TD Group US Holdings LLC

Dodd-Frank Act Stress Testing Results
TDGUS Severely Adverse Scenario

October 7, 2019

Overview

The following disclosure is specific to TD Group US Holdings LLC (hereafter referred to as "TDGUS") and its wholly owned subsidiaries (collectively, the "Company") 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")[1]. 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, 2019 and ending on September 30, 2021 ("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 the 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 2018 Annual 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).

[1]The FRB's stress test rules that are applicable to TDGUS are found in 12 CFR Part 252, Subpart F (by way of 252.153(e)(5)).

Scenario Overview

The TDGUS Severely Adverse Scenario represents a hypothetical economic environment in combination with certain idiosyncratic events. The US escalates the imposition of tariffs on countries in Developing Asia ("DA"), China in particular. DA countries respond with retaliatory measures that include raising tariffs and non-tariff barriers. A major disruption in supply chains ensues, leading to a prolonged interruption of production and lower productivity growth in the US and DA. China and countries in the region with managed exchange rate regimes devalue their currencies in an effort to stimulate export-led growth. The USD appreciates significantly against DA currencies. The US responds in turn with additional tariffs and non-tariff barriers. Growth prospects deteriorate significantly in the US and DA.

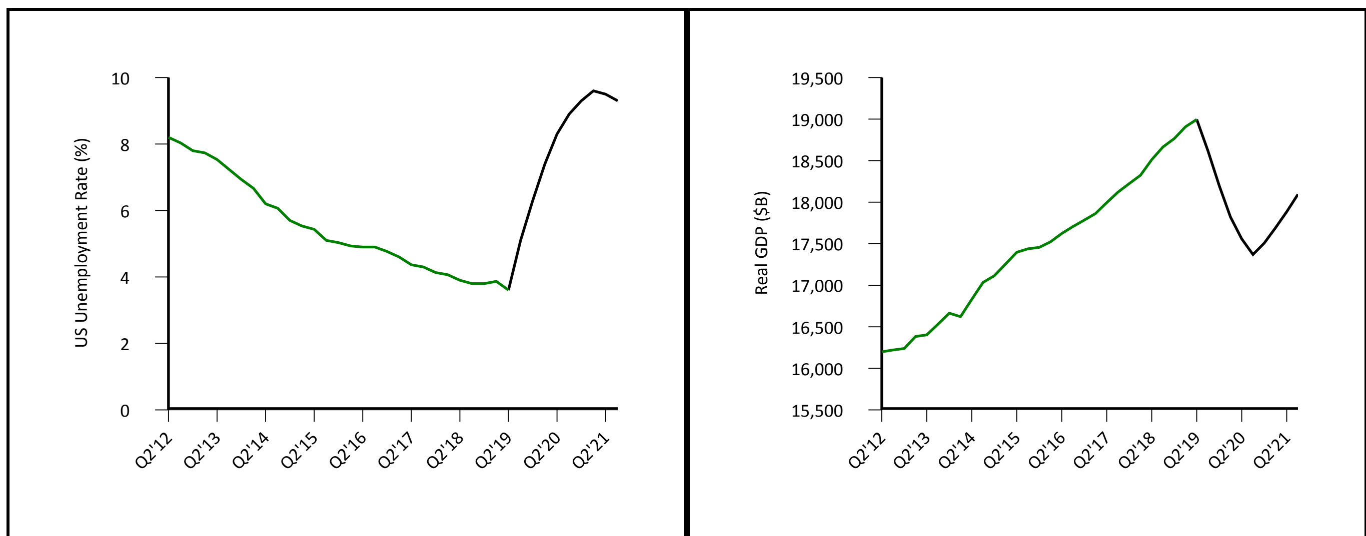
The deterioration in the global growth prospects undermines the corporate profitability outlook. Investors reassess credit risk in the non-financial corporate sector, with a focus on highly-indebted businesses with low credit ratings. Corporate bond spreads widen significantly especially in the non-investment grade segment of the market. Credit migration into this segment is unprecedented due to the large proportion of businesses with the lowest investment grade rating (BBB-/Baa). Heavily-indebted, low-credit quality businesses have difficulty meeting their financing needs. Credit constraints accentuate the pace of the downturn. The medium-term outlook for business investment and corporate profitability further deteriorates.

The US is impacted through trade and financial linkages. Real Gross Domestic Product ("GDP") declines by 9% by the fifth quarter. The unemployment rate peaks at 9.6% in the seventh quarter. The Volatility Index ("VIX") peaks at 81 in the fifth quarter, returning near to pre-stress levels by the ninth quarter. The Dow Jones Industrial Average ("DOW") declines by 46% by the sixth quarter, with partial recovery in the second half of the time horizon. The Commercial Real Estate Price Index ("CREPI") and Home Price Index ("HPI") decline by 41% and 25%, respectively. 30 Yr mortgage rates rise to 4.6% by the fourth quarter then declines to 4.1% by the ninth quarter. Credit Spreads (BBB-10Y) peak at 5.5% in the third quarter then fall through the end of the forecast.

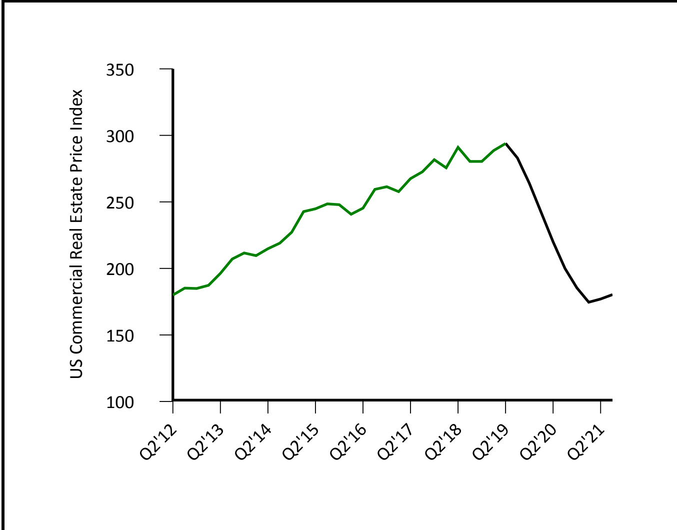
The scenario also incorporates a number of idiosyncratic events including a major cyber security breach, the default of a large counterparty due to significant credit deterioration, and the failure of a third-party service provider.

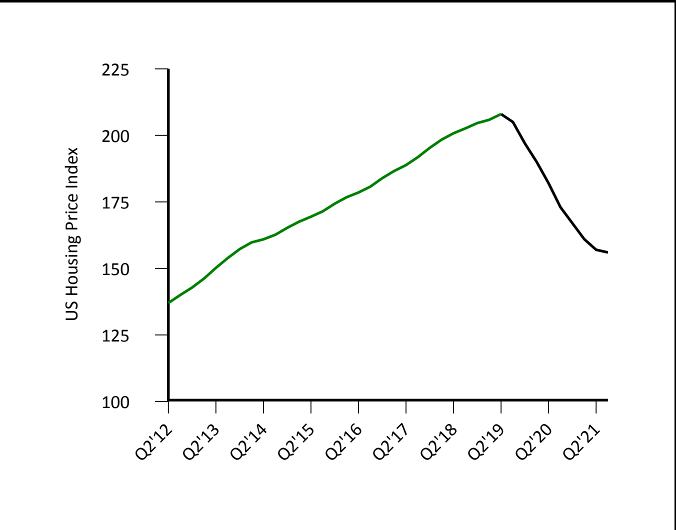
The graphs in Figure 1 below show the historical experience (green line) and projected trends (black line) of the leading macroeconomic and financial indicators[2].

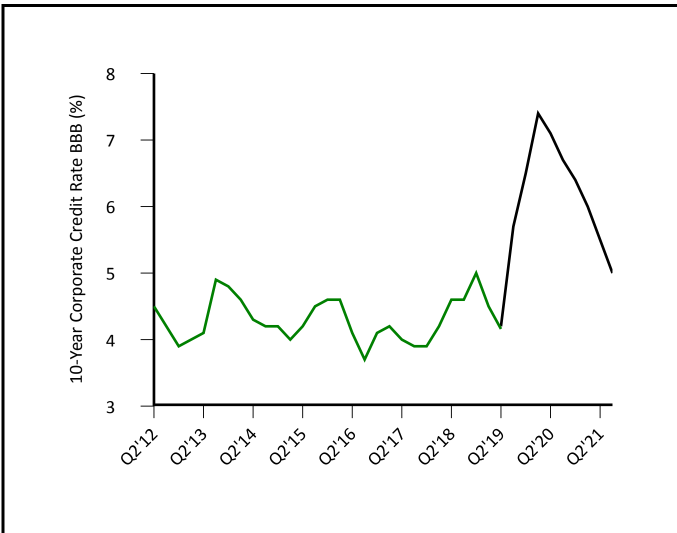
Figure 1: Key Macroeconomic and Financial Indicators under the TDGUS Severely Adverse Scenario

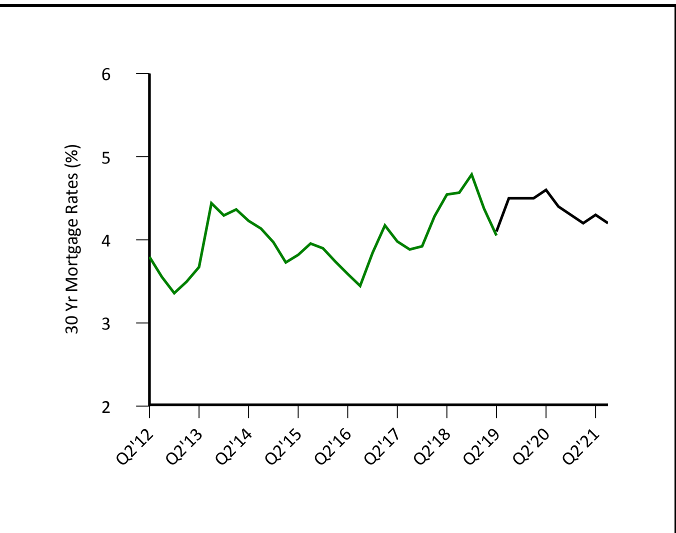


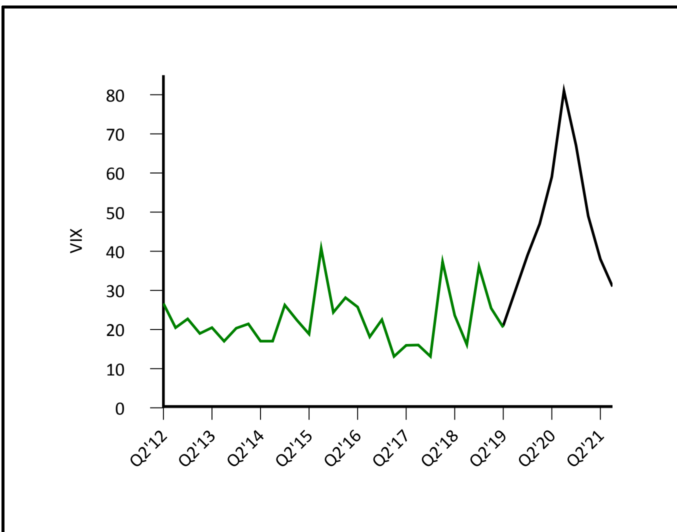
[2] Data presented in Figure 1 is period ending data.

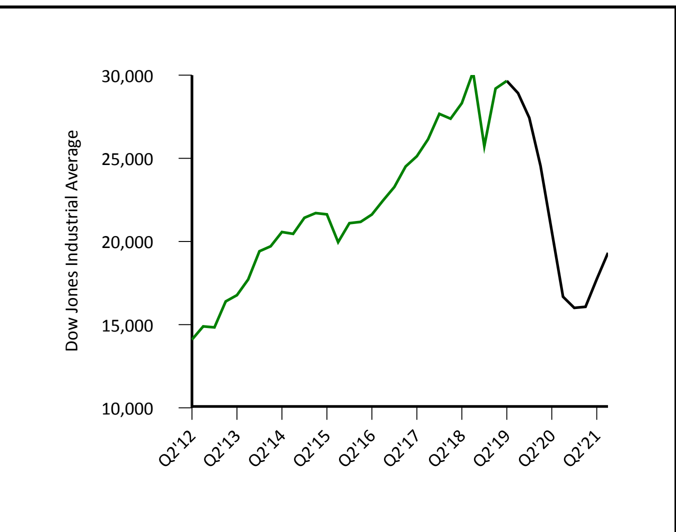

US Commercial Real Estate Price Index
350
300
250
200
150
100
Q2'12
Q2'13
Q2'14
Q2'15
Q2'16
Q2'17
Q2'18
Q2'19
Q2'20
Q2'21


US Housing Price Index
225
200
175
150
125
100
Q2'12
Q2'13
Q2'14
Q2'15
Q2'16
Q2'17
Q2'18
Q2'19
Q2'20
Q2'21


10-Year Corporate Credit Rate BBB (%)
8
7
6
5
4
3
Q2'12
Q2'13
Q2'14
Q2'15
Q2'16
Q2'17
Q2'18
Q2'19
Q2'20
Q2'21


30 Yr Mortgage Rates (%)
6
5
4
3
2
Q2'12
Q2'13
Q2'14
Q2'15
Q2'16
Q2'17
Q2'18
Q2'19
Q2'20
Q2'21


VIX
80
70
60
50
40
30
20
10
0
Q2'12
Q2'13
Q2'14
Q2'15
Q2'16
Q2'17
Q2'18
Q2'19
Q2'20
Q2'21


Dow Jones Industrial Average
30,000
25,000
20,000
15,000
10,000
Q2'12
Q2'13
Q2'14
Q2'15
Q2'16
Q2'17
Q2'18
Q2'19
Q2'20
Q2'21

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 so 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, regulatory compliance and conduct, reputational, model, and capital adequacy. The potential consequences of failing to mitigate these risks include financial loss, regulatory censure and sanctions, incorrect business and strategic decisions, and reputational harm, which could be material to the Company.

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 (including Cyber Security) or from human activities or from external events. This definition includes legal risk but excludes strategic and reputational risk. Operational risk is inherent in all of the Bank's business activities, including the practices and controls used to manage other risks such as credit, market, and liquidity risk.

Market Risk (Trading and Non-Trading)

Trading Market Risk is the risk of loss in financial instruments held in trading positions due to adverse movements in market factors such as interest rates, foreign exchange rates, equity prices, commodity prices, credit spreads, and their respective volatilities. The Company is exposed to market risk in its trading and investment portfolios, as well as through its non-trading activities. The core market risk limits are based on the key risk drivers in the business and includes changes in the level, notional, credit spread, yield curve shift, price, and volatility limits.

Non-Trading Market Risk is the risk of loss on the balance sheet or volatility in earnings from non-trading activities such as asset-liability management or investments, due to adverse movements in market factors, predominantly from interest rate, credit spread, foreign exchange rates and equity prices. In the Company's non-trading activities, it is exposed to market risk through the everyday banking transactions that the Company's customers execute with TD.

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 monetize assets at a non-distressed price. Financial obligations can arise from deposit withdrawals, debt maturities, commitments to provide credit or liquidity support or the need to pledge additional collateral.

Legal, Regulatory Compliance and Conduct Risk

The risks associated with the failure to meet the Bank's legal obligations from legislative, regulatory, or contractual perspectives, obligations under the Code of Conduct and Ethics, or requirements of fair business conduct or market conduct practices. 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, including the prudential risk management of Money Laundering, Terrorist Financing, Economic Sanctions and Bribery and Corruption risk.

Reputational Risk
Reputational risk is the potential that stakeholder perceptions, 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 other estimation approaches and their outputs. It can lead to financial loss, reputational risk, or incorrect business decisions 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, changes to the Company's balance sheet, and capital for each scenario. The quantitative and qualitative approaches are subject to a validation process managed by independent Model Risk Management ("MRM") and Model Validation ("MV") functions. The Company's stress test results incorporate the impact of certain adjustments that are intended to confirm 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. This structure promotes the effective challenge and approval by senior management of quantitative and qualitative approaches, key assumptions and the results. Stress test results and associated capital adequacy assessments are reviewed and approved by the Enterprise Risk Management Committee ("ERMC") and the board of directors (or its designated committee).

Pre-Provision Net Revenue ("PPNR")
The Company has methodologies for estimating PPNR including 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 qualitative models that include the projection of key drivers linked to changes in scenario-driven product volumes. Management may apply expert judgment where applicable.

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 using projected market rates and parameters for each scenario. The loss projections are based either on statistical models or qualitative approaches. The approaches are designed to quantify the impact of market and position changes by performing a full revaluation of the entire portfolio. The Company uses the same approaches for estimating non-trading market risk losses as those used for trading, with additional projections and assessments performed for other-than-temporary impairments.

Credit Losses and Provision for Credit Losses ("PCL")
The Company estimates credit risk-related losses 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), collateral type 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 net quarter-over-quarter change in the required level of ALLL for the scenario and the projected net charge-offs for each quarter.

Capital
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 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:

1. *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);*
2. *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;*
3. *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*
4. *An assumption of no issuances of common stock or preferred stock, except for issuances related to expensed employee compensation.*

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 Q3'21 under the TDGUS Severely Adverse Scenario

	$Billions	Percent of average assets [1]
Pre-provision net revenue[2]	8.4	2.2%
Other revenue[3]	0.0	—%
less		
Provision for Credit Loss	12.1	3.1%
Realized losses/gains on securities (Available-for-Sale and Held-to-Maturity)	0.0	—%
Trading and counterparty losses	0.0	—%
Other losses/gains	0.0	—%
equals		
Net income before taxes	(3.7)	(0.9)%
Other Effects on Capital:	**Q2'19**	**Q3'21**
AOCI Included in Capital ($Billions)	(0.2)	(0.2)

[1] Average assets is the 9-quarter average of total assets.

[2] PPNR means the sum of net interest income and non-interest income less expenses (including operational risk losses) before adjusting for loss provisions.

[3] Other revenue includes one-time income (and expense) items not included in PPNR.

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 Q3'21 under the TDGUS Severely Adverse Scenario

	$Billions	Portfolio loss rates [1]
Loan Losses[2]	8.9	5.4%
First-lien mortgages, domestic	0.2	0.9%
Junior Liens and HELOCS, domestic	0.2	1.9%
Commercial and Industrial[3]	1.8	4.5%
Commercial real estate, domestic	1.3	4.8%
Credit cards	3.4	25.9%
Other consumer[4]	1.3	5.3%
Other loans	0.7	2.3%

[1] Portfolio loss rates are calculated based on the 9-quarter average of total loans and exclude loans Held-for-Sale and loans Held-for-Investment under the Fair-Value option.

[2] Loan losses represent net charge offs which reduce the ALLL.

[3] Commercial and industrial loans include small business loans and business and corporate cards.

[4] 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 for the severely adverse scenario. As illustrated in Figure 4 below, the Common Equity Tier 1 capital ("CET1") ratio for TDGUS is projected to decrease from 16.6% as of Q2'19 to 13.4% as of Q3'21 under this scenario. The Tier 1 leverage ratio is projected to decrease from 9.7% as of Q2'19 to 7.9% as of Q3'21.

Figure 4: TDGUS Projected Stressed Capital Ratios and Metrics through Q3'21 under the TDGUS Severely Adverse Scenario

		Stressed Capital Ratios	
Capital ratios	**Actual Q2'19**	**Ending**	**Minimum**
CET1 capital ratio (%)	16.6	13.4	13.0
Tier 1 risk-based capital ratio (%)	16.6	13.4	13.0
Total risk-based capital ratio (%)	17.6	14.6	14.3
Tier 1 leverage ratio (%)	9.7	7.9	7.9
Tier 1 supplementary leverage ratio (%)	8.7	7.2	7.1

RWA / Leverage Assets	Actual Q2'19	Ending	Balance at capital ratio minimum
Basel III RWA ($Billions)	214.3	227.7	223.7
Total leverage assets ($Billions)	366.0	385.0	385.0
Total supplementary leverage assets ($Billions)	410.1	426.4	409.1

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

Figure 5 below illustrates the key drivers of change to the CET1 ratio over the planning horizon. The CET1 ratio reduced by 321 basis points primarily due to negative net income before taxes (as shown in Figure 2) driven by PCLs primarily in the Commercial & Industrial, Commercial Real Estate, and Credit Card portfolios. The losses give rise to an income tax benefit that is partially offset by higher deferred tax asset deductions due to higher unused tax credits. RWA growth primarily driven by a forecasted increase in commercial loans and securities (includes credit migration) results in a further reduction to the CET1 ratio. "Other Capital" related items also contributing to the reduction in the CET1 ratio include increased threshold deductions as required by US Basel III Final Rules. Dodd-Frank Act ("DFA") capital actions result in an additional decrease to the CET1 ratio as TDGUS pays a quarterly dividend to The Toronto-Dominion Bank throughout the planning horizon.

Figure 5: TDGUS CET1 Capital Ratio Q2'19 to Q3'21 under the TDGUS Severely Adverse Scenario