# The Bank of New York Mellon Corporation The Bank of New York Mellon



## Company-Run Stress Test Dodd-Frank Act Stress Test Results

June 21, 2018

**Supervisory Severely Adverse Scenario** 

#### Introduction

Throughout this document The Bank of New York Mellon Corporation on a consolidated basis is referred to as "BNY Mellon," the "Firm," "we," "our" and "us." BNY Mellon is a global company that manages and services assets for financial institutions, corporations and individual investors in 35 countries.

BNY Mellon has two business segments, Investment Services and Investment Management, which offer a comprehensive set of capabilities and deep expertise across the investment lifecycle, enabling the Firm to provide solutions to buy-side and sell-side market participants, as well as leading institutional and wealth management clients globally. The Other segment includes any remaining operations.

BNY Mellon Investment Services provides business services and technology solutions to entities including financial institutions, corporations, foundations and endowments, public funds and government agencies. Our lines of business include: Asset Servicing, Pershing, Issuer Services, Treasury Services and Clearance and Collateral Management.

Our Investment Management business consists of two lines of business, Asset Management and Wealth Management. The Asset Management business offers diversified investment management strategies and distribution of investment products. The Wealth Management business provides investment management, custody, wealth and estate planning and private banking services.

BNY Mellon is not focused on lending as a primary business and does not have a dedicated retail bank.

Additional financial and other information about BNY Mellon and its principal business activities can be found in its 2017 Annual Report on Form 10-K and subsequent Quarterly Reports on Form 10-Q and other filings, referred to as SEC filings, with the Securities and Exchange Commission, which we make available on the Investor Relations section of our corporate website at <a href="https://www.bnymellon.com">https://www.bnymellon.com</a>.

The projections contained herein are based on the Supervisory Severely Adverse Scenario provided by the Board of Governors of the Federal Reserve System (the "Federal Reserve") for the 2018 annual Dodd-Frank Act Stress Testing ("DFAST") exercises. The Supervisory Severely Adverse Scenario is designed to be generally representative of a severe economic downturn scenario that can be described in many respects as similar to the recession beginning in 2008. The specific variables included in the Supervisory Severely Adverse Scenario such as economic activity, unemployment, exchange rates, prices, incomes, and interest rates are detailed in the document published by the Federal Reserve on February 1, 2018 titled "2018 Supervisory Scenarios for Annual Stress Tests Required under the Dodd-Frank Act Stress Testing Rules and the Capital Plan Rule." The Firm's DFAST stress test relies on various models to forecast performance under stressed conditions. These models cover loss estimates, revenue projections, scenario infrastructure, and risk-weighted asset calculations. The projections contained within this disclosure represent hypothetical estimates that involve an economic outcome that is more adverse than expected, and accordingly these estimates are not forecasts of expected losses, pre-provision net revenue ("PPNR"), net income before taxes, or capital ratios.

BNY Mellon and The Bank of New York Mellon (the "Institutional Bank") are required to conduct company-wide stress tests pursuant to 12 C.F.R. part 252 (the "Regulation"). A summary of those results is also required to be published under the Regulation. Accordingly, we have developed the following disclosure, which contains the information required by the Regulation to be disclosed publicly and has been prepared in accordance with the Regulation. Any differences between the presentation of information concerning BNY

Mellon or the Institutional Bank in this disclosure and how we present such information for other purposes are solely due to our efforts to comply with the Regulation. The information presented in this disclosure does not, in any way, reflect changes to our organizational structure, business plans or practices, or strategy.

The Regulation requires us, among other things, to make certain assumptions regarding capital actions ("Dodd-Frank Capital Actions") when computing pro forma capital ratios across the nine-quarter planning horizon. These Dodd-Frank Capital Actions include:

- For the first quarter of 2018, actual capital actions;
- For the second through ninth quarters of the planning horizon, the following capital actions:
  - 1. Common stock dividends equal to the quarterly average dollar amount of common stock dividends that BNY Mellon paid in the previous four quarters plus common stock dividends attributable to issuances related to expensed employee compensation, or in connection with a planned merger or acquisition to the extent that the merger or acquisition is reflected in our proforma balance sheet estimates;
  - 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 that instrument during the quarter;
  - 3. No redemption or repurchase of any capital instrument that is eligible for inclusion in the numerator of a regulatory capital ratio; and
  - 4. No new issuances of capital instruments over the second through ninth quarters of the planning horizon, except for issuances related to expensed employee compensation or in connection with a planned merger or acquisition to the extent that the merger or acquisition is reflected in our pro forma balance sheet estimates.

In practice, if a severely adverse economic scenario were to in fact occur, it is highly likely that we would respond with certain capital conservation actions consistent with internal policy, and could change planned distributions. The stress test results summarized in this report should not be interpreted as expected or likely outcomes, but rather as a possible result under hypothetical, highly adverse economic conditions.

A description of the types of risks included in the stress test, a general description of methodologies applied, and a summary of our company-run stress test results under the Supervisory Severely Adverse Scenario follows.

## Description of types of risk included in the stress test

When conducting the company-run stress test under the Supervisory Severely Adverse Scenario, which, as noted above, incorporates Dodd-Frank Capital Actions, we evaluated and incorporated the principal risks that have been determined to influence us. These risks include operational risk, market risk, credit risk, liquidity risk, and strategic risk.

<u>Operational Risk.</u> Operational risk is the risk of loss resulting from inadequate or failed internal processes, human factors and systems, breaches of technology and information systems, or from external events. Operational risk also includes fiduciary risk, reputational risk, and litigation risk.

<u>Market Risk</u>. Market risk is the risk of loss due to adverse changes in the financial markets. Our market risks are primarily interest rate, foreign exchange, and equity risk. Market risk particularly impacts our exposures that are fair valued such as the securities portfolio, trading book, and equity investments.

<u>Credit Risk.</u> Credit risk is the risk of loss if any of our borrowers or other counterparties were to default on their obligations to us. Credit risk is resident in the majority of our assets, but primarily concentrated in the loan and securities books, as well as off-balance sheet exposures such as lending commitments, letters of credit, and securities lending indemnifications.

<u>Liquidity Risk</u>. Liquidity risk is the risk that we cannot meet our cash and collateral obligations at a reasonable cost for both expected and unexpected cash flows, without adversely affecting daily operations or financial conditions. Liquidity risk can arise from cash flow mismatches, market constraints from the inability to convert assets to cash, the inability to raise cash in the markets, deposit run-off, or contingent liquidity events.

<u>Strategic Risk</u>. Strategic risk is the risk that BNY Mellon does not effectively manage and protect the Firm's market positioning and stability. This includes risks associated with the inability to maintain a strong understanding of clients' needs, provide suitable product offerings that are financially viable and fit within the Firm's operating model and adapt to transformational change in the industry.

The following table presents the primary types of risk typically embedded in on- and off-balance-sheet instruments.

Table 1: Risks of BNY Mellon's On-and Off-balance Sheet Instruments

Balance Sheet Instruments	Types of Risk
Assets	
Interest-bearing deposits with banks	Credit
Federal funds sold and securities purchased under resale agreements	Market, Credit
Securities	Market, Credit, Liquidity
Trading Assets	Market, Credit, Liquidity
Loans	Credit, Liquidity
Goodwill	Operational, Market
Intangible Assets	Operational, Market
Liabilities	
Deposits	Liquidity
Federal funds purchased and securities sold under repurchase agreements	Market, Liquidity
Trading liabilities	Market, Liquidity
Payables to customers and broker-dealers	Liquidity
Off-balance Sheet Instruments	Types of Risk
Lending commitments	Credit, Liquidity
Standby letters of credit	Credit, Liquidity
Commercial letter of credit	Credit, Liquidity
Securities lending indemnifications	Market, Credit

## Overview of Stress Testing

BNY Mellon's policy is to perform Enterprise-Wide Stress Testing at regular intervals as part of its Internal Capital Adequacy Assessment Process ("ICAAP"). Additionally, the Firm performs an analysis of capital adequacy in a stressed environment in its Enterprise-Wide Stress Test Framework, as required by the enhanced prudential standards issued pursuant to the Dodd-Frank Wall Street Reform and Consumer Protection Act.

Enterprise-Wide Stress Testing evaluates all of the Firm's lines of business, products, geographic areas, and risk types, incorporating the results given a certain stress-test scenario. It is an important component of assessing our capital adequacy, as well as identifying any higher risk business activities. Furthermore, Enterprise-Wide Stress Testing provides our capital planning process with a forward-looking evaluation of our ability to execute planned capital actions in an economic environment that is more adverse than anticipated.

BNY Mellon's and the Institutional Bank's annual company-run stress tests under the Supervisory Severely Adverse Scenario with Dodd-Frank Capital Actions contain wide-ranging impacts across multiple risk areas, including the principal risk types identified above. To incorporate these risks into our annual stress test, we identified and stressed key risk drivers and assumptions to estimate how losses might be incurred and how an event in one risk may impact other areas. The following section discusses our methodology for translating the Supervisory Severely Adverse Scenario's variables into various financial impacts including expected losses, net income, on- or off-balance sheet exposure, liquidity, leverage, and capital positions. Please refer to BNY Mellon's Annual Report on Form 10-K for the year ended December 31, 2017 for a broader description of BNY Mellon's capital planning and risk management processes.

#### General Description of Methodologies

We have forecasted projected losses, Pre-Provision Net Revenue ("PPNR"), and other items affecting capital using a series of models and estimation techniques that translate the economic and financial variables in the Supervisory Severely Adverse Scenario to losses and revenues.

Occasionally it is necessary to supplement modeled projections with expert judgment where historical data may be inadequate to project loss and revenue estimates or historical relationships may not hold up under forward-looking hypothetical scenarios. In these cases, which are referred to as qualitative frameworks, we ensure consistency of projections with the conditions of the stress test through a cross-functional governance structure and control environment that incorporates multiple levels of review, challenge, and approval.

<u>Loan Losses</u>. We have developed a series of models and qualitative frameworks to estimate losses on various types of loans. Loss projection methods are product-specific and link economic variables to credit performance based on historical and expected relationships. The table below identifies major loan types and key assumptions used to derive loss estimates.

Table 2: Credit Portfolio Loss Methodologies and Assumptions

Loan Type	Description of Methodology	Key Assumptions
Domestic Residential Mortgages	Statistical model estimated using loan- level data on mortgage characteristics and performance supplemented by macroeconomic indicators and housing price data.	Macroeconomic factors such as:  - Housing Price Index ("HPI")  - Unemployment rate - Mortgage rates
Domestic Commercial Real Estate Loans	Individually assigning counterparties stressed ratings by adjusting the inputs to BNY Mellon's commercial real estate ("CRE") credit rating scorecard, which produces a stressed probability of default ("PD") rating for each quarter. For each impaired exposure, a downturn loss given default ("LGD") percentage is applied to the exposure at default ("EAD") to generate an immediate credit loss.	Macroeconomic factors such as:  - Unemployment rate - BBB corporate yield - Commercial real estate price index - Prime rate
Wholesale and Other*	Expected loss model relying on stressed transition matrix, PD, LGD, and usage given default ("UGD"). The stressed transition matrix, LGD and UGD were linked to macroeconomic factors through statistical models. For each impaired exposure, a stressed LGD percentage is applied to the EAD to generate an immediate credit loss, where EAD is stressed UGD times exposure.	Macroeconomic factors such as:  - CBOE Volatility Index ("VIX")  - Equity indices - GDP growth rate - Treasury yields - Unemployment

<sup>\*</sup>Commercial and industrial, loans to depositories and other financial institutions, loans for purchasing or carrying securities, overdrafts, and leases.

<u>Provision for Loan Losses</u>. The credit loss allowance is our estimate of incurred losses inherent in our portfolio. We use a quantitative methodology (product of the long run PD, LGD, and EAD) and a qualitative framework in determining the allowance. The qualitative framework employs management judgment when assessing internal risk factors and environmental factors to compute an additional allowance for each component of the loan portfolio. Changes in the allowance balance are reflected through the provision to provide adequate coverage for potential future losses.

<u>Realized Gains/Losses on Securities</u>. We use instrument-specific methodologies to forecast other-than-temporary impairment ("OTTI") on the securities investment portfolio. Loss estimates are recognized in accordance with our established accounting policy. The table below identifies major security types and key assumptions used to derive loss estimates.

Table 3: Securities Portfolio OTTI Methodologies and Assumptions

Security Type	Description of Methodology	Key Assumptions
Domestic Non-Agency Residential Mortgage-	Statistical model estimated using loan-level data on mortgage characteristics and performance supplemented by macroeconomic indicators and house price data.	Collateral type and characteristics  Macroeconomic factors such as:
Backed Securities ("RMBS")	Cash flow is discounted using an Internal Rate of Return ("IRR") (derived in a vendor baseline scenario) to obtain the Net Present Value ("NPV"). OTTI is then computed as the difference between book value and the NPV of the cash flow.	<ul><li>HPI</li><li>Unemployment rate</li><li>Mortgage rates</li></ul>
Foreign RMBS	Combines macroeconomic variables, historical pool performance, and the pool level characteristics to generate monthly performance measures such as delinquencies, conditional prepayment rate ("CPR"), constant default rate ("CDR"), and charge offs. The performance measures are then used in a waterfall tool to determine losses on foreign RMBS tranches.	Collateral type and characteristics  Macroeconomic factors such as:  – HPI  – Unemployment rate  – Consumer Price Index ("CPI") inflation rate
	Cash flow is discounted using an IRR (derived in a vendor baseline scenario) to obtain the NPV. OTTI is then computed as the difference between book value and NPV of the cash flow.	
	Combines macroeconomic variables, CRE market factors and loan-level details to generate the credit risk measures including PD and LGD. PD and LGD are then used to determine losses on CMBS.	Loan details  Property type and characteristics
Commercial Mortgage- Backed Securities ("CMBS")	Cash flow is discounted using an IRR (derived in a vendor baseline scenario) to obtain the NPV. OTTI is then computed as the difference between book value and NPV of the cash flow.	Macroeconomic factors such as:  - HPI  - Unemployment rate  - Federal Funds rate  - Treasury 10-year yield
Consumer Asset-Backed Securities ("ABS")	Combines macroeconomic variables, historical pool performance and the pool-level characteristics to generate monthly performance measures such as delinquencies, CPR, CDR and charge offs. The performance measures are then used in a waterfall tool to determine losses on ABS tranches.	Collateral type and characteristics  Macroeconomic factors such as:  – Unemployment rate  – Treasury rates  – LIBOR rates
	Cash flow is discounted using an IRR (derived in a vendor baseline scenario) to obtain the NPV. OTTI is then computed as the difference between book value and NPV of the cash flow.	

Security Type	Description of Methodology	Key Assumptions
Bond Portfolio*	Bond OTTI is projected using the expected loss (PD x LGD) approach. The risk parameters PD and LGD are forecasted using statistical models that are driven by macroeconomic variables.	Corporate and Covered Bond - National level Macroeconomic factors such as: - VIX, Equity indices - GDP growth rate - Treasury yields  Sovereign Bond - Country level Macroeconomic factors such as: - Unemployment rate - CPI - Debt-to-GDP ratio - GDP - Foreign Exchange Rate  Municipal Bond - State level Macroeconomic factors such as: - GDP Growth Rate - Median family income
Collateralized Loan Obligations ("CLOs")	CLO collateral performance metrics (CDR, CPR, Severity) are forecasted using credit transition and LGD model for each underlying loan.  Tranche level cash flows are discounted using tranche coupon/nominal spread to arrive at present value. OTTI is then calculated as the difference between present value and book value.	Underlying collateral metrics including:  - Prepayment rate  - Default rate  - Severity rate

<sup>\*</sup>This portfolio consists of corporate bonds, municipal bonds, sovereign bonds, and covered bonds.

<u>Operational Losses</u>. We use a methodology to estimate operational losses that incorporates both internal and external data. We forecast both litigation and non-litigation operational losses under separate methodologies.

For non-litigation loss estimates, our forecasting methodology centers on workshops organized around the risks in our operational risk taxonomy, led by our Chief Operational Risk Officer ("CORO"). These workshops included participants from our business, business partner, and risk teams. Subject matter experts ("SMEs") considered and discussed the outputs of our operational risk framework elements (*e.g.*, Risk and Control Self-Assessment ("RCSA") data, as well as internal and external event data) and other key information such as risk drivers, including macroeconomic factors, to challenge and supplement our Material Risk Inventory ("MRI"). For idiosyncratic operational loss events, SMEs developed specific storylines and estimates that were considered as part of the development of our stress testing operational loss estimates. Where deemed relevant, statistical models were used as a reference point to develop estimates, supplemented with expert judgment to incorporate anticipated impacts based on risk drivers.

For litigation loss estimates, we use a forward-looking, scenario-based process as a core component of our litigation loss estimation methodology. This methodology is centered around the use of expert judgment and scenario-based determination and leverages subject matter expertise in our Legal department. This

methodology generally estimates severe yet reasonably plausible litigation-related costs for key active matters and certain possible claims in stress scenarios.

<u>Balance Sheet</u>. We have developed a suite of models using statistical and qualitative estimation methodologies to project each major balance sheet segment. The statistical models are based on logical relationships to economic drivers. For balance sheet segments where developing a model was inappropriate, a rules-based qualitative approach was developed with pre-determined, repeatable, data-driven processes in order to generate projections. An aggregate secondary statistical model exists for a subset of balance sheet segments to aid in review and challenge. In addition, relevant SMEs develop judgment based forecasts for their respective products using the macroeconomic variables derived from their business expertise and experience. These are used to challenge the primary model forecasting framework. A structured internal review of model and qualitative results is discussed by a panel of SMEs, risk managers and management, at review and challenge meetings, to formalize balance sheet composition.

<u>Pre-Provision Net Revenue</u>. Consistent with balance sheet development and exposure assumptions used for loss estimation, we use a suite of models to project all key elements of PPNR including net interest income, noninterest income, and noninterest expense.

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Table 4: PPNR Methodologies and Assumptions

PPNR Component	ent Description of Methodology Key Assumptions	
Net Interest Income	Current and forecasted balance sheet positions and cash flows are modeled by product type and reflect growth, runoff, prepayment, and loss projection assumptions.	Future balance sheet growth Runoff and pricing assumptions Interest rates and macroeconomic indicators
Noninterest Income	Total noninterest income projection is composed of a series of distinct projection models, each of which creates a fee revenue projection for some aspect of the business using historical fee revenue and business volume data.  Regression models were tied to the business and economic drivers, while certain areas are estimated using other techniques such as management judgment, seasonality and historical averages.	Business dynamic and strategy assumptions  Relationship to economic drivers such as:  - Fixed income and equity asset prices  - Interest rates  - Volatility measurements  - Volume measurements
Noninterest Expense	Variable expenses were modeled based primarily on historical expense to noninterest revenue relationships.  Expenses deemed to be fixed in nature are projected generally in line with inflation.	Noninterest revenue projections  Growth rates

<u>Capital Position</u>. Our forecasting process employed a set of methodologies to reflect losses and PPNR on pro forma capital levels and ratios. Future balance sheet growth, runoff, and pricing assumptions were developed using the framework and suite of models described under the "Balance Sheet" section above and are reflective of the economic and interest rate environments being analyzed under the Supervisory Severely Adverse Scenario. We forecast risk-weighted assets ("RWA") based on the changes in individual asset components in each quarter of the projection horizon. Credit RWA was projected in a manner consistent with U.S. capital rules and applicable regulatory guidance, which required us to use the U.S. capital rules' Standardized Approach methodology (the "Standardized Approach") to calculate credit RWA. Additionally, the U.S. capital rules' market risk capital rules were used to calculate market risk RWA.

The Firm recognizes that the U.S. capital rules' Advanced Approaches risk-weighting framework (the "Advanced Approaches") has been the Firm's constraining measure. Our Supervisory Severely Adverse Scenario post-stress capital position reflects regulatory capital inclusive of PPNR and stress losses. Additionally, as discussed above, our Supervisory Severely Adverse Scenario post-stress capital utilizes, in the second through ninth quarters of the planning horizon, the Dodd-Frank Capital Actions, which prescribe a series of assumptions regarding capital actions, including with respect to common stock dividends, contracted payments, and a general assumption of no redemptions, repurchases, or issuances of capital instruments. These assumptions do not reflect currently planned capital actions, and might not reflect behavior in an actual severely stressed environment.

<u>Counterparty Default</u>. BNY Mellon is one of the eight banking organizations with substantial trading or custodial operations required to incorporate a counterparty default scenario component into the Supervisory Severely Adverse Scenario. Specifically, per guidance, BNY Mellon is required to estimate and report the potential losses and related effects on capital associated with the instantaneous and unexpected default of the Firm's single largest counterparty across derivatives and securities financing activities, including securities lending, and repurchase/reverse repurchase agreement activity. BNY Mellon's single largest counterparty was determined by net stressed losses, which were computed by revaluing exposures and collateral using the set of hypothetical asset price shocks specified in the Federal Reserve's global market shock scenarios.

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

As demonstrated by BNY Mellon's DFAST results, we maintain excess regulatory capital in every quarter, for every ratio, over the entire planning horizon throughout the Supervisory Severely Adverse Scenario. This success is driven by a number of factors, including the Firm's strong capital generation and its risk profile. We further recognize that our capital position was enhanced because the DFAST 2018 exercise does not require RWA to be calculated under the Advanced Approaches and the Advanced Approaches has been the Firm's constraining measure in recent quarters.

The most significant cause of declines in BNY Mellon's regulatory capital ratios over the planning horizon under the Supervisory Severely Adverse Scenario is losses related to the default of a major Securities Financing Transactions ("SFT") counterparty in the first projection quarter. Additionally, impairments within the securities portfolio and trading book losses occurring in the first projection quarter also contribute to the decline in BNY Mellon's regulatory capital ratios.

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### **BNY Mellon - Tables of Statistical Results**

## ANNUAL FIRM-RUN RESULTS

### **Dodd-Frank Act Stress Testing Results**

The capital ratios are calculated using the Dodd-Frank Capital Actions. These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. These estimates are not forecasts of expected losses, revenues, net income before taxes, or capital ratios. The minimum capital ratio presented is for the period from the first quarter of 2018 through the first quarter of 2020.

Table 5: Projected Stressed Capital Ratios Through the First Quarter of 2020 Under the Supervisory Severely Adverse Scenario

	Actual <sup>1</sup>	Stressed Capital Ratios	
	4Q2017	Ending	Minimum
Common Equity Tier 1 capital ratio (%)	11.9%	13.3%	8.3%
Tier 1 capital ratio (%)	14.2%	15.9%	10.4%
Total capital ratio (%)	15.1%	17.3%	11.4%
Tier 1 leverage ratio (%)	6.6%	5.5%	4.6%
Supplementary leverage ratio (%)	N/A	5.3%	4.3%

<sup>&</sup>lt;sup>1</sup>Actual fourth quarter 2017 Common Equity Tier 1, Tier 1 and Total capital ratios are calculated using the Standardized Approach. At December 31, 2017 BNY Mellon's reported Common Equity Tier 1, Tier 1 capital, and Total capital ratios were 10.7%, 12.7%, and 13.4%, respectively, based on Basel III components of capital, as phased-in, and credit risk asset risk-weightings using the Advanced Approaches, which was the Firm's constraining measure for that quarter.

Table 6: Projected Q1 2020 Risk-Weighted Assets ("RWA")

	Actual Q4 2017	Projected Q1 2020
RWA <sup>1</sup> (\$ in Millions)	\$155,621	\$129,664

<sup>&</sup>lt;sup>1</sup>RWA calculated using the U.S. capital rules' Standardized Approach methodology ("Standardized Approach").

Table 7: Projected Loan Losses by Type of Loan for the First Quarter of 2018 through the First Quarter of 2020 Under the Supervisory Severely Adverse Scenario

	Millions of Dollars	Portfolio Loss Rates (%)1
Loan Losses	\$1,834	3.3%
First-lien mortgages, domestic	\$78	0.8%
Junior liens and HELOCs, domestic	\$0	0.0%
Commercial real estate, domestic	\$393	12.6%
Credit cards	\$0	0.0%
Commercial and industrial	\$120	3.2%
Other consumer	\$33	1.1%
Other loans	\$1,210	3.5%

<sup>&</sup>lt;sup>1</sup>Average loan balance used to calculate portfolio loss rates excludes loans held for sale and loans held for investment under the fair value option, and are calculated over nine quarters. Portfolio loss rates are rounded to the nearest tenth of a percentage point.

Table 8: Projected Losses, Revenue, and Net Income Before Taxes for the First Quarter of 2018 Through the First Quarter of 2020 Under the Supervisory Severely Adverse Scenario

	Millions of Dollars	Percent of Average Assets <sup>4</sup>
PPNR <sup>1</sup>	\$6,024	1.5%
Less		
Provisions	\$2,056	0.5%
Realized losses/(gains) on securities Available-for- Sale/Held-to-Maturity ("AFS/HTM")	\$179	<b>%</b>
Trading and counterparty losses <sup>2</sup>	\$1,815	0.5%
Other losses/(gains) <sup>3</sup>	\$16	0.0%
Equals		
Net income before taxes	\$1,958	0.5%

<sup>&</sup>lt;sup>1</sup>PPNR includes losses from operational risk events.

<sup>&</sup>lt;sup>2</sup>Trading and counterparty losses include mark-to-market and credit valuation adjustments losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities.

<sup>&</sup>lt;sup>3</sup>Other losses/gains includes projected change in Funding Value Adjustments/Overnight Index Swaps as well as CLO Impairment losses.

Average assets are averaged over the nine-quarter planning horizon. Amounts are rounded to the nearest tenth of a percentage point.

## Institutional Bank - Summary of Results.

When conducting the company-run stress test under the Supervisory Severely Adverse Scenario using Dodd-Frank Capital Actions, the Institutional Bank evaluated the types of risks and utilized the same methodologies as described above in the discussion concerning BNY Mellon.

As demonstrated by the Institutional Bank's DFAST results, the Institutional Bank maintains excess regulatory capital in every quarter of the planning horizon for every ratio of the Supervisory Severely Adverse Scenario. This success is driven by a number of factors, including the Institutional Bank's strong capital generation, asset quality, business mix, and risk profile. The Institutional Bank recognizes that the DFAST 2018 exercise approaches risk-weighted assets solely from the perspective of the Standardized Approach for Advanced Approaches organizations, while during recent quarters the Advanced Approaches has been the Institutional Bank's constraining measure.

The significant loss drivers for the Institutional Bank are substantially the same as those described above for BNY Mellon. The results of the Institutional Bank's annual DFAST stress test demonstrate that its business model serves as a source of strength in stress environments. As a result, the Institutional Bank is able to remain well-capitalized throughout the Supervisory Severely Adverse Scenario.

#### **Institutional Bank - Tables of Statistical Results**

#### FIRM-RUN RESULTS

Table 9: Projected Stressed Capital Ratios Through the First Quarter of 2020 Under the Supervisory Severely Adverse Scenario

	<b>Actual</b> <sup>1</sup>	Stressed Capital Ratios <sup>2</sup>	
	4Q2017	Ending	Minimum
Common Equity Tier 1 capital ratio (%)	16.7%	21.8%	14.1%
Tier 1 capital ratio (%)	17.1%	22.0%	14.3%
Total capital ratio (%)	17.6%	24.7%	15.0%
Tier 1 leverage ratio (%)	7.6%	6.3%	5.6%
Supplementary leverage ratio (%)	N/A	6.0%	5.2%

<sup>&</sup>lt;sup>1</sup> Actual fourth quarter 2017 Common Equity Tier 1, Tier 1 and Total capital ratios are calculated using the Standardized Approach. At December 31, 2017 the Institutional Bank's reported constraining Common Equity Tier 1, Tier 1 capital, and Total capital ratios were 14.1%, 14.4%, and 14.7%, respectively, based on asset risk-weightings using the Advanced Approaches.

<sup>&</sup>lt;sup>2</sup>The capital ratios are calculated using Dodd-Frank Capital Actions. These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. These estimates are not forecasts of expected losses, revenues, net income before taxes, or capital ratios. The minimum capital ratio presented is for the period from the first quarter of 2018 through the first quarter of 2020.

## Forward-Looking Statements

Additional information related to BNY Mellon is contained in BNY Mellon's reports filed with the Securities and Exchange Commission (the "SEC"), including the Annual Report on Form 10-K for the year ended December 31, 2017 (including the Annual Report to Shareholders (the "Annual Report") included with the 10-K) (the "2017 Form 10-K"), the Quarterly Reports on Form 10-Q and the Current Reports on Form 8-K (each, a "'34 Act Report"). These periodic '34 Act Reports can be viewed, as they become available, on the SEC's website at www.sec.gov and at www.bnymellon.com. Information contained in '34 Act Reports that BNY Mellon provides to the SEC subsequent to the date of the 2017 Form 10-K may modify, update and supersede the information contained in the 2017 Form 10-K and provided in this document.

This document and BNY Mellon's '34 Act Reports referred to above contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Words such as "estimate," "forecast," "project," "anticipate," "confident," "target," "expect," "intend," "seek," "believe," "plan," "goal," "could," "should," "may," "will," "strategy," "opportunities," "trends" and words of similar meaning, signify forward-looking statements. These statements are based on the current beliefs and expectations of BNY Mellon's management and are subject to significant risks and uncertainties that are subject to change based on various important factors (some of which are beyond BNY Mellon's control). Actual results may differ materially from those set forth in the forward-looking statements. Factors that could cause BNY Mellon's actual results to differ materially from those described in the forward-looking statements can be found in the "Risk Factors" section of the 2017 Form 10-K, the Quarterly Report on Form 10-Q for the period ended March 31, 2018, and other subsequent '34 Act Reports filed with the SEC. All forward-looking statements speak only as of the date on which such statements are made and BNY Mellon does not undertake to update the forward-looking statements to reflect the impact of circumstances or events that may arise after the date of the forward-looking statements.