HSBC North America Holdings Inc.

2019 Mid-Cycle Company-Run Dodd-Frank Act Stress Test Results

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This document has been prepared pursuant to the disclosure requirements set out in the regulations issued by the Board of Governors of the Federal Reserve System ('Federal Reserve') under the Dodd-Frank Wall Street Reform and Consumer Protection Act ('Dodd-Frank Act') related to the mid-cycle company-run stress testing exercise.

References to 'HSBC' are to HSBC North America Holdings Inc. and its subsidiaries.

This document makes certain references that are not historical facts, including statements about HSBC's beliefs and expectations, which are forward-looking statements. Words such as 'may', 'will', 'should', 'would', 'could', 'appears', 'believe', 'intends', 'expects', 'estimates', 'targeted', 'plans', 'anticipates', 'goal' and similar expressions are intended to identify forward-looking statements but should not be considered as the only means through which these statements may be made. These matters or statements will relate to our future financial condition, economic forecast, results of operations, plans, objectives, performance or business developments and will involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from that which was expressed or implied by such forward-looking statements. The projections disclosed in this document should not be viewed or interpreted as forecasts of expected outcomes or capital adequacy or of the actual financial condition of either HSBC or HSBC Bank USA, N.A. Rather, these projections are based solely on the hypothetical adverse scenarios and other specific conditions required to be assumed by HSBC for the purpose of Dodd-Frank Act stress testing as well as modeling assumptions necessary to project and assess the impact of the various adverse scenarios on HSBC's capital position. Forward-looking statements speak only as of the date of this document. HSBC makes no commitment to revise or update any forward-looking statements to reflect events or circumstances occurring or existing after the date of any forward-looking statements. Factors that could cause HSBC's actual results to differ materially from those described in forward-looking statements can be found in the annual report on Form 10-K for HSBC USA Inc. Additionally, please refer to the HSBC USA Inc. annual report on Form 10-K for a broader description of our capital planning and risk management processes.

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1. Overview of the Mid-Cycle Company-Run Dodd-Frank Act Stress Test

HSBC Holdings plc is one of the world's largest banking and financial services organizations. With approximately 3,800 offices in both established and emerging markets, it provides more than 37 million customers with a broad range of banking products and services to meet their financial needs.

HSBC North America Holdings Inc. ("HSBC North America") is the holding company for HSBC Holdings plc's operations in the United States. Those operations are primarily conducted through HSBC Bank USA, N.A., and HSBC Markets (USA) Inc., which is the intermediate holding company of, inter alia, HSBC Securities (USA) Inc., a registered broker-dealer.

HSBC North America is subject to the provisions of Section 165 of the Dodd-Frank Wall Street Reform and Consumer Protection Act ("the Dodd-Frank Act"), and, subsequently, is required to conduct company-run stress tests semi-annually (an "annual stress test" and a "mid-cycle stress test"). The results of these stress tests are required to be disclosed under its internally developed severely adverse scenario. This document provides the results of the mid-cycle stress test.

2. Description of the Bank Holding Company Severely Adverse Scenario

For the 2019 mid-cycle stress testing exercise, the internally developed severely adverse scenario is characterized by a broad based global downturn and reflects the rise in geopolitical uncertainty and sharp reversal in global economic integration, leading to a severe contraction of global economic activity. In this hypothetical stress scenario:

- The level of U.S. real GDP declines by 6.3 percent peak-to-trough, and U.S. unemployment rate peaks at 10 percent. As a result of the severe decline in economic activity, the Federal Reserve cuts rates to near zero. Short-term Treasury rates fall and remain near zero through the end of the scenario horizon. The yield on three-month U.S. Treasury bills drops to 7 basis points starting the first quarter of 2020 . The 10-year U.S. Treasury rate drops to 60 basis points in the third quarter of 2019.

- U.S. equity prices fall by 55 percent through the middle of 2020, accompanied by a surge in equity market volatility. The 10-year BBB rated corporate bond spread widens to a peak level of 5.8 percent. The real estate market also experiences large declines, with residential and commercial real estate prices falling by 28 percent and 40 percent, respectively.

- The global market shock component of the severely adverse scenario assumes large instantaneous movements across market factors including equities, interest rates, foreign exchange rates, credits spreads and commodity prices.

It is important to note that the scenarios are not forecasts, but rather hypothetical scenarios used to assess the strength and resilience of HSBC North America in stressed economic and financial market environments.

It should also be noted that the stress test results summarized in this report are not comparable to the results of other stress tests performed by HSBC North America due to a number of factors including the uniqueness of the scenario assumptions used to prepare each stress test, differences in market conditions and differences in the companies' financial positions and exposures at the time each stress test is performed. Differences also arise due to the evolving risk quantification methodologies and regulatory capital frameworks that may be applicable to each stress test.

3. Forecasting Methodologies Utilized for Mid-Cycle Company-Run Dodd-Frank Act Stress Testing

Our stress testing methodologies focus on empirically defining the relationship between macroeconomic variables, business volumes, revenues and losses in order to estimate outcomes that may result from a specific stress scenario. We use a series of models and estimation methodologies, coupled with management judgment and overlays to model results to take account of HSBC North America's specific risk profile, to produce a comprehensive estimate of future business performance. Additional macroeconomic variables are projected to facilitate the forecasting of certain risk- and portfolio-specific factors. Stress testing methodologies are subject to uncertainties and modeling limitations, including uncertainty about the extent to which historical relationships between macroeconomic factors and business outcomes will continue to be relevant in a severely stressed economic environment. We regularly consider these uncertainties and the limitations of our estimates when evaluating stress test results. The methodologies apply accounting practices consistent with HSBC's significant accounting policies, generally accepted accounting principles ("GAAP") in the U.S., and the regulatory capital rules in place at the time of the stress test.

The forecast methodologies employed by HSBC to quantify the impact of the hypothetical assumptions over the stress testing forecast period include, but are not limited to, the following areas presented below.

Balance Sheet

The balance sheet under each scenario reflects projected changes over the planning horizon based on the macroeconomic environment of each scenario, business growth and planned activity, changes in carrying values resulting from mark-to-market movements and other balance sheet impacts, including draws on unfunded commitments.

Pre-Provision Net Revenue

HSBC's net interest income, non-interest income, and non-interest expense forecasts under the firm's severely adverse scenario reflect a detailed process in which business segment projections are developed over the nine-quarter capital planning horizon. The revenue forecast is aligned with the balance sheet projections for each business segment over the capital planning horizon, as well as HSBC's expectations of customer behavior and competitive dynamics.

Losses

Stress losses from wholesale and retail credit, market risk and operational risk are calculated using the following methodologies:

Credit risk: Loans to our customers are a significant component of HSBC's total assets, and their related credit risk is among the most significant risks we manage. When estimating loan losses, probability of default, exposure at default, and loss severity assumptions are incorporated into the loan-loss estimates. Loss estimates take into consideration the unique characteristics of our wholesale and retail loan portfolios.

A variety of models are used to project losses on loans. These models take into consideration many factors, including historical performance, the projected economic scenarios, current credit characteristics and credit-quality ratings. Where appropriate, we incorporate country-specific, state and local economic variables to reflect geographical concentrations within a given loan portfolio.

Wholesale loss estimates are segmented based on asset types, specifically commercial and industrial, and commercial real-estate portfolios. Within each of these, the portfolio is segmented further to capture key portfolio risk characteristics, such as particular industry concentrations, that may react differently under various stress scenarios. Rigorous statistical techniques are used to determine and estimate relationships between probability of default and macroeconomic factors. Probability of default projections are sensitive to and consistent with scenario conditions, resulting in loss rates that are indicative of underlying economic fundamentals. Loss severity is projected using similar techniques.

Losses on retail loans are projected using statistical models that use economic attributes (such as unemployment rate and housing-price levels) and portfolio or loan-level credit characteristics within an expected loss framework.

Market risk and counterparty credit risk: Market risk includes all trading mark-to-market positions and securities carried at fair value. The potential impact of market movements on trading positions and mark-to-market losses for fair-value assets not held in the trading book (including loans held for sale or held for investment under the fair-value option) are incorporated as appropriate. Counterparty credit risk is the risk that a counterparty to a transaction could default or deteriorate in creditworthiness before the final settlement of a transaction's cash flows.

For the 2019 mid-cycle company-run submission, HSBC North America included an instantaneous market shock and counterparty default component in the severely adverse scenario. These losses were taken in the first quarter of the planning horizon and were treated as an add-on component to the nine-quarter loss projection.

Operational risk: Operational risk is the risk of loss as a result of inadequate or failed internal processes, people and systems or from external events, including legal risk. Operational risk arises from day-to-day operations or external events, and is relevant to every aspect of the business.

HSBC North America stresses operational risk by analyzing the firm's internal loss history and using regression and simulation models to forecast losses, assessing our known material legal matters, and using expert judgment and internal and external reference data to perform scenario analysis on the firm's most material risks.

Capital Position

The projected capital levels and capital ratios for HSBC North America under the internally developed severely adverse scenario is forecasted using the estimates of revenues, losses, risk-weighted assets, and average assets. Common equity tier 1, tier 1, total capital, tier 1 leverage, and supplementary leverage ratios are then projected over the nine-quarter stress testing forecast period.

The actual capital ratios as of the second quarter of 2019 and all projected capital ratios are calculated in accordance with the Federal Reserve's revised capital framework implementing Basel III and using Basel III standardized risk-weighted assets.

4. Mid-Cycle Company-Run Stress Test Results – HSBC North America Holdings Inc.

The results of our 2019 mid-cycle Dodd-Frank Act stress test are shown below. For HSBC North America, the forecasts include prescribed assumptions, as required under the Dodd-Frank Act stress testing requirements, in respect of the capital actions projected over the planning horizon. The initial quarter of the planning horizon reflects actual capital actions HSBC North America has taken. For the remaining quarters of the planning horizon, the following assumptions are included: (i) no issuances or redemptions of regulatory capital instruments; (ii) no payment of common stock dividends based on previous year actual experience; and (iii) payments on any other regulatory capital instruments are equal to the stated dividend, interest or principal due on such instrument in any given quarter.

The estimates should not be seen as forecasts of expected outcomes or capital adequacy or of the actual financial condition of HSBC North America. The forecasts for HSBC North America may not necessarily be in alignment with those of other institutions or the Federal Reserve because of differences in modeling techniques, methodologies and assumptions made.

The following tables show projected regulatory capital ratios, projected losses, revenues, net income before taxes and projected loan losses by loan type for HSBC North America under the internal severely adverse scenario.

Table 1: HSBC North America projected minimum regulatory capital ratios, Q3 2019 to Q3 2021, and the required regulatory minimum capital ratios for DFAST 2019

	Required regulatory minimum capital ratios	Actual Q2 2019	Stressed capital ratios[1]	
			Q3 2021	Minimum[2]
Common Equity Tier 1 capital ratio	4.5%	13.2%	8.3%	7.9%
Tier 1 risk-based capital ratio	6.0%	14.8%	9.9%	9.4%
Total risk-based capital ratio	8.0%	18.7%	14.1%	13.7%
Tier 1 leverage ratio	4.0%	7.7%	5.3%	5.3%
Supplementary leverage ratio	3.0%	5.8%	4.1%	4.0%

1 The capital ratios are calculated using capital action assumptions prescribed under the Dodd-Frank Act stress testing rules.

2 The minimum capital ratios represent the lowest projected ratio in the period Q3 2019 to Q3 2021, which do not necessarily occur in the same quarter.

Table 2: HSBC North America projected losses, revenues and net loss before taxes for the nine quarters

	Billions of dollars	Percent of average assets[1]
Pre-provision net revenue/(loss)[2]	(0.79)	0.3%
less		
Provisions	2.29	0.8%
Realized losses/(gains) on securities (AFS/HTM)	0.02	0.0%
Trading and counterparty losses[3]	1.16	0.4%
Other losses/(gains)	0.08	0.0%
equals		
Net loss before taxes	(4.35)	1.6%

1 Average assets are calculated as the nine-quarter average of total assets.

2 Pre-provision net revenue includes losses from operational-risk events.

3 Trading and counterparty losses include mark-to-market ("MTM") and credit valuation adjustment ("CVA") losses resulting from the assumed instantaneous global market shock and counterparty default scenario component.

Table 3: HSBC North America projected loan losses, by loan type for the nine quarters

	Billions of dollars	Portfolio loss rates (%)[1]
Loan Losses	1.97	2.7%
First-lien mortgages, domestic	0.10	0.6%
Junior liens and HELOCs, domestic	0.03	4.2%
Commercial and industrial[2]	0.81	2.5%
Commercial real estate, domestic	0.56	4.9%
Credit cards	0.29	22.0%
Other consumer[3]	0.03	10.2%
Other loans[4]	0.16	1.5%

1 Cumulative loss rates calculated over the nine-quarter planning horizon as a percentage of average loan balances (excluding loans held for sale and loans held for investment under the fair-value option).

2 Commercial and industrial loans include small- and medium-enterprise loans and corporate cards.

3 Other consumer loans include student loans and automobile loans.

4 Other loans include international real estate loans.