



# **CIBC Bank USA (f/k/a The PrivateBank and Trust Company)**

**DODD-FRANK ACT COMPANY-RUN STRESS TEST DISCLOSURE**

**UNDER SUPERVISORY SEVERELY ADVERSE SCENARIO**

**OCTOBER 31, 2017**

## **Introduction**

On June 29, 2016, PrivateBancorp, Inc., the holding company for The PrivateBank and Trust Company (the “Bank”), entered into a definitive agreement and plan of merger with Canadian Imperial Bank of Commerce, a Canadian chartered bank (“CIBC”), providing for the acquisition of PrivateBancorp by CIBC via the merger of PrivateBancorp with and into CIBC Holdco Inc., a direct wholly-owned subsidiary of CIBC. On June 23, 2017, the merger was completed, resulting in the Bank becoming a direct wholly-owned subsidiary of CIBC Holdco Inc. and an indirect wholly-owned subsidiary of CIBC. On September 18, 2017, the name of the Bank was changed to CIBC Bank USA and the name of CIBC Holdco Inc., its bank holding company, was changed to CIBC Bancorp USA Inc.

The required company-run stress test assessment under the Dodd-Frank Wall Street Reform and Consumer Protection Act (the “DFA” and such stress test assessment, the “DFAST”) was conducted by PrivateBancorp and the Bank using financial information as of December 31, 2016, prior to the consummation of the merger with CIBC. Accordingly, this public disclosure contains the DFAST results of PrivateBancorp and the Bank even though, as of the date of this disclosure, PrivateBancorp no longer exists as a legal entity. The DFAST results herein do not cover CIBC Bancorp USA as a consolidated entity, as CIBC Bancorp USA did not acquire the Bank and become a bank holding company until the merger was completed on June 23, 2017. As used in this disclosure, references to the “Company,” “we” or “our” refer to PrivateBancorp and the Bank on a consolidated basis (unless the context clearly requires otherwise), and not to CIBC Bancorp USA on a consolidated basis.

The Company, as banking organization with total consolidated assets between \$10 billion and \$50 billion, is subject to rules adopted by the federal banking agencies (collectively, the “agencies”) implementing the stress test requirements under the DFA. Under such rules, we must assess the potential impact of a minimum of three macroeconomic scenarios—baseline, adverse, and severely adverse—on our consolidated balance sheet (including risk-weighted assets (“RWA”)), income statement and capital. On an annual basis, we are required to publicly disclose a summary of our DFAST results under the supervisory severely adverse scenario. The DFAST is conducted by the Company itself rather than by the agencies. The agencies have stated that they will not make any public statements about the results of company-run stress tests or comment on the public disclosures of their results.

In conducting its DFAST, the Company used its own internal methodologies and assumptions, which were designed to estimate the losses that the Company may incur under the supervisory severely adverse scenario in light of its specific business model and mix of assets and funding, except in those cases where methodologies and assumptions were specifically prescribed by the agencies’ DFAST rules and guidance. Consequently, the Company’s DFAST results are not directly comparable to the results of other mid-sized institutions. Furthermore, the Company’s DFAST results are not comparable to the DFAST and Comprehensive Capital Analysis and Review (“CCAR”) results of large banking organizations (*i.e.*, those with total consolidated assets \$50 billion or more) because the required methodologies and assumptions applicable to them differ in significant respects.

The results summarized in this report represent estimates, under the supervisory severely adverse scenario, of the Company’s cumulative aggregate losses, pre-provision net revenue (“PPNR”), provision for loan and lease losses and net income, as well as quarter-end regulatory capital levels and ratios, over the nine-quarter period beginning with Q1 2017 through Q1 2019 (the “planning horizon”), as required by the DFAST rules. Such estimates are projections of hypothetical results and do not represent the Company’s forecast of future economic conditions or expected or most likely financial results. The prescribed macroeconomic conditions and assumptions used in the DFAST reflect an economic outcome that we do not believe is likely to occur.

The stress test was performed at a point in time and covers only the planning horizon. The Company is not required, and does not intend, to update the results of the 2017 DFAST based on actual results, changing economic conditions or any other facts that may subsequently arise. Similarly, the results herein will not be updated to reflect CIBC Bancorp USA as the new holding company for the Bank.

### **Risk Types Incorporated in DFAST**

The Company's stress testing process is designed to estimate the potential impact of various macroeconomic scenarios on its consolidated balance sheet (including RWA), income statement and capital. The key risks considered as part of the Company's DFAST process include credit risk, interest rate risk, liquidity risk, and operational risk:

- ***Credit Risk:*** Credit risk is the risk of loss arising from a borrower's failure to pay some or all of its contractually required interest and principal payments or other financial obligations to the Company. Credit risk arises primarily in the Company's lending operations (*i.e.*, the risk of repayment from borrowers). The assessment of credit risk within the Company's loan portfolio is primarily reflected in the allowance for loan and lease losses on the balance sheet and provision for loan and lease losses on the income statement.
- ***Interest Rate Risk:*** Interest rate risk is the risk to earnings arising from the impact of changes in interest rates on the timing and amount of cash flows generated by our assets and payable on our liabilities. In particular, changes in interest rates will affect the yield on the Company's loan portfolio, which is primarily comprised of variable-rate loans based on short-term rates, and investment securities portfolio and the Company's cost of funds, which is driven primarily by the rate that we pay on deposits. Interest rate risk is reflected in the Company's net interest income, which is the most significant component of PPNR, on the income statement. Interest rate risk is a prominent risk given its substantial impact on net interest income.
- ***Liquidity risk:*** Liquidity risk is the risk that the Company is unable to fund increases in assets, and/or liquidate assets at fair market values when required to satisfy debt, deposit, or other obligations as they come due, and the risk arising from the Company's increased cost to meet its obligations as a result of changes in market dynamics or the financial position of the Company under stressed economic conditions. Liquidity risk is inherent in the Company's loan portfolio, investment securities portfolio, deposit base, and short-term borrowings and long-term debt.
- ***Operational Risk:*** Operational risk is the risk of loss arising from inadequate or failed internal processes, systems or people, or from external events. Operational risk arises through fraud, error and the inability to deliver products or services to meet client needs and securely manage data through information technology systems. An increase in operational risk may result in an increase in the Company's non-interest expense, which is a component of PPNR, on the income statement.

We believe that the risks described above are the most impactful to our business from a quantitative perspective and the most highly correlated to the changed macroeconomic conditions contemplated in the DFAST scenarios and, accordingly, are the risks that were directly incorporated into our DFAST model. We note, however, that because the Company operates in the highly regulated financial services industry, we are also subject to legal, regulatory and political risks, the costs of which are generally reflected in our internal forecasts.

## **Summary of Testing Methodology and Models**

Stress testing is intended to estimate the impact of a variety of hypothetical adverse economic conditions on the Company's capital position based on the nature of the Company's business model and asset and funding composition. Stress testing is a planning tool utilized to assess the Company's ability to maintain adequate capital even under severely stressed economic conditions.

In conducting its stress testing process, the Company employs various internal methodologies to project balance sheet, income statement and capital balances, with primary reliance on statistical, regression-based models. We use stress testing methodologies that focus on defining correlations between macroeconomic variables and losses, revenues, loan portfolio performance and overall business volumes in order to develop projected financial statements and estimate the impact on capital levels and ratios. In areas where predictive statistical relationships were not evidenced, such as non-interest income and non-interest expense, we used historical data to estimate such amounts over the planning horizon based on projected asset levels. These processes generate the key outputs of projected balance sheets and income statements, which we use to develop projections for RWA and capital levels and calculate estimates of stressed regulatory capital ratios. Our regulatory capital ratio projections incorporate the "standardized approach" under the Basel III capital rules in effect over the nine quarter forecast horizon (Q1 2017 thru Q1 2019).

***Credit Losses.*** The Company is predominantly a commercial middle-market bank and focuses its strategy on delivering customized business and personal financial services to middle-market companies, as well as business owners, executives, entrepreneurs and their families. Our loan portfolio reflects this strategy—as of March 31, 2017, 64% of our loan portfolio was in commercial and industrial and owner-occupied commercial real estate loans, with an additional 28% in non-owner occupied commercial real estate loans. Our stress testing models assume that we continue pursuing this strategy throughout the nine-quarter planning horizon and the overall composition of our loan portfolio remains generally consistent.

We developed credit loss estimation methodologies to capture the risks associated with each of our primary loan categories. The primary risk captured in the credit loss estimation process was credit risk, given the nature of our business. We also face counterparty credit risk relating to interest rate risk management products, but because of our positions and the interest rate assumptions in the supervisory severely adverse scenario, our credit loss estimates do not reflect any counterparty credit losses from this business activity.

We used top-down regression models to determine statistical relationships between historical macroeconomic variables and historical portfolio level loss rates for our primary loan categories. We selected those macroeconomic variables provided by the agencies exhibiting the strongest correlation and, to estimate credit losses in stressed economic scenarios, applied the assumptions prescribed by the agencies for those selected macroeconomic variables over the planning horizon to adjust the probability of default ("PD") and loss given default ("LGD") for each of our primary loan categories. Our models incorporated these adjusted PDs and LGDs for each primary loan category. Model outputs from this process are loan losses and levels of non-performing loans.

***Allowance and Provision for Loan and Lease Losses.*** We developed projections for our allowance for loan and lease losses ("ALLL") as of the last day of each quarter in the planning horizon using information generated by our portfolio level PD and LGD loan loss models, as described above, as well as our projections of loan balances over the planning horizon. Our ALLL projections for each quarter in the planning horizon were used in conjunction with our net loan charge-off estimates to project the associated provision expense for each such quarter needed to bring the ALLL to the level deemed appropriate as of quarter-end.

***Pre-Provision Net Revenue.*** PPNR was analyzed and consolidated into three major components—net interest income, non-interest income, and non-interest expense—on an aggregate, company-wide level. We modeled the three major PPNR components separately and then combined them to generate estimates of PPNR. Each of the components of PPNR estimation has distinct processes and the PPNR estimates consider a variety of risks, including interest rate risk, liquidity risk and operational risk. Estimates of PPNR are consistent with projected balance sheet levels over the planning horizon (as adjusted for forecasted growth and estimated credit losses over such time period) because our DFAST model utilizes balance sheet accounts to derive the PPNR components.

- Estimates of net interest income utilize a statistical regression-based model to develop projections for net interest income. The model uses the three-month U.S. Treasury rate prescribed by the agencies’ supervisory severely adverse scenario to project interest income and interest expense based on forecasted levels of assets (primarily loans) and liabilities (primarily deposits), including the impact of negative interest rates in the scenario.
- Estimates of non-interest income were developed based upon our historical experience with respect to the link between increased asset levels and increased non-interest income.
- Projected changes in asset levels are driven by the forecasted growth of our business and the estimated impact of the prescribed economic scenarios.
- Estimates of non-interest expense were derived based on levels of variable non-interest expense, fixed non-interest expense, and operational losses. We estimated variable non-interest expense (primarily credit and collection costs) based on the projected level of non-performing loans modeled in the stress scenario. We estimated operational losses based on our historical loss experience, which has not shown significantly increased levels of operational losses during periods of stressed economic conditions. Our estimates of fixed non-interest expenses were generally based on internal forecasted amounts.

***Changes in Capital Position.*** As a starting point for our projected balance sheet amounts over the planning horizon, we leveraged our existing planning framework used for budgeting purposes, which contemplates growth that is generally consistent with our more recent growth. RWA projections are based on applying risk weightings pertaining to each type of asset category and off-balance sheet exposure and the projected balance sheet changes, including the Basel III capital rules that went into effect in 1Q 2015. Furthermore, as required by the DFAST rules, estimated changes in the Company’s capital position and capital ratios incorporate the actual capital actions taken by the Company during Q1 2017, the first quarter of the planning horizon, and, for each remaining quarter, the following assumptions: (i) maintaining common stock dividends at the current level of \$0.01 per share per quarter; (ii) payments on the Company’s other instruments that constitute regulatory capital equal to the stated dividend, interest or principal due on such instrument during the quarter; (iii) no redemption or repurchase of any capital instrument that constitutes regulatory capital; and (iv) no issuances of common stock or preferred stock (except for issuances related to expensed employee compensation). The projected impact of the merger with CIBC, which was still pending as of the time when our DFAST was conducted, was not incorporated into our DFAST process.

### **Summary of Test Results Under the Supervisory Severely Adverse Scenario**

We completed the required stress testing and submitted the results to the Federal Reserve and FDIC in June 2017. Our DFAST results reflect the macroeconomic scenarios published by the agencies on February 10, 2017. The supervisory severely adverse scenario for the United States, as formulated by the agencies, is characterized by a severe global recession that is accompanied by a period of

heightened stress in corporate loan markets and commercial real estate markets. Asset prices drop sharply in this scenario. Financial conditions in corporate and real estate lending markets are stressed severely, together with a widening of corporate bond spreads and mortgage spreads, and an unemployment rate increases by about 5.25% from its level in the fourth quarter of 2016, peaking at 10% by the third quarter of 2018. Long-term U.S. Treasury yields declining below 0.75% and short-term interest rates falling and remaining near zero over the planning horizon. Consumer price inflation falls to about 1.25% by the second quarter of 2017 before rising to about 1.75% by the middle of 2018. By the second quarter of 2017, the level of U.S. real GDP is approximately 6.5% lower than the level in Q4 2016, before beginning to recover.<sup>1</sup>

---

<sup>1</sup> For the full set of economic variables and scenario descriptions, *see* Board of Governors of the Federal Reserve “2017 Supervisory Scenarios for Annual Stress Tests Required under the Dodd-Frank Act Stress Testing Rules and the Capital Plan Rule,” February 10, 2017, available at <https://www.federalreserve.gov/newsevents/pressreleases/bcreg20170210a.htm> .

The following represents a summary of the DFAST results that we submitted to the Federal Reserve and the FDIC.

**Table 1: PrivateBancorp 2017 DFAST Results under Supervisory Severely Adverse Scenario (Q1 2017 – Q1 2019)**

<b>Projected Estimates: Nine Quarter Cumulative (\$ millions)</b>		
Aggregate Losses <sup>(a)</sup>	<u>\$716.4</u>	4.7% <sup>(b)</sup>
Pre-Provision Net Revenue (PPNR)	<u>\$465.3</u>	
Provision for Loan and Lease Losses	<u>\$834.0</u>	
Net Income	<u>(\$433.3)</u>	
(a)	Represents cumulative net charge-offs on our loan portfolio.	
(b)	Represents the cumulative loan loss rate. Calculated by dividing the nine-quarter cumulative aggregate losses by the average loan balances over the same period.	

<b>Projected Regulatory Capital Ratios (%)</b>			
	<b>Actual Q4 2016</b>	<b>Stressed capital ratios</b>	
		<b>Q1 2019</b>	<b>Minimum<sup>(d)</sup></b>
Common equity Tier 1 ratio <sup>(c)</sup>	9.83	7.48	7.34
Tier 1 leverage ratio	10.28	7.87	7.77
Tier 1 risk-based capital ratio	10.73	8.35	8.21
Total risk-based capital ratio	12.49	10.23	10.09
<b>Memo items – risk-weighted assets (\$ millions)</b>			
Basel III standardized approach	\$18,628	\$19,236	
(c)	The CET1 ratio is calculated based on the Basel III-based regulatory capital rules that went into effect in Q1 2015. From Q1 2017 through Q1 2019, the capital ratios are calculated under the new Basel III-based regulatory capital rules.		
(d)	Represents the lowest observed capital ratio as of the end of a quarter during the nine-month planning horizon.		

**Table 2: CIBC Bank USA (f/k/a The PrivateBank and Trust Company) 2017 DFAST Results under Supervisory Severely Adverse Scenario (Q12017 – Q1 2019)**

<b>Projected Regulatory Capital Ratios (%)</b>			
	<b>Actual Q4 2016</b>	<b>Stressed capital ratios</b>	
		<b>Q1 2019</b>	<b>Minimum<sup>(e)</sup></b>
Common equity tier 1 ratio <sup>(e)</sup>	11.05	8.69	8.69
Tier 1 leverage ratio	10.59	8.15	8.15
Tier 1 risk-based capital ratio	11.05	8.69	8.69
Total risk-based capital ratio	12.17	9.94	9.94
(e)	Refer to the corresponding footnotes in the table above for PrivateBancorp.		

Based on the Company's evaluation of the impact of the hypothetical stressed macroeconomic conditions on its regulatory capital ratios over the planning horizon, the most significant causes of the reduction in the Company's capital levels were the estimated cumulative net loan charge-offs and the estimated income tax expense associated with a projected valuation allowance on our deferred tax asset. This estimated reduction in capital levels, combined with an estimated increase in RWA of approximately \$608 million over the planning horizon, resulted in the estimated reductions in the Company's regulatory capital ratios over the planning horizon.

### **Cautionary Note Regarding Forward-Looking Statements**

This report contains a summary of the results of a forward-looking company-run stress test exercise that regulations of the agencies require the Company to perform and publicly disclose. Accordingly, this report contains statements that we believe constitute forward-looking statements, including estimates of financial condition, results of operations, and capital ratios under a hypothetical supervisory severely adverse scenario that incorporates a set of assumed economic and financial conditions prescribed by the agencies. Forward-looking statements represent management's current projections regarding future events based on certain estimates and assumptions made by management or mandated by the agencies that are inherently uncertain. Actual results may differ materially from those set forth in the forward- looking statements. Factors that could cause the Company's actual results to differ materially from those described in the forward-looking statements include actual economic and financial conditions (as opposed to the hypothetical economic and financial conditions required to be used in the stress test, which reflect an economic outcome that we do not believe is likely to occur) and various other factors that can be found in PrivateBancorp's Annual Report on Form 10-K for the year ended December 31, 2016, and Quarterly Report on Form 10-Q for the quarter ended March 31, 2017, which were filed with the Securities and Exchange Commission (the "SEC") and are available on the SEC's website ([www.sec.gov](http://www.sec.gov)). Such forward-looking statements speak only as of the date of this report, and the Company assumes no obligation to update any of these statements in light of new information, future events or otherwise following the date of this report.