HSBC North America Holdings Inc.

2018 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 HSBC. 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

Pursuant to the Dodd-Frank Act, the Federal Reserve has issued regulations requiring covered companies to conduct semi-annual company-run stress tests ('Dodd-Frank Act stress test'). HSBC North America Holdings Inc. ('HSBC North America') is considered a covered company and is therefore required to conduct a semi-annual company-run stress test under three internally developed hypothetical scenarios (baseline, adverse and severely adverse) to assess the impact on its financial condition and capital adequacy over a nine-quarter planning horizon beginning in the third quarter of 2018. HSBC North America provides herein the disclosure of its 2018 mid-cycle company-run stress test exercise, under its internally developed severely adverse stress scenario, as required to be prepared and submitted to the Federal Reserve by October 5, 2018 under these regulations.

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 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.

2. Description of the Bank Holding Company Severely Adverse Scenario

The HSBC internally developed severely adverse scenario is characterized by a set of hypothetical trade protectionist measures that result in a trade war, leading to a contraction in global economic activity and a deep global financial crisis. In the scenario, multinational firms face mounting barriers to cross-border business, which results in a significant sell-off of global asset markets and a collapse of corporate bond markets. Interest rates for the global advanced economies drop and remain low. In addition to the larger economic backdrop, HSBC's idiosyncratic spreads widen more than the financial names of a similar stature. The scenario includes an instantaneous repricing of our trading and counterparty exposures. A large counterparty is also assumed to default in the first quarter of the scenario.

As a result of the severe market conditions, the real U.S. GDP drops by 6.1 percent through the third quarter of 2019. The unemployment rate peaks at 10 percent. As a result of the contraction in economic activity, short-term Treasury rates fall and remain near zero through the end of the scenario period. The three-month Treasury yield drops to 7 basis points starting the first quarter of 2019. The ten-year Treasury yield drops to 1.5 percent in the third quarter of 2019.

Asset prices also drop sharply in this scenario. Equity prices fall by 60 percent by the end of 2019, accompanied by a surge in equity market volatility. The ten-year BBB rated corporate bond spread widens to a peak value of 5.8 percent in the first quarter of 2019. House prices and commercial real estate prices also experience large declines, falling by 30 percent and 40 percent, respectively.

It is important to note that the firm's 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. In addition, the stress test results summarized in this report are not comparable to the results of other stress tests performed by HSBC North America and HSBC Bank USA, N.A., 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 forecast 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 methodologies described below.

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 forecast 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 2018 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 results from inadequate or failed internal processes, people and systems or from external events, including legal risk. Operational risk is relevant to every aspect of the business and covers a wide spectrum of risks. We use both quantitative approaches and scenario analysis, including an assessment of material legal matters, to estimate operational losses.

Quantitative approaches leverage statistical models, such as regression analysis, to forecast losses based on the firm's internal loss history. Scenario analysis uses expert judgment and internal and external reference data to produce a forward-looking loss estimate for operational risk events identified through our internal risk identification process. Legal matters disclosed in the financial statements are assessed by internal counsel.

Capital Position

The projected capital levels and capital ratios for HSBC North America under the firm's severely adverse scenario are 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 2018 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 2018 mid-cycle company-run 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 firm's severely adverse scenario.

Table 1: HSBC North America projected minimum regulatory capital ratios, Q3 2018 to Q3 2020, and the required regulatory minimum capital ratios for the 2018 mid-cycle company-run Dodd-Frank Act stress test

	Required regulatory minimum capital ratios	Actual Q2 2018	Stressed capital ratios[1,2]	
			Q3 2020	Minimum[3]
Common Equity Tier 1 capital ratio	4.5%	13.0%	7.6%	7.6%
Tier 1 risk-based capital ratio	6.0%	15.7%	9.3%	9.3%
Total risk-based capital ratio	8.0%	19.7%	13.9%	13.9%
Tier 1 leverage ratio	4.0%	7.9%	4.9%	4.9%
Supplementary leverage ratio	3.0%	6.1%	3.8%	3.8%

1 All projected capital ratios are calculated in accordance with the transition provisions set out in the Federal Reserve's revised capital framework implementing Basel III and using Basel III standardized risk-weighted assets from January 2016.

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

3 The minimum capital ratios represent the lowest projected ratio in the period Q3 2018 to Q3 2020 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]	(2.19)	0.8%
less		
Provisions	3.23	1.2%
Realized losses/(gains) on securities (AFS/HTM)	0.03	0.0%
Trading and counterparty losses[3]	1.52	0.6%
Other losses/(gains)	—	—%
equals		
Net loss before taxes	(6.97)	2.6%

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

2 Pre-provision net revenue includes losses from operational-risk events, mortgage repurchase expenses, unfavorable movements in the lower of amortized cost or fair value adjustments on the fair value of real estate receivables held for sale and other real estate owned ('OREO') costs.

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	2.38	3.7%
First-lien mortgages, domestic	0.09	0.5%
Junior liens and HELOCs, domestic	0.04	4.2%
Commercial and industrial[2]	0.98	3.9%
Commercial real estate, domestic	0.86	7.6%
Credit cards	0.18	18.0%
Other consumer[3]	0.02	6.3%
Other loans[4]	0.20	2.9%

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.