pillar 2 capital requirements for compliance risk are considered within the operational risk methodology, however, compliance risk is subject to separate governance and monitoring.

Annual compliance risk assessments are completed outside of the ICAAP process and will be used to assess whether there needs to be any adjustment made to the program of NTGS risk specific stress testing.

4.5.2. Compliance risk governance and monitoring

Regulatory risk

The NTGS Chief Risk Officer is a member of NTGS authorized management and reports

- to the ERC, which monitors regulatory risk and risk mitigation activities of NTGS (notably);

- to the Risk and Compliance Committee of the NTGS Board on the Risk and Compliance programs.

The Chief Risk Officer is supported by NTGS Chief Compliance Officer and compliance team (including the compliance officers of the branches), a team of Compliance professionals within the UK, as well as by the Global Compliance team in Chicago.

Financial crime risk

NTGS has a Money Laundering Reporting Officer (MLRO) who reports to NTGS Chief Compliance Officer and the NT EMEA MLRO , the NTGS Board and NTGS Risk Committee.

Procedures and controls are in place to manage financial crime risk. These include but are not limited to:

- sanction screening processes;
- transaction monitoring;
- a global anti-fraud program which includes a suite of electronic fraud detection tools;
- anti-bribery & corruption; and
- compliance monitoring and testing.

4.6 Strategic Risk

4.6.1. Definition and sources of risk

Strategic risk is the vulnerability of the firm to internal or external developments that render the firm's strategy ineffective or unachievable. The consequences of strategic risk can diminish long-term earnings and capital as well as reputational damage to the firm.

NTGS defines strategic risk across 3 subcomponents: Strategic risk, Business risk, Reputation risk.

Strategic risk is considered a key inherent risk, as reflected in the quarterly NTGS risk reporting and NTGS risk assessment.

Both the risk report and the risk assessment reflect that the key strategic risk driver remains business risk, with the external stresses of the geopolitical and adverse macro-economic conditions, applying pressures upon the current business model and earnings.

Strategy risk

Strategy risk is the risk to the expansion plans that determine the desired future profile of NTGS or to the intended changes that must be made to realise those plans.

Strategy risk represents the risk that NTGS:

- Cannot grow its revenues and earnings as planned due to failure of executing its organic growth plans or an acquisition;
- Is unable to gain new clients and retain its existing clients due to aggressive competitive pricing, a lack of innovation or similar factors;
- Is impacted by government regulation or intervention; and
- Is unable to attract and retain appropriate staff, to develop and deliver new products or to control costs.

Business risk

Business risk is the risk arising from general economic conditions and external factors that could adversely affect NTGS's revenues, profits and capital. More specifically, business risk encompasses the risk of adverse economic conditions, including changes in equity market levels, interest and foreign exchange rates; a slowdown of the globalisation of investing activities or pension reform; and instability or disruption of political, economic, legal or regulatory systems in NTGS's markets, including changes in the monetary or other policies of regulatory authorities and central banks.

The risk types within business risk are:

- Contracting markets risk – the risk to earnings from reduced business volumes due to contracting markets or client base;
- Revenue risk including foreign exchange translation risk – the risk to earnings from reduced fees through declining equity markets and other capital market drivers of fee-based revenues;
- Unattractive products risk – the risk to earnings from changes in market sentiment rendering a product unattractive to clients;
- Pension obligations risk – the risk from an underfunded pension plan;
- Business concentration risk – the risk resulting from concentration of net income sources to certain business units, products, services or clients.

The demand for NTGS's services can be affected by broad economic conditions. Weakness of economic conditions can adversely affect NTGS's ability to generate new business and maintain existing business volumes.

A weakening of equity markets and/or decrease in value of some debt-related investments, as a result of market disruption or illiquidity, reduces the valuations of assets that NTGS services for its clients. Such a weakening can result in a reduction of earnings, since a proportion of the fees NTGS earns are based on asset values.

The sustained low interest rates and uncertainty as to whether individual domestic rate rises will impact a still fragile global economy produce an ongoing compression of net interest margins and reduction of net interest income.

Reputation risk

Reputation risk is the risk arising from negative perception on the part of clients, counterparties, shareholders, investors, debt-holders, market analysts, regulators or other relevant parties that could adversely affect an entity's ability to maintain existing, or establish new business relationships and access to funding. Reputation risk is usually connected to another risk or risk related event such as credit, operational or business.

The three risk types within reputation risk are:

- Product/client support;
- Third-party;
- Adverse publicity risk.

The reputation of NTGS is closely correlated to the reputation of the Corporation which has been captured as an indicator in the NTGS Recovery plan. Equally an adverse reputational event within NTGS can impact the reputation of Northern Trust as a whole.

4.6.2. Strategic risk governance and monitoring

Strategy risk

NTGS's planning processes are focused on establishing goals for revenue, net income and balance sheet growth. All of the above risk types could affect future revenue, net income or balance sheet growth and are therefore important components of the capital adequacy assessment.

The key strategy risk driver for NTGS is the ever growing regulatory change (both volume and complexity) that may give rise to unintended and/or undesired changes to its business or operating model; and divert resources away from strategic initiatives.

The key programs used to manage various components of strategy risk are as follows:

- *Business or expansion plan execution* risk*;*
- *Group risk;*
- *Cost Management*;
- *New Business and Client Service*;
- *Compliance*;
- *Brexit*.

Business risk

NTGS has sought to mitigate the adverse external factors by the expansion and diversification of its existing client base and the depth of products. The diversification strategies are closely reviewed by senior management and in the main are extensions of the core services already offered by NTGS, rather than a change of business model.

NTGS has also identified the need to respond to the significant changes in the European custody and clearing landscape and facilitated by the introduction of the Central Securities Depository Regulation (CSDR) and the creation of Target 2 Securities (T2S).

As part of an enterprise initiative, NTGS has appointed Euroclear France as its point of entry into the T2S settlement process for the French market. Work is continuing to assess entry into other key markets which include Germany, Netherlands, Belgium and Spain.

The annual business unit strategies address the key components of business risk. On an on-going basis, NTGS's Board of Directors and Authorized Management carefully monitor financial results and receive updates from the business around key market, product and client issues.

Reputation risk

NTGS leverages on following programmes to manage its reputation risk:

- *Clients at Risk and Senior Management Calling Programmes* – clients at risk for service or strategic reasons are closely monitored by senior management. Where service issues are identified senior management calling officers are assigned to provide close attention and focus to the relationship until the service issues are resolved*;*
- *Outsourcing Risk Management Program* – this program is designed to vet and approve all third party suppliers to mitigate third party risk.
- *Publicity Monitoring* - the EMEA marketing team monitors news items concerning Northern Trust to manage any potential adverse publicity risk.

4.7 Liquidity Risk

4.7.1. Definition and sources of risk

Liquidity risk is the risk of not being able to raise sufficient funds to meet cash flow obligations because of firm-specific or market-wide events.

Liquidity risk arise as the exposure to a range of liquidity risk drivers:

- Capital markets environment risk — risk to earnings from funding needs during difficult markets, impacting the entity's ability to raise capital and its ability to meet the entity's commitments;
- Funding Risk - risk of losing access to short- or long-term funds during periods of market or idiosyncratic stress;
- Franchise Risk – risk to earnings from clients and capital markets counterparties losing confidence in the entity;
- Marketability Risk - risk that monetary assets cannot be sold, pledged or otherwise converted to cash as needed;
- Cross Currency Risk - risk that funds in one currency cannot be converted to another currency when required;
- Group Risk - risk to earnings and/or capital availability from the performance of the parent or other group companies. This includes Forced Dividend Risk, Parent Insolvency Risk, Trapped Capital Risk and Legal Restrictions Risk;
- Intraday Risk - Risk that funds cannot be provided during the business day to meet time-specific payment deadlines;
- Off-balance Sheet Risk - risks from funding commitments or other obligations, especially during periods of market or idiosyncratic stress.

Intraday liquidity risk is the most significant liquidity risk at NTGS SE. It arises primarily in relation to its obligations towards depository, clearing and settlement systems across a large sub-custodial network with varying market and settlement requirements.

Sources of risk include the inability to:

- Access sources of funds in a timely manner, such as reserves held at central banks;
- Provide the appropriate amount or type of collateral required to draw down on secured intraday liquidity sources;
- Draw on intraday credit lines at Nostros;
- Utilise balances with other banks for intraday settlement, or late receipt of client funding, to settle custody related purchases by the cut-off times for settlement systems such as Euroclear.

Intraday liquidity risk would crystallise in a situation where NTGS could not tap into its usual intraday liquidity pools, or where these pools were not sufficiently funded, to support payment obligations during a business day to a point that would precipitate a liquidity shortfall resulting in NTGS being unable to continue to meet its obligations.

4.7.2. Liquidity risk governance and monitoring

As a tactical approach to quantify the potential intraday liquidity requirement under stress, NTGS has leveraged the corporate methodology currently being employed until more granular information is available via the "liquidity management engine". When new system cash management capabilities are implemented around the monitoring of client balances, NTGS will be able to model client payment patterns to improve the robustness of its analysis, which is likely to result in revising the required buffer.

The NTGS Liquidity and Investment Policy contains a section on the management of collateral and asset encumbrance.
Additionally, as a banking subsidiary of a wider corporation, NTGS is subject to the Northern Trust Corporation Collateral Management Standard, which establishes the controls and procedures for calculating and monitoring collateral pledged by the Northern Trust Corporation in accordance with relevant regulatory requirements.

Treasury is responsible for the practices surrounding Northern Trust's collateral management, in coordination with Operations. Collateral is managed globally by Treasury and regional Treasury and Finance teams. Market and Liquidity Risk Management periodically performs an independent review of the Standard.

Treasury, in conjunction with Cash Liquidity management, continuously monitors the amount of collateral pledged to financial market utilities to ensure that a sufficient amount is maintained to ensure smooth settlement activity.

4.8 Adequacy of Risk Management Arrangements

NTGS defines risk appetite as the amount and type of risk it is willing to assume in order to achieve its strategic and financial objectives. NTGS continuously strives to balance its desire to meet these objectives with an acceptable level of risk. The risk tolerance thresholds applicable to NTGS's business activities are contained in its risk appetite statement, which is approved by the Board.

The risk appetite statement at NTGS covers a very broad range of risks: Market & Liquidity risk, Credit risk, Operational risk, Business Continuity and Resiliency, Conduct risk, Compliance risk, Fiduciary risk, Investment risk, workforce risk, and strategic risk.

As part of the ongoing operation of the Risk Management Framework (RMF), NTGS employs a "three lines of defence" model. The responsibilities across the three lines of defence are fundamental to the design and implementation of the Framework, and taken together establish an appropriate operating model to control risk taking.

The first line of defence is accountable and responsible for identifying, measuring, controlling and monitoring risks associated with its activities either individually or with the assistance of the second line of defence. The first line of defence is typically engaged in activities designed to generate revenue, reduce expense, provide operational support for delivery of products or services to clients, and provide technology services.

The second line of defence is accountable and responsible for identifying, measuring, monitoring, and controlling risk in aggregate. Typically the risk practices, as independent risk functions separate and distinct from the business units, are considered NTGS's second line of defence.

The third line of defence is accountable and responsible for independently assessing the design and ongoing effectiveness of governance, risk management, and internal controls. Audit Services is an independent control function that assesses and validates controls within Northern Trust's Enterprise Risk Management framework.

The NTGS Board is satisfied with the existing risk management arrangements and that the thresholds in place are considered adequate with regard to the profile and strategy of NTGS.

The Board also confirms that the disclosures contained within this document accurately reflect the risk profile of NTGS based on the activities it undertakes.

5. CAPITAL RESOURCES

The Capital Resources of the Group and NTGS are presented below.

All figures in euro millions	Group 2019	Group 2018	NTGS 2019	NTGS 2018
Tier 1 Capital				
Called up share capital	371	368	393	387
Share premium	-	-	23	-
Retained earnings and other reserves	312	209	279	190
	683	577	695	577
Less: Deductions from Tier 1 Capital	175	156	175	156
Total Tier 1 Capital net of deductions	508	421	520	421
Total Capital Resources	**508**	**421**	**520**	**421**

As at 31 December 2019 the Group has Tier 1 capital of €508million consisting of share capital, audited retained earnings and reserves, including a historic foreign currency translation reserve.

As at 31 December 2019, NTGS had Tier 1 capital of €520 million consisting of share capital contributed by NTHL and audited retained reserves

A reconciliation of NTGS's Total Capital Resources to its balance sheet in the audited financial statements is included in Annex 1.

Article 437 of the CRR requires certain disclosures in respect of Capital Resources (or "Own Funds") to be made in accordance with uniform templates as provided in ITS No 1423/2013. These disclosures are provided as appendices to this disclosure document.

6. CAPITAL ADEQUACY

6.1 Overview

The NTGS Board reviews the capital position of the NTGS on a regular basis to ensure it is sufficient to meet its strategic goals and risk profile. Pillar 1 capital requirements are calculated on a daily basis as outlined below and the ongoing ICAAP process provides further assessment for any additional risk capital requirement under Pillar 2.

Both NTGS and the Group are sufficiently capitalised to meet their regulatory capital requirements under Pillar 1 and Pillar 2.

6.2 *Pillar 1 Capital Requirement*

Both NTGS and the Group calculate their minimum capital requirements in accordance with the requirements of the CRR and the CSSF, being the higher of the following:

1. €8.7m, being the base case capital resources requirement; and
2. the sum of the credit risk capital requirement, market risk capital requirement and operational risk capital requirement calculated in accordance with the CRR.

Both NTGS and the Group uses the standardised approaches to calculate credit and market risk capital requirements, and the basic indicator approach to calculate operational risk capital requirements. The Pillar 1 capital requirements of NTGS and the Group as at 31 December 2019 are provided in the following table:

	Group		**NTGS**	
All figures in Euro millions	**2019**	**2018**	**2019**	**2018**
Total Credit Exposures	5,411	4,625	5,398	4,625
Total Credit Risk Weighted Assets (RWA)	304	460	301	460
Credit Risk	24.3	36.8	24.1	36.8
Market Risk	0.2	0.1	0.2	0.1
Operational Risk	22.0	16.8	22.0	16.8
CVA Risk	0.4	0.2	0.4	0.2
Pillar 1 Capital Requirement	**46.9**	**53.9**	**46.7**	**53.9**
Tier 1 Ratio % (Tier 1 Capital / RWA)	**87%**	**62%**	**89%**	**62%**
Total Capital Ratio % (Total Capital / RWA)	**87%**	**62%**	**89%**	**62%**

6.3 Credit Risk Capital Requirement

All credit exposures arise as a result of NTGS's operations. NTGS's minimum credit risk capital requirement is calculated using the standardised approach and is expressed as 8 % of risk weighted exposures. Where available, issuer ratings from the External Credit Assessment Institutions (ECAIs) Moody's and Standard & Poor's (S&P) are used in the determination of the relevant risk weighting across all exposure classes. Where ECAI ratings differ, the lower issuer rating is applied.

A breakdown of NTGS's credit risk exposures by asset class, geography and maturity as at 31 December 2019 is provided in the following tables:

Credit Risk by Exposure Class	**2019**			**2018**		
All figures in Euro millions	**Exposure (Gross)**	**Exposure (Net)**	**RWA**	**Exposure (Gross)**	**Exposure (Net)**	**RWA**
Central governments or central banks	4,361	4,361	-	2,669	2,669	-
Multilateral Development Banks	30	30	-	62	62	-
Covered Bonds	32	32	3	30	30	3
Institutions	782	445	104	1,614	932	207
Corporates	43	43	43	179	179	179
Other	151	151	151	71	71	71
Total	**5,398**	**5,061**	**301**	**4,625**	**3,943**	**460**

Average Credit Risk by Exposure Class	**Avg. Exposure (Gross)**	
All figures in Euro millions	**2019**	**2018**
Central governments or central banks	4,745	5,422
Multilateral Development Banks	52	62
Covered Bonds	31	31
Institutions	1,117	2,233
Corporates	78	86
Other	142	109
Total	**6,165**	**7,943**

Credit Risk (Net) Exposures by Geographic Region All figures in Euro millions	**United Kingdom**	**European Union**	**United States**	**Other**	**TOTAL**
			2019		
Central governments or central banks	593	3,768	-	-	4,361
Multilateral Development Banks	-	30	-	-	30
Covered Bonds	-	16	-	16	32
Institutions	55	85	118	187	445
Corporates	-	33	1	9	43
Other	-	-	151	-	151
Total	648	3,932	270	211	5,061
			2018		
Central governments or central banks	250	2,419	-	-	2,669
Multilateral Development Banks	-	62	-	-	62
Covered Bonds	-	15	-	15	30
Institutions	68	145	189	530	932
Corporates	-	5	-	174	179
Other	-	-	71	-	71
Total	318	2,646	260	719	3,943

Credit Risk (Net) Exposures by Maturity All figures in Euro millions	**Demand**	**Less than 8 days**	**<1 year**	**1-5 years**	**Undated**	**TOTAL**
			2019			
Central governments or central banks	4,361	-	-	-	-	4,361
Multilateral Development Banks	-	-	-	30	-	30
Covered Bonds	-	-	5	27	-	32
Institutions	327	117	2	-	-	446
Corporates	43	-	-	-	-	43
Other	-	-	-	-	151	151
Total	**4,731**	**117**	**7**	**57**	**151**	**5,061**
			2018			
Central governments or central banks	2,558	-	111	-	-	2,669
Multilateral Development Banks	-	-	34	28	-	62
Covered Bonds	-	-	-	30	-	30
Institutions	383	456	93		-	932
Corporates	179	-	-	-	-	179
Other	-	-	-	-	71	71
Total	**3,120**	**456**	**238**	**58**	**71**	**3,943**

6.4 The Internal Capital Adequacy Assessment Process (ICAAP)

The Group undertakes an ICAAP as required by the CSSF (see notably 07/301). The ICAAP assesses the adequacy of the Group's Capital Resources to cover Pillar 1 risks as well as other risks not captured within the Pillar 1 assessment. The adequacy of NTGS's capital resources on a stand-alone basis is also assessed. These assessments are supported by scenario analysis and stress testing. The ICAAP also provides detail on the risk management framework and contains a risk assessment across all risk categories.

The ICAAP includes key input from NTGS and EMEA region's risk professionals, business management and the finance group. For each risk category the inherent risk level is documented, along with risk mitigation practices in place to derive an overall residual risk profile.

For the material inherent risks faced by NTGS, quantitative methods, scenarios and stress testing has been used to evaluate the potential capital demands. Business management and the Board have provided input to the scenarios and stress testing process to ensure all appropriate information and experience is brought to this evaluation exercise.

The ICAAP has identified the need for the Group to hold capital in addition to its Pillar 1 requirement and confirms this additional requirement is met by available Capital Resources.

The ICAAP is an ongoing process. Scenario and stress testing is revisited at least annually and more frequently should material events (external and/or internal) warrant a re-assessment. The ICAAP document is formally reviewed and approved by the NTGS Board and noted by the NTHL Board on an annual basis.

The ICAAP has been prepared in accordance with the CSSF circular 07/301 guidance and has been made available to the CSSF.

7. LEVERAGE RATIO

7.1 Leverage Ratio

The leverage ratio is an additional supervisory tool designed to assist in managing the risks of excessive leverage. It is calculated by dividing Tier 1 capital by the quarter-end balance for on and most off-balance sheet exposures prior to any application of risk weighting, netting or collateral.

NTGS is required to report its leverage ratios during an observation period. The Basel Committee is testing a minimum ratio of 3% during this observation period with a view to establishing a global binding minimum ratio.

The tables below provide a breakdown of NTGS's leverage ratio as at 31 December 2019 calculated in accordance with Article 429 and 499(2) and (3) of the EU CRR and a reconciliation of leverage exposures to NTGS's audited financial statements. All information is provided on a solo basis.

Summary reconciliation of accounting assets and leverage ratio exposures

		€m
1	Total assets as per published financial statements Total assets as per prudential reporting prepared under IFRS	5,240 5,278
2	Adjustment for entities which are consolidated for accounting purposes but are outside the scope of regulatory consolidation	
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")	96
4	Adjustments for derivative financial instruments	23
5	Adjustments for securities financing transactions "SFTs"	
6	Adjustment for off-balance sheet items (ie conversion to credit equivalent amounts of off-balance sheet exposures)	9
6a	(Adjustment for intragroup exposures excluded from the leverage ratio exposure measure in accordance with Article 429 (7) of Regulation (EU) No 575/2013)	
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	
8	**Total leverage ratio exposure**	5,182

Leverage ratio common disclosure

		€m
	On-balance sheet exposures (excluding derivatives and SFTs)	
1	On-balance sheet items (excluding derivatives, SFTs and fiduciary assets, but including collateral)	5,278
2	(Asset amounts deducted in determining Tier 1 capital)	96
3	**Total on-balance sheet exposures (excluding derivatives, SFTs and fiduciary assets) (sum of lines 1 and 2)**	5,182
	Derivative exposures	
4	Replacement cost associated with *all* derivatives transactions (ie net of eligible cash variation margin)	1
5	Add-on amounts for PFE associated with *all* derivatives transactions (mark-to-market method)	22
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	
10	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	
11	**Total derivative exposures (sum of lines 4 to 10)**	23
	Securities financing transaction exposures	
12	Gross SFT assets (with no recognition of netting), after adjusting for sales accounting transactions	
13	(Netted amounts of cash payables and cash receivables of gross SFT assets)	
14	Counterparty credit risk exposure for SFT assets	
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	
15a	(Exempted CCP leg of client-cleared SFT exposure)	
16	**Total securities financing transaction exposures (sum of lines 12 to 15a)**	
	Other off-balance sheet exposures	
17	Off-balance sheet exposures at gross notional amount	85
18	(Adjustments for conversion to credit equivalent amounts)	76
19	**Other off-balance sheet exposures (sum of lines 17 to 18)**	9
	Capital and total exposures	
20	**Tier 1 capital**	521
21	**Total leverage ratio exposures (sum of lines 3, 11, 16, 19, EU-19a and EU-19b)**	5,182
	Leverage ratio	
22	**Leverage ratio**	10.05%

Split-up of on balance sheet exposures (excluding derivatives, SFTs and exempted exposures)		
		€m
1	Total on-balance sheet exposures (excluding derivatives, SFTs, and exempted exposures), of which:	5,278
2	Trading book exposures	
3	Banking book exposures, of which:	
4	Covered bonds	32
5	Exposures treated as sovereigns	4,360
6	Exposures to regional governments, MDB, international organisations and PSE NOT treated as sovereigns	30
7	Institutions	519
8	Secured by mortgages of immovable properties	
9	Retail exposures	
10	Corporate	35
11	Exposures in default	
12	Other exposures (eg equity, securitisations, and other non-credit obligation assets)	302

8. ASSET ENCUMBRANCE

8.1 Background

Article 443 of the CRR identifies the European Banking Authority (EBA) guidelines on the disclosure of encumbered assets (EBA/GL/2014/03, published 27 June 2014 as the legal source of requirements for the publication of disclosures on asset encumbrance. This section has been produced in accordance with these EBA guidelines.

Consistent with the EBA guidelines NTGS considers an asset to be encumbered if it has been pledged or if it is subject to any form of arrangement to secure, collateralize or credit-enhance any on-balance-sheet or off-balance-sheet transaction from which it cannot be freely withdrawn. This includes assets which are subject to any restrictions on withdrawal, including a requirement for prior approval or replacement with other assets.

NTGS's median quarterly balance of encumbered assets for the year to 31 December 2019 was €0.5 million

8.2 Disclosure

Assets (€m)

		Carrying amount of encumbered assets	Fair value of encumbered assets	Carrying amount of unencumbered assets	Fair value of unencumbered assets
		010	040	060	090
010	**Assets of the reporting institution**	**0.5**		**6,142**	
020	Loans on demand	-	-	5,576	
040	Debt securities	0.5	-	179	179
120	Other assets	-		339	

Sources of encumbrance

		Matching liabilities, contingent liabilities or securities lent	Assets, collateral received and own debt securities issued other than covered bonds and ABSs encumbered
		010	030
010	**Carrying amount of selected financial liabilities**	**-**	**-**

D – Information on the importance of encumbrance

Asset encumbrance for the NTGS Group is driven exclusively by the activities of NTGS. Asset encumbrance is not a key feature of NTGS's funding model which is primarily driven by unsecured client deposits. Asset encumbrance may be considered in a stressed liquidity environment where NTGS's stock of eligible debt securities could be used to borrow funds on a secured basis from third parties.
For the year to 31 December 2019 the only source of asset encumbrance was a €1 million government bond pledged in support of NTGS's client custody activities. This pledge is designed to protect against potential shortfalls in client custody assets as required under UK Client Asset rules.

NTGS does not consider that any of the balance reported as "other assets" in row 120 of Template A above to be available for encumbrance in the normal course of its business.

9. CAPITAL BUFFERS

9.1 Overview

In addition to meeting the applicable minimum Pillar 1 and Pillar 2 capital requirements described above, NTGS is required to hold additional Common Equity Tier 1 capital to cover capital to meet CRR/CRD capital buffer requirements..

These buffers, comprising the Capital Conservation Buffer ('CCoB') and the Counter-cyclical Capital Buffer ('CCyB'), are designed to ensure that banks accumulate sufficient high quality capital that is capable of absorbing losses in stressed periods.

9.2 Capital Conservation Buffer ('CCoB')

From 1 January 2019 NTGS is required to calculate a CCoB rate of ~~1.875%~~ of 2.5% applied against risk weighted assets. The CCoB objective is to conserve capital. When a bank breaches the buffer, automatic safeguards apply to limit the amount of dividend and bonus payments it can make.

9.3 Counter-cyclical Buffer ('CCyB')

NTGS is required to calculate an institution-specific CCyB based on a weighted average of the CCyB rates applied in the countries where its relevant credit exposures are located.

A designated authority in each EU member state is responsible for setting the CCyB rate in that member state on a quarterly basis, taking into account various macro-prudential indicators including the growth in the provision of credit and changes in the ratio of credit to GDP. The European Systemic Risk Board (ESRB) is an independent body of the EU and is part of the European System of Financial Supervision (ESFS), the purpose of which is to ensure the supervision of the EU's financial system. The ESRB is responsible for setting the rate in Luxembourg. The ESRB may also recognise the CCyB rates applied by responsible authorities in other EU member states and other foreign authorities.

As at 31 December NTGS's relevant credit exposures to counterparties in those jurisdictions where a CCyB has been set was minimal.

NTGS will continue to calculate its CCyB in accordance with the rates prescribed by the ESRB.

10. REMUNERATION AND BOARD OF DIRECTORS

10.1 Board of Directors

All executive directors of the Northern Trust Global Services Societas Europaea ("NTGS SE" hereinafter) Board are required to obtain approval for any directorships held in organisations external to Northern Trust. Non-executive directors are required to avoid taking up any appointments during their tenure which would give rise to a conflict of interest. During the 2019 performance year, 3 directors of the NTGS SE Board held a total of 5 directorships for organisations outside of Northern Trust.

NTGS SE has a Risk Committee of the Board that discusses and recommends risk related matters to the Board.

Qualitative Disclosures

Governance and Compensation Policies

The Northern Trust (NTC) Compensation and Benefits Committee (CBC) is a committee of the Board of the parent company headquartered in Chicago IL, USA. The CBC has primary responsibility for ensuring that compensation programs align with our philosophy and objectives, including oversight of the processes through which the company reviews its incentive plans within the context of business risk mitigation.

The CBC consists of independent NTC non-executive directors and has Meridian Compensation Partners as its independent consultant. The CBC confers with its independent compensation consultant to ensure that decisions and actions are consistent with stockholders' long-term interests and compensation-related best practices within the financial services industry, including effective risk management within our compensation framework.

A Compensation Committee (NTGS CC) has also been established at a local level consisting of three Non-executive Directors of the NTGS SE Board (including the chair). The role of the NTGS CC is to provide support and advice to the NTGS SE Board of Directors on the design and review of the NTGS SE compensation policies, practices and processes and to monitor and implement the NTGS SE regulatory compensation requirements. The purpose of NTGS CC is to ensure remuneration policies and processes are in line with the requirements of the Luxembourg law implementing the European Directive ("CRD IV Luxembourg Law") and provisions in relation to remuneration policies into the Luxembourg law on the financial sector ("the LFS"). The terms of reference for the NTGS SE CC details their role and responsibilities.

Northern Trust's Total Compensation Policy applies to all employees globally and contains addendums specifically related to EU remuneration requirements for employees operating in EU regulated countries. The CBC reviews the Total Compensation Policy on an annual basis.

Furthermore, NTGS SE has established a Total Compensation Policy in line with the requirements of the LFS, CRD IV Luxembourg Law and the EBA Guidelines. NTGS SE Total Compensation Policy applies to all employees in NTGS SE. The NTGS SE Board of Directors approve and regularly review the general principles of this Total Compensation Policy following a recommendation by NTGS CC.

Material Risk Takers

Employees whose professional activities have a material impact on NTGS SE risk profile are classified as performing Material Risk Taker ("MRT") roles in accordance with the criteria set out in the European Regulation, (EU) No 604/2014 and are categorised as:

- "*Senior Managers MRTs*" - those employees identified under Regulatory Technical Standards Article 3 (criterion 1,2,3) who are heads of Control Functions and/or members of governing bodies and/or heads of significant business groups.

- "*Standard MRTs*"- those employees that could have the ability to impact the risk profile of NTGS SE however these all operate within appropriate governance structures and under delegated authorised limits from Senior Managers.

In addition "Group MRTs" are employees who are subject to both Luxembourg (CSSF) and UK (FCA/PRA) remuneration rules as a result of being identified as an MRT for the UK regulated entity(s) as well.

Compensation design:

Remuneration design and structure at NTC focuses on all elements of total compensation and differentiation to avoid entitlement and to develop a high performance culture. In addition to fixed remuneration, NTC offers variable remuneration which includes short-term and long-term incentives where appropriate. Risk and Compliance employees have incentive awards funded from the Corporate Risk & Compliance pool and are not impacted by the business funding.

At the start of the performance year, the NTC Board of Directors approves a Profit Plan which includes detail on projected performance outlook and competitive requirements for incentive compensation. The Profit Plan determination includes risk considerations including reserves for credit and operational losses and other risk assessments. The CBC then reviews the initial cash incentive pool accrual at the corporate level based on a competitive target percentage range of the pre-tax income projections included in the Profit Plan.

The initial accrual level takes into consideration financial performance factors including affordability and risk considerations. The corporate cash incentive pool is funded based on the actual performance of the Corporation as measured by pre-tax income in early December, with the ability to claw funding back post-performance period when the actuals have been determined.

NTC's Chief Risk Officer (CRO) participates in funding and allocation discussions that inform the recommendation to the CBC of corporate pool funding level as well as Business Unit allocation. Corporate Risk Management has developed a process to track and consolidate risk events and key metrics for the plan year and this information is provided to Business Unit leaders and managers for incorporation in performance review and throughout the plan year. The CRO uses the Enterprise and Business Unit Risk Performance Scorecards and any known Significant Risk Outcomes to inform recommendations to the CBC regarding any risk adjustments to the overall funding or business unit allocations. The CRO participates in quarterly discussions with the Chief Financial Officer and Chief Human Resources Officer regarding the financial performance as well as consideration of risk factors such as credit loss reserves and operational losses. Once the cash incentive allocation to Business Units has been determined, the Business Unit President reviews financial performance and any risk factors to determine allocation of the cash incentive pool. The Business Unit Chief Financial Officer and Business Unit Chief Risk Officer (with input from the EMEA CRO and NTGS SE CRO) participate in this review.

The Board of Directors and Authorized Management of NTGS SE are also provided with the Finance and Risk Scorecard for NTGS SE as part of the global incentive risk management processes to ensure that they can feedback into the corporate process. Performance against these criteria is measured using both quantitative and qualitative criteria.

Annual review processes for all employees include performance expectations related to the monitoring and mitigation of risk. In completing the annual performance evaluation and compensation planning, managers receive information on how to incorporate appropriate performance expectations relative to the management of risk into the review process. As part of the annual salary reviews and incentive process managers recommend total compensation reflecting their discretionary assessment of specific objective and subjective factors including performance against risk expectations.

When choosing appropriate measures for team and individual goals, these goals are aligned with those of the business. As these business and financial goals are achieved, employees are rewarded accordingly to reinforce the value of their contribution. In order to determine an individual's pay and

incentive allocation, mangers will take into consideration discretionary assessment of specific objective and subjective factors such as:

- corporate and business unit performance;
- performance within a standard risk expectation for all employees;
- prior and expected individual performance and long term impact; and
- teamwork and individual contributions.

All employees within NTC are eligible for an incentive payment subject to performance. Performance factors can result in no increase to base pay and/or a zero cash incentive award for a specific performance period.

The short-term incentive (STI) and long-term incentive (LTI) mix was determined for employees according to a fixed structure based on the total incentive award amount. For Performance Year 2019, the minimum total incentive award for receiving a LTI award was $75,000. Incentive splits for MRTs and other regulated roles was administered according to regulatory requirements and the deferral and vesting of variable remuneration was in accordance with the CRD IV remuneration rules.

Total variable remuneration consists of a combination of four components for Material Risk Takers:

- STI Cash award;
- STI Equity[1] typically granted in the form of Restricted Stock Unit (RSU) awards that vest immediately;
- LTI Cash[2,3] deferred award;
- LTI Equity[1,3] deferred award typically granted in the form of RSUs.

[1]At the time of vest, delay in distribution / hold period is applicable on STI and LTI awards delivered in equity. The equity award is distributed 12 months after it vests. Solely UK MRTs who receive LTI in 100% equity, the hold period is applicable to 50% of the LTI equity award only.
[2]LTI Cash is awarded to NTGS SE and Group MRTs only whereas solely UK regulated MRTs receive the full LTI award in the form of equity awards.
[3]In accordance with CRD IV remuneration requirements, deferred awards are subject to performance adjustment consideration at time of vesting.

The deferral period for MRTs solely identified for NTGS SE is:

- 5 years for Senior Manager MRTs vesting on a pro-rata basis of 20% per year beginning on the first anniversary of the first day of the month after the month of grant;
- 4 years for Standard MRTs vesting on a pro-rata basis of 25% per year beginning on the first anniversary of the first day of the month after the month of grant;

Where MRTs are identified for other regulated entities with longer deferral periods, the more stringent rules apply, such as:

- 7 year vest period for TNTC-LB PRA Senior Managers MRTs vesting on a pro-rata basis of 20% per year beginning on the third anniversary of the first day of the month after the month of grant;

The MRT remuneration structure does not apply where variable remuneration is less than €100k. In addition, for Group MRTs the total incentive award must be less than 33% of total compensation and total compensation is no more than £500k, for the rules to not apply. Standard corporate splits between STI and LTI prevail in these instances.
The purpose of the LTI cash and equity awards is to link current and future business leaders to overall long term performance of the organisation.

There is a set limit on the amount of incentive compensation that can be paid in relation to fixed compensation. This is referred to as the bonus cap. The maximum incentive compensation that an MRT can receive is 100% of their fixed compensation. Under exceptional and limited circumstances which are amongst others subject to shareholder approvals on an annual basis and compliance with the procedure set out in article 38-6 of the LFS and notification requirements of the CSSF Circular 15/622, the bonus cap may be extended to a higher ratio which may reach up to 200% of the fixed component of the total remuneration for the MRT.

Quantitative Disclosures

The NTGS CC met three times during the 2019 performance year. The Non-Executive Directors who act as members of the NTGS CC are also members of other committees of the NTGS SE Board and as such the fixed remuneration they receive relates to their full duties and not just the NTGS CC duties. All NTGS CC members are MRTs. Total fixed cash remuneration for performance year 2019 of the members is €0.22m. No variable remuneration is awarded.

The CBC met four times during 2019. The directors who act as members of the CBC are also members of other committees of the NTC Board and as such the remuneration they receive relates to their full duties and not just the CBC duties. Total remuneration paid to the CBC members for 2019 was US$1.47m in a combination of stock and cash. Full details of these awards are available in the 2020 NTC Proxy Statement.

Fixed and variable remuneration

In 2019, there were 28 MRTs classified as Senior Manager MRTs and Standard MRTs. The aggregate remuneration expenditure in respect of MRTs was as follows:

Material Risk Takers	2019
Number of MRTs	28
Fixed remuneration (€ m)	7.6
Variable remuneration (€ m)	2.9
of which STI Cash (€ m)	1.2
of which STI RSU (€ m)	0.69
of which LTI Cash (€ m)	0.46
of which LTI RSU (€ m)	0.53

Notes:

- Fixed remuneration consists of base salaries and cash allowances.
- Variable remuneration consists of STI Cash, STI RSUs, LTI Cash and LTI RSUs.
- No NTGS SE MRTs hired in performance year 2019 received a guarantee award.

During the financial year, no severance payments were awarded to NTGS SE MRTs.

The information above includes remuneration for MRTs whose responsibilities also cover other regulated entities.

Note, there were no NTGSE SE MRT earning over €1m total remuneration bracket to report.

11. CONTACTS

Should you have any queries please contact:

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ANNEX I

Balance Sheet Reconciliation Methodology

Disclosure according to Article 2 in Commission implementing regulation (EU) No 1423/2013

Capital base - 31 December 2018	**NTGS SE**
EURO 000's	
Shareholders' equity according to the Group's balance sheet	695,623
Common Equity Tier 1 capital	**695,623**
Tier 1 capital contributions	
Regulartory deductions from Tier 1 capital	-175,223
Total Tier 1 capital	**520,400**
Tier 2 instrument	
Net provisions for reported IRB credit exposures	
Transistional adjustments	
Total Tier 2 capital	**0**
Total capital base	**520,400**

In absence of audited consolidated financial statements at the NTGS Group level, the total capital base is reconciled to Shareholders' equity as reported in NTGS's audited financials statements on a stand-alone basis. NTGS is the only operating entity in the NTGS Group and its results are representative of the Group.

ANNEX VI

Own funds disclosure template

Disclosure according to Article 5 in Commission implementing regulation (EU) No 1423/2013

Common Equity Tier 1 capital: instruments and reserves		NTGS EURO 000's	NTHL EURO 000's	(B) REGULATION (EU) No 575/2013 ARTICLE REFERENCE
1	Capital instruments and the related share premium accounts	416,514	371,452	26 (1), 27, 28, 29, EBA list 26 (3)
	of which: Instrument type 1	0	0	EBA list 26 (3)
	of which: Instrument type 2	0	0	EBA list 26 (3)
	of which: Instrument type 3	0	0	EBA list 26 (3)
2	Retained earnings	276,986	280,074	26 (1) (c)
3	Accumulated other comprehensive income (and any other reserves)	2,122	32,065	26 (1)
3a	Funds for general banking risk	0	0	26 (1) (f)
4	Amount of qualifying items referred to in Article 484 (3) and the related share premium accounts subject to phase out from CET1	0	0	486 (2)
	Public sector capital injections grandfathered until 1 january 2018	0	0	483 (2)
5	Minority interests (amount allowed in consolidated CET1)	0	0	84, 479, 480
5a	Independently reviewed interim profits net of any foreseeable charge or dividend	0	0	26 (2)
6	**Common Equity Tier 1 (CET1) capital before regulatory adjustments**	695,623	683,591	
0				
7	Additional value adjustments (negative amount)	0	0	34, 105
8	Intangible assets (net of related tax liability) (negative amount)	109,956	109,956	36 (1) (b), 37, 472 (4)
9	Empty set in the EU	0	0	
10	Deferred tax assets that rely on future profitability excluding those arising from temporary difference (net of related tax liability where the conditions in Article 38 (3) are met) (negative amount)	19,739	19,739	36 (1) (c), 38, 472 (5)
11	Fair value reserves related to gains or losses on cash flow hedges	0	0	33 (a)
12	Negative amounts resulting from the calculation of expected loss amounts	0	0	36 (1) (d), 40, 159, 472 (6)
13	Any increase in equity that results from securitised assets (negative amount)	0	0	32 (1)
14	Gains or losses on liabilities valued at fair value resulting from changes in own credit standing	0	0	33 (1) (b) (c)
15	Defined-benefit pension fund assets (negative amount)	0	0	36 (1) (e), 41, 472 (7)
16	Direct and indirect holdings by an institution of own CET1 instruments (negative amount)	0	0	36 (1) (f), 42, 472 (8)
17	Direct, indirect and synthetic holdings of the CET1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negatvie amount)	0	0	36 (1) (g), 44, 472 (9)
18	Direct, indirect and synthetic holdings of the CET1 instruments of financial sector entities where the institution does not have a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	0	0	36 (1) (h), 43, 45, 46, 49 (2) (3), 79, 472 (10)
19	Direct, indirect and synthetic holdings of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	0	0	36 (1) (i), 43, 45, 47, 48 (1) (b), 49 (1) to (3), 79, 470, 472 (11)
20	Empty set in the EU	0	0	
20a	Exposure amount of the following items which qualify for a RW of 1250%, where the institution opts for the deduction alternative	45,526	45,526	36 (1) (k)
20b	of which: qualifying holdings outside the financial sector (negative amount)	45,526	45,526	36 (1) (k) (i), 89 to 91
20c	of which: securitisation positions (negative amount)	0	0	36 (1) (k) (ii) 243 (1) (b) 244 (1) (b) 258
20d	of which: free deliveries (negative amount)	0	0	36 (1) (k) (iii), 379 (3)
21	Deferred tax assets arising from temporary difference (amount above 10 % threshold , net of related tax liability where the conditions in Article 38 (3) are met) (negative amount)	0	0	36 (1) (c), 38, 48 (1) (a), 470, 472 (5)
22	Amount exceeding the 15% threshold (negative amount)	0	0	48 (1)
23	of which: direct and indirect holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities	0	0	36 (1) (i), 48 (1) (b), 470, 472 (11)
24	Empty set in the EU	0	0	
25	of which: deferred tax assets arising from temporary difference	0	0	36 (1) (c), 38, 48 (1) (a), 470, 472 (5)
25a	Losses for the current financial year (negative amount)	0	0	36 (1) (a), 472 (3)
25b	Foreseeable tax charges relating to CET1 items (negative amount)	0	0	36 (1) (l)
26	Regulatory adjustments applied to Common Equity Tier 1 in respect of amounts subject to pre-CRR treatment	0	0	

26a	Regulatory adjustments relating to unrealised gains and losses pursuant to Articles 467 and 468	0	0	
26b	Amount to be deducted from or added to Common Equity Tier 1 capital with regard to additional filters and deductions required pre CRR	3	3	481
27	Qualifying AT1 deductions that exceeds the AT1 capital of the institution (negative amount)	0	0	36 (1) (j)
28	**Total regulatory adjustments to Common Equity Tier 1 (CET1)**	175,223	175,223	
29	**Common Equity Tier 1 (CET1) capital**	520,400	508,368	
30	Capital instruments and the related share premium accounts	0	0	51, 52
31	of which: classified as equity under applicable accounting standards	0	0	
32	of which: classified as liabilities under applicable accounting standards	0	0	
33	Amount of qualifying items referred to in Article 484 (4) and the related share premium accounts subject to phase out from AT1	0	0	486 (3)
	Public sector capital injections grandfathered until 1 january 2018	0	0	483 (3)
34	Qualifying Tier 1 capital included in consolidated AT1 capital (including minority interest not included in row 5) issued by subsidiaries and held by third parties	0	0	85, 86, 480
35	of which: instruments issued by subsidiaries subject to phase-out	0	0	486 (3)
36	**Additional Tier 1 (AT1) capital before regulatory adjustments**	0	0	
Additional Tier 1 (AT1) capital: regulatory adjustments				
37	Direct and indirect holdings by an institution of own AT1 instruments (negative amount)	0	0	52 (1) (b), 56 (a), 57, 475 (2)
38	Holdings of the AT1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)	0	0	56 (b), 58, 475 (3)
39	Direct, indirect and synthetic holdings of the AT1 instruments of financial sector entities where the institution does not have a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	0	0	56 (c), 59, 60, 79, 475 (4)
40	Direct, indirect and synthetic holdings of the AT1 instruments of financial sector entities where the institution has a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	0	0	56 (d), 59, 79, 475 (4)
41	Regulatory adjustments applied to Additional Tier 1 capital in respect of amounts subject to pre-CRR treatment and transitional treatments subject to phase-out as prescribed in Regulation (EU) No 585/2013 (ie. CRR residual amounts)	0	0	
41a	Residual amounts deducted from Additional Tier 1 capital with regard to deduction from Common Equity Tier 1 capital during the transitional period pursuant to article 472 of Regulation (EU) No 575/2013	0	0	472, 473(3)(a), 472 (4), 472 (6), 472 (8) (a), 472 (9), 472 (10) (a), 472 (11) (a)
41b	Residual amounts deducted from Additional Tier 1 capital with regard to deduction from Tier 2 capital during the transitional period pursuant to article 475 of Regulation (EU) No 575/2013	0	0	477, 477 (3), 477 (4) (a)
41c	Amounts to be deducted from added to Additional Tier 1 capital with regard to additional filters and deductions required pre- CRR	0	0	467, 468, 481
42	Qualifying T2 deductions that exceed the T2 capital of the institution (negative amount)	0	0	56 (e)
43	**Total regulatory adjustments to Additional Tier 1 (AT1) capital**	0	0	
44	**Additional Tier 1 (AT1) capital**	0	0	
45	**Tier 1 capital (T1 = CET1 + AT1)**	520,400	508,368	
Tier 2 (T2) capital: instruments and provisions				
46	Capital instruments and the related share premium accounts	0	0	62, 63
47	Amount of qualifying items referred to in Article 484 (5) and the related share premium accounts subject to phase out from T2	0	0	486 (4)
	Public sector capital injections grandfathered until 1 january 2018	0	0	483 (4)
48	Qualifying own funds instruments included in consolidated T2 capital (including minority interest and AT1 instruments not included in rows 5 or 34) issued by subsidiaries and held by third party	0	0	87, 88, 480
49	of which: instruments issued by subsidiaries subject to phase-out	0	0	486 (4)
50	Credit risk adjustments	0	0	62 (c) & (d)
51	**Tier 2 (T2) capital before regulatory adjustment**	0	0	
Tier 2 (T2) capital: regulatory adjustments				
52	Direct and indirect holdings by an institution of own T2 instruments and subordinated loans (negative amount)	0	0	63 (b) (i), 66 (a), 67, 477 (2)
53	Holdings of the T2 instruments and subordinated loans of financial sector entities where those entities have reciprocal cross holdings with the institutions designed to inflate artificially the own funds of the institution (negative amount)	0	0	66 (b), 68, 477 (3)
54	Direct, indirect and synthetic holdings of the T2 instruments and subordinated loans of financial sector entities where the institution does not have a significant investment in those entities (amount above 10 % threshold and net of eligible short positions) (negative amount)	0	0	66 (c), 69, 70, 79, 477 (4)
54a	Of which new holdings not subject to transitional arrangements	0	0	
54b	Of which holdings existing befor 1 January 2013 and subject to transitional arrangements	0	0	
55	Direct, indirect and synthetic holdings of the T2 instruments and subordinated loans of financial sector entities where the institution has a significant investment in those entities (net of eligible short positions) (negative amounts)	0	0	66 (d), 69, 79, 477 (4)
56	Regulatory adjustments applied to tier 2 in respect of amounts subject to pre-CRR treatment and transitional treatments subject to phase out as prescribed in Regulation (EU) No 575/2013 (i.e. CRR residual amounts)	0	0	

56a	Residual amounts deducted from Tier 2 capital with regard to deduction from Common Equity Tier 1 capital during the transitional period pursuant to article 472 of Regulation (EU) No 575/2013	0	0	472, 472(3)(a), 472 (4), 472 (6), 472 (8), 472 (9), 472 (10) (a), 472 (11) (a)
56b	Residual amounts deducted from Tier 2 capital with regard to deduction from Additional Tier 1 capital during the transitional period pursuant to article 475 of Regulation (EU) No 575/2013	0	0	475, 475 (2) (a), 475 (3), 475 (4) (a)
56c	Amounts to be deducted from or added to Tier 2 capital with regard to additional filters and deductions required pre- CRR	0	0	467, 468, 481
57	**Total regulatory adjustments to Tier 2 (T2) capital**	0	0	
58	**Tier 2 (T2) capital**	0	0	
59	**Total capital (TC = T1 + T2)**	520,400	508,368	
59a	Risk weighted assets in respect of amounts subject to pre-CRR treatment and transitional treatments subject to phase out as prescribed in Regulation (EU) No 575/2013 (i.e. CRR residual amount)	0	0	
	Of which:… items not deducted from CET1 (Regulation (EU) No 575/2013 residual amounts) (items to be detailed line by line, e.g. Deferred tax assets that rely on future profitability net of related tax liability, indirect holdings of own CET1, etc)	0	0	472, 472 (5), 472 (8) (b), 472 (10) (b), 472 (11) (b)
	Of which:…items not deducted from AT1 items (Regulation (EU) No 575/2013 residual amounts) (items to be detailed line by line, e.g. Reciprocal cross holdings in T2 instruments, direct holdings of non-significant investments in the capital of other financial sector entities, etc.)	0	0	475, 475 (2) (b), 475 (2) ©, 475 (4) (b)
	Items not deducted from T2 items (Regulation (EU) No 575/2013 residual amounts) (items to be detailed line by line, e.g. Indirect holdings of own T2 instruments, indirect holdings of non-significant investments in the capital of other financial sector entities, indirect holdings of significant investments in the capital of other financial sector entities etc)	0	0	477, 477 (2) (b), 477 (2) (c), 477 (4) (b)
60	**Total risk-weighted assets**	301,349	303,772	
Capital ratios and buffers				
61	Common Equity Tier 1 (as a percentage of total risk exposure amount	89.2%	86.8%	92 (2) (a), 465
62	Tier 1 (as a percentage of total risk exposure amount	89.2%	86.8%	92 (2) (b), 465
63	Total capital (as a percentage of total risk exposure amount	89.2%	86.8%	92 (2) (c)
64	Institution specific buffer requirement (CET1 requirement in accordance with article 92 (1) (a) plus capital conservation and countercyclical buffer requirements plus a systemic risk buffer, plus systemically important institution buffer expressed as a percentage of total risk exposure amount)	15,438	15,438	CRD 128, 129, 140
65	of which: capital conservation buffer requirement	14,579	14,579	
66	of which: countercyclical buffer requirement	859	859	
67	of which: systemic risk buffer requirement	0	0	
67a	of which: Global Systemically Important Institution (G-SII) or Other Systemically Important Institution (O-SII) buffer	0	0	CRD 131
68	Common Equity Tier 1 available to meet buffers (as a percentage of risk exposure amount)	0	0	CRD 128
69	[non-relevant in EU regulation]	0	0	
70	[non-relevant in EU regulation]	0	0	
71	[non-relevant in EU regulation]	0	0	
Amounts below the thresholds for deduction (before risk-weighting)				
72	Direct and indirect holdings of the capital of financial sector entities where the institution does not have a significant investment in those entities (amount below 10% threshold and net of eligible short positions	0	0	36 (1) (h), 45, 46, 472 (10) 56 (c), 59, 60, 475 (4), 66 (c), 69, 70, 477 (4)
73	Direct and indirect holdings of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount below 10% threshold and net of eligible short positions	0	0	36 (1) (i), 45, 48, 470, 472 (11)
74	Empty set in the EU	0	0	
75	Deferred tax assets arising from temporary difference (amount below 10 % threshold , net of related tax liability where the conditions in Article 38 (3) are met)	0	0	36 (1) (c), 38, 48, 470, 472 (5)
Applicable caps on the inclusion of provisions in Tier 2				
76	Credit risk adjustments included in T2 in respect of exposures subject to standardised approach (prior to the application of the cap)	0	0	62
77	Cap on inclusion of credit risk adjustments in T2 under standardised approach	0	0	62
78	Credit risk adjustments included in T2 in respect of exposures subject to internal rating-based approach (prior to the application of the cap)	0	0	62
79	Cap for inclusion of credit risk adjustments in T2 under internal ratings-based approach	0	0	62
Capital instruments subject to phase-out arrangements (only applicable between 1 Jan 2014 and 1 Jan 2022)				
80	- Current cap on CET1 instruments subject to phase-out arrangements	0	0	484 (3), 486 (2) & (5)
81	- Amount excluded from CET1 due to cap (excess over cap after redemptions and maturities)	0	0	484 (3), 486 (2) & (5)
82	- Current cap on AT1 instruments subject to phase-out arrangements	0	0	484 (4), 486 (3) & (5)
83	- Amount excluded from AT1 due to cap (excess over cap after redemptions and maturities)	0	0	484 (4), 486 (3) & (5)
84	- Current cap on T2 instruments subject to phase-out arrangements	0	0	484 (5), 486 (4) & (5)
85	- Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)	0	0	484 (5), 486 (4) & (5)