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 2018

CONTENTS

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 2018. In various sections prior year comparatives have been provided for ease of comparison.

Northern Trust Global Services SE (NTGS) a UK 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 UK consolidation group (the NTGS Group). The Pillar 3 disclosures provided in this document are on the Group basis, as at 31 December 2018 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.

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) - in conjunction with the completion of NTGS's audited annual financial statements.

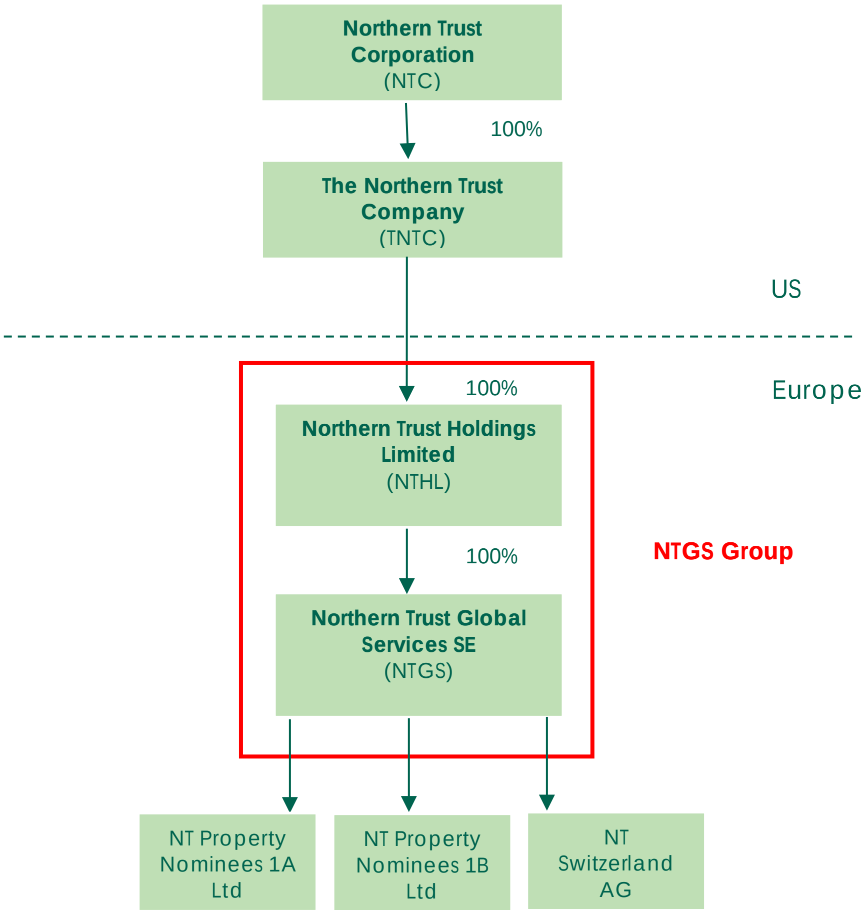
3. SCOPE OF APPLICATION

Northern Trust Global Services SE (NTGS), a UK incorporated entity, is authorised by the Prudential Regulation Authority (PRA) to conduct banking activities and regulated by both the PRA and the FCA. NTGS is wholly owned by Northern Trust Holdings Limited (NTHL), another 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.

NTC, through its UK entities, is a significant financial services provider in the UK marketplace. Its business activities in the UK include global custody, equity brokerage, FX trading, securities lending, asset management and fund administration services. The majority of the UK custody business is carried out by the London Branch of TNTC. NTGS was established to provide custody and other banking services to those clients which are European Union (EU) domiciled, 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 hence the Group results reflect those of NTGS. NTGS operates branches in Luxembourg, the Netherlands, Sweden and Abu Dhabi.

NTGS and NTHL together form the NTGS Group. NTHL is an European Economic Area (EEA) parent institution and NTGS is the group's significant subsidiary. The Group structure is shown below.



NTGS reports its regulatory capital position to the PRA 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 and PRA Rule Book:

- 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 PRA for review; and

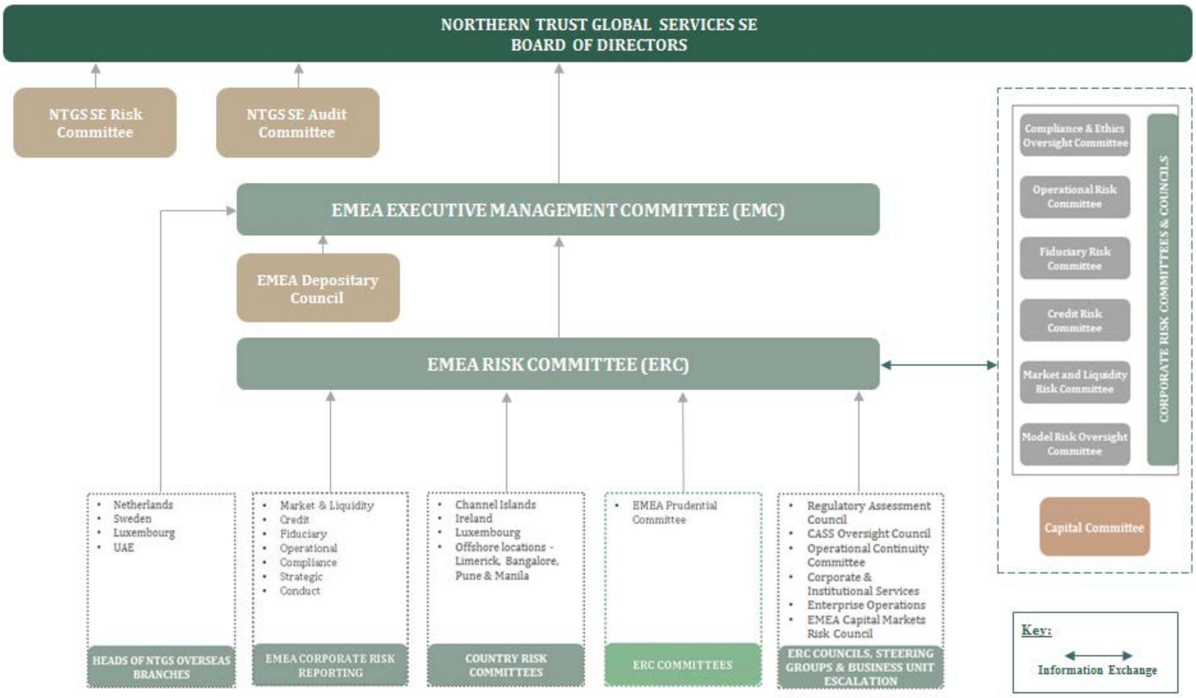
- Pillar 3: Risk Disclosure and Market Discipline – requires qualitative and quantitative public disclosures regarding regulatory capital and risk management practices and process to promote transparency. This Pillar 3 disclosure document provides information on the Group's risk management objectives 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 utilises 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.

Supporting this local governance, there are six corporate risk committees that possess a detailed understanding of the risks within their specific areas of responsibility. Collectively these committees review, recommend and approve risk management strategies, policies, and management practices. They also monitor risk performance and the effectiveness of the risk management processes.



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 is comprised of six Risk Categories: credit, market, liquidity, operational, strategic, fiduciary and compliance. For capital purposes, Northern Trust considers operational risk to include compliance and fiduciary risk, although each is governed and managed separately.

For all categories of risk, the risk profile of the NTGS Group aligns with that of its sole operating subsidiary, NTGS. NTGS's appetite for risk is defined and integrated with its business strategy through the use of tolerance thresholds which act as triggers to measure and monitor risk on an on-going basis (see section 4.7). The following sections outline:

i) NTGS's key sources of risk as identified in Part Eight of CRR and the strategies and processes used to manage those risks.
ii) Other key risks from the Northern Risk Universe faced by NTGS

4.2 Credit Risk

4.2.1 Counterparty Credit Risk

Northern Trust defines credit risk as the risk to interest income or principal from the failure of a borrower or counterparty to perform an obligation.

NTGS's inherent counterparty credit risk derives from; money market investment of client deposits principally collateralised upstreaming (see Credit Risk Mitigation section) to its parent or placement with Central Banks, purchase of high quality liquid fixed income securities for investment purposes, cash balances held in its sub-custodian network and indemnified agency securities lending. There is also very limited spot FX trading mainly in restricted currencies where NTGS is the holder of the cash account and FX's are transacted with the sub-custodian and immediately hedged out with TNTC.

A series of credit approval and oversight committees exist within the risk framework. They are ultimately overseen by the NTC Credit Risk Committee, which has established corporate credit policies that NTGS applies – subject to any local regulatory requirements or restrictions. The Corporate Credit Policy sets out requirements for the creation of credit reserves and credit risk mitigation as required. The NTGS Credit Policy details the implementation within NTGS of the Corporate Credit Policy and Standards,

All money market (MM) activity and purchases of investment securities are subject to counterparty/issuer limits pre-approved by the Capital Markets Credit Committee (CMCC). A credit risk application is used to check execution exposure, with daily reporting by the Financial Control and Credit Risk teams. Country Risk limits are also set and monitored daily. All counterparty and country credit limits are approved and measured on a credit risk equivalent rather than notional basis.

Credit exposure also arises in respect of NTGS's relationships with its sub-custodians. While client securities are held under contractual fiduciary arrangements established at the outset of any sub-custodian relationship, cash balances are not subject to similar protection. As part of the daily cash management process, material cash balances are generally swept from the sub-custodian network and invested by NTGS in the interbank market. Consequently, overnight exposure from a sub-custodian default is low but intra-day exposure could be high depending on the amount of cash held at the point of default. NTGS's sub-custodian network is monitored by a Sub-custodian Network Oversight Committee which reports to the CMCC. CMCC sets the acceptable credit risk to be taken. Credit ratings and the general financial stability of the sub-custodian network are regularly reviewed.

Given the high quality of counterparties and short tenors of exposures, none of NTGS's counterparty or issuer credit exposures were reported past due or impaired in the 2018 financial statements. All receivables are repayable on demand or within 3 months.

4.2.2 Client Credit Risk

NTGS's client credit risk is primarily derived from short-term 'incidental' overdrafts on client custody accounts or from a very limited number of formal but still uncommitted overdraft facilities with custody clients. Typically NTGS has a contractual lien on client assets as an ultimate form of remedy for unapproved overdrafts but such liens are not formally recorded as credit risk mitigation and as such any exposures are recorded on a 'gross' basis.

Formal client facilities are subject to the Corporate Credit Policy (including any associated reserve requirements) and ultimate oversight by the NTC Credit Risk Committee, NTGS client facilities are reviewed and approved at the Global Financial Institution Credit Committee or if sufficiently large at the Senior Credit Committee.

Given the small number and size of client facilities as well as the short tenors of exposures, none of NTGS's client credit exposures were reported past due or impaired in the 2018 financial statements. All receivables are repayable on demand or within 3 months.

4.2.3 Credit Risk Mitigation

A risk participation agreement exists between NTGS and TNTC, whereby TNTC agrees to participate in the credit risk arising in the NTGS credit portfolio. In addition, a pledge agreement is in place under which TNTC pledges collateral to NTGS to offset exposures that it has to TNTC. This collateral takes the form of high quality debt securities as governed by NTGS's Credit Policy. The value of this collateral is recalculated by NTGS on a daily basis in accordance with the financial collateral comprehensive method (Supervisory volatility adjustments approach) under Part 3 Title II Chapter 4 Article 220 of the CRR.

Procedures have been established for the review and acceptance of collateral by NTGS in order to reduce wrong-way and other risks. Concentrations within credit and collateral portfolios are managed in accordance with NTGS's procedures and the wider Enterprise Risk Framework. Ongoing assessments of concentration risk are performed as part of the Pillar 2 risk assessment process.

The Credit Risk Committee sets policy and associated procedures for the client loan approval process. Client overdrafts (and fee receivables) are generally secured by a lien over the respective client assets held in custody. Client exposures are monitored daily by the Credit Risk Team.

For securities lending, inherent risk arises from NTGS's contractual obligations under the stock borrower failure indemnity given to clients. The standard market practice of collateralisation mitigates this risk significantly. All loan and collateral asset classes as well as eligible borrowers are approved under the Enterprise Risk Framework for credit risk. The collateralisation positions are monitored and reported daily by the Securities Lending Operational Control Team.

4.3 Market Risk

4.3.1 Market Risk - Trading

Northern Trust defines trading risk as the potential for movements in foreign exchange and interest rates to cause changes in the value of trading positions. NTGS does not run a trading book as defined by the CRR therefore market risk is low both at an inherent and residual level. Capital and reserve funds of NTGS are invested in the base currency and therefore do not present market risk.

NTGS may enter into 'spot' FX contracts in order to pay fees and commissions to sub-custodians and agency banks, and to convert foreign currency income into base currency, but the volume is not substantial. In addition, client custody related trades may be accepted in currencies where the sub-custodian can only trade with the global custodial entity and not a third party. Any FX risk arising from such trades is closed out with either TNTC or the relevant sub-custodian immediately.

Lastly NTGS, via its Treasury function, may enter into FX contracts with NTC for the purposes of balance-sheet management.

Whilst no proprietary trading positions are taken, it is still deemed prudent to have small position and VaR limits in place. These limits are set by the Market and Liquidity Risk Committee (MLRC) and are detailed in the NTGS FX and Trading Book Policy which is approved by the NTGS Board. Independent monitoring of daily limit usage is carried out by Risk Management.

4.3.2 Market Risk - Interest Rate Risk in the Banking Book (IRRBB)

Northern Trust defines interest rate risk in the banking book as the potential for movements in interest rates to cause changes in net interest income and the market value of equity

NTGS's handling of client deposits, which are primarily used to support client custody settlement activity, is the key consideration for this risk. Net interest income is earned by a combination of spreads against market rates and some limited gapping of interest rate maturities. NTGS is therefore primarily inherently subject to re-pricing and yield curve interest rate risk, based on client call deposits and the short term investment of these in the money markets, central banks and high quality fixed income securities. Given the overwhelmingly short term nature of both assets and liabilities, the residual IRRBB risk is deemed low.

Interest rate risk is managed by Treasury and monitored through Sensitivity of Net Interest Income and Sensitivity of Market Value of Equity metrics for the NTGS balance sheet. Both metrics are calculated on an individual currency basis with limits and thresholds set at a consolidated level and measured on a monthly basis and reviewed by Risk Management.

4.4 Operational Risk

Northern Trust defines operational risk as the risk of loss from inadequate or failed internal processes, human factors and systems or from external events. The objective is to manage operational risk so as to balance the avoidance of financial losses and reputational damage with overall cost effectiveness.

In respect of operational risk, NTGS operates a transaction processing and fund accounting infrastructure. Northern Trust has made significant investment in its technology, process design and people to mitigate the risk inherent in its operating model. The corporate operational risk framework is very comprehensive and includes a wide range of risk management programmes, robust oversight and monitoring and loss assessment.

For NTGS, Transactional Risk, Technology Risk and Business Continuity are considered the key inherent components of operational risk.

Transactional Risk is the risk that a transaction is altered, delayed or not properly executed. Examples would include losses due to clerical error, procedural error or system technology failures. This includes fraudulent acts. Line managers have the primary responsibility for managing the inherent risks of all activities under their control. As part of Northern Trust's operational risk management framework, various techniques are employed to identify current risks (including Risk and Control Self Assessments and operational loss event reporting). A reconciliation and exception management policy enables potential risks to be identified in a timely manner.

The Corporate Information Security and Technology Risk Management function identifies and analyses both day to day technology risks and longer term strategic risks as well as devoting considerable time to the potential risks posed by the threat of cyber-attack, covering system security, availability and performance and system development and implementation.

Business Continuity risk is overseen by a dedicated team, Global Business Continuity and Recovery Services (GBCRS). GBCRS help assess and coordinate incident response and set standards for the content and testing of disaster recovery and business continuity plans.

NTGS's inherent operational risk is significantly mitigated through a well-established range of risk management programmes and business unit controls. The residual operational risk profile is within the NTGS Board-approved risk appetite. The Board receives regular reporting on operational risk to cover all aspects of the framework to ensure it can exercise the necessary oversight for operational risk.

Other key risks applicable to NTGS are:

4.5 Compliance Risk

Compliance risk is defined as the risk of legal or regulatory sanctions, material financial loss, or loss of 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.

NTGS splits out Compliance Risk into Regulatory risk and Financial Crime risk.

Regulatory risk arises from the failure to comply with business conduct regulatory requirements. Conduct requirements seek to protect the interests of customers and the integrity of the market.

Financial Crime Risk is the 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 with the same.

NTGS is authorised to carry out certain business in other jurisdictions, including European Union jurisdictions and in the Middle East and, therefore, has to observe not only UK but also applicable regulations in the host state. 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.

Reporting on the Compliance programme is provided periodically to the ERC the Risk Committee of the NTGS Board by the Head of UK and Mainland EMEA Compliance and the EMEA Head of Financial Crime Compliance. These reports contain an overview of key regulatory risks, events and trends relating to Anti Money Laundering (AML), Privacy, the Asset Servicing and Capital Markets products, and regulatory breaches. Recent regulatory meetings and requests, current and upcoming regulatory developments, policy updates, monitoring observations and training roll out are also captured, as appropriate.

There is an annual assessment of the strength and appropriateness of NTGS's control environment against key relevant regulations by way of completion of a Compliance Risk Assessment. The output of this determines what is covered in the Compliance Testing and Monitoring Plans. The results of Compliance Tests and Monitoring are reported to the ERC and the Risk Committee of the NTGS Board.

Key current compliance risks are also covered within the monthly Top and Emerging Risks report, which is reviewed by the ERC. Business Units will also embed compliance related metrics within Business Unit scorecards such as the CASS scorecard, which is reported monthly to the CASS Oversight Council, a sub-committee of the ERC.

Overall, for compliance risk, NTGS's inherent risk assessment in 2018 is set as considerable whilst the residual risk rating is set as moderate. The rationale for a considerable inherent risk assessment for compliance is due to a high risk rating for financial crime risk, relative to regulatory risk which has been set as moderate.

4.5.1 Regulatory Risk:

The assessment of NTGS's inherent regulatory risk is moderate for 2018 with a decreasing risk trend. This reflects the outcome of a number of regulatory analyses conducted in 2018 that have helped de-scope certain rules from NTGS's regulatory obligations, reducing NTGS's overall inherent risk rating from considerable to moderate.

Controls are considered to be satisfactory and any areas that require further development form part of the Compliance Plan.

4.5.2 Financial crime risk:

The overall assessment of NTGS's inherent financial crime risk has remained stable at 'High' for 2018. This is due to a number of factors including a reassessment of the wider financial crime environment, taking into account both the severity of risk attached to sanctions violations, and to account for the significant developments in the anti-bribery & corruption enforcement landscape. In addition, the expansion of the Luxembourg business and the implementation of the Criminal Finances Act has informed the decision.

From an AML and Sanctions perspective there is a dedicated AML/Sanction programme in place managing these risks, underpinned by dedicated AML and Economic Sanctions risk assessments. The first line of defence is responsible for the implementation of the Global AML programme and any local controls required by the NTGS Money Laundering Reporting Officer (MLRO), whose team alongside other 2nd line of defence team provide appropriate assurance and management information and reporting.

Reporting is provided to the EMEA Risk Committee (ERC), NTGS Risk Committee and the Global AML Oversight Committee (AMLOC). Reporting captures, amongst other things, client onboarding, fraud attempts, transaction monitoring and PEP/sanctions/adverse media screening.

Periodic MLRO reporting to the ERC and NTGS Risk Committee also comprises broader financial crime risks including fraud and anti-bribery & corruption risks and narrative and MI detailing regulatory developments, fraud attempts (internal and external) and risk-mitigation activities undertaken.

4.6 Strategic Risk

Strategic risk is the risk of loss from the adverse effects of business decisions, or the improper implementation of those decisions, and the risk that internal or external forces impede the long-term plans of the business for growth, profitability and stability.

NTGS is a relatively small, wholly owned subsidiary of an overseas ultimate parent with a simple business model delivering a global product. To achieve this, NTGS recognises the importance of the strong global reputation and brand of Northern Trust. Northern Trust in turn, requires NTGS to deliver the global product to a standard that maintains the global reputation. Therefore, the management of strategic risk is a balance between actions taken at the group level and by NTGS's Board of Directors.

From a Group perspective, strategic risk is managed by NTC's Board of Directors. NTC's CEO and senior management, including the Global Enterprise Risk Committee, support the Board in the performance of its functions. They in turn are supported in their duties by the head of Corporate Strategy and the manager of Strategic Risk, in cooperation with the support of partners throughout the organisation.

Within NTGS, strategic risk is managed by NTGS's Board of Directors with significant input from its management team. NTGS greatly benefits from the experience and oversight provided by its non-executive directors who are able to provide guidance and challenge on strategic issues. The Board is also able to draw on the UK, EMEA and Corporate risk governance structure, as well as risk management programmes and risk reporting to oversee strategic risk.

When assessing risk, the Board takes into account the review and challenge of business updates received at Board meetings; as well as the EMEA strategic risk scorecard and programme information, including escalation of risks and issues, through the quarterly legal entity risk report presented to the Risk Committee of the Board.

Legal entity risk reporting is a key component of strategic risk reporting. It combines a blend of group and regional metrics which provides the Board with the necessary balance and perspective. The metrics include key financial ratios, a focus on new business and revenues, senior management turnover and clients at risk.

On 28 March 2017 the UK triggered Article 50 of the Lisbon Treaty, beginning a two year negotiation period to agree terms of the UK's exit from the European Union. To mitigate against the potential impact on clients of NTGS losing its right to passport' services into the EU, preparations are underway, subject to regulatory approval, to re-domicile NTGS to Luxembourg with effect from 1st March 2019.

4.7 Liquidity Risk

Northern Trust defines liquidity risk as the risk of not being able to raise sufficient funds or collateral to meet balance sheet and contingent liability cash flow obligations when they are due and payable because of firm-specific of market-wide events. Liquidity risk is limited at both an inherent and residual level for NTGS.

As a custodian bank, the primary objective of liquidity risk management at NTGS is to maintain liquidity resources which are adequate, both as to amount and quality, and to ensure that there is no significant risk that NTGS's liabilities cannot be met as they fall due under both normal and adverse economic conditions. The key liability is to meet the daily cash demands of clients whilst optimising the investment return and credit diversification of balance-sheet assets.

The NTGS Treasurer has overall responsibility for liquidity management at NTGS. The Treasury trading desk is responsible for daily placement of long cash balances or covering of short positions. Both Cash Management and Treasury systems are used for monitoring and managing daily liquidity requirements.

As required under the CRR, NTGS holds a liquidity buffer, in the form of High Quality Liquid Assets (HQLA), comprising of cash held in central bank reserve accounts and buffer eligible government bonds amongst others, to meet the Liquidity Coverage Ratio (LCR) requirement.

The appropriateness of this liquidity buffer is assessed through scenario analyses and stress tests as part of the annual Individual Liquidity Adequacy Assessment Process (ILAAP) to evaluate NTGS's exposure to high severity individual events and combinations of events. These stress tests are also used to inform recovery and resolution planning as well as the NTGS contingency funding plan for use in times of a liquidity crisis.

In addition to its own liquidity resources, NTGS can rely upon the significant liquidity resources of TNTC as necessary. TNTC has articulated this through a formal liquidity support letter.

While the first line retains initial responsibility for an understanding of the business risks, additional control is provided by the Risk function which provides independent oversight to ensure that prudential risks are considered. The Head of Market & Liquidity Risk - EMEA, as the second line of defence, has responsibility to ensure that the systems and controls are adequate to meet internal and regulatory requirements and will report any material liquidity issues to the NTGS Board.

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.

Key measures contained within the risk appetite statement are as follows:

- Credit risk (obligor) - Net charge offs of no more than 0.35% of outstanding exposures, with a watch list set at 3.75% of the overall obligor portfolio.
- Credit risk (counterparty) – Portfolio to be biased by internal Borrower Rating ("BR"), to counterparties internally rated as "BR1" and "BR2" therefore the exposure-weighted average should not exceed 2.5.
- Operational risk – Proprietary risk modelling is used and is conducted annually to calculate operational risk appetite guidelines and thresholds for the entity. The same process is used to establish fiduciary risk guidelines and thresholds.
- Compliance risk - no tolerance threshold applied as NTGS is expected to comply with all applicable statutes, laws, and regulations.
- Market risk (interest rate risk in the banking book) – a) Limit on Sensitivity of Net Interest Income: annual net interest income should not decline by more than 10.5% (expressed as % of base case NII) and b) Limit on Market Value of Equity: value should not decline by more than 12% (expressed as % of tier 1 capital). Both are measured under a 200 basis point change in interest rates.
- Liquidity risk - Sufficient HQLA are held that are sufficient to cover the higher of; a) that required to maintain a minimum LCR as specified under the revised PRA liquidity regime, plus any PRA specified add-ons to cover liquidity risks not captured in the LCR; b) that which exceeds the maximum net cash outflow over a 30 day survival period under approved stress scenarios.

As part of the ongoing operation of the Enterprise Risk Management (ERM) Framework, 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. Audit Services is managed by the General Auditor with oversight from the Audit Committee. Audit Services tests the overall adequacy and effectiveness of the system of internal controls associated with the advanced systems on an ongoing basis and reports the results of these audits directly to the NTGS Audit Committee of the Board of Directors. Audit Services includes professionals with a broad range of audit and industry experience, including risk management expertise. The General Auditor reports directly to the Audit Committee and the Corporation's Chief Executive Officer.

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.

	Group		NTGS	
All figures in euro millions	**2018**	**2017**	**2018**	**2017**
Tier 1 Capital				
Called up share capital	368	292	387	311
Retained earnings and other reserves	209	148	190	130
	577	440	577	440
Less: Deductions from Tier 1 Capital	156	160	156	160
Total Tier 1 Capital net of deductions	421	280	421	280
Tier 2 Capital				
Perpetual subordinated debt	-	77	-	77
Less: Transitional Adjustment	-	22	-	22
Total Tier 2 Capital	-	55	-	55
Less: Deductions from Tier 1 and Tier 2 capital		-		-
Total Capital Resources	**421**	**335**	**421**	**335**

As at 31 December 2018 the Group has Tier 1 capital of €421million consisting of share capital, audited retained earnings and reserves, including a historic foreign currency translation reserve.

As at 31 December 2018, NTGS had Tier 1 capital of €421 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.

Other than restrictions due to regulatory capital requirements and corporate law restrictions on the reduction, redemption and purchase of share capital, there are no current or foreseen material, practical or legal impediments to the prompt transfer of capital resource between the Group and NTC.

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 PRA Rulebook, being the higher of the following:

1. €5m, being the base case capital resources requirement as per section 11 of the “Definition of Capital” chapter of the PRA Rulebook; 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 2018 are provided in the following table:

	Group		**NTGS**	
All figures in Euro millions	**2018**	**2017**	**2018**	**2017**
Total Credit Exposures	4,625	7,670	4,625	7,670
Total Credit Risk Weighted Assets (RWA)	460	508	460	508
Credit Risk	36.8	40.6	36.8	40.6
Market Risk	0.1	-	0.1	-
Operational Risk	16.8	12.6	16.8	12.6
CVA Risk	0.2	-	0.2	-
Pillar 1 Capital Requirement	**53.9**	**53.3**	**53.9**	**53.3**
Tier 1 Ratio % (Tier 1 Capital / RWA)	**62%**	**42%**	**62%**	**42%**
Total Capital Ratio % (Total Capital / RWA)	**62%**	**50%**	**62%**	**50%**

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 2018 is provided in the following tables:

Credit Risk by Exposure Class	**2018**			**2017**		
All figures in Euro millions	**Exposure (Gross)**	**Exposure (Net)**	**RWA**	**Exposure (Gross)**	**Exposure (Net)**	**RWA**
Central governments or central banks	2,669	2,669	-	5,849	5,849	3
Multilateral Development Banks	62	62	-	62	62	9
Covered Bonds	30	30	3	31	31	3
Institutions	1,614	932	207	3,373	1,606	405
Corporates	179	179	179	64	64	30
Other	71	71	71	58	58	58
Total	**4,625**	**3,943**	**460**	**9,437**	**7,670**	**508**

Average Credit Risk by Exposure Class	**Avg. Exposure (Gross)**	
All figures in Euro millions	**2018**	**2017**
Central governments or central banks	5,422	4,828
Multilateral Development Banks	62	79
Covered Bonds	31	31
Institutions	2,233	2,815
Corporates	86	94
Other	109	62
Total	**7,943**	**7,909**

Credit Risk (Net) Exposures by Geographic Region All figures in Euro millions	**United Kingdom**	**European Union**	**United States**	**Other**	**TOTAL**
			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
			2017		
Central governments or central banks	213	5,636	-	-	5,849
Multilateral Development Banks	-	62	-	-	62
Covered Bonds	-	16	-	15	31
Institutions	139	390	391	686	1,606
Corporates	2	15	-	47	64
Other	15	-	43	-	58
Total	369	6,119	434	748	7,670

Credit Risk (Net) Exposures by Maturity All figures in Euro millions	**Demand**	**Less than 8 days**	**<1 year**	**1-5 years**	**Undated**	**TOTAL**
			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**
			2017			
Central governments or central banks	5,741	-	108	-	-	5,849
Multilateral Development Banks	-	-	-	62	-	62
Covered Bonds		-		31		31
Institutions	1,253	107	246	-	-	1,606
Corporates	22	-	42	-		64
Other	-	-	-	-	58	58
Total	**7,016**	**107**	**396**	**93**	**58**	**7,670**

6.4 The Internal Capital Adequacy Assessment Process (ICAAP)

The Group undertakes an ICAAP as required by the “Internal Capital Adequacy Assessment” chapter of the PRA Rulebook. 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 NTC’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 facing the Group, scenario 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 PRA Rulebook guidance and has been made available to the PRA.

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. The Basel Committee is testing a minimum ratio of 3.0% 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 2018 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.

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

		Applicable Amounts €m
1	Total assets as per published financial statements	4,424
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")	157
4	Adjustments for derivative financial instruments	14
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**	4,290

Table LRCom: Leverage ratio common disclosure		
		CRR leverage ratio exposures €m
On-balance sheet exposures (excluding derivatives and SFTs)		
1	On-balance sheet items (excluding derivatives, SFTs and fiduciary assets, but including collateral)	4,424
2	(Asset amounts deducted in determining Tier 1 capital)	157
3	**Total on-balance sheet exposures (excluding derivatives, SFTs and fiduciary assets) (sum of lines 1 and 2)**	4,267
Derivative exposures		
4	Replacement cost associated with *all* derivatives transactions (ie net of eligible cash variation margin)	2
5	Add-on amounts for PFE associated with *all* derivatives transactions (mark-to-market method)	12
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)**	14
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

Exempted exposures in accordance with CRR Article 429 (7) and (14) (on and off balance sheet)		
19a	(Exemption of intragroup exposures (solo basis) in accordance with Article 429(7) of Regulation (EU) No 575/2013 (on and off balance sheet))	
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**	360
21	**Total leverage ratio exposures (sum of lines 3, 11, 16, 19, EU-19a and EU-19b)**	4,290
Leverage ratio		
22	**Leverage ratio**	8.39%
Choice on transitional arrangements and amount of derecognised fiduciary items		
23	Choice on transitional arrangements for the definition of the capital measure	
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 €m
1	Total on-balance sheet exposures (excluding derivatives, SFTs, and exempted exposures), of which:	4,424
2	Trading book exposures	
3	Banking book exposures, of which:	
4	Covered bonds	30
5	Exposures treated as sovereigns	2,669
6	Exposures to regional governments, MDB, international organisations and PSE NOT treated as sovereigns	62
7	Institutions	1,269
8	Secured by mortgages of immovable properties	
9	Retail exposures	
10	Corporate	179
11	Exposures in default	
12	Other exposures (eg equity, securitisations, and other non-credit obligation assets)	215

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 as well as the relevant provisions of PRA Supervisory Statement 11/14 (published 19 December 2014).

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, collateralise 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 2018 was €5 million.

8.2 Disclosure

Template A – 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**	**5**		**7,789**	
020	Loans on demand	-	-	7,467	-
040	Debt securities	5	-	197	197
120	Other assets	-		95	

NTGS is not required to disclose Template B – Collateral received in accordance with the threshold criteria in the PRA supervisory statement SS11/14 (CRD IV: Compliance with the European Banking Authority's Guidelines on the disclosure of encumbered and unencumbered assets).

Template C – 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 2018 the only source of asset encumbrance was a €5 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 buffers as outlined in the “Capital Buffers” provisions of the PRA Rulebook.

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 2016 NTGS is required to calculate a CCoB. A rate of 1.875% of risk weighted assets will apply during 2018, rising gradually to 2.5% of risk weighted assets by 1 January 2019.

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 Financial Policy Committee (FPC) of the Bank of England is responsible for setting the rate in the UK. The FPC may also recognise the CCyB rates applied by responsible authorities in other EU member states and other foreign authorities.

As at 31 December 2018 the FPC had recognised CCyB rates that were applicable in Sweden, Norway, Hong Kong Czech Republic, Iceland, Slovakia and the UK. NTGS’s relevant credit exposures to counterparties in those jurisdictions and therefore the amount of its CCyB, was immaterial.

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

10. REMUNERATION AND BOARD OF DIRECTORS

10.1 Board of Directors

All executive directors of the NTGS Board are required to obtain approval for any directorships held in organisations external to Northern Trust and all non-executive directors are required to notify the company secretary of any directorships taken up. During the 2018 performance year, three non-executive directors held 5 directorships in organisations outside of Northern Trust.

Recruitment of management body members is of critical importance to Northern Trust. In line with Northern Trust's commitment to Diversity, a target has been set that every candidate short list for management body positions has at least one woman or ethnic minority candidate.

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

Job descriptions validated by the Head of Human Resources drive the assessment process and the key accountabilities for all candidates considered for selection for a position within the management body. Each candidate is assessed against the same criteria of key accountabilities as they relate to the position for which they are being considered. In addition all candidates are assessed against competencies expected by the FCA/PRA (i.e. Risk Management and Control, Market Knowledge, Business Strategy & Business Model, Financial Analysis & Control, Governance Oversights & Controls, Regulatory Framework). The interview panel for positions within the management body consists of senior managers and directors which may include any combination of the CEO, CRO, Head of HR, General Legal Counsel as well as other Non-Executive Directors (NEDs). Thorough documentation containing the feedback from all interviewers is held within Human Resources as evidence to support the selection decision. Appointment to a management body position would require the candidate to demonstrate how they have a solid understanding and experience of all the key accountabilities and competencies required for the role.

10.2 Qualitative Disclosures

The Northern Trust 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 compensation 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 UK based EMEA Remuneration Governance Group (ERGG), previously called the Executive Sponsor Group (ESG), consisting of UK SMF Regional Manager Human Resources EMEA (chair), UK SMF Regional Chief Risk Officer (member), UK SMF Chief Finance Officer (member), UK SMF Regional Executive President Northern Trust EMEA (standing attendee) and UK CP Deputy General Counsel (standing attendee), operates to monitor and implement EMEA regulatory compensation requirements. The purpose of ERGG is to ensure remuneration policies and processes are operated in line with the requirements of the EU Directives and the Financial Services remuneration code requirements as set out in various regulatory rulebooks and policy documents.
Northern Trust's Total Compensation Policy applies to all employees globally. An addendum specifically related to EU requirements exists for all employees operating in EU regulated countries.

Staff whose professional activities have a material impact on its risk profile are classified as performing Material Risk Taker (MRT) roles and have been categorised as:

"*Senior Manager MRTs*" - those employees who are registered with the FCA and PRA as Control Functions and/or members of governing bodies and/or heads of significant business groups.

"*Certified MRTs*" - through the review of the inherent risk profile of the UK entities key roles were identified with the responsibility for managing or supervising risk-taking / significant risk functions.

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

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. The CBC reviews the Total Compensation Policy and all Remuneration Policy Statements on an annual basis. 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 the 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 estimated 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 CRO participates in funding 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 robust 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 total incentive allocation to Business Units has been determined, the Business Unit President reviews financial performance and any risk factors to determine allocation of the total incentive pool. The Business Unit Chief Financial Officer and Business Unit Chief Risk Officer (with input from the EMEA CRO) participate in this review.

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 specific 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. 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 staff;
- prior and expected individual performance and long term impact; and

- team work 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 2018, 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.

For MRTs the deferral and vesting of variable remuneration was in accordance with the Remuneration Code set out in the Handbook for the 2018 performance period. Total variable remuneration consists of three components for MRT's:

- **STI plan** for cash variable pay;
- **Short term Restricted Stock Unit (RSU)**[1] awards that vest immediately and distributed twelve months after vesting;
- **LTI equity awards**[1,2]- equity is typically awarded in the form of RSUs,. The purpose of the equity awards is to link current and future business leaders to overall long term performance of the organisation. The deferral period is as follows with at least 50% of the vested equity distributed twelve month after vesting;
    - 7 year vest period for Senior Managers MRT's 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
    - 5 years vesting period for Certified 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 vesting period for Standard MRTs 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

For all other employees at NTC, RSU awards typically vest over 4 years, on a pro-rata basis of 25% per year on the anniversaries of the first day of the month after the month of grant.

As set out in the global Northern Trust Policy on Recoupment and the Northern Trust UK Policy on Malus and Clawback, all equity remains subject to malus and clawback.

[1]Does not apply where variable remuneration is less than 33% of total compensation and total compensation is no more than £500k. Standard corporate splits between STI and LTI prevail in these instances.

[2] In accordance with Remuneration Code requirements, deferred awards are subject to Performance Adjustment consideration at time of vesting.

10.3 Quantitative Disclosures

The EMEA Executive Sponsor Group met six times during the 2018 performance year. Remuneration of this group is incorporated in the table below for Senior Managers MRTs, Certified MRTs and Standard MRTs.
The CBC met five times during 2018 (four in person and one telephonic meeting). 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 2018 was US$1.2m in a combination of stock and cash. Full details of these awards are available in the 2018 NTC Proxy Statement.

The disclosures relate to NTGS Material Risk Takers classified as Senior Managers MRTs, Certified MRTs and Standard MRTs.

In 2018, there were thirty two (includes non-executive directors) MRTs. The aggregate remuneration expenditure in respect of MRTs was as follows.

Fixed/variable remuneration

Fixed remuneration consists of base salaries and cash allowances. Variable remuneration consists of short-term incentive payable in cash and short–term restricted stock units (RSUs) and long-term deferred equity awards in RSUs.

All NTGS MRTs are employed by another Northern Trust Group entity.

Senior Management and other Code Staff	2018	2017
Number of Code Staff	32	26
Fixed remuneration (€ m)	8.9	6.8
Variable remuneration (€ m)	9.2	7.5

Information above includes remuneration for MRTs whose responsibilities also cover:

- Northern Trust Global Investments Limited (NTGIL): nine employees
- Northern Trust Securities LLP (NTS LLP): eleven employees

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	NTGSL
EURO 000's	
Shareholders' equity according to the Group's balance sheet	577,150
Common Equity Tier 1 capital	**577,150**
Tier 1 capital contributions	
Regulartory deductions from Tier 1 capital	-156,384
Total Tier 1 capital	**420,766**
Tier 2 instrument	
Net provisions for reported IRB credit exposures	
Transistional adjustments	
Total Tier 2 capital	**0**
Total capital base	**420,766**

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	387,068	368,452	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	190,466	209,620	26 (1) (c)
3	Accumulated other comprehensive income (and any other reserves)	-384	-384	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**	577,150	577,688	
0				
7	Additional value adjustments (negative amount)	0	0	34, 105
8	Intangible assets (net of related tax liability) (negative amount)	113,857	113,857	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)	0	0	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	42,526	42,526	36 (1) (k)
20b	of which: qualifying holdings outside the financial sector (negative amount)	42,526	42,526	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	0	0	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)**	156,383	156,383	
29	**Common Equity Tier 1 (CET1) capital**	420,767	421,305	
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)**	420,767	421,305	
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)**	420,767	421,305	
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**	460,386	460,386	
Capital ratios and buffers				
61	Common Equity Tier 1 (as a percentage of total risk exposure amount	62.4%	62.4%	92 (2) (a), 465
62	Tier 1 (as a percentage of total risk exposure amount	62.4%	62.4%	92 (2) (b), 465
63	Total capital (as a percentage of total risk exposure amount	62.4%	62.4%	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)	17,428	17,428	CRD 128, 129, 140
65	of which: capital conservation buffer requirement	12,683	12,683	
66	of which: countercyclical buffer requirement	4,745	4,745	
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)