

**TD Group US Holdings LLC** 

Dodd-Frank Act Stress Testing Results TDGUS Severely Adverse Scenario

October 6, 2017

#### Overview

The following disclosure is specific to TD Group US Holdings LLC (hereafter referred to individually as "TDGUS" and together with its subsidiaries as "the Company"). TDGUS is a wholly-owned subsidiary of The Toronto-Dominion Bank, a Schedule I bank chartered under the Bank Act (Canada). The Company is required to conduct a stress test for TDGUS by September 30 of each calendar year, under the requirements of regulations adopted by the Board of Governors of the Federal Reserve System ("FRB") pursuant to the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Stress Test Regulations")<sup>1</sup>. Stress test results projected by the Company provide forward-looking information to help regulators, the board of directors, senior management, and market participants to identify risks and the potential impacts of adverse economic environments on the Company's capital.

The FRB does not provide stress test scenarios during the Mid-Cycle stress test. However, Stress Test Regulations require the disclosure of a summary of results for the Company-run stress test under an internally-developed severely adverse scenario ("TDGUS Severely Adverse Scenario") for nine projection quarters beginning on July 1, 2017 and ending on September 30, 2019 ("planning horizon"). The Stress Test Regulations also require that the Company disclose a description of the types of risks included in the stress test, projection methodologies used, and an explanation of the most significant causes of changes in capital under this scenario.

This document contains forward-looking statements, including projections of the Company's financial results and conditions under a hypothetical scenario. The projections are not intended to be a forecast by the Company of expected future economic and financial conditions or results, but rather reflect possible results under an internally-developed scenario which is highly unlikely to occur. The Company's actual financial results and conditions may be influenced by different actual economic and financial conditions and various other factors, both general and specific, which may cause such results to differ materially from the projections provided in this document. For more detailed information regarding forward-looking statements and discussions of risk factors relating to the Company, see The Toronto-Dominion Bank's 2016 Management's Discussion and Analysis, and any updates to such document as may be subsequently filed in quarterly reports to shareholders and news releases (as applicable).

# **Scenario Overview**

The TDGUS Severely Adverse Scenario represents a hypothetical economic environment in combination with certain idiosyncratic events. The scenario features a marked slowdown in global growth prospects leading to a prolonged recession along with heightened uncertainty in global financial markets. The US raises tariffs, leading to a series of retaliatory trade measures which curtail global trade. The growth outlook in the developing Asia region worsens considerably as a result, raising the risk of financial distress in China's domestic debt and property markets. Consequently, global growth prospects deteriorate significantly.

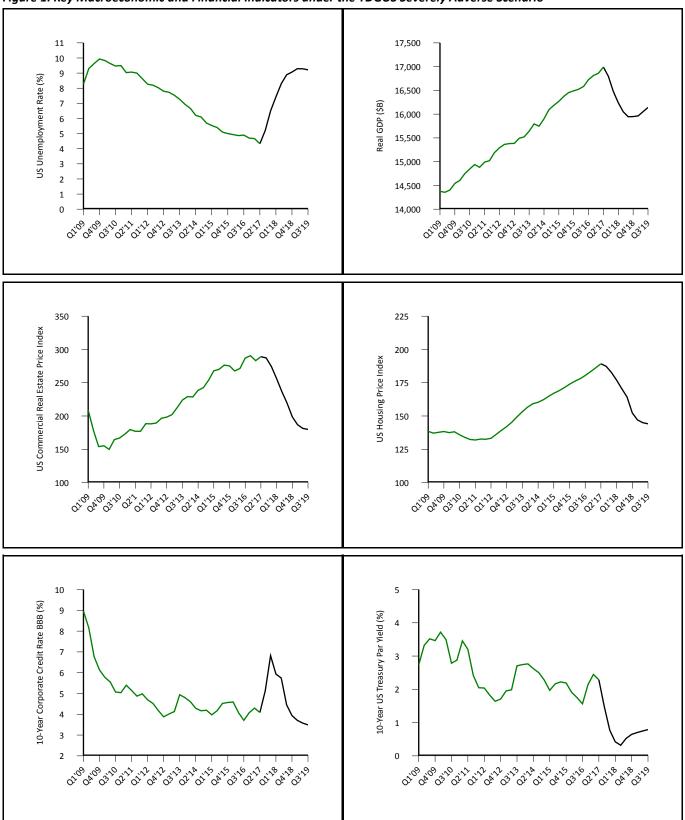
A robust recovery in the European Union ("EU") fails to take hold amid uncertainty surrounding unproductive negotiations on trade and financial linkages with the United Kingdom. The bleak growth outlook undermines fragile banking systems in the region. Rising populist sentiment across EU countries heightens concerns about the ability of member countries to put in place a credible recapitalization plan in a timely manner. Contagion spreads beyond periphery countries through large cross-border debt and bank lending exposures. Risk appetite retrenches and financial markets worldwide are destabilized.

The US is impacted through trade and financial linkages with the protracted slump in energy prices weakening the oil and gas sector. The unemployment rate rises by 5.1 percentage points, reaching 9.3%. Given the absence of a robust recovery, Real Gross Domestic Product ("Real GDP") remains 5.0% below its pre-recession level at the end of the 9-quarter planning horizon, while the unemployment rate remains 4.9 percentage points above its pre-recession level. The scenario also incorporates a number of idiosyncratic risks including a major cyber security breach, an unexpected credit loss related to a large borrower within the Company's Commercial and Industrial lending portfolio, and a terrorist attack involving damage to three different locations in New York.

<sup>&</sup>lt;sup>1</sup>The FRB's stress test rules that are applicable to TDGUS are found in 12 CFR Part 252, Subpart F.

The graphs in Figure 1 below show the historical experience (green line) and projected trends (black line) of the leading macroeconomic and financial indicators<sup>2</sup>.

Figure 1: Key Macroeconomic and Financial Indicators under the TDGUS Severely Adverse Scenario



<sup>&</sup>lt;sup>2</sup> Data presented in Figure 1 is period ending data.

## Description of the Types of Risks Included in the Company-Run Stress Test

As a part of the ongoing capital management process, the Company performs a risk identification process to ensure that capital adequacy is assessed based on the Company's significant risks and risk profile, business practices, and environment. The risk identification process is designed to comprehensively identify, capture, and estimate the impact of the following significant risks: strategic, credit, operational, market, liquidity, legal and regulatory compliance, reputational, model, and capital adequacy.

### Strategic Risk

Strategic risk is the potential for financial loss or reputational damage arising from the choice of sub-optimal or ineffective strategies, the improper implementation of chosen strategies, choosing not to pursue certain strategies, or a lack of responsiveness to changes in the business environment. Strategies include merger and acquisition activities.

#### Credit Risk

Credit risk is the risk of loss if a borrower or counterparty in a transaction fails to meet its agreed payment obligations. The magnitude of loss is determined by probability of default, exposure at default, and loss given default. Credit risk is incurred in the Company's lending operations and investment portfolio and derivative contracts where customers and counterparties have principal repayment, interest payment, collateral settlement, or other obligations to the Company.

## **Operational Risk**

Operational risk is the risk of loss resulting from inadequate or failed internal processes or technology or from human activities or from external events. As a financial institution, the Company is inherently exposed to a broad range of operational risks with root causes categorized by process, people, technology, or external factors. The impact can result in significant financial loss, reputational harm, or regulatory censure and penalties.

# Market Risk (Trading and Non-Trading)

Trading Market Risk is the risk of loss in financial instruments or the balance sheet due to adverse movements in market factors such as interest rates, foreign exchange rates, equity prices, commodity prices, credit spreads, volatilities, and correlations from trading activities. The Company's trading market risk arises from securities and other financial instruments held in support of trading activities including facilitating transactions and providing liquidity to the Company's wholesale clients. The key risk drivers include changes in the level, volatility or correlations of interest rates, credit spreads, foreign exchange rates, and equity prices.

Non-Trading Market Risk is the risk of loss in financial instruments, the balance sheet or in earnings, or the risk of volatility in earnings from non-trading activities such as asset-liability management or investments, predominantly from interest rate, foreign exchange, and equity risks. The Company's non-trading market risk is largely related to banking products offered to clients, and securities and other financial instruments held for investment and asset-liability management purposes. The key drivers of non-trading market risk changes include changes in interest and foreign exchange rates, and credit spreads.

# Liquidity Risk

Liquidity risk is the risk of having insufficient cash or collateral to meet financial obligations and an inability to, in a timely manner, raise funding or sell assets at a non-distressed price. The Company's primary liquidity needs arise from deposit withdrawals, debt maturities, utilization of commitments to provide credit or liquidity support, or the need to pledge additional collateral.

#### Legal and Regulatory Compliance Risk

Legal and regulatory compliance risk is the risk associated with the failure to meet the Company's legal obligations from legislative, regulatory, or contractual perspectives. This includes risks associated with the failure to identify, communicate, and comply with current and changing laws, regulations, rules, regulatory guidance, self-regulatory organization standards, and codes of conduct, including the prudent risk management of Money Laundering or Terrorist Financing Risk. It also includes the risks associated with the failure to meet material contractual obligations

or similarly binding legal commitments, by either the Company or other parties contracting with the Company. Potential consequences of failing to mitigate legal and regulatory compliance risk include financial loss, regulatory sanctions, and loss of reputation, which could be material to the Company.

### Reputational Risk

Reputational risk is the potential that stakeholder impressions, whether true or not, regarding the Company's business practices, actions or inactions, will or may cause a significant decline in the Company's value, brand, liquidity or customer base, or require costly measures to address.

#### Model Risk

Model risk is the potential for adverse consequences arising from decisions based on incorrect or misused models and their outputs. It can lead to financial loss, reputational risk, or incorrect business and strategic decisions.

# Capital Adequacy Risk

Capital adequacy risk is the risk of insufficient capital being available in relation to the amount of capital required to carry out the Company's strategy and/or satisfy regulatory and internal capital adequacy requirements.

## Summary Description of the Methodologies Used in the Company-Run Stress Tests

The Company's stress testing process uses quantitative and qualitative approaches to estimate revenue, expenses, credit losses, non-credit losses and reserves, subsequent changes to the Company's balance sheet, and capital for each scenario. The quantitative and qualitative approaches are subject to approval through a validation process managed by independent Model Risk Management and Model Validation functions. The Company's stress test results incorporate the impact of certain adjustments based on expert judgment that are intended to ensure that results accurately reflect senior management's expectations under the various macroeconomic scenarios, including those required to mitigate any identified limitations or weaknesses in a specific approach. These adjustments are documented, reviewed, and approved by an independent function. The Company has established a governance structure comprised of several committees with focused areas of oversight to ensure that the Company employs a robust capital adequacy process. This structure promotes the effective challenge and approval by senior management of quantitative and qualitative approaches and key assumptions. Stress test results and associated capital adequacy assessments are reviewed by the Enterprise Risk Management Committee and the board of directors (or its designated committee).

#### Pre-Provision Net Revenue ("PPNR")

The Company's methodologies for estimating PPNR include balance sheet, interest income, interest expense, non-interest income, non-interest expense, and operational risk losses (as described below). Interest income and expense are largely estimated based on scenario-driven customer rates and product volumes. Net interest income is calculated as the difference between gross interest income on projected net loan balances and investment securities and the interest expense paid on deposits and borrowings. Net Interest Income also incorporates the impact of derivatives. Non-interest income and expense are projected using a combination of quantitative models where macroeconomic relationships have been identified and qualitative models that include the projection of key drivers linked to changes in macroeconomic variables.

# Operational Risk Losses

The Company uses a hybrid approach to estimate operational risk-related losses over the planning horizon. The Company leverages regression analysis based on both internal and external operational loss event history along with historical averages and scenario analysis for non-legal losses; the Company leverages a litigation claims and settlements-based approach for legal losses. Operational risk loss estimates incorporate expert judgment where applicable.

# Market Risk (Trading and Non-Trading) Losses

The Company's methodology for estimating trading market risk losses mainly involves a full mark-to-market revaluation of projected trading positions over the planning horizon. Loss projections are based either on statistical models or qualitative approaches. The approach is designed to quantify the impact of market and position changes

by performing a full revaluation of the entire portfolio. The Company's methodology for estimating non-trading market risk losses associated with other-than-temporary impairment involves a review of all non-trading investment positions.

The methodologies above also include the projection of additional key market rates and parameters for each scenario. The projection of additional key rates, including those associated with credit spreads and interest rates, are based on a combination of econometric models and other quantitative methods, historical data, and the application of expert judgment.

# Credit Losses and Provision for Credit Losses ("PCL")

The Company's estimates of credit risk-related losses are based upon retail and wholesale credit loss quantitative models that leverage a number of factors such as borrower credit quality, historical loss experience, the macroeconomic environment (including the interest rate environment and unemployment rate), and related loan volumes determined for the scenario.

The allowance for loan and lease losses ("ALLL") is established for each type of loan to reserve for the level of credit losses the Company could experience under each scenario over the planning horizon. The provision for each quarter of the planning horizon is based on the quarter-over-quarter change in the required level of ALLL for the scenario plus the projected net charge-offs for each quarter.

#### Capital

The impact of the estimated PPNR, PCL, capital actions, changes in risk weighted assets ("RWA"), accumulated other comprehensive income ("AOCI"), and changes in deferred tax assets ("DTA") are the most significant components of the capital projections under the hypothetical stress scenario. The Company's capital position is projected based on Basel III ("BIII") standardized rules for RWA and advanced approaches for available capital except for treatment of the ALLL allowable in Tier 2 capital, which is calculated based on standardized rules. The assumed capital actions used to assess capital adequacy (hereafter referred to as "Dodd Frank Act capital actions") are determined in accordance with the Stress Test Regulations as follows:

- (1) For the first quarter of the planning horizon, the Company takes into account its actual capital actions as of the end of that quarter; and
- (2) For each of the second through ninth quarters of the planning horizon, the Company includes in its projections of capital:
  - i. Common stock dividends equal to the quarterly average dollar amount of common stock dividends that the Company paid in the previous year (that is, the first quarter of the planning horizon and the preceding three calendar quarters);
  - ii. Payments on any other instrument that is eligible for inclusion in the numerator of a regulatory capital ratio equal to the stated dividend, interest, or principal due on such instrument during the quarter;
  - iii. An assumption of no redemption or repurchase of any capital instrument that is eligible for inclusion in the numerator of a regulatory capital ratio; and
  - iv. An assumption of no issuances of common stock or preferred stock, except for issuances related to expensed employee compensation.

As indicated in the 2017 annual stress test instructions, institutions are required to incorporate any proposed business changes in their stress test results. To comply with its obligations under the FRB's Regulation YY, which establishes certain Enhanced Prudential Standards for Foreign Banking Organizations, including the requirement to form a US Intermediate Holding Company, on July 1, 2017, the Company transferred all remaining non-bank subsidiaries to TDGUS. This included TD Luxembourg International Holdings ("TDLIH") and its investment in TD Ameritrade ("AMTD"). Further, the Scottrade transaction<sup>3</sup> closed on September 18, 2017 following receipt of all required regulatory

<sup>&</sup>lt;sup>3</sup> On September 18, 2017, TD Bank Group and AMTD completed the previously announced acquisition of Scottrade Bank ("STB") and Scottrade Financial Services, Inc. ("SFSI"), respectively. The overall Scottrade transaction is comprised of the following: (i) "STB Transaction" which involved the acquisition of STB through a merger with TDBNA for cash consideration equal to approximately \$1.4B; and (ii) "SFSI Transaction" which involved the acquisition of SFSI by AMTD for \$4B, or \$2.7B, net of the proceeds from the STB Transaction. TD Bank Group concurrently purchased \$400MM in new common equity from AMTD in connection with the transaction.

approvals. TDLIH is included in the stress test results provided for TDGUS in the following sections as of Q2'17 while Scottrade is included as of Q3'17.

# **Summary of Results of the Company-Run Stress Test**

The following section presents results of the stress test submitted to the FRB. Cumulative provisions for credit losses exceed total projected PPNR over the planning horizon, resulting in a pre-tax loss as noted in Figure 2.

Figure 2: TDGUS Projected Revenue, Losses, and Net Income Before Taxes through Q3'19 under the TDGUS Severely Adverse Scenario

	\$Billions	Percent of average assets <sup>1</sup>
Pre-provision net revenue <sup>2</sup>	6.1	1.4%
Other revenue <sup>3</sup>	0.0	<b>-</b> %
less		
Provision for Credit Loss	8.6	2.0%
Realized losses/gains on securities (Available-for-Sale and Held-to-Maturity)	(0.1)	<b>-</b> %
Trading and counterparty losses	0.0	-%
Other losses/gains	0.0	<b>-</b> %
equals		
Net income before taxes	(2.6)	(0.6)%
Other Effects on Capital:	Q2'17	Q3'19
AOCI Included in Capital (\$Billions) <sup>4</sup>	0.1	(0.1)

<sup>&</sup>lt;sup>1</sup> Average assets is the 9-quarter average of total assets.

Credit risk-related losses projected for each loan category over the planning horizon are presented in Figure 3 below.

Figure 3: TDGUS Projected 9-Quarter Loan Losses by Type of Loan through Q3'19 under the TDGUS Severely Adverse Scenario

	\$Billions	Portfolio loss rates 1
Loan Losses <sup>2</sup>	5.3	3.6%
First-lien mortgages, domestic	0.2	0.8%
Junior Liens and HELOCS, domestic	0.2	1.6%
Commercial and Industrial <sup>3</sup>	1.3	3.5%
Commercial real estate, domestic	0.7	2.8%
Credit cards	2.0	18.4%
Other consumer <sup>4</sup>	0.8	3.7%
Other loans	0.2	0.9%

<sup>&</sup>lt;sup>1</sup>Portfolio loss rates are calculated based on the 9-quarter average of total loans and exclude loans Held-for-Investment under the Fair-Value option.

<sup>&</sup>lt;sup>2</sup> PPNR means the sum of net interest income and non-interest income less expenses (including operational risk losses) before adjusting for loss provisions.

<sup>&</sup>lt;sup>3</sup> Other revenue includes one-time income (and expense) items not included in PPNR.

<sup>&</sup>lt;sup>4</sup> Certain AOCI items are subject to transition into projected regulatory capital. Those transitions are 80 percent included in projected regulatory capital for 2017, and 100 percent included in projected regulatory capital for 2018 and 2019.

<sup>&</sup>lt;sup>2</sup> Loan losses represent net charge offs which reduce the ALLL.

<sup>&</sup>lt;sup>3</sup> Commercial and industrial loans include small business loans and business and corporate cards.

<sup>&</sup>lt;sup>4</sup> Other consumer loans include automobile loans.

The risk and leverage-based capital ratios for TDGUS remain (i) well above applicable minimum regulatory ratios and (ii) above the Company's approved internal policy goals over the planning horizon. As illustrated in Figure 4 below, the common equity tier 1 capital ("CET1") ratio for TDGUS is projected to decrease from 16.7% as of June 30, 2017 to 14.4% as of September 30, 2019 under this scenario.

Figure 4: TDGUS Projected Stressed Capital Ratios and Metrics through Q3'19 under the TDGUS Severely Adverse Scenario

Capital Ratios	Actual	Stressed capital ratios	
	Q2'17	Ending	Minimum
CET1 capital ratio (%)	16.7	14.4	12.7
Tier 1 risk-based capital ratio (%)	16.7	14.4	12.7
Total risk-based capital ratio (%)	17.9	15.7	13.9
Tier 1 leverage ratio (%)	9.2	6.3	6.3
Tier 1 supplementary leverage ratio (%)	8.3	5.9	5.9

RWA / Leverage Assets	Actual Q2'17	Ending	Balance at capital ratio minimum
Basel III RWA (\$Billions)	188.7	196.8	210.1
Total leverage assets (\$Billions)	344.3	447.7	447.7
Total supplementary leverage assets (\$Billions)	379.0	481.4	481.4

## Explanation of the Most Significant Causes of the Changes in Regulatory Capital Ratios

Figure 5 below illustrates the drivers of changes to the CET1 ratio over the planning horizon. Net income before taxes results in a loss of \$2.6B (as referenced in Figure 2 above) over the 9-quarter planning horizon due to the severe economic recession coupled with an increase in PCL. There is a significant increase in PCL as a result of a hypothetical terrorist attack in the early quarters of the planning horizon. These losses give rise to a tax benefit which is partially offset by increased deductions for DTAs which exceed regulatory CET1 thresholds.

Excluding the Scottrade transaction, RWA remains relatively flat due to (i) increases caused by the phase-in of BIII transition rules, (ii) decreases due to reductions in loan originations, and (iii) increases in low risk securities within the investment portfolio driven by increased deposit growth.

"Other" drivers which led to a decrease in the CET1 ratio include (i) an increase in net deductions related to our significant investment in AMTD, (ii) an increase in unrealized losses in AOCI due to the widening of credit spreads, and (iii) the closing of the Scottrade transaction in the first projection quarter.

Figure 5: TDGUS CET1 Capital Ratio Q2'17 to Q3'19 under the TDGUS Severely Adverse Scenario

