

The Northern Trust Company, Canada  
Basel III Pillar III Disclosure  
March 31, 2018

*April 27, 2018*

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## THE NORTHERN TRUST COMPANY, CANADA OVERVIEW & SCOPE OF APPLICATION

This document presents the capital structure and capital adequacy calculations of The Northern Trust Company, Canada (TNTCC) based on Basel III guidelines on an “All-in” basis. TNTCC complies with the Basel III framework as it applies:

- Pillar 1: Minimum Capital Requirements. Senior management and TNTCC Board of Directors have adopted the Standardized Approach to Credit Risk and the Basic Indicator Approach to Operational Risk to determine the company’s capital requirements under Basel Capital Adequacy Reporting (BCAR);
- Pillar 2: The Supervisory Review Process. TNTCC completes an Internal Capital Adequacy Assessment Process (ICAAP) annually, with the results reviewed and approved by TNTCC Board of Directors; and
- Pillar 3: Market Discipline. This Pillar 3 disclosure document has been prepared to provide information on TNTCC’s risk management objectives and policies, its capital position, its approach to assessing the adequacy of its capital and its exposure to material risks.

TNTCC was, by Letters Patent of Continuance, continued as a trust company under the *Trust and Loan Companies Act* (Canada) in July 1993 and the Office of the Superintendent of Financial Institutions (OSFI) issued an order approving TNTCC to commence and carry out trust business in January 1994. TNTCC is a wholly owned subsidiary of The Northern Trust Company (TNTC), a corporation organised under the banking laws of the State of Illinois, United States of America. Northern Trust Corporation (NTC), a financial holding company based in Chicago, is the ultimate parent of TNTC. TNTCC is not considered a Domestic-systemically important bank by OSFI.

NTC’s business activities in Canada are comprised of global custody and associated services, securities lending, asset management and fund administration services. These services are delivered through three regulated Canadian entities: TNTCC, the Canada Branch of TNTC (Canada Branch) and NT Global Advisors, Inc. (NTGA Canada).

To ensure that TNTCC maintains sufficient regulatory capital at all times, TNTCC has adopted a Capital Management Policy and manages its assets and liabilities in accordance with TNTCC’s Board of Directors approved criteria set forth in its Asset and Liability Management Policy (ALM Policy). The ALM Policy provides the basis for TNTCC’s credit risk management and guidelines to govern the investment in securities and money market assets.

TNTCC currently does not hold any client deposits or engage in any activities that result in off-balance sheet exposures. Accordingly, its capital requirements are relatively stable and predictable.

## **Northern Trust Risk Management**

TNTC has established an integrated Enterprise Risk Management Framework (ERM) that provides for consistent risk management practices throughout the organization, including TNTCC, and acts as a reference of how various components are defined, aligned and linked to capital adequacy. It allows for active management of risk in conjunction with defined risk appetites.

TNTCC's risk appetite is low to moderate and its attitude toward risk is best described as judicious, with an objective of long-term stability. TNTCC's very strong capital base and liquid balance sheet enable it to pursue strategic growth opportunities and manage unexpected events. Risk is effectively managed by a comprehensive risk management program which involves related Northern Trust entities, as required.

This report is unaudited and the amounts are presented in Thousands of Canadian Dollars, unless otherwise disclosed. Financial results are prepared in accordance with International Financial Reporting Standards (IFRS).

## **LOCATION AND FREQUENCY OF DISCLOSURE**

This disclosure is published on Northern Trust's website ([www.northerntrust.com](http://www.northerntrust.com)) on a quarterly basis.

## CAPITAL STRUCTURE

The capital structure of TNTCC consists of Common Shares and Retained Earnings. TNTCC has authorized an unlimited number of common shares without par value. As at March 31, 2018, TNTCC had 30,000 common shares issued fully paid and outstanding.

### Table 1 - Capital Structure

The table below provides a breakdown of TNTCC's capital structure:

	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Q1 2018
<b>Tier 1 Capital</b>					
Share Capital	30,000	30,000	30,000	30,000	30,000
Retained Earnings	20,054	19,925	26,019	26,971	27,995
<b>Total Tier 1 Capital<sup>1</sup></b>	<b>50,054</b>	<b>49,925</b>	<b>56,019</b>	<b>56,971</b>	<b>57,995</b>
<b>Total Capital</b>	<b>50,054</b>	<b>49,925</b>	<b>56,019</b>	<b>56,971</b>	<b>57,995</b>

1. All capital held by TNTCC is Tier 1 Capital.

## CAPITAL ADEQUACY

TNTCC has a thorough process to assess capital adequacy built around an internal view of its risk profile and a comprehensive capital planning process.

Projections of regulatory and internal capital requirements and available capital are compared to assess TNTCC's capital adequacy over a multi-year time period. Having a clear understanding of regulatory and internal capital requirements, as well as available capital levels, under different circumstances is an important component of an entity's capital adequacy assessment. TNTCC's capital adequacy is assessed quarterly and is based on the Capital Management Policy and Capital Management Guideline (CMG) approved by the Board of Directors.

## Table 2 - Modified Capital Disclosure Template <sup>1</sup>

The table below represents a modified version of the “All-in” capital disclosure template for Non-domestic-systemically important banks (Non-D-SIBs):

	Q1 2017 All-in	Q2 2017 All-in	Q3 2017 All-in	Q4 2017 All-in	Q1 2018 All-in
<b>Common Equity Tier 1 capital: instruments and reserves</b>					
1 Directly issued qualifying common share capital (and equivalent for non-joint stock companies) plus related stock surplus	30,000	30,000	30,000	30,000	30,000
2 Retained earnings	20,054	19,925	26,019	26,971	27,995
6 Common Equity Tier 1 capital before regulatory adjustments	50,054	49,925	56,019	56,971	57,995
29 Common Equity Tier 1 capital (CET1)	50,054	49,925	56,019	56,971	57,995
36 Additional Tier 1 capital before regulatory adjustments	-	-	-	-	-
44 Additional Tier 1 capital (AT1)	-	-	-	-	-
45 Tier 1 capital (T1 = CET1 + AT1)	50,054	49,925	56,019	56,971	57,995
58 Tier 2 capital (T2)	-	-	-	-	-
59 <b>Total capital (TC = T1 + T2)</b>	<b>50,054</b>	<b>49,925</b>	<b>56,019</b>	<b>56,971</b>	<b>57,995</b>
60 <b>Total risk-weighted assets<sup>2</sup></b>	<b>35,483</b>	<b>35,034</b>	<b>41,209</b>	<b>32,608</b>	<b>33,918</b>
<b>Capital ratios</b>					
61 Common Equity Tier 1 (as a percentage of risk weighted assets)	141.06%	142.50%	135.94%	174.71%	170.99%
62 Tier 1 (as a percentage of risk weighted assets)	141.06%	142.50%	135.94%	174.71%	170.99%
63 Total capital (as a percentage of risk weighted assets)	141.06%	142.50%	135.94%	174.71%	170.99%
<b>OSFI all-in target</b>					
69 Common Equity Tier 1 capital all-in target ratio	7.0%	7.0%	7.0%	7.0%	7.0%
70 Tier 1 capital all-in target ratio	8.5%	8.5%	8.5%	8.5%	8.5%
71 Total capital all-in target ratio	10.5%	10.5%	10.5%	10.5%	10.5%

1. Numbering in the above table corresponds to the OSFI prescribed template

2. See Table 3 – Capital Adequacy

### Table 3 - Capital Adequacy

The Pillar III capital requirements of TNTCC for credit and operational risk are provided in the following table:

	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Q1 2018
<b>Capital Requirements for Credit Risk</b>					
Deposits with Regulated Financial Institutions	5,364	5,059	6,713	5,434	4,570
Risk Weighted - Deposits with Regulated Financial Institutions (20%)	1,073	1,012	1,343	1,087	914
Government Treasury Bills	39,473	39,875	40,784	48,898	49,730
Risk Weighted - Government Treasury Bills (0%)	-	-	-	-	-
Other Assets	7,897	7,422	13,316	4,871	6,072
Risk Weighted - Other Assets (100%)	7,897	7,422	13,316	4,871	6,104
<b>Total Risk Weighted Assets for Credit Risk</b>	<b>8,970</b>	<b>8,434</b>	<b>14,659</b>	<b>5,958</b>	<b>7,018</b>
<b>Capital Requirements for Operational Risk</b>					
Average three year gross income	14,138	14,186	14,163	14,216	14,344
Capital Charge (15%)	2,121	2,128	2,124	2,132	2,152
<b>Risk Weighted assets for Operational Risk (12.5 times Capital Charge)</b>	<b>26,513</b>	<b>26,600</b>	<b>26,550</b>	<b>26,650</b>	<b>26,900</b>
<b>Total Risk Weighted Assets</b>	<b>35,483</b>	<b>35,034</b>	<b>41,209</b>	<b>32,608</b>	<b>33,918</b>

## Table 4 – Leverage Ratio

The table below represents the leverage ratio disclosure on an “all-in” basis:

	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Q1 2018
<b>On-balance sheet exposures</b>					
1 On-balance sheet items (excluding derivatives, SFTs and grandfathered securitization exposures but including collateral)	52,734	52,356	60,813	59,203	60,372
2 (Asset amounts deducted in determining Basel III “all-in” Tier 1 capital)	-	-	-	-	-
3 <b>Total on-balance sheet exposures</b> (excluding derivatives and SFTs)	<b>52,734</b>	<b>52,356</b>	<b>60,813</b>	<b>59,203</b>	<b>60,372</b>
<b>Capital and Total Exposures</b>					
20 <b>Tier 1 capital</b>	<b>50,054</b>	<b>49,925</b>	<b>56,019</b>	<b>56,971</b>	<b>57,995</b>
21 <b>Total Exposures</b>	<b>52,734</b>	<b>52,356</b>	<b>60,813</b>	<b>59,203</b>	<b>60,372</b>
<b>Leverage Ratios</b>					
22 <b>Basel III leverage ratio</b> <sup>2</sup>	<b>94.92%</b>	<b>95.36%</b>	<b>92.12%</b>	<b>96.23%</b>	<b>96.06%</b>

1. Numbering in the above table corresponds to the OSFI prescribed template

2. The minimum ratio stipulated by the Basel Committee on Banking Supervision is 3.0%

## Liquidity Coverage Ratio

Per OSFI’s Liquidity Adequacy Requirements (LAR) Guideline, TNTCC is required to maintain a liquidity coverage ratio (LCR) with a value no lower than 100%. TNTCC’s LCR exceeded this minimum requirement as at all the quarter ends reported herein.

## CREDIT RISK

Credit risk is the risk to earnings and/or capital arising from the failure of a borrower or counterparty to perform on an obligation.

The primary sources of credit risk for TNTCC derive from issuer risk (as it pertains to Canadian government securities), counterparty risk (as it pertains to cash balances maintained with our nostro bank agent and client fee receivables) and concentration risk (as it pertains to concentrated exposure to Canadian sovereign debt).



The credit risk management process is documented in the ALM Policy. Central to this process is approval and monitoring of exposures. The nature of TNTCC's business is not to provide traditional commercial credit; it is not part of TNTCC's business plan to have a portfolio of loans.

TNTCC credit risk exposure is substantively limited to Canada.

Given TNTCC's business focus, counterparties, product offerings and the extremely low risk nature of its investment holdings (Government of Canada securities), TNTCC's exposure to credit risk is not significant.

#### Table 5 - Residual Contract Maturity Breakdown

A breakdown of TNTCC's credit risk by contractual maturity is provided in the table below:

	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Q1 2018
<b>Bank Deposits</b>					
Demand	5,364	5,059	6,713	5,434	4,570
<b>Government Treasury Bills</b>					
Up to 1 month	-	-	-	13,597	3,598
Over 1 month to 3 months	8,592	9,987	10,987	-	8,991
Over 3 months to 6 months	9,973	10,971	9,983	12,565	10,927
Over 6 months to 1 year	20,908	18,917	19,814	22,736	26,214
<b>Total Credit Gross Exposure</b>	<b>44,837</b>	<b>44,934</b>	<b>47,497</b>	<b>54,332</b>	<b>54,300</b>

## EXPOSURES RELATED TO COUNTERPARTY CREDIT RISK

For TNTCC, counterparty risk pertains to cash balances maintained with a nostro bank agent and client fee receivables.

Northern Trust Corporation (NTC's) Sub-custodian Oversight Committee is charged with evaluating proposals for the appointment or replacement of nostro bank agents for use by NTC legal entities. Upon review by the Sub-custodian Oversight Committee, TNTCC's Capital Markets Credit Committee is ultimately responsible for approving all such appointments and replacements.

TNTCC utilizes the credit ratings from Standard and Poor's (S&P) for purposes of determining its capital adequacy.

Client fee receivables, including aging of such receivables, are reviewed by Management on a monthly basis. Actions are taken as and if necessary based on that review.

The credit valuation adjustment (CVA) is an adjustment to the mid-market valuation of the trading portfolio due to the risk of losses associated with deterioration in the credit risk of the counterparty. Given the nature of TNTCC's operations a CVA capital charge is not required.

### Table 6 - Credit Exposure by Counterparty Type

A breakdown of TNTCC's credit risk exposure by asset class is provided in the table below:

	Q2 2017			Q3 2017			Q4 2017			Q1 2018		
	Exposure (Gross)	Exposure (Net)	RWA	Exposure (Gross)	Exposure (Net)	RWA	Exposure (Gross)	Exposure (Net)	RWA	Exposure (Gross)	Exposure (Net)	RWA
Sovereign <sup>1</sup>	39,875	39,875	-	40,784	40,784	-	48,898	48,898	-	49,730	49,730	-
Bank <sup>2</sup>	5,059	5,059	1,012	6,713	6,713	1,343	5,434	5,434	1,087	4,570	4,570	914
Other assets <sup>3</sup>	7,422	7,422	7,422	13,316	13,316	13,316	4,871	4,871	4,871	6,072	6,072	6,104
<b>Total</b>	<b>52,356</b>	<b>52,356</b>	<b>8,434</b>	<b>60,813</b>	<b>60,813</b>	<b>14,659</b>	<b>59,203</b>	<b>59,203</b>	<b>5,958</b>	<b>60,372</b>	<b>60,372</b>	<b>7,018</b>

1. This asset class covers all exposures to counterparties treated as sovereigns under the standardized approach
2. This asset class covers exposures to banks
3. This asset class includes client receivables

In January 2018, TNTCC adopted IFRS 9, Financial Instruments, which includes a new expected credit loss model for calculating impairment of financial assets. The methodology to recognize expected credit losses considers whether there has been a significant increase in credit risk exposures since the initial recognition of such financial assets. In measuring the expected credit loss, TNTCC considers reasonable and supportable information that is available without undue cost or effort and includes quantitative and qualitative information with a forward-looking analysis. Upon the adoption of IFRS 9, TNTCC recorded an adjustment to the opening balances of client fee receivables, deferred income taxes and retained earnings. The impacts of adopting IFRS 9 on TNTCC's capital and leverage ratios as at December 31, 2017 were not material.

## MARKET RISK AND LIQUIDITY RISK

Market risk results primarily from the sensitivity of the value of assets and liabilities, as well as the sensitivity of net interest income, to changes in interest rates. Secondly, market risk results from changes in the value of trading positions due to movements in market prices, foreign exchange rates and interest rates.

Market & Liquidity risk is comprised of three sub-risks:

- Trading risk - risk of loss in trading positions from changes in the value of the trading position
- Interest rate risk - risk of loss due to significant unexpected changes in interest rates
- Liquidity funding risk - risk of loss due to the inability to raise capital to meet business needs

TNTCC engages in no trading activity and therefore is not required to hold any capital in relation to market risk.

Liquidity is not required to meet deposit liabilities of TNTCC as TNTCC does not hold any client deposits. Sufficient working capital is maintained at all times to meet business requirements. Core investments are held in third-party bank deposits and Canadian government securities, which are considered liquid assets given their short maturities and marketability.

## OPERATIONAL 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 for inadequate information systems, operating problems, product design and delivery difficulties or catastrophes that result in unexpected losses. TNTCC uses the basic indicator approach to measure operational risk. Operational risk is shown in Table 3 Capital Adequacy.

All operational activities are outsourced to the Canada Branch and are carried out by the employees of the Canada Branch or TNTC. TNTCC does have moderate inherent operational risk which includes the oversight of the outsourced operations. Employment Practices and Workplace Safety risk is limited to the directors of TNTCC as applicable.

## INTEREST RATE RISK IN THE BANKING BOOK

Interest rate risk is the risk of loss due to significant unexpected changes in interest rates.

The ALM Policy governs activities related to interest rate sensitivity, liquidity, the pledging of assets, and large exposures in accordance with the OSFI Guidelines.

Equity is the dominant funding source for TNTCC and the majority of the assets at March 31, 2018 are short-term Canadian government securities with an average maturity of approximately six months. As a result, TNTCC has limited exposure to interest rate changes from a loss perspective.

TNTCC's assets are generally held to maturity to meet one or more of the following objectives: provide interest income, manage interest rate risk, comply with applicable regulatory requirements or ensure adequate liquidity. Pursuant to the ALM Policy, TNTCC may acquire debentures, bonds or other debt instruments of the Government of Canada or guaranteed by it; or place deposits with

banks, subject to TNTC’s list of approved counterparties and limits. These investments are also subject to the volume, maturity, and credit guidelines outlined below.

**Table 7 - Maturity and Size Restrictions**

The maximum maturity of new purchases of an instrument and the total holdings obligations of a single issuer are limited according to the following table as defined in the ALM Policy:

Instruments	Maximum Maturity	Maximum Holdings of a Single Issuer	Concentration limits as % of Assets
Canadian Government Securities	5 Years	No Limit	No Limit
Money Market Assets (deposits in Canadian banks)	3 Months	Approved Credit Limit	25%

TNTCC measures interest rate risk by reference to OSFI’s “Interest Rate Risk and Maturities Matching Return” (I3 Return). Since shareholder’s equity is the dominant funding source for TNTCC and the vast majority of the assets are in short-term Canadian government securities, TNTCC has minimal exposure to interest rate risk.

**REMUNERATION**

NTC’s Total Compensation Policy applies to all partners world-wide. The Compensation and Benefits Committee (“CBC”) of the NTC Board has primary responsibility for overseeing all global remuneration. The CBC consists of independent non-executive directors and takes advice from external consultants in all areas of compensation. Members of the CBC are compensated for their services with cash compensation and Restricted Stock Units (RSU). Total remuneration earned by the CBC members for 2017 was US\$1.2M with a combination of cash and stock. The CBC met 4 times during 2017.

A Canadian based Senior Management Group operates to monitor and implement the Canada compensation policy.

"Senior Management" has been defined as those employees who are the heads of Control Functions and/or members of governing bodies and/or heads of significant business groups. There are 9 employees in the Senior Management Group consisting of the Canada Chief Executive Officer, Chief Financial Officer, Legal Counsel, Chief Compliance Officer, Chief Risk Officer, Chief Administrative Officer, SVP Relationship Management and Client Service, SVP Global Securities Lending and SVP of Institutional Sales.

“Other Material Risk Takers” are defined as those teams and individuals attached to a function that could have the ability to impact the risk profile of the company, however these all operate within appropriate governance structures and under delegated authorized limits from Senior

Management. There are 2 employees in the Other Material Risk Takers group, the VP of Finance and Controller and the VP Reporting and Analysis.

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 compensation which includes short term and long term incentives where appropriate. The CBC reviews the remuneration policy on an annual basis. In February 2018, the CBC adopted a revised Total Compensation Policy Statement. The revised policy has a more modern appearance and an updated set of guiding principles that describe how NTC delivers compensation programs that are aligned with the Corporation's philosophy.

Annual review processes for all partners 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 activities reflecting their discretionary assessment of specific objective and subjective factors including performance against risk expectations.

NTC's Chief Risk Officer ("CRO"), the global head of Corporate Risk Management ("CRM"), participates in funding discussions that inform the recommendation to the CBC of corporate pool funding level as well as to the Chairman and CEO for the Business Unit allocation. CRM has developed a process to track and consolidate risk events 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. NTC's Chief Risk Officer participates in quarterly discussions with NTC's 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.

The cash incentive pool funding is a discretionary pool amount set by the CBC. The funding level is based on several factors including a defined range percentage of NTC's pre-tax income, performance against profit plan and affordability. The profit plan determination includes risk considerations including reserves for credit and operational losses and other risk assessments. When choosing appropriate measures for incentive plans, these goals are aligned with those of the business.

As these business and financial goals are achieved, partners are rewarded accordingly to reinforce the value of their contribution. To determine an individual's pay and incentive allocation, managers 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 and individual contributions.

Performance factors can result in no increase to base pay and/or no cash incentive award for a specific performance period.

Total variable remuneration consists of two components:

- Cash incentive plan for cash bonuses. All regular partners within NTC are eligible for an incentive payment subject to performance;
  
- Long term incentive awards. Long-term incentive awards can be awards in cash or equity. Equity is typically awarded in the form of restricted stock units (“RSUs”). The purpose of the equity awards is to link current and future business leaders to overall long term performance of the organization. Long-term incentive awards typically vest over four years. Long-term equity awards are subject to forfeiture prior to vesting and are subject to recoupment/clawback after vesting. Consistent with NTC’s risk-mitigation strategies for its compensation program, the CBC shall review all unvested long-term incentive awards in the case of a financial restatement or misconduct on behalf of the employee.

The Total Compensation Policy Statement for Canada is reviewed by the Human Resources Committee of TNTCC Board of Directors on an annual basis.

**Table 8a & 8b : Total Value of Remuneration Award for Senior Management and Other Material Risk Takers**

The table below provides a breakdown of the total value of remuneration award for Senior Management and Other Material Risk Takers

**Table 8a**

	Unrestricted		Deferred	
	Year ended December 31		Year ended December 31	
	2016	2017	2016	2017
<b>Fixed Remuneration</b>				
•Cash-Based				
Wages(Regular)/Dividend Cash Equivalent	\$2,227	\$2,243	-	-
RRSP employer contributions	-	-	\$191	\$200
•Shares and Share-linked instruments	-	-	-	-
•Other	-	-	-	-
<b>Variable Remuneration</b>				
•Cash-Based				
Stock Option/RSU Grants	\$670	\$563	-	-
•Other	-	-	-	-
<b>Total</b>	<b>\$2,897</b>	<b>\$2,806</b>	<b>\$536</b>	<b>\$494</b>

**Table 8b**

	Year ended December 31	
	2016	2017
Number of employees receiving variable remuneration	12	11
Number of employees and total amount of guaranteed bonuses	1/\$50	
Number and total of sign-on bonuses	-	
Number and total of severance payments	-	
Total number of outstanding deferred remuneration shares (in shares)	12,121	14,336
Total amount of deferred remuneration paid out in year (000s)	\$79	\$253