## BNP Paribas USA, Inc.

2018 Mid-Year Dodd Frank Act Company-Run Capital Stress Test Disclosure

November 2, 2018



The bank for a changing world

### **BNP Paribas USA, Inc.**

Incorporated in this disclosure are the annual stress test results of BNP Paribas USA, Inc. and a summary of our operations.

- BNPP USA, Inc. is a wholly-owned subsidiary of BNP Paribas (BNPP SA). BNPP SA is a well-capitalized global bank operating in 74 countries with consolidated assets of 2.23 trillion Euros as of June 30, 2018. BNPP USA was established as BNPP SA's intermediate holding company (IHC) in July 2016 to consolidate its U.S. operations and comply with the Federal Reserve Board's (FRB) Enhanced Prudential Standards for Bank Holding Companies and Foreign Banking Organizations.
- BNPP USA, Inc. is a large and noncomplex<sup>1</sup> IHC with retail, commercial and investment banking, brokerage and asset management operations. It has \$147.8 BN in assets as of June 30, 2018 with two direct subsidiaries: BancWest Corporation (BWC) and BNP Paribas US Wholesale Holdings Corporation (WHC).
- BWC, with \$110.1 BN in assets<sup>2</sup>, is a Bank Holding Company (BHC) focusing on consumer and middle market commercial banking. BWC has two direct BHC subsidiaries, wholly-owned BancWest Holding Inc. (BWHI) and 48.8%-owned<sup>2</sup> First Hawaiian, Inc. (FHI), which in turn each own a bank subsidiary:
  - Bank of the West (BOW) BOW is a regional bank chartered in California, headquartered in San Francisco, and a wholly-owned subsidiary of BWHI with \$89.6 BN in assets as of June 30, 2018. BOW operates a network of retail, wealth, commercial and business banking branches and offices in 24 states.
  - First Hawaiian Bank (FHB) FHB is Hawaii's oldest and largest financial institution. As of June 30, 2018 FHB was a wholly-owned subsidiary of FHI with \$20.5 BN in assets. As of June 30, 2018, FHI was a consolidated subsidiary of BWC. Between June 30 and Sept 30, BWC reduced its ownership in FHI from 48.8% to 18.4%. In accordance with GAAP, FHI is treated as a de-consolidated equity investment starting the first projection period and over the remainder of the forecast horizon.
- WHC, with \$37.7 BN in assets, focuses on brokerage, investment banking and asset management.

<sup>&</sup>lt;sup>2</sup> As of June 30, 2018.



<sup>&</sup>lt;sup>1</sup> As defined by FRB in SR 15-19

### **BNPP USA Company Run Stress Test Results and Process**

BNPP USA is subject to the Comprehensive Capital Analysis and Review (CCAR) and Dodd-Frank Act Stress Test (DFAST) requirements under the FRB's capital planning rules and the Dodd-Frank Wall Street Reform and Consumer Protection Act.

This disclosure provides the results of BNPP USA's mid-year DFAST stress-test results under the hypothetical severely adverse scenario. The results herein reflect Dodd-Frank capital action assumptions.

BNPP USA projects capital and financial results over a nine-quarter forecast horizon, starting July 1, 2018. This projection is not a forecast of economic conditions or financial results, but rather a hypothetical scenario designed by BNPP USA to help assess the strength and resilience of the financial institution in the event of a severe economic downturn.

#### Disclosure requirements include:

- Description of risks included and methodologies used in stress testing
- Aggregate cumulative financial estimates of major income statement categories
- Cumulative dollar loss and loss rates by portfolio
- Explanation of the most significant causes for changes in capital ratios
- Beginning, ending and minimum values of capital ratios



#### **Stress Test Scenarios**

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For the mid-year stress test, IHCs are required to run at least three economic scenarios, including internally developed base, adverse and severely adverse scenarios to ensure that the IHC has sufficient regulatory capital to continue lending and serving its customers during an economic downturn. Capital is an important measure of the IHC's strength, as it represents the cushion against various types of unexpected losses and protects depositors' money.

**BNPP USA Severely Adverse Scenario:** Heightened market fear of a large country exit from the euro area causes a crisis in Europe that quickly becomes global. Banks with exposure face liquidity and credit difficulties and severe global recession ensues.

- U.S. real GDP drops 8.0% peak-to-trough over the initial seven quarters of the scenario period
- The U.S. unemployment rate climbs to 10.0% at its peak
- Home prices decline 30% over the entire scenario horizon of nine quarters
- Commercial real estate prices decline 40% over the nine quarters
- Equity prices drop 65% within four quarters accompanied by an increase in equity market volatility
- The Federal Reserve floods the market with liquidity and the Federal funds rate drops to negative in the first quarter and remains below zero throughout the scenario period
- Short-term Treasury rates fall and remain below zero through the end of the scenario period, while 10-year Treasury yields swiftly drop to 0.5% until the eight quarter



### **Descriptions of Risks**

CREDIT/ COUNTERPARTY	Risk that borrower or counterparty will fail to meet the terms of an obligation in accordance with agreed terms.
OPERATIONAL	Risk of loss resulting from inadequate or failed internal processes, people and systems, or from external events. It includes regulatory, compliance, technology and legal risk, but excludes strategic and reputational risk.
MARKET/ INTEREST RATE	Risk resulting from adverse movement in market rates or prices, such as interest rates, foreign exchange rates or equity prices.
LIQUIDITY	Risk of the firm's inability to meet its obligations as they come due because of inability to liquidate assets or obtain adequate funding or because it cannot easily unwind or offset specific exposures without significant compromise to pricing.
OTHER RISKS	Business/Strategic Risk is the risk that arises from adverse business decisions or business plans. Reputational risk is related to the confidence placed in the firm by its customers, clients, providers, counterparts, shareholders and regulators. Model Risk is the risk resulting from the use of models that fail to perform the tasks or capture the risks for which they were designed.



### Pre-Provision Net Revenue (PPNR) Risks and Methodologies

IHC Severely Adverse Scenario Nine-Quarter Cumulative PPNR -\$0.9 BN (July 1, 2018 – September 30, 2020)

#### Scope

- Net interest income
- Non-interest income and other fee-related revenues excluding realized gains and losses on investment securities
- Non-interest expense includes losses associated with operational risk, counterparty and trading losses

#### **Approach**

- For BWC and WHC, net interest income projections are based on product-level forecasts for interestearning asset and interest-bearing liability balances, combined with product-level forecast for loan and deposit rates
- BWC fee revenue projections are generally tied to balance sheet forecasts and bank initiatives
- WHC revenue projections reflect forecasted investment banking income, commissions and fees from clearing activities, trading revenue, NII associated with trading products, and service payments from non-IHC affiliates for agency services performed by BNPP USA Inc.'s subsidiaries
- For BWC and WHC, non-interest expense forecasts are projected using a combination of statistical and judgmental approaches

#### Types of Risks Identified and Captured

- Business/Strategic
- Operational
- Interest rate and liquidity
- Trading and Counterparty losses

#### **Methodologies**

- Forecasts are based on statistical models linked to macroeconomic variables or qualitative approaches
  reflecting management judgment. All forecast methods and results are subject to multiple internal review
  and challenge processes.
- Projected operational losses are based on business indicator model and idiosyncratic scenario analysis.



### **Provision for Credit Losses Risk and Methodologies**

IHC Severely Adverse Scenario
Nine-Quarter Cumulative Provision for Credit Losses \$4.6 BN
(July 1, 2018 – September 30, 2020)

#### Scope

 Represents credit-related loss retained in BNPP USA's loan and leases portfolios and related commitments through the planning horizon as well as the reserve for the expected losses

#### **Approach**

- Expected losses (EL) are based on the composition and characteristics of loans and lines in the BNPP USA's portfolio, including its two subsidiaries
- Credit quality is modeled using a loan-level approach by projecting and combining Probability of Default (PD), Loss Given Default (LGD) and Exposure at Default (EAD) for each outstanding exposure
  - Commercial loans and lines are assessed based upon the IHC's internal credit risk ratings, estimated values of collateral, utilization rate, and other product-specific characteristics
  - Consumer loans are assessed for credit quality based upon delinquency status, FICO score, loan-to-value deterioration, and a few other product-specific characteristics
  - Credit loss models also use a set of portfolio-specific macroeconomic drivers as predictors

#### Types of Risks Identified and Captured

Credit risks, which are impacted by:

- Evolution and current state of BWC's internal risk grade for commercial exposures
- Consumer loan delinquency status (current, delinquent, default)

- Loss severity
- Changes in reserves
- Collateral type and collateral valuation
- Obligor/product-specific characteristics
- Changes in commitment utilization

#### Methodologies

- Statistical analyses that consider the idiosyncratic characteristics of IHC's portfolios
- Reflects stress reserve levels estimated in accordance with accounting standards, regulatory guidance and BNPP USA's internal accounting policies
- Losses are computed at the loan-level based upon IHC specific characteristics such as credit quality, geography, product mix and collateral requirements, and then aggregated



### Capital Ratios and Projections Risks and Methodologies

IHC Severely Adverse Scenario Ending Projection Period Tier 1 Capital \$8.7 BN (July 1, 2018 – September 30, 2020)

#### Scope

 Common Equity Tier 1 (CET 1), Tier 1 Capital, Total Risk Based Capital and Tier 1 Leverage Ratios are projected over the forecast horizon.

#### **Approach**

- Full balance sheet and income statement are projected for each scenario.
- Risk-weighted assets are forecasted based upon Standardized Approach for Revised Regulatory Capital Guidelines (Basel III Standardized) with opt-out of impact of AOCI<sup>3</sup> to capital.
- On and off-balance sheet exposures are risk-weighted, taking into account the prepayment, new volume and other outputs from the modeling process.
- An internal controls framework supports all elements of Capital Planning Process, which includes governance review and challenge.

#### Types of Risks Identified and Captured

- Covers all material risks identified throughout the enterprise, which were subject to governance that includes challenge from business units, executive management and the Board.
- Impact of data limitations, process maturity and other weaknesses are taken into account through management overlays.
- Model risk is reflected through an explicit capital buffer.

#### Methodologies

 Forecasted capital ratios aggregate all modeling processes and assumptions, including balance sheet, PPNR, loan and lease losses and other elements.

<sup>&</sup>lt;sup>3</sup> Accumulated other comprehensive income



### IHC Severely Adverse Scenario Results (1 of 2)

Cumulative P&L Metrics (2018 Q3 through 2020 Q3)			
(\$ in Billions)	BNPP USA		
Pre-Provision Net Revenue	(0.9)		
Other Revenues <sup>4</sup>	0.6		
Provision for Loan and Lease Losses			
Net Income (loss) Before Taxes			

	BN	BNPP USA	
Loan losses (\$ in Billions)	9-Quarter losses	Loss rate <sup>5</sup>	
	3.53	5.5%	
First Lien Mortgages, Domestic	0.16	2.0%	
Junior Liens and HELOCs, Domestic	0.09	2.7%	
Commercial and Industrial	1.23	8.7%	
Commercial Real Estate, Domestic	1.03	6.4%	
Credit Cards	0.06	29.2%	
Other Consumer	0.67	4.7%	
Other Loans <sup>6</sup>	0.28	3.7%	

Note: Totals may not sum due to rounding



<sup>&</sup>lt;sup>4</sup> Other Revenues include net realized gains and losses on securities, OTTI, and other income statement items, such as gains from FHI public offerings and FHI de-consolidation

<sup>&</sup>lt;sup>5</sup> Loss rates are calculated by summing the nine quarters of losses and dividing by the nine-quarter average balance for a given loan portfolio. Average loan balances used to calculate portfolio loss rates exclude loans held for sale and loans held for investment under the fair-value option

<sup>&</sup>lt;sup>6</sup> Other Loans include Other Loans and Leases, Loans Secured by Farmland, and Real Estate Loans (Not in Domestic Offices)

### IHC Severely Adverse Scenario Results (2 of 2)

	Basel III Capit	al Ratios		
	Actual	Stressed Capital Ratios		
Capital Ratios <sup>7</sup>	2018 Q2	2020 Q3	Lowest (over the projection horizon)	Regulatory Minimum <sup>8</sup>
BNPP USA				
CET 1 Ratio	12.2%	9.9%	9.9%	4.5%
Tier 1 Capital Ratio	12.8%	9.9%	9.9%	6.0%
Total Risk-Based Capital Ratio	14.9%	12.5%	12.5%	8.0%
Tier 1 Leverage Ratio	9.6%	7.4%	7.4%	4.0%

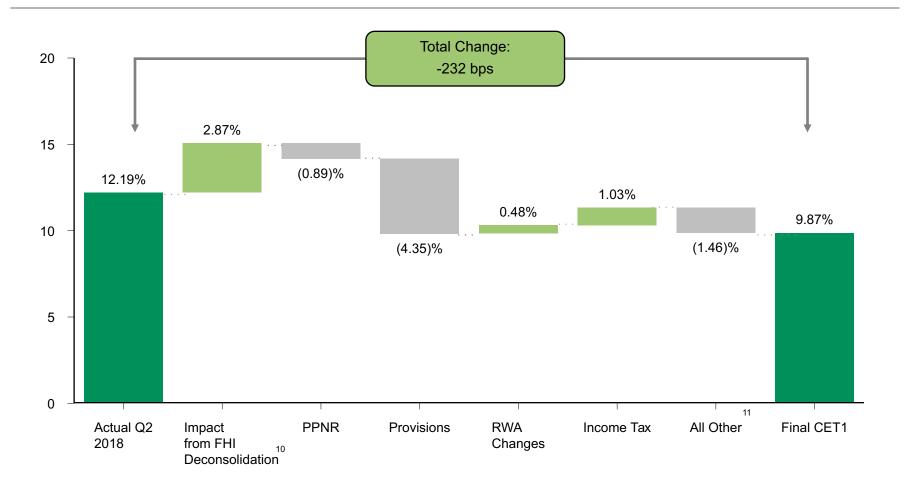
RWA (\$ in Billions) <sup>9</sup>	Actual RWA 2018 Q2	RWA Projection 2020 Q3
BNPP USA	105.5	88.2



<sup>&</sup>lt;sup>7</sup> Capital Ratios include any capital action across the forecasting horizon under DFAST capital actions assumptions

Regulatory minimums as defined in the Comprehensive Capital Analysis Review 2018 Summary Instructions
 Risk Weighted Assets calculated under Basel III Standardized Approach

# Significant Drivers of Changes to the Projected CET1 Ratio under the Internal Stress Scenario for BNPP USA



Note: Totals may not sum due to rounding

<sup>&</sup>lt;sup>11</sup> Includes DTA from net operating loss and tax credit carry forwards.



<sup>10</sup> Includes impact of risk-weighted assets, equity method revaluations and increases to CET1 resulting from gains on FHI stock offerings and a reduction in goodwill.

### **Forward Looking Statements**

- This disclosure contains statements related to stress tests conducted by BNPP USA under DFAST
  requirements. The stress test projections are based on hypothetical scenarios under severely stressed
  economic conditions. These estimates are not forecasts of BNPP USA's actual expected losses, revenues,
  net income before taxes, or capital ratios.
- This disclosure does not constitute an offer to sell, or a solicitation of an offer to purchase, any securities from any of the entities herein.

