



Discover Financial Services

Dodd-Frank Act Stress Test Disclosures

March 5, 2015

## **Discover CCAR 2015 Public Disclosure of Results**

### **Introduction**

The Dodd-Frank Wall Street Reform and Consumer Protection Act (“Dodd Frank Act”) and the Federal Reserve Regulation YY require certain bank holding companies, including Discover Financial Services (“Discover” or the “company”) to perform stress tests to assess the potential impact of hypothetical economic scenarios on the company’s operations and capital over a defined planning horizon. Federal Reserve regulation requires the disclosure of stress test results under the Federal Reserve’s Severely Adverse Stress Scenario, which was published by the Federal Reserve on October 23, 2014. The scenario portrays a hypothetical, severely adverse macroeconomic environment in a deep and prolonged recession in which the unemployment rate increases and asset prices contract sharply, including equity and home prices.

Discover Bank (“Discover Bank” or the “Bank”) is a Delaware state bank and is the company’s principal subsidiary. In addition to performing stress testing for the consolidated company, we also performed the annual stress test required under rules and guidance published by the Federal Deposit Insurance Corporation (the “FDIC”). The rules and guidance (including the Supervisory Severely Adverse Scenario) provided by the FDIC for the Bank stress test were consistent with those provided by the Federal Reserve for the company.

This disclosure contains forward-looking statements, including projections of the company’s results of operations and financial condition, under a hypothetical scenario incorporating a set of assumed economic and financial conditions that are more adverse than the company expects, as prescribed by the company’s regulators. The projections do not represent forecasts of expected results of operations or financial condition, but rather reflect possible results under the prescribed hypothetical scenario. The company’s future results of operations and financial condition will be influenced by actual economic and financial conditions and various other factors as described in the company’s annual report on Form 10-K for the year ended December 31, 2014, and other reports filed with the Securities and Exchange Commission, which are available at [www.sec.gov](http://www.sec.gov).

### **Summary of Supervisory Severely Adverse Scenario**

The Supervisory Severely Adverse Scenario is described in the 2015 Supervisory Scenarios for Annual Stress Tests required under the Dodd-Frank Act Stress Testing Rules and the Capital Plan Rule published by the Board of Governors of the Federal Reserve System, dated October 23, 2014. The scenario starts in the fourth quarter of 2014, and extends through the fourth quarter of 2017. See [www.federalreserve.gov](http://www.federalreserve.gov) to obtain a copy of this publication.

The Supervisory Severely Adverse Scenario forecasts a substantial weakening in global economic activity, accompanied by large reductions in asset prices. Under the scenario, the U.S. experiences a deep and prolonged recession. The unemployment rate increases by 4 percentage points from its level in the third quarter of 2014, to a peak of 10 percent in the middle of 2016. By the end of 2015, the level of real GDP is approximately 4½ percent lower than its level in the third quarter of 2014 and begins to recover thereafter. Short-term interest rates remain near zero through 2017; long-term Treasury yields drop to 1 percent in the fourth quarter of 2014 and then edge up slowly over the remainder of the scenario period. Corporate credit quality is assumed to decline, resulting in spreads on investment-grade corporate bonds jumping from about 170 basis points to 500 basis points at their peak. Mortgage rates increase over the course of 2015 driven by wider spreads.

Asset prices contract sharply, with equity prices falling by approximately 60 percent from the third quarter of 2014 through the fourth quarter of 2015. House prices decline by approximately 25 percent

during the scenario period from 3Q14 levels, and commercial real estate prices are more than 30 percent lower at their trough.

For a complete description of the 2015 Supervisory Severely Adverse Scenario, refer to the October 23, 2014, Federal Reserve System's Board of Governors *2015 Supervisory Scenarios for Annual Stress Tests Required under the Dodd-Frank Act Stress Testing rules and the Capital Plan Rule* document.

## **Risk Types**

When conducting the company-run stress test under the Supervisory Severely Adverse Scenario, the company intended to capture the principal risks to which the company is exposed, including credit risk, market risk, operational risk, compliance and legal risk, liquidity risk, and strategic risk. Credit risk is primarily incurred through the company's consumer lending activities. Operational risk refers to the risk of loss that can arise from a number of events, such as inadequate or failed internal processes or systems, breaches of technology and information systems, fraud, potential legal or regulatory actions or external events. Market risk is incurred due to adverse movements in market rates or prices, such as interest rates, foreign exchange rates, credit spreads, or equity prices. Compliance risk is the risk of legal or regulatory sanctions, financial loss, or damage to reputation resulting from failure to comply with laws, regulations, rules, other regulatory requirements, or codes of conduct and other standards applicable to the company. Legal risk arises from the potential that unenforceable contracts, lawsuits, or adverse judgments can disrupt or otherwise negatively affect the operations or condition of the company. Liquidity risk arises from events that could impact the company's ability to meet its day-to-day operating expenses, extend credit to consumers, or repay principal and interest on borrowings. Strategic risk is associated with a highly competitive marketplace, macroeconomic factors, and the uncertainty associated with new and acquired businesses.

## **Methodology**

Discover used both quantitative and qualitative methods to measure and assess risks, including proprietary models that forecast receivables, revenues, expenses, and losses under the Supervisory Severely Adverse Scenario. The company's capital position was projected by aggregating revenue and loss estimates as well as capital actions over the nine-quarter capital planning horizon.

### ***Pre-provision Net Revenue ("PPNR")***

PPNR is estimated as total revenues (interest and non-interest revenues), net of interest expense and non-interest expense.

Interest income is generated from the company's lending products, while non-interest income is generated by both the payments businesses and the lending products. Interest income is estimated across the company's lending products, using the forecasted performing receivables balance and projected yield. The receivables balance is forecasted based on projected originations, payments, charge-offs and other product-specific inputs. The projected yield is forecasted based on the yield on the loan, pricing strategies, and historical pricing information. Non-interest income is generally estimated by forecasting the volume of transactions and the rate for those transactions.

Interest expense is forecasted for both retail and wholesale funding channels. The total cost of funding is estimated by multiplying the expected interest rates with the projected funding balance across those channels.

Non-interest expense is forecasted in several components based on whether they are fixed expenses, volume-driven expenses, expenses that vary in response to factors other than business volume, or expenses due to known initiatives that are expected to impact expense trends.

Net interest income and non-interest income components are forecasted at a business line level and then aggregated with non-interest expenses to determine total PPNR.

### ***Loan Losses***

Net loan losses are calculated as gross loan losses less recoveries. Discover forecasts its gross loan losses by using vintage-based framework and regression analyses based on macroeconomic, internal portfolio and other data.

Reserves are estimated based on the 12-month forward forecast of loan losses, adjusted for an estimate of activity included in the loss forecast related to loans that do not exist on the balance sheet at the reporting date.

### ***Operational Risk Losses***

Operational risk loss estimates include forecasted operational risk expenses for risk categories that include external fraud, damage to physical assets, business disruptions and systems failures, employment practices and workplace safety, and losses related to development, marketing, execution and delivery of products and services. Further, idiosyncratic operational risk losses, which are potentially severe losses driven by low probability operational risk events identified through the company's operational risk scenario analysis framework, are also included under stress conditions in total operational risk loss estimates as either an increase in non-interest expense, or a reduction of non-interest income.

### **Company-Run Stress Test Results**

The results of the company-run stress test on the company's capital ratios and certain financial metrics are set forth in the tables below. The results include capital action assumptions provided within the Dodd-Frank Act Stress Testing ("DFAST") rules, including:

- For fourth quarter 2014, actual capital actions taken throughout the quarter, including dividends and share repurchases, are reflected in the results.
- For first quarter 2015 through the fourth quarter 2016, common stock dividends equal to the quarterly average dollar amount of common stock dividends that the company paid in the previous year (this includes the fourth quarter 2014 and the preceding three calendar quarters), as well as preferred dividends, were included. Consistent with the Federal Reserve instructions, common stock issuances associated with expensed employee compensation were also included.

These capital actions are defined in the DFAST rule in order to allow the Federal Reserve to conduct the required stress tests and may not represent the actual capital actions that Discover would take in a similar economic environment.

Discover Bank accounts for over 95 percent of the company's overall assets. The types of risks evaluated and methodologies used were the same for the Bank as those described above for the company. Accordingly, the results of the Bank's stress test under the same Supervisory Severely Adverse Scenario are similar to the financial results of the consolidated company. However, there are differences in the capital ratios when compared to Discover since the stress

testing requirements for the Bank do not require the use of standardized DFAST capital actions. Therefore, the capital ratios presented for the Bank below reflect management's judgment of the actions that would be taken to preserve capital under a hypothetical severe economic environment.

*Hypothetical Discover and Discover Bank Capital Ratios in the Supervisory Severely Adverse Scenario*

|                                | DFS Consolidated    |                              |         | Discover Bank       |                              |         |
|--------------------------------|---------------------|------------------------------|---------|---------------------|------------------------------|---------|
|                                | Actual <sup>1</sup> | Stress Scenario <sup>2</sup> |         | Actual <sup>1</sup> | Stress Scenario <sup>2</sup> |         |
|                                | 3Q14                | 4Q16                         | Minimum | 3Q14                | 4Q16                         | Minimum |
| Tier 1 Common Capital Ratio    | 14.8%               | 13.6%                        | 13.1%   | 13.7%               | 13.8%                        | 12.3%   |
| Common Equity Tier 1 Capital   | 14.8%               | 13.5%                        | 13.0%   | 13.6%               | 13.6%                        | 12.5%   |
| Tier 1 Capital Ratio           | 15.6%               | 14.3%                        | 13.8%   | 13.7%               | 13.6%                        | 12.3%   |
| Total Risk-based Capital Ratio | 17.8%               | 15.9%                        | 15.6%   | 15.9%               | 15.5%                        | 14.5%   |
| Tier 1 Leverage Ratio          | 13.7%               | 12.4%                        | 12.1%   | 12.0%               | 11.9%                        | 11.0%   |

*Actual 3Q14 and Hypothetical 4Q16 Risk-Weighted Assets*

|   | Actual 3Q14              |  | Projected 4Q16           |  |
|---|--------------------------|--|--------------------------|--|
|   | Current General Approach | Basel III Standardized Approach <sup>3</sup> | Current General Approach | Basel III Standardized Approach <sup>3</sup> |
| Risk-weighted Assets <sup>4</sup><br>(\$ in billions) | 70.1                     | 70.7   | 68.3                     | 69.0   |

<sup>1</sup> Represents Basel I capital ratios, except for Common Equity Tier 1 Capital, which is calculated based on Basel III rule reflecting transition provisions; capital ratios calculated under Basel III rule (except for Tier 1 Common Capital Ratio, which is only calculated under Basel I rule) would not be significantly different as of 3Q14

<sup>2</sup> Represents Basel III capital ratios reflecting transition provisions, except for Tier 1 Common Capital Ratio, which is calculated based on Basel I rule, at the end of the forecast horizon and the projected minimum quarter-end ratio at any point during the forecast horizon

<sup>3</sup> Basel III standardized approach risk-weighted assets reflect transition provisions

<sup>4</sup> In 4Q14, risk-weighted assets are calculated using the current general risk-based capital approach; in 2015 and 2016, risk-weighted assets are calculated on the Basel III standardized approach reflecting transition provisions, except for the Tier 1 Common ratio, which uses the general risk-based capital approach for all quarters

| <i>Hypothetical Nine-Quarter (4Q14 to 4Q16) Losses, Revenue and Net Income Before Taxes under the Supervisory Severely Adverse Scenario</i> |                         |  |
|---|-------------------------|--|
|   | <b>(\$ in billions)</b> | <b>% of Average Assets<sup>5</sup></b> |
| Pre-provision Net Revenue <sup>6</sup>  | \$ 8.6                  | 10.6%                                  |
| Other Revenue <sup>7</sup>  | -                       | -                                      |
| Provisions  | (8.5)                   | (10.5%)                                |
| Realized losses/gains on securities (AFS/HTM)   | -                       | -                                      |
| Trading and counterparty losses <sup>8</sup>  | -                       | -                                      |
| Other losses/gains <sup>9</sup>   | (0.1)                   | (0.1%)                                 |
| <i>Equals</i>   |                         |  |
| Net Income Before Tax   | <u>\$ 0.0</u>           | <u>0.0%</u>                            |
| <b>Memo items</b>   |                         |  |
| Other comprehensive income  | -                       | -                                      |
| <i>Other effects on capital</i>   |                         |  |
| AOCI included in capital (billions of dollars) <sup>10</sup>  | -                       | -                                      |

| <i>Hypothetical Nine-Quarter (4Q14 to 4Q16) Loan Losses, By Type of Loan, Under The Supervisory Severely Adverse Scenario</i> |                         |  |
|---|-------------------------|--|
|   | <b>(\$ in billions)</b> | <b>Portfolio Loss Rates<sup>11</sup></b> |
| Loan Losses   | 6.7                     | 10.1%                                    |
| First-lien mortgages domestic   | -                       | -  |
| Junior liens and HELOCs, domestic   | -                       | -  |
| Commercial and Industrial   | -                       | -  |
| Commercial real estate, domestic  | -                       | -  |
| Credit cards  | 6.0                     | 11.4%                                    |
| Other consumer  | 0.7                     | 5.1%                                     |
| Other loans   | -                       | -  |

## Description of Stress Scenario Results for the Company and Discover Bank

While capital ratios decline over the scenario horizon for the company and the Bank, both ending and minimum capital ratios are significantly above regulatory requirements. The decrease in capital ratios is due to a reduction in earnings in the stress scenario, offset in part by lower risk-weighted assets.

The decline in earnings under the stress scenario is primarily the result of an increase in the provision for loan losses. Net charge-offs rise significantly over the period, driven largely by

<sup>5</sup> Expressed on a nine-quarter cumulative basis as a percentage of average total assets over the same time period

<sup>6</sup> Pre-provision Net Revenue includes losses from operational risk events, credit card fraud losses, and mortgage put-back expenses

<sup>7</sup> Other revenue includes one-time income and (expense) items not included in pre-provision net revenue

<sup>8</sup> Trading and counterparty losses include mark-to-market and credit valuation adjustments (CVA) losses and losses arising from the counterparty default scenario component applied to derivatives, securities lending, and repurchase agreement activities

<sup>9</sup> Other losses/gains includes goodwill impairment losses

<sup>10</sup> As a non-advanced approaches Banking organization, Discover chose to "opt-out" of including AOCI in the regulatory capital calculations

<sup>11</sup> Nine-quarter cumulative losses as a percentage of average balances over the same time period

credit cards due to a significant increase in both contractual and bankruptcy charge-offs. Net income is further impacted by a significant increase in loan loss provisions, driven by higher expected net charge-offs early in the scenario horizon offset by releases in the second half of the scenario.

In the scenario, PPNR declines because of a decrease in net interest income due to lower receivables, higher non-principal charge-offs, and higher operating expenses. Non-interest income also declines, driven by lower discount and interchange revenue due to lower credit card sales volume. Idiosyncratic operational and strategic risk scenarios also impact PPNR through higher non-interest expenses and lower revenues.

Assets decline over the period, driven primarily by credit card receivables, due to an increase in credit losses, lower credit card balance growth from existing customers, and a reduction in marketing activities across all lending products. Total funding falls due to lower borrowing needs while maintaining funding diversification throughout the forecast period.