
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-Q**

(Mark One)

- QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the quarterly period ended March 31, 2023
- TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the transition period from _____ to _____

Commission File Number 001-33378

DISCOVER FINANCIAL SERVICES

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

36-2517428

(I.R.S. Employer Identification No.)

2500 Lake Cook Road, Riverwoods, Illinois 60015

(Address of principal executive offices, including zip code)

(224) 405-0900

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act

<u>Title of each class</u>	<u>Trading symbol(s)</u>	<u>Name of each exchange on which registered</u>
Common Stock, par value \$0.01 per share	DFS	New York Stock Exchange

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer	<input checked="" type="checkbox"/>	Accelerated Filer	<input type="checkbox"/>
Non-accelerated Filer	<input type="checkbox"/>	Smaller Reporting Company	<input type="checkbox"/>
		Emerging Growth Company	<input type="checkbox"/>

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

As of April 20, 2023, there were 253,946,033 shares of the registrant's Common Stock, par value \$0.01 per share, outstanding.

DISCOVER FINANCIAL SERVICES
Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2023

TABLE OF CONTENTS

Part I	FINANCIAL INFORMATION	
Item 1.	Financial Statements	1
Item 2.	Management's Discussion and Analysis of Financial Condition and Results of Operations	40
Item 3.	Quantitative and Qualitative Disclosures about Market Risk	63
Item 4.	Controls and Procedures	64
Part II	OTHER INFORMATION	
Item 1.	Legal Proceedings	66
Item 1A.	Risk Factors	66
Item 2.	Unregistered Sales of Equity Securities and Use of Proceeds	66
Item 3.	Defaults Upon Senior Securities	67
Item 4.	Mine Safety Disclosures	67
Item 5.	Other Information	67
Item 6.	Exhibits	67

Except as otherwise indicated or unless the context otherwise requires, "Discover Financial Services," "Discover," "DFS," "we," "us," "our," and "the Company" refer to Discover Financial Services and its subsidiaries. See Glossary of Acronyms, located after Part I — Item 4, for terms and abbreviations used throughout the quarterly report.

We own or have rights to use the trademarks, trade names and service marks that we use in conjunction with the operation of our business, including, but not limited to Discover®, PULSE®, Cashback Bonus®, Discover Cashback Checking®, Discover it®, Freeze it®, College Covered® and Diners Club International®. All other trademarks, trade names and service marks included in this quarterly report on Form 10-Q are the property of their respective owners.

Part I. FINANCIAL INFORMATION
Item 1. Financial Statements

DISCOVER FINANCIAL SERVICES
Condensed Consolidated Statements of Financial Condition (unaudited)
(dollars in millions, except for share amounts)

	March 31, 2023	December 31, 2022
Assets		
Cash and cash equivalents	\$ 10,130	\$ 8,856
Restricted cash	33	41
Investment securities (includes available-for-sale securities of \$12,017 and \$11,987 reported at fair value with associated amortized cost of \$12,075 and \$12,167 at March 31, 2023 and December 31, 2022, respectively)	12,248	12,208
Loan receivables		
Loan receivables	112,674	112,120
Allowance for credit losses	(7,691)	(7,374)
Net loan receivables	104,983	104,746
Premises and equipment, net	1,031	1,003
Goodwill	255	255
Other assets	4,381	4,519
Total assets	\$ 133,061	\$ 131,628
Liabilities and Stockholders' Equity		
Liabilities		
Deposits		
Interest-bearing deposit accounts	\$ 94,319	\$ 90,151
Non-interest bearing deposit accounts	1,421	1,485
Total deposits	95,740	91,636
Long-term borrowings	18,163	20,108
Accrued expenses and other liabilities	4,843	5,294
Total liabilities	118,746	117,038
Commitments, contingencies and guarantees (Notes 9, 12 and 13)		
Stockholders' Equity		
Common stock, par value \$0.01 per share; 2,000,000,000 shares authorized; 570,460,075 and 569,689,007 shares issued at March 31, 2023 and December 31, 2022, respectively	6	6
Preferred stock, par value \$0.01 per share; 200,000,000 shares authorized; 10,700 shares issued and outstanding at March 31, 2023 and December 31, 2022, respectively	1,056	1,056
Additional paid-in capital	4,493	4,468
Retained earnings	29,292	28,453
Accumulated other comprehensive loss	(235)	(339)
Treasury stock, at cost; 313,857,601 and 302,305,216 shares at March 31, 2023 and December 31, 2022, respectively	(20,297)	(19,054)
Total stockholders' equity	14,315	14,590
Total liabilities and stockholders' equity	\$ 133,061	\$ 131,628

The table below presents the carrying amounts of certain assets and liabilities of Discover Financial Services' consolidated variable interest entities ("VIEs"), which are included in the condensed consolidated statements of financial condition above. The assets in the table below include those assets that can only be used to settle obligations of the consolidated VIEs. The liabilities in the table below include third-party liabilities of consolidated VIEs only and exclude intercompany balances that eliminate in consolidation. The liabilities also exclude amounts for which creditors have recourse to the general credit of Discover Financial Services.

	March 31, 2023	December 31, 2022
Assets		
Restricted cash	\$ 33	\$ 41
Loan receivables	\$ 24,686	\$ 25,937
Allowance for credit losses allocated to securitized loan receivables	\$ (1,106)	\$ (1,152)
Other assets	\$ 4	\$ 3
Liabilities		
Long-term borrowings	\$ 9,095	\$ 10,259
Accrued expenses and other liabilities	\$ 13	\$ 14

See Notes to the Condensed Consolidated Financial Statements.

DISCOVER FINANCIAL SERVICES
Condensed Consolidated Statements of Income (unaudited)
(dollars in millions, except for share amounts)

	For the Three Months Ended March 31,	
	2023	2022
Interest income		
Credit card loans	\$ 3,321	\$ 2,268
Other loans	564	428
Investment securities	101	36
Other interest income	91	4
Total interest income	4,077	2,736
Interest expense		
Deposits	756	139
Short-term borrowings	—	1
Long-term borrowings	189	117
Total interest expense	945	257
Net interest income	3,132	2,479
Provision for credit losses	1,102	154
Net interest income after provision for credit losses	2,030	2,325
Other income		
Discount and interchange revenue, net	341	320
Protection products revenue	43	44
Loan fee income	166	140
Transaction processing revenue	67	57
Losses on equity investments	(18)	(162)
Other income	22	24
Total other income	621	423
Other expense		
Employee compensation and benefits	625	500
Marketing and business development	241	192
Information processing and communications	139	125
Professional fees	232	177
Premises and equipment	22	24
Other expense	124	112
Total other expense	1,383	1,130
Income before income taxes	1,268	1,618
Income tax expense	292	376
Net income	\$ 976	\$ 1,242
Net income allocated to common stockholders	\$ 939	\$ 1,205
Basic earnings per common share	\$ 3.58	\$ 4.23
Diluted earnings per common share	\$ 3.58	\$ 4.22

See Notes to the Condensed Consolidated Financial Statements.

DISCOVER FINANCIAL SERVICES
Condensed Consolidated Statements of Comprehensive Income (unaudited)
(dollars in millions)

	For the Three Months Ended March 31,	
	2023	2022
Net income	\$ 976	\$ 1,242
Other comprehensive income (loss), net of tax		
Unrealized gains (losses) on available-for-sale investment securities, net of tax	92	(121)
Unrealized gains on cash flow hedges, net of tax	12	2
Other comprehensive income (loss)	104	(119)
Comprehensive income	\$ 1,080	\$ 1,123

See Notes to the Condensed Consolidated Financial Statements.

DISCOVER FINANCIAL SERVICES
Condensed Consolidated Statements of Changes in Stockholders' Equity (unaudited)
(dollars in millions, shares in thousands)

	Preferred Stock		Common Stock		Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Treasury Stock	Total Stockholders' Equity
	Shares	Amount	Shares	Amount					
For the Three Months Ended March 31, 2022									
Balance at December 31, 2021	11	\$ 1,056	568,831	\$ 6	\$ 4,369	\$ 24,766	\$ (94)	\$ (16,695)	\$ 13,408
Net income	—	—	—	—	—	1,242	—	—	1,242
Other comprehensive loss	—	—	—	—	—	—	(119)	—	(119)
Purchases of treasury stock	—	—	—	—	—	—	—	(944)	(944)
Common stock issued under employee benefit plans	—	—	22	—	2	—	—	—	2
Common stock issued and stock-based compensation expense	—	—	651	—	19	—	—	—	19
Dividends — common stock (\$0.50 per share)	—	—	—	—	—	(144)	—	—	(144)
Dividends — Series C preferred stock (\$2,750 per share)	—	—	—	—	—	(16)	—	—	(16)
Dividends — Series D preferred stock (\$3,062.50 per share)	—	—	—	—	—	(15)	—	—	(15)
Balance at March 31, 2022	11	\$ 1,056	569,504	\$ 6	\$ 4,390	\$ 25,833	\$ (213)	\$ (17,639)	\$ 13,433
For the Three Months Ended March 31, 2023									
Balance at December 31, 2022	11	\$ 1,056	569,689	\$ 6	\$ 4,468	\$ 28,453	\$ (339)	\$ (19,054)	\$ 14,590
Cumulative effect of ASU No. 2022-02 adoption	—	—	—	—	—	52	—	—	52
Net income	—	—	—	—	—	976	—	—	976
Other comprehensive income	—	—	—	—	—	—	104	—	104
Purchases of treasury stock	—	—	—	—	—	—	—	(1,243)	(1,243)
Common stock issued under employee benefit plans	—	—	29	—	3	—	—	—	3
Common stock issued and stock-based compensation expense	—	—	742	—	22	—	—	—	22
Dividends — common stock (\$0.60 per share)	—	—	—	—	—	(158)	—	—	(158)
Dividends — Series C preferred stock (\$2,750 per share)	—	—	—	—	—	(16)	—	—	(16)
Dividends — Series D preferred stock (\$3,062.50 per share)	—	—	—	—	—	(15)	—	—	(15)
Balance at March 31, 2023	11	\$ 1,056	570,460	\$ 6	\$ 4,493	\$ 29,292	\$ (235)	\$ (20,297)	\$ 14,315

See Notes to the Condensed Consolidated Financial Statements.

DISCOVER FINANCIAL SERVICES
Condensed Consolidated Statements of Cash Flows (unaudited)
(dollars in millions)

	For the Three Months Ended March 31,	
	2023	2022
Cash flows provided by operating activities		
Net income	\$ 976	\$ 1,242
Adjustments to reconcile net income to net cash provided by operating activities:		
Provision for credit losses	1,102	154
Deferred income taxes	(112)	(10)
Depreciation and amortization	129	139
Amortization of deferred revenues	(105)	(76)
Net losses on investments and other assets	30	173
Other, net	25	20
Changes in assets and liabilities:		
Decrease (increase) in other assets	133	(127)
(Decrease) increase in accrued expenses and other liabilities	(387)	219
Net cash provided by operating activities	<u>1,791</u>	<u>1,734</u>
Cash flows provided by (used for) investing activities		
Maturities of available-for-sale investment securities	402	769
Purchases of available-for-sale investment securities	(285)	—
Maturities of held-to-maturity investment securities	3	12
Purchases of held-to-maturity investment securities	(13)	(14)
Net change in principal on loans originated for investment	(1,245)	(103)
Proceeds from the sale of other investments	1	71
Purchases of other investments	(16)	(23)
Purchases of premises and equipment	(76)	(51)
Net cash (used for) provided by investing activities	<u>(1,229)</u>	<u>661</u>
Cash flows provided by (used for) financing activities		
Net change in short-term borrowings	—	(1,750)
Net change in deposits	4,088	82
Proceeds from issuance of securitized debt	—	1,242
Maturities and repayment of securitized debt	(1,180)	(2,556)
Maturities and repayments of other long-term borrowings	(800)	—
Proceeds from issuance of common stock	3	2
Purchases of treasury stock	(1,232)	(944)
Dividends paid on common and preferred stock	(175)	(160)
Net cash provided by (used for) financing activities	<u>704</u>	<u>(4,084)</u>
Net increase (decrease) in cash, cash equivalents and restricted cash	1,266	(1,689)
Cash, cash equivalents and restricted cash, at the beginning of the period	8,897	11,332
Cash, cash equivalents and restricted cash, at the end of the period	<u>\$ 10,163</u>	<u>\$ 9,643</u>
Reconciliation of cash, cash equivalents and restricted cash		
Cash and cash equivalents	\$ 10,130	\$ 9,625
Restricted cash	33	18
Cash, cash equivalents and restricted cash, at the end of the period	<u>\$ 10,163</u>	<u>\$ 9,643</u>

See Notes to the Condensed Consolidated Financial Statements.

**Notes to the Condensed Consolidated Financial Statements
(unaudited)**

1. Background and Basis of Presentation

Description of Business

Discover Financial Services ("DFS" or the "Company") is a digital banking and payment services company. The Company is a bank holding company under the Bank Holding Company Act of 1956 and a financial holding company under the Gramm-Leach-Bliley Act. Therefore, the Company is subject to oversight, regulation and examination by the Board of Governors of the Federal Reserve System (the "Federal Reserve"). The Company provides digital banking products and services and payment services through its subsidiaries. The Company offers its customers credit card loans, private student loans, personal loans, home loans and deposit products. The Company also operates the Discover Network, the PULSE network ("PULSE") and Diners Club International ("Diners Club"), collectively known as the Discover Global Network. The Discover Network processes transactions for Discover-branded credit and debit cards and provides payment transaction processing and settlement services. PULSE operates an electronic funds transfer network, providing financial institutions issuing debit cards on the PULSE network with access to ATMs domestically and internationally, as well as merchant acceptance throughout the United States of America ("U.S.") for debit card transactions. Diners Club is a global payments network of licensees, which are generally financial institutions, that issue Diners Club branded credit and charge cards and/or provide card acceptance services.

The Company manages its business activities in two segments, Digital Banking and Payment Services, based on the products and services provided. See Note 16: Segment Disclosures for a detailed description of each segment's operations and the allocation conventions used in business segment reporting.

Basis of Presentation

The accompanying condensed consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the U.S. ("GAAP") for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, they do not include all of the information and footnotes required by GAAP for complete consolidated financial statements. In the opinion of management, the financial statements reflect all adjustments necessary for the fair presentation of results for the interim period. All such adjustments are of a normal, recurring nature. The preparation of financial statements in conformity with GAAP requires the Company to make estimates and assumptions that affect the amounts reported in the condensed consolidated financial statements and related disclosures. These estimates are based on information available as of the date of the condensed consolidated financial statements. The Company believes that the estimates used in the preparation of the condensed consolidated financial statements are reasonable. Actual results could differ from these estimates. These interim condensed consolidated financial statements should be read in conjunction with the Company's 2022 audited consolidated financial statements filed with the Company's annual report on Form 10-K for the year ended December 31, 2022.

Recently Issued Accounting Pronouncement (Not Yet Adopted)

In March 2023, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2023-02, *Investments—Equity Method and Joint Ventures (Topic 323): Accounting for Investments in Tax Credit Structures Using the Proportional Amortization Method*. The ASU expands the use of the proportional amortization method of accounting for tax credit investments. Currently, the method is limited to Low Income Housing Tax Credit investments. Under the amended guidance, use of proportional amortization will be available to any qualifying tax credit investments, including but not limited to investments in New Markets Tax Credit and Renewable Energy Tax Credit programs. The amendments in the ASU are to be applied on a retrospective or modified retrospective basis. The ASU is effective for the Company on January 1, 2024. Management does not expect the amendments to have a material impact on the Company's consolidated financial statements.

Recently Adopted Accounting Pronouncement

In March 2022, the FASB issued ASU No. 2022-02, *Financial Instruments—Credit Losses (Topic 326): Troubled Debt Restructurings and Vintage Disclosures*. The ASU eliminates the troubled debt restructuring ("TDR") recognition and measurement guidance and enhances disclosures for modifications of receivables to borrowers experiencing financial difficulty. Under ASU 2022-02, the use of a discounted cash flow method is no longer required when measuring expected credit losses on modified loans. The ASU also refines existing credit-related disclosures by requiring disclosure of current-

period gross charge-offs of receivables by year of origination. The amendments in the ASU are to be applied prospectively to modifications and disclosures of gross charge-offs; however, adoption on a modified retrospective basis is permitted for the effect on the allowance for credit losses related to the elimination of the TDR recognition and measurement guidance. The ASU became effective for the Company on January 1, 2023. Upon adoption, the Company recorded an adjustment to reduce the beginning balance of its allowance for credit losses by \$68 million to reflect the elimination of the measurement guidance related to TDRs with an offsetting increase, net of tax, to beginning retained earnings.

2. Investments

The Company's investment securities consist of the following (dollars in millions):

	March 31, 2023	December 31, 2022
U.S. Treasury ⁽¹⁾ and U.S. GSE ⁽²⁾ securities	\$ 11,474	\$ 11,423
Residential mortgage-backed securities - Agency ⁽³⁾	774	785
Total investment securities	\$ 12,248	\$ 12,208

(1) Includes \$132 million and \$97 million of U.S. Treasury securities pledged as swap collateral as of March 31, 2023 and December 31, 2022, respectively.

(2) Consists of a security issued by the Federal Home Loan Bank.

(3) Consists of securities issued by Fannie Mae, Freddie Mac, or Ginnie Mae.

The amortized cost, gross unrealized gains and losses and fair value of available-for-sale and held-to-maturity investment securities are as follows (dollars in millions):

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
At March 31, 2023				
Available-for-Sale Investment Securities⁽¹⁾				
U.S. Treasury and U.S. GSE securities	\$ 11,515	\$ 74	\$ (115)	\$ 11,474
Residential mortgage-backed securities - Agency	560	—	(17)	543
Total available-for-sale investment securities	\$ 12,075	\$ 74	\$ (132)	\$ 12,017
Held-to-Maturity Investment Securities⁽²⁾				
Residential mortgage-backed securities - Agency ⁽³⁾	\$ 231	\$ —	\$ (19)	\$ 212
Total held-to-maturity investment securities	\$ 231	\$ —	\$ (19)	\$ 212
At December 31, 2022				
Available-for-Sale Investment Securities⁽¹⁾				
U.S. Treasury and U.S. GSE securities	\$ 11,580	\$ 21	\$ (178)	\$ 11,423
Residential mortgage-backed securities - Agency	587	—	(23)	564
Total available-for-sale investment securities	\$ 12,167	\$ 21	\$ (201)	\$ 11,987
Held-to-Maturity Investment Securities⁽²⁾				
Residential mortgage-backed securities - Agency ⁽³⁾	\$ 221	\$ —	\$ (22)	\$ 199
Total held-to-maturity investment securities	\$ 221	\$ —	\$ (22)	\$ 199

(1) Available-for-sale investment securities are reported at fair value.

(2) Held-to-maturity investment securities are reported at amortized cost.

(3) Amounts represent residential mortgage-backed securities ("RMBS") that were classified as held-to-maturity as they were entered into as a part of the Company's community reinvestment initiatives.

The Company invests in U.S. Treasury obligations and securities issued by government agencies and government-sponsored enterprises of the U.S. ("U.S. GSEs"), which have long histories with no credit losses and are explicitly or implicitly guaranteed by the U.S. federal government. Therefore, management has concluded that there is no expectation of non-payment on its investment securities and does not record an allowance for credit losses on these investments. In addition, the Company does not have the intent to sell any available-for-sale securities with an unrealized loss position and does not believe it is more likely than not that it will be required to sell any such security before recovery of its amortized cost basis.

The following table provides information about available-for-sale investment securities with aggregate gross unrealized losses and the length of time that individual investment securities have been in a continuous unrealized loss position (dollars in millions):

	Number of Securities in a Loss Position	Less than 12 months		More than 12 months	
		Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
At March 31, 2023					
Available-for-Sale Investment Securities					
U.S. Treasury and U.S. GSE securities	52	\$ 3,614	\$ (45)	\$ 1,928	\$ (70)
Residential mortgage-backed securities - Agency	34	\$ 456	\$ (13)	\$ 86	\$ (4)
At December 31, 2022					
Available-for-Sale Investment Securities					
U.S. Treasury and U.S. GSE securities	123	\$ 9,060	\$ (175)	\$ 106	\$ (3)
Residential mortgage-backed securities - Agency	34	\$ 559	\$ (22)	\$ 5	\$ (1)

There were no proceeds from sales or recognized gains or losses on available-for-sale securities during the three months ended March 31, 2023 and 2022. See Note 8: Accumulated Other Comprehensive Income for unrealized gains and losses on available-for-sale securities during the three months ended March 31, 2023 and 2022.

Maturities of available-for-sale debt securities and held-to-maturity debt securities are provided in the following table (dollars in millions):

	One Year or Less	After One Year Through Five Years	After Five Years Through Ten Years	After Ten Years	Total
At March 31, 2023					
Available-for-Sale Investment Securities — Amortized Cost					
U.S. Treasury and U.S. GSE securities	\$ 1,850	\$ 9,113	\$ 552	\$ —	\$ 11,515
Residential mortgage-backed securities - Agency ⁽¹⁾	—	79	55	426	560
Total available-for-sale investment securities	\$ 1,850	\$ 9,192	\$ 607	\$ 426	\$ 12,075
Held-to-Maturity Investment Securities — Amortized Cost					
Residential mortgage-backed securities - Agency ⁽¹⁾	\$ —	\$ —	\$ —	\$ 231	\$ 231
Total held-to-maturity investment securities	\$ —	\$ —	\$ —	\$ 231	\$ 231
Available-for-Sale Investment Securities — Fair Values					
U.S. Treasury and U.S. GSE securities	\$ 1,828	\$ 9,085	\$ 561	\$ —	\$ 11,474
Residential mortgage-backed securities - Agency ⁽¹⁾	—	75	54	414	543
Total available-for-sale investment securities	\$ 1,828	\$ 9,160	\$ 615	\$ 414	\$ 12,017
Held-to-Maturity Investment Securities — Fair Values					
Residential mortgage-backed securities - Agency ⁽¹⁾	\$ —	\$ —	\$ —	\$ 212	\$ 212
Total held-to-maturity investment securities	\$ —	\$ —	\$ —	\$ 212	\$ 212

(1) Maturities of RMBS are reflective of the contractual maturities of the investment.

Other Investments

As a part of the Company's community reinvestment initiatives, the Company has made equity investments in certain limited partnerships and limited liability companies that finance the construction and rehabilitation of affordable rental housing and stimulate economic development in low- to moderate-income communities. These investments are accounted for using the equity method of accounting and are recorded within other assets. The related commitment for future investments is recorded in accrued expenses and other liabilities within the condensed consolidated statements of financial condition. The portion of each investment's operating results allocable to the Company reduces the carrying value of the investments and is recorded in other expense within the condensed consolidated statements of income. The Company further reduces the carrying value of the investments by recognizing any amounts that are in excess of future net tax benefits in other expense. The Company earns a return primarily through tax credits allocated to the affordable housing projects and the community revitalization projects. The Company does not consolidate these investments as the Company does not have a controlling financial interest in the investee entities. As of March 31, 2023 and December 31, 2022, the Company had outstanding

investments in these entities of \$406 million and \$416 million, respectively, and related contingent liabilities for unconditional and legally binding delayed equity contributions of \$97 million and \$111 million, respectively. Of the above outstanding equity investments, the Company had \$368 million and \$375 million of investments related to affordable housing projects as of March 31, 2023 and December 31, 2022, respectively, which had \$91 million and \$100 million of related contingent liabilities for unconditional and legally binding delayed equity contributions, respectively.

The Company holds non-controlling equity positions in several payment services entities. Most of these investments are not subject to equity method accounting because the Company does not have significant influence over the investee. The common or preferred equity securities that the Company holds typically do not have readily determinable fair values. As a result, the majority of these investments are carried at cost minus impairment, if any. As of March 31, 2023 and December 31, 2022, the carrying value of these investments, which are recorded within other assets on the Company's condensed consolidated statements of financial condition, was \$31 million and \$39 million, respectively.

The Company also holds non-controlling equity positions in payment services entities that have publicly traded stock and therefore have readily determinable fair values. As a result, these investments are carried at fair value based on the quoted share prices. As of March 31, 2023 and December 31, 2022, the carrying value of these investments, which are recorded within other assets on the Company's condensed consolidated statements of financial condition, was \$31 million and \$41 million, respectively. During the three months ended March 31, 2023, the Company recognized an immaterial net loss on the condensed consolidated statements of income related to these investments. The Company recognized a net loss of \$165 million during the three months ended March 31, 2022.

3. Loan Receivables

The Company has two loan portfolio segments: credit card loans and other loans.

The Company's classes of receivables within the two portfolio segments are depicted in the following table (dollars in millions):

	March 31, 2023	December 31, 2022
Credit card loans ⁽¹⁾⁽²⁾	\$ 89,755	\$ 90,113
Other loans ⁽³⁾		
Private student loans ⁽⁴⁾	10,480	10,308
Personal loans	8,374	7,998
Other loans	4,065	3,701
Total other loans	22,919	22,007
Total loan receivables	112,674	112,120
Allowance for credit losses	(7,691)	(7,374)
Net loan receivables	\$ 104,983	\$ 104,746

(1) Amounts include carrying values of \$12.2 billion and \$13.5 billion underlying investors' interest in trust debt at March 31, 2023 and December 31, 2022, respectively, and \$12.3 billion and \$12.2 billion in seller's interest at March 31, 2023 and December 31, 2022, respectively. See Note 4: Credit Card and Private Student Loan Securitization Activities for additional information.

(2) Unbilled accrued interest receivable on credit card loans, which is presented as part of other assets in the Company's condensed consolidated statements of financial condition, was \$628 million and \$611 million at March 31, 2023 and December 31, 2022, respectively.

(3) Accrued interest receivable on private student, personal and other loans, which is presented as part of other assets in the Company's condensed consolidated statements of financial condition, was \$501 million, \$52 million and \$12 million, respectively, at March 31, 2023 and \$468 million, \$49 million and \$11 million, respectively, at December 31, 2022.

(4) At March 31, 2023 and December 31, 2022, there were \$6.0 billion of private student loans in repayment.

Credit Quality Indicators

As part of credit risk management activities, on an ongoing basis, the Company reviews information related to the performance of a customer's account with the Company and information from credit bureaus, such as FICO or other credit scores, relating to the customer's broader credit performance. The Company actively monitors key credit quality indicators, including FICO scores and delinquency status, for credit card, private student and personal loans. These indicators are important to understand the overall credit performance of the Company's customers and their ability to repay.

FICO scores are generally obtained at the origination of the account and are refreshed monthly or quarterly thereafter to assist in predicting customer behavior. Historically, the Company has noted that accounts with FICO scores below 660 have larger delinquencies and credit losses than those with higher credit scores.

The following table provides the distribution of the amortized cost basis (excluding accrued interest receivable presented in other assets) by the most recent FICO scores available for the Company's customers for credit card, private student and personal loan receivables (dollars in millions):

	Credit Risk Profile by FICO Score							
	March 31, 2023				December 31, 2022			
	660 and Above		Less than 660 or No Score		660 and Above		Less than 660 or No Score	
	\$	%	\$	%	\$	%	\$	%
Credit card loans	\$ 72,515	81 %	\$ 17,240	19 %	\$ 73,827	82 %	\$ 16,286	18 %
Private student loans by origination year ⁽¹⁾⁽²⁾								
2023	\$ 171	98 %	\$ 4	2 %				
2022	1,560	94 %	104	6 %	\$ 1,172	94 %	\$ 77	6 %
2021	1,612	95 %	84	5 %	1,668	95 %	81	5 %
2020	1,304	95 %	67	5 %	1,365	95 %	65	5 %
2019	1,162	94 %	68	6 %	1,221	95 %	67	5 %
Prior	4,060	93 %	284	7 %	4,306	94 %	286	6 %
Total private student loans	\$ 9,869	94 %	\$ 611	6 %	\$ 9,732	94 %	\$ 576	6 %
Personal loans by origination year								
2023	\$ 1,317	100 %	\$ 6	— %				
2022	3,834	97 %	119	3 %	\$ 4,270	98 %	\$ 77	2 %
2021	1,699	95 %	97	5 %	1,958	96 %	91	4 %
2020	653	94 %	39	6 %	790	95 %	40	5 %
2019	355	91 %	33	9 %	444	92 %	38	8 %
Prior	188	85 %	34	15 %	249	86 %	41	14 %
Total personal loans	\$ 8,046	96 %	\$ 328	4 %	\$ 7,711	96 %	\$ 287	4 %

(1) A majority of private student loan originations occur in the third quarter and disbursements can span multiple calendar years.

(2) FICO score represents the higher credit score of the cosigner or borrower.

Delinquencies are an indicator of credit quality at a point in time. A loan balance is considered delinquent when contractual payments on the loan become 30 days past due.

The amortized cost basis (excluding accrued interest receivable presented in other assets) of delinquent loans in the Company's loan portfolio is shown below for credit card, private student and personal loan receivables (dollars in millions):

	March 31, 2023			December 31, 2022		
	30-89 Days Delinquent	90 or More Days Delinquent	Total Past Due	30-89 Days Delinquent	90 or More Days Delinquent	Total Past Due
Credit card loans	\$ 1,273	\$ 1,204	\$ 2,477	\$ 1,250	\$ 1,028	\$ 2,278
Private student loans by origination year ⁽¹⁾						
2023	\$ —	\$ —	\$ —			
2022	2	1	3	\$ —	\$ —	\$ —
2021	8	5	13	6	1	7
2020	13	6	19	14	3	17
2019	18	7	25	19	5	24
Prior	116	35	151	128	36	164
Total private student loans	\$ 157	\$ 54	\$ 211	\$ 167	\$ 45	\$ 212
Personal loans by origination year						
2023	\$ —	\$ —	\$ —			
2022	22	6	28	\$ 12	\$ 3	\$ 15
2021	18	6	24	15	6	21
2020	7	2	9	8	2	10
2019	5	3	8	6	2	8
Prior	5	2	7	6	3	9
Total personal loans	\$ 57	\$ 19	\$ 76	\$ 47	\$ 16	\$ 63

(1) Private student loans may include a deferment period, during which borrowers are not required to make payments while enrolled in school at least half time as determined by the school. During a deferment period, these loans do not advance into delinquency.

Allowance for Credit Losses

The following tables provide changes in the Company's allowance for credit losses (dollars in millions):

	For the Three Months Ended March 31, 2023				
	Credit Card Loans	Private Student Loans	Personal Loans	Other Loans	Total Loans
Balance at December 31, 2022	\$ 5,883	\$ 839	\$ 595	\$ 57	\$ 7,374
Cumulative effect of ASU No. 2022-02 adoption ⁽¹⁾	(66)	—	(2)	—	(68)
Balance at January 1, 2023	5,817	839	593	57	7,306
Additions					
Provision for credit losses ⁽²⁾	1,002	60	68	5	1,135
Deductions					
Charge-offs	(879)	(33)	(54)	—	(966)
Recoveries	195	6	15	—	216
Net charge-offs	(684)	(27)	(39)	—	(750)
Balance at March 31, 2023	\$ 6,135	\$ 872	\$ 622	\$ 62	\$ 7,691
	For the Three Months Ended March 31, 2022				
	Credit Card Loans	Private Student Loans	Personal Loans	Other Loans	Total Loans
Balance at December 31, 2021	\$ 5,273	\$ 843	\$ 662	\$ 44	\$ 6,822
Additions					
Provision for credit losses ⁽²⁾	178	45	(30)	—	193
Deductions					
Charge-offs	(541)	(24)	(38)	—	(603)
Recoveries	210	6	19	—	235
Net charge-offs	(331)	(18)	(19)	—	(368)
Balance at March 31, 2022	\$ 5,120	\$ 870	\$ 613	\$ 44	\$ 6,647

(1) Represents the adjustment to the allowance for credit losses as a result of the adoption of ASU No. 2022-02 on January 1, 2023, which eliminated the requirement to apply discounted cash flow measurements for certain troubled debt restructurings.

(2) Excludes a \$33 million and \$39 million adjustment of the liability for expected credit losses on unfunded commitments for the three months ended March 31, 2023 and 2022, respectively, as the liability is recorded in accrued expenses and other liabilities in the Company's condensed consolidated statements of financial condition.

The allowance for credit losses was approximately \$7.7 billion at March 31, 2023, which reflects a \$385 million build over December 31, 2022. The build in the allowance for credit losses for the three months ended March 31, 2023 was primarily driven by a modestly more pessimistic economic outlook and growth in revolving loan balances.

The allowance estimation process begins with a loss forecast that uses certain macroeconomic variables and multiple macroeconomic scenarios among its inputs. In estimating the allowance at March 31, 2023, the Company used a macroeconomic forecast that projected the following weighted average amounts:

(i) unemployment rate ending 2023 at 4.7% and peaking at 4.8% in early 2024 and (ii) 0.96% growth rate in real gross domestic product in 2023.

In estimating expected credit losses, the Company considered the uncertainties associated with borrower behavior and payment trends, as well as recent and expected macroeconomic conditions, such as high consumer price inflation and the fiscal and monetary policy responses to that inflation. The Federal Reserve raised its federal funds rate target range substantially during 2022 in an effort to slow economic growth and reduce inflation. Most economists and financial market participants expect U.S. economic growth and inflation to continue to slow during 2023 as the economy responds to the lagged effects of tighter monetary policy and credit conditions, which may contract further after the failure of two domestic banks in March.

The forecast period the Company deemed to be reasonable and supportable was 18 months for all periods presented. The 18 months reasonable and supportable forecast period was deemed appropriate given the current economic conditions. For all periods presented, the Company determined that a reversion period of 12 months was appropriate for the same reason. The Company applied a weighted reversion method to provide a more reasonable transition to historical losses for all loan products for all periods presented.

The net charge-offs for credit card loans increased for the three months ended March 31, 2023, when compared to the three months ended March 31, 2022, primarily due to continued credit normalization and the seasoning of vintages from the past two years. The net charge-offs for private student and personal loans increased for the three months ended March 31, 2023, when compared to the three months ended March 31, 2022, primarily due to continued credit normalization.

Net charge-offs of principal are recorded against the allowance for credit losses, as shown in the preceding table. Information regarding net charge-offs of interest and fee revenues on credit card and other loans is as follows (dollars in millions):

	For the Three Months Ended March 31,	
	2023	2022
Interest and fees accrued subsequently charged-off, net of recoveries (recorded as a reduction of interest income)	\$ 128	\$ 66
Fees accrued subsequently charged-off, net of recoveries (recorded as a reduction to other income)	\$ 41	\$ 21

Gross principal charge-offs of the Company's loan portfolio are presented in the table below, on a year-to-date basis, for credit card, private student and personal loan receivables (dollars in millions):

	For the Three Months Ended March 31,	
	2023	
Credit card loans	\$	879
Private student loans by origination year		
2023	\$	—
2022		—
2021		2
2020		5
2019		5
Prior		21
Total private student loans	\$	33
Personal loans by origination year		
2023	\$	—
2022		16
2021		18
2020		9
2019		7
Prior		4
Total personal loans	\$	54

Delinquent and Non-Accruing Loans

The amortized cost basis (excluding accrued interest receivable presented in other assets) of delinquent and non-accruing loans in the Company's loan portfolio is shown below for each class of loan receivables (dollars in millions):⁽¹⁾

	30-89 Days Delinquent	90 or More Days Delinquent	Total Past Due	90 or More Days Delinquent and Accruing	Total Non-accruing ⁽²⁾
At March 31, 2023					
Credit card loans	\$ 1,273	\$ 1,204	\$ 2,477	\$ 1,154	\$ 219
Other loans					
Private student loans	157	54	211	54	8
Personal loans	57	19	76	18	8
Other loans	14	13	27	1	25
Total other loans	228	86	314	73	41
Total loan receivables	\$ 1,501	\$ 1,290	\$ 2,791	\$ 1,227	\$ 260
At December 31, 2022					
Credit card loans	\$ 1,250	\$ 1,028	\$ 2,278	\$ 1,003	\$ 176
Other loans					
Private student loans	167	45	212	45	8
Personal loans	47	16	63	16	7
Other loans	13	12	25	1	23
Total other loans	227	73	300	62	38
Total loan receivables	\$ 1,477	\$ 1,101	\$ 2,578	\$ 1,065	\$ 214

(1) The payment status of both modified and unmodified loans is included in this table.

(2) The Company estimates that the gross interest income that would have been recorded under the original terms of non-accruing credit card loans was \$8 million and \$6 million for the three months ended March 31, 2023 and 2022, respectively. The Company does not separately track the amount of gross interest income that would have been recorded under the original terms of loans. Instead, the Company estimated this amount based on customers' current balances and most recent interest rates.

Loan Modifications to Borrowers Experiencing Financial Difficulty

The Company has internal loan modification programs that provide relief to credit card, private student and personal loan borrowers who are experiencing financial hardship. The internal loan modification programs include both temporary and permanent programs, which vary by product. External loan modification programs, through third party consumer credit counseling agencies, are also available for credit card and personal loans. Those programs feature interest rate reductions, payment delays, term extensions, or a combination thereof.

For credit card customers, the Company offers both temporary and permanent hardship programs. The temporary hardship programs consist of an interest rate reduction lasting for a period no longer than 12 months. Charging privileges on these accounts are generally suspended while in the program. However, if the customer meets certain criteria, charging privileges may be reinstated following completion of the program.

The permanent modification program involves closing the account, changing the structure of the loan to a fixed payment loan with a maturity no longer than 72 months and reducing the interest rate on the loan. The permanent modification program does not typically provide for the forgiveness of unpaid principal, but may allow for the reversal of certain unpaid interest or fee assessments. The Company also makes permanent loan modifications for customers who request financial assistance through external sources, such as a consumer credit counseling agency program. These loans typically receive a reduced interest rate, typically continue to be subject to the original minimum payment terms and do not normally include waiver of unpaid principal, interest or fees.

To assist private student loan borrowers who are experiencing temporary financial difficulties but are willing to resume making payments, the Company may offer a payment delay (in the form of hardship forbearance or a temporary payment reduction), or a temporary interest rate reduction. Typically programs are offered up to six consecutive months at one time with a lifetime usage cap, most commonly, of 12 months.

For personal loan customers, the Company offers various payment programs, including temporary and permanent programs, in certain situations. The temporary programs normally consist of reducing the minimum payment for no longer than 12 months and, in certain circumstances, the interest rate on the loan is reduced. The permanent programs involve extending the loan term and, in certain circumstances, reducing the interest rate on the loan. The total term of the loan, including modification, may not exceed nine years. The Company also allows permanent loan modifications for customers who request financial assistance through external sources, similar to the credit card customers discussed above. Payments are modified based on the new terms agreed upon with the credit counseling agency.

In addition to the programs described above, the Company will in certain cases accept partial payment in full satisfaction of the outstanding receivable. This is a form of principal forgiveness also known as a settlement. The difference between the loan balance and the amount received in settlement is recorded as a charge-off.

The Company monitors borrower performance after using payment programs or forbearance. The Company believes the programs are useful in assisting customers experiencing financial difficulties and allowing them to make timely payments. In addition to helping customers with their credit needs, these programs are designed to maximize collections and ultimately the Company's profitability. The Company plans to continue to use payment programs to provide relief to customers experiencing financial difficulties.

ASU No. 2022-02, *Financial Instruments—Credit Losses (Topic 326): Troubled Debt Restructurings and Vintage Disclosures*, became effective for the Company on January 1, 2023. The new guidance eliminated Subtopic 310-40, *Troubled Debt Restructurings*, and implemented enhanced disclosure requirements regarding loan modifications to borrowers experiencing financial difficulty. The new disclosures are required to be applied on a prospective basis. There will be no comparative disclosures to prior periods until such time as both periods disclosed are subject to the new guidance.

The following table provides the period-end amortized cost basis, by modification category, of loans to borrowers experiencing financial difficulty that entered a modification program during the period (dollars in millions). Some of the loans presented in the table below may no longer be enrolled in a program at period-end:

	For the Three Months Ended March 31,	
	2023	
Credit card loans⁽¹⁾⁽²⁾		
Interest rate reduction	\$	632
Total credit card loans ⁽³⁾	\$	632
% of total class of financing receivables		0.70 %
Private student loans⁽¹⁾		
Payment delay ⁽⁴⁾	\$	3
Interest rate reduction and payment delay ⁽⁴⁾		29
Total private student loans ⁽³⁾	\$	32
% of total class of financing receivables		0.04 %
Personal loans⁽¹⁾		
Payment delay ⁽⁴⁾	\$	2
Term extension ⁽⁵⁾		8
Interest rate reduction and payment delay ⁽⁴⁾		14
Interest rate reduction and term extension ⁽⁵⁾		6
Total personal loans ⁽³⁾	\$	30
% of total class of financing receivables		0.36 %

- (1) Accrued interest receivable (including unbilled accrued interest receivable for credit card loans) on modified loans to borrowers experiencing financial difficulty, which is presented as part of other assets in the Company's condensed consolidated statements of financial condition, was immaterial at March 31, 2023.
- (2) Accounts that entered a credit card loan modification program include \$118 million that were converted from revolving line-of-credit arrangements to term loans during the three months ended March 31, 2023.
- (3) For settlements, the amortized cost basis is zero at period-end and therefore there is no amount reported for principal forgiveness in the table above. See financial effects table below for principal forgiveness to borrowers experiencing financial difficulty.
- (4) The Company defines a payment delay as a temporary reduction in payments below the original contractually required payment amounts (e.g., interest only payments). The Company's credit card loan modification programs do not result in an other than insignificant delay in payment.
- (5) The Company defines term extensions as only those modifications for which the maturity date is extended beyond the original contractual maturity date by virtue of a change in terms other than a payment delay as defined above. Modifications to credit card loans are not considered term extensions because credit card loans do not have a fixed repayment term.

The only non-cancellable commitments the Company has to lend additional funds to borrowers experiencing financial difficulty relate to certain private student loans. As of March 31, 2023, the amount of such commitments was immaterial.

The following table provides information on the financial effects of loan modifications to borrowers experiencing financial difficulty, by modification type, made during the period (dollars in millions):

	For the Three Months Ended March 31,	
	2023	
Credit card loans		
Weighted-average interest rate reduction		13.38 %
Principal forgiven		NM
Interest and fees forgiven ⁽¹⁾	\$	12
Private student loans		
Weighted-average interest rate reduction		8.02 %
Payment delay duration (in months) ⁽²⁾		6 to 12
Principal forgiven	\$	—
Personal loans		
Weighted-average interest rate reduction		11.55 %
Weighted-average term extension (in months)		38
Payment delay duration (in months) ⁽²⁾		6 to 12
Principal forgiven	\$	—

(1) Represents the amount of interest and fees forgiven resulting from accounts entering into a credit card loan modification program.

(2) For private student loan payment delays, the Company offers up to six consecutive months of delay and most commonly limits assistance to a life of loan maximum of 12 months. For personal loan payment delays, the Company limits this assistance to a life of loan maximum of 12 months.

Loan receivables that have been modified are subject to the same requirements for the accrual of expected credit loss over their expected remaining lives as for unmodified loans. The allowance for credit losses incorporates modeling of historical loss data and thereby captures the higher risk associated with modified loans to borrowers experiencing financial difficulty based on their account attributes.

The following table presents the payment status and period-end amortized cost basis, by class of loan receivable, of loans that were modified on or after January 1, 2023 to borrowers experiencing financial difficulty (dollars in millions):

	Current	30-89 Days Delinquent	90 or More Days Delinquent
At March 31, 2023			
Credit card loans	\$ 469	\$ 96	\$ 67
Private student loans	31	1	—
Personal loans	26	4	—
Total	<u>\$ 526</u>	<u>\$ 101</u>	<u>\$ 67</u>

The period-end amortized cost basis of loans modified on or after January 1, 2023 to borrowers experiencing financial difficulty which subsequently defaulted was immaterial for the three months ended March 31, 2023, for all classes of loan receivables. For purposes of this disclosure, a loan is considered to be defaulted when it is 60 days or more delinquent at month end. Loans that entered a modification program in any stage of delinquency but did not experience a further payment default are included in the aging table above but are not counted as defaulted for purposes of this disclosure.

Troubled Debt Restructurings (Prior to 2023)

Prior to the adoption of ASU 2022-02, the Company considered a modified loan in which a concession had been granted to the borrower to be a TDR based generally on the cumulative length of the concession period and credit quality of the borrower. Due to differences between the legacy TDR requirements and current loan modification disclosure requirements, information presented in the disclosures below is not directly comparable to the disclosures under the current guidance.

To evaluate the primary financial effects that resulted from credit card loans entering into a TDR program during the three months ended March 31, 2022, the Company quantified the amount by which interest and fees were reduced during the periods. During the three months ended March 31, 2022, the Company forgave approximately \$7 million of interest and fees resulting from accounts entering into a credit card loan TDR program.

The following table provides information on loans that entered a TDR program during the period (dollars in millions):

	For the Three Months Ended March 31, 2022	
	Number of Accounts	Balances
Accounts that entered a TDR program during the period		
Credit card loans ⁽¹⁾	54,511	\$ 344
Private student loans	1,755	\$ 31
Personal loans	1,159	\$ 15

(1) Accounts that entered a credit card TDR program include \$75 million that were converted from revolving line-of-credit arrangements to term loans during the three months ended March 31, 2022.

The number and balance of enrollments in credit card and private student loan modification programs designated as TDRs increased during the three months ended March 31, 2022, when compared to the same period in 2021. The number and balance of enrollments in personal loan modification programs designated as TDRs decreased during the three months ended March 31, 2022, when compared to the same period in 2021, primarily due to tighter underwriting standards that the Company implemented in early 2020.

The following table presents the carrying value of loans that experienced a default during the period that had been modified in a TDR during the 15 months preceding the end of each period (dollars in millions):

	For the Three Months Ended March 31, 2022	
	Number of Accounts	Aggregated Outstanding Balances Upon Default
TDRs that subsequently defaulted		
Credit card loans ⁽¹⁾⁽²⁾	4,535	\$ 23
Private student loans ⁽³⁾	106	\$ 2
Personal loans ⁽²⁾	261	\$ 3

(1) For credit card loans that default from a temporary loan modification program, accounts revert back to the pre-modification terms and charging privileges remain suspended in most cases.

(2) For credit card loans and personal loans, a customer defaults from a loan modification program after either two consecutive missed payments or at charge-off, depending on the program. The outstanding balance upon default is generally the loan balance at the end of the month prior to default.

(3) For student loans, a customer defaults from a loan modification after they are 60 or more days delinquent. The outstanding balance upon default is generally the loan balance at the end of the month prior to default.

Of the account balances that defaulted as shown above for the three months ended March 31, 2022, approximately 64% of the total balances were charged off at the end of the month in which they defaulted from a TDR program. For the three months ended March 31, 2022, for accounts that had defaulted from a TDR program and had not been subsequently charged off, the balances were included in the allowance for credit loss analysis.

4. Credit Card and Private Student Loan Securitization Activities

The Company's securitizations are accounted for as secured borrowings and the related trusts are treated as consolidated subsidiaries of the Company. For a description of the Company's principles of consolidation with respect to VIEs, see Note 1: Background and Basis of Presentation to the consolidated financial statements in the Company's annual report on Form 10-K for the year ended December 31, 2022.

Credit Card Securitization Activities

The Company accesses the term asset securitization market through Discover Card Master Trust I ("DCMT") and Discover Card Execution Note Trust ("DCENT"). Credit card loan receivables are transferred into DCMT and beneficial interests in DCMT are transferred into DCENT. DCENT issues debt securities to investors that are reported primarily in long-term borrowings.

The DCENT debt structure consists of four classes of securities (DiscoverSeries Class A, B, C and D notes), with the most senior class generally receiving a triple-A rating. To issue senior, higher-rated classes of notes, it is necessary to obtain the appropriate amount of credit enhancement, generally through the issuance of junior, lower-rated or more highly subordinated classes of notes. Wholly-owned subsidiaries of Discover Bank hold the subordinated classes of notes. The Company is exposed to credit risk associated with trust receivables as of the balance sheet date through the retention of these subordinated interests. The estimate of expected credit losses on trust receivables is included in the allowance for credit losses estimate.

The Company's retained interests in the trust's assets, consisting of investments in DCENT notes held by subsidiaries of Discover Bank, constitute intercompany positions that are eliminated in the preparation of the Company's condensed consolidated statements of financial condition.

Upon transfer of credit card loan receivables to the trust, the receivables and certain cash flows derived from them become restricted for use in meeting obligations to the trust's creditors. Further, the transferred credit card loan receivables are owned by the trust and are not available to the Company's third-party creditors. The trusts have ownership of cash balances, the amounts of which are reported in restricted cash within the Company's condensed consolidated statements of financial condition. Except for the seller's interest in trust receivables, the Company's interests in trust assets are generally subordinate to the interests of third-party investors in trust debt and, as such, may not be realized by the Company if needed to absorb deficiencies in cash flows that are allocated to those investors. Apart from the restricted assets related to securitization activities, the investors and the securitization trusts have no recourse to the Company's other assets or the Company's general credit for a shortage in cash flows.

The carrying values of these restricted assets, which are presented on the Company's condensed consolidated statements of financial condition as relating to securitization activities, are shown in the following table (dollars in millions):

	March 31, 2023	December 31, 2022
Restricted cash	\$ 24	\$ 33
Investors' interests held by third-party investors	9,025	10,200
Investors' interests held by wholly-owned subsidiaries of Discover Bank	3,197	3,341
Seller's interest	12,296	12,220
Loan receivables ⁽¹⁾	24,518	25,761
Allowance for credit losses allocated to securitized loan receivables ⁽¹⁾	(1,106)	(1,152)
Net loan receivables	23,412	24,609
Other assets	3	2
Carrying value of assets of consolidated variable interest entities	\$ 23,439	\$ 24,644

(1) The Company maintains its allowance for credit losses at an amount equal to lifetime expected credit losses associated with all loan receivables, which includes all loan receivables in the trusts. Therefore, the credit risk associated with the transferred receivables is fully reflected on the Company's statements of financial condition in accordance with GAAP.

The debt securities issued by the consolidated trusts are subject to credit, payment and interest rate risks on the transferred credit card loan receivables. To protect investors in the securities, there are certain features or triggering events that will cause an early amortization of the debt securities, including triggers related to the impact of the performance of the trust receivables on the availability and adequacy of cash flows to meet contractual requirements. As of March 31, 2023, no economic or other early amortization events have occurred.

The Company continues to own and service the accounts that generate the loan receivables held by the trusts. Discover Bank receives servicing fees from the trusts based on a percentage of the monthly investor principal balance outstanding. Although the fee income to Discover Bank offsets the fee expense to the trusts and thus is eliminated in consolidation, failure to service the transferred loan receivables in accordance with contractual requirements could lead to a termination of the servicing rights and the loss of future servicing income, net of related expenses.

Private Student Loan Securitization Activities

The Company's private student loan trust receivables reported in loan receivables and the related debt issued by the trust reported in long-term borrowings were immaterial as of March 31, 2023 and December 31, 2022. The amounts are included, together with amounts related to the Company's credit card securitizations, in the supplemental information about assets and liabilities of consolidated variable interest entities, which is presented with the Company's condensed consolidated statements of financial condition.

5. Deposits

The Company obtains deposits from consumers directly or through affinity relationships ("direct-to-consumer deposits"). Additionally, the Company obtains deposits through third-party securities brokerage firms that offer the Company's deposits to their customers ("brokered deposits"). Direct-to-consumer deposit products include savings accounts, certificates of deposit, money market accounts, IRA savings accounts, IRA certificates of deposit and checking accounts. Brokered deposit products include certificates of deposit and sweep accounts.

Customer deposits held with Discover Bank are currently insured for up to \$250,000 per account holder through the Federal Deposit Insurance Corporation ("FDIC"). At March 31, 2023 and December 31, 2022, the Company had approximately \$5.9 billion and \$8.9 billion of uninsured deposits, respectively. The decrease in uninsured deposits reported was primarily driven by leveraging technological capabilities enabling improved application of deposit account ownership attributes in deriving this amount. The amounts of uninsured deposits above were estimated based on the same methodologies and assumptions used for Discover Bank's regulatory reporting at each respective balance sheet date.

The following table summarizes certificates of deposits maturing over the remainder of this year, over each of the next four years and thereafter (dollars in millions):

	At March 31, 2023
2023	\$ 13,792
2024	10,685
2025	3,314
2026	2,421
2027	3,581
Thereafter	1,623
Total	\$ 35,416

6. Long-Term Borrowings

Long-term borrowings consist of borrowings having original maturities of one year or more. The following table provides a summary of the Company's long-term borrowings and weighted-average interest rates on outstanding balances (dollars in millions):

	March 31, 2023			December 31, 2022	
	Maturity	Interest Rate	Weighted-Average Interest Rate	Outstanding Amount	Outstanding Amount
Securitized Debt					
Fixed-rate asset-backed securities ⁽¹⁾	2024-2026	0.58% - 5.03%	2.76%	\$ 7,792	\$ 8,401
Floating-rate asset-backed securities ⁽²⁾	2023-2024	5.07% - 5.28%	5.23%	1,224	1,774
Total Discover Card Master Trust I and Discover Card Execution Note Trust				9,016	10,175
Floating-rate asset-backed security ⁽³⁾⁽⁴⁾	2031	9.00%	9.00%	79	84
Total private student loan securitization trust				79	84
Total long-term borrowings - owed to securitization investors				9,095	10,259
Discover Financial Services (Parent Company)					
Fixed-rate senior notes	2024-2032	3.75% - 6.70%	4.68%	3,334	3,333
Fixed-rate retail notes	2023-2031	2.85% - 4.40%	3.77%	154	154
Discover Bank					
Fixed-rate senior bank notes ⁽¹⁾	2023-2030	2.45% - 4.65%	3.68%	4,562	5,348
Fixed-rate subordinated bank notes ⁽¹⁾	2028	4.68%	4.68%	493	489
Floating-rate Federal Home Loan Bank advance ⁽⁵⁾	2023	5.05%	5.05%	525	525
Total long-term borrowings				\$ 18,163	\$ 20,108

- The Company uses interest rate swaps to hedge portions of these long-term borrowings against changes in fair value attributable to changes in the applicable benchmark interest rates. The use of these interest rate swaps impacts the carrying value of the debt. See Note 15: Derivatives and Hedging Activities.
- DCENT floating-rate asset-backed securities include issuances with the following interest rate terms: 1-month LIBOR + 39 to 60 basis points as of March 31, 2023.
- The private student loan securitization trust floating-rate asset-backed security includes an issuance with the following interest rate term: Prime rate + 100 basis points as of March 31, 2023.
- Repayment of this debt is dependent upon the timing of principal and interest payments on the underlying private student loans. The date shown represents the final maturity date.
- The floating-rate Federal Home Loan Bank ("FHLB") advance includes the following interest rate term: SOFR + 23 basis points as of March 31, 2023.

The following table summarizes long-term borrowings maturing over the remainder of this year, over each of the next four years and thereafter (dollars in millions):

	March 31, 2023
2023	\$ 1,841
2024	3,728
2025	6,172
2026	2,674
2027	1,000
Thereafter	2,748
Total	\$ 18,163

As a member of the FHLB of Chicago, the Company has access to both short- and long-term advance structures with maturities ranging from overnight to 30 years. As of March 31, 2023, the Company had total committed borrowing capacity of \$2.6 billion based on the amount and type of assets pledged, of which the outstanding balance was comprised solely of a \$525 million long-term advance. As of December 31, 2022, the Company had total committed borrowing capacity of \$2.2 billion based on the amount and type of assets pledged, of which the outstanding balance was comprised solely of a \$525 million long-term advance. These advances are presented as short- or long-term borrowings on the condensed consolidated statements of financial condition as appropriate.

Additionally, the Company has access to committed borrowing capacity through private securitizations to support the funding of its credit card loan receivables. As of March 31, 2023, the total commitment of secured credit facilities through private providers was \$3.5 billion, none of which was drawn. As of December 31, 2022, the total commitment of secured credit facilities through private providers was \$3.5 billion, none of which was drawn. Access to the unused portions of the secured credit facilities is subject to the terms of the agreements with each of the providers. The secured credit facilities have various expirations in 2024 and 2025. Borrowings outstanding under each facility bear interest at a margin above the London Interbank Offered Rate ("LIBOR"), Term Secured Overnight Financing Rate ("SOFR") or the asset-backed commercial paper costs of each provider. The terms of each agreement provide for a commitment fee to be paid on the unused capacity and include various affirmative and negative covenants, including performance metrics and legal requirements similar to those required to issue any term securitization transaction.

7. Preferred Stock

The table below presents a summary of the Company's non-cumulative perpetual preferred stock that is outstanding at March 31, 2023 (dollars in millions, except per depositary share amounts):

Series	Description	Initial Issuance Date	Liquidation Preference and Redemption Price per Depositary Share ⁽¹⁾	Per Annum Dividend Rate in effect at March 31, 2023	Total Depositary Shares Authorized, Issued and Outstanding		Carrying Value	
					March 31, 2023	December 31, 2022	March 31, 2023	December 31, 2022
C ⁽²⁾⁽³⁾⁽⁴⁾	Fixed-to-Floating Rate	10/31/2017	\$ 1,000	5.500 %	570,000	570,000	\$ 563	\$ 563
D ⁽²⁾⁽⁵⁾⁽⁶⁾	Fixed-Rate Reset	6/22/2020	\$ 1,000	6.125 %	500,000	500,000	493	493
Total Preferred Stock					1,070,000	1,070,000	\$ 1,056	\$ 1,056

(1) Redeemable at the redemption price plus declared and unpaid dividends.

(2) Issued as depositary shares, each representing 1/100th interest in a share of the corresponding series of preferred stock. Each preferred share has a par value of \$0.01.

(3) Redeemable at the Company's option, subject to regulatory approval, either (i) in whole or in part on any dividend payment date on or after October 30, 2027, or (ii) in whole but not in part, at any time within 90 days following a regulatory capital treatment event (as defined in the certificate of designations for the Series C preferred stock).

(4) Any dividends declared are payable semi-annually in arrears at a rate of 5.500% per annum until October 30, 2027. Thereafter, dividends declared will be payable quarterly in arrears at a floating rate equal to 3-month LIBOR plus a spread of 3.076% per annum.

(5) Redeemable at the Company's option, subject to regulatory approval, either (i) in whole or in part during the three-month period prior to, and including, each reset date (as defined in the certificate of designations for the Series D preferred stock) or (ii) in whole but not in part, at any time within 90 days following a regulatory capital treatment event (as defined in the certificate of designations for the Series D Preferred Stock).

(6) Any dividends declared are payable semi-annually in arrears at a rate of 6.125% per annum until September 23, 2025, after which the dividend rate will reset every 5 years to a fixed annual rate equal to the 5-year Treasury plus a spread of 5.783%.

8. Accumulated Other Comprehensive Income

Changes in each component of accumulated other comprehensive income ("AOCI") were as follows (dollars in millions):

	Unrealized Losses on Available-for- Sale Investment Securities, Net of Tax	Losses on Cash Flow Hedges, Net of Tax	Losses on Pension Plan, Net of Tax	AOCI
For the Three Months Ended March 31, 2023				
Balance at December 31, 2022	\$ (136)	\$ (14)	\$ (189)	\$ (339)
Net change	92	12	—	104
Balance at March 31, 2023	\$ (44)	\$ (2)	\$ (189)	\$ (235)
For the Three Months Ended March 31, 2022				
Balance at December 31, 2021	\$ 114	\$ (9)	\$ (199)	\$ (94)
Net change	(121)	2	—	(119)
Balance at March 31, 2022	\$ (7)	\$ (7)	\$ (199)	\$ (213)

The following table presents each component of other comprehensive income ("OCI") before reclassifications and amounts reclassified from AOCI for each component of OCI before- and after-tax (dollars in millions):

	Before Tax	Tax (Expense) Benefit	Net of Tax
For the Three Months Ended March 31, 2023			
Available-for-Sale Investment Securities			
Net unrealized holding gains arising during the period	\$ 122	\$ (30)	\$ 92
Net change	\$ 122	\$ (30)	\$ 92
Cash Flow Hedges			
Net unrealized gains arising during the period	\$ 10	\$ (2)	\$ 8
Amounts reclassified from AOCI	5	(1)	4
Net change	\$ 15	\$ (3)	\$ 12
For the Three Months Ended March 31, 2022			
Available-for-Sale Investment Securities			
Net unrealized holding losses arising during the period	\$ (160)	\$ 39	\$ (121)
Net change	\$ (160)	\$ 39	\$ (121)
Cash Flow Hedges			
Net unrealized losses arising during the period	\$ (1)	\$ —	\$ (1)
Amounts reclassified from AOCI	1	2	3
Net change	\$ —	\$ 2	\$ 2

9. Income Taxes

The following table presents the calculation of the Company's effective income tax rate (dollars in millions):

	For the Three Months Ended March 31,	
	2023	2022
Income before income taxes	\$ 1,268	\$ 1,618
Income tax expense	\$ 292	\$ 376
Effective income tax rate	23.0 %	23.3 %

The Company is subject to examination by the Internal Revenue Service ("IRS") and tax authorities in various state, local and foreign tax jurisdictions. The Company's federal income tax filings are open to examinations for the tax years ended December 31, 2019 and forward. The Company regularly assesses the likelihood of additional assessments or settlements in each of the taxing jurisdictions. At this time, the potential change in unrecognized tax benefits is not expected to be significant over the next 12 months. The Company believes that its reserves are sufficient to cover any tax, penalties and interest that would result from such examinations.

10. Earnings Per Share

The following table presents the calculation of basic and diluted earnings per share ("EPS") (dollars and shares in millions, except per share amounts):

	For the Three Months Ended March 31,	
	2023	2022
Numerator		
Net income	\$ 976	\$ 1,242
Preferred stock dividends	(31)	(31)
Net income available to common stockholders	945	1,211
Income allocated to participating securities	(6)	(6)
Net income allocated to common stockholders	\$ 939	\$ 1,205
Denominator		
Weighted-average shares of common stock outstanding	262	285
Weighted-average shares of common stock outstanding and common stock equivalents	262	285
Basic earnings per common share	\$ 3.58	\$ 4.23
Diluted earnings per common share	\$ 3.58	\$ 4.22

Anti-dilutive securities were not material and had no impact on the computation of diluted EPS for the three months ended March 31, 2023 and 2022.

11. Capital Adequacy

DFS is subject to the capital adequacy guidelines of the Federal Reserve. Discover Bank, the Company's banking subsidiary, is subject to various regulatory capital requirements as administered by the FDIC. Failure to meet minimum capital requirements can result in the initiation of certain mandatory and possibly additional discretionary actions by regulators that, if undertaken, could limit the Company's business activities and have a direct material effect on the financial condition and operating results of DFS and Discover Bank. Under capital adequacy guidelines and the regulatory framework for prompt corrective action, DFS and Discover Bank must meet specific risk-based capital requirements and leverage ratios that involve quantitative measures of assets, liabilities and certain off-balance sheet items, as calculated under regulatory guidelines. Capital amounts and classification are also subject to qualitative judgments by the regulators about components, risk weightings and other factors.

DFS and Discover Bank are subject to regulatory and capital rules issued by the Federal Reserve and FDIC, respectively, under the Basel Committee's December 2010 framework ("Basel III rules"). Under the Basel III rules, DFS and Discover Bank are classified as "standardized approach" entities. Standardized approach entities are defined as U.S. banking organizations with consolidated total assets over \$50 billion but not exceeding \$250 billion and consolidated total on-balance sheet foreign exposure less than \$10 billion.

In accordance with the final rule on the impact of current expected credit losses ("CECL") on regulatory capital, the Company has elected to phase in the impact over three years beginning in 2022. Accordingly, the Company's Common Equity Tier 1 ("CET1") capital ratios are higher than they otherwise would have been. The Company's CET1 capital ratios will continue to be favorably impacted by this election over the phase-in period, which ends December 31, 2024.

As of March 31, 2023 and December 31, 2022, DFS and Discover Bank met all Basel III minimum capital ratio requirements to which they were subject. DFS and Discover Bank also met the requirements to be considered "well-capitalized" under Regulation Y and prompt corrective action rules, respectively. There have been no conditions or events that management believes have changed DFS' or Discover Bank's category. To be categorized as "well-capitalized", DFS and Discover Bank must maintain minimum capital ratios outlined in the table below.

The following table shows the actual capital amounts and ratios of DFS and Discover Bank and comparisons of each to the regulatory minimum and "well-capitalized" requirements (dollars in millions):

	Actual		Minimum Capital Requirements		Capital Requirements To Be Classified as Well-Capitalized	
	Amount	Ratio ⁽¹⁾	Amount	Ratio	Amount ⁽²⁾	Ratio ⁽²⁾
March 31, 2023						
Total capital (to risk-weighted assets)						
Discover Financial Services	\$ 17,375	14.9 %	\$ 9,299	≥8.0%	\$ 11,623	≥10.0%
Discover Bank	\$ 15,928	13.9 %	\$ 9,186	≥8.0%	\$ 11,482	≥10.0%
Tier 1 capital (to risk-weighted assets)						
Discover Financial Services	\$ 15,368	13.2 %	\$ 6,974	≥6.0%	\$ 6,974	≥6.0%
Discover Bank	\$ 13,089	11.4 %	\$ 6,889	≥6.0%	\$ 9,186	≥8.0%
Tier 1 capital (to average assets)						
Discover Financial Services	\$ 15,368	11.6 %	\$ 5,296	≥4.0%	N/A	N/A
Discover Bank	\$ 13,089	10.0 %	\$ 5,222	≥4.0%	\$ 6,528	≥5.0%
Common Equity Tier 1 (to risk-weighted assets)						
Discover Financial Services	\$ 14,312	12.3 %	\$ 5,231	≥4.5%	N/A	N/A
Discover Bank	\$ 13,089	11.4 %	\$ 5,167	≥4.5%	\$ 7,463	≥6.5%
December 31, 2022						
Total capital (to risk-weighted assets)						
Discover Financial Services	\$ 18,250	16.0 %	\$ 9,133	≥8.0%	\$ 11,416	≥10.0%
Discover Bank	\$ 16,579	14.7 %	\$ 9,015	≥8.0%	\$ 11,268	≥10.0%
Tier 1 capital (to risk-weighted assets)						
Discover Financial Services	\$ 16,285	14.3 %	\$ 6,850	≥6.0%	\$ 6,850	≥6.0%
Discover Bank	\$ 13,683	12.1 %	\$ 6,761	≥6.0%	\$ 9,015	≥8.0%
Tier 1 capital (to average assets)						
Discover Financial Services	\$ 16,285	12.7 %	\$ 5,147	≥4.0%	N/A	N/A
Discover Bank	\$ 13,683	10.8 %	\$ 5,086	≥4.0%	\$ 6,357	≥5.0%
Common Equity Tier 1 (to risk-weighted assets)						
Discover Financial Services	\$ 15,229	13.3 %	\$ 5,137	≥4.5%	N/A	N/A
Discover Bank	\$ 13,683	12.1 %	\$ 5,071	≥4.5%	\$ 7,324	≥6.5%

(1) Capital ratios are calculated based on the Basel III standardized approach rules, subject to applicable transition provisions, including CECL transition provisions.

(2) The Basel III rules do not establish well-capitalized thresholds for these measures for bank holding companies. Existing well-capitalized thresholds established in the Federal Reserve's Regulation Y have been included where available.

12. Commitments, Contingencies and Guarantees

In the normal course of business, the Company enters into a number of off-balance sheet commitments, transactions and obligations under guarantee arrangements that expose the Company to varying degrees of risk. The Company's commitments, contingencies and guarantee relationships are described below.

Commitments

Unused Credit Arrangements

At March 31, 2023, the Company had unused credit arrangements for loans of approximately \$229.1 billion. Such arrangements arise primarily from agreements with customers for unused lines of credit on certain credit cards and certain other loan products, provided there is no violation of conditions in the related agreements. These arrangements, substantially all of which the Company can terminate at any time and which do not necessarily represent future cash requirements, are periodically reviewed based on account usage, customer creditworthiness and loan qualification. As the Company's credit card loans are unconditionally cancellable, no liability for expected credit losses is required for unused lines of credit. For all other loans, the Company records a liability for expected credit losses for unfunded commitments, which is presented as part of accrued expenses and other liabilities in the consolidated statements of financial condition.

Contingencies

See Note 13: Litigation and Regulatory Matters for a description of potential liability arising from pending litigation or regulatory proceedings involving the Company.

Guarantees

The Company has obligations under certain guarantee arrangements, including contracts, indemnification agreements and representations and warranties, which contingently require the Company to make payments to the guaranteed party based on changes in an underlying asset, liability or equity security of a guaranteed party, rate or index. Also included as guarantees are contracts that contingently require the Company to make payments to a guaranteed party based on another entity's failure to perform under an agreement. The Company's use of guarantees is disclosed below by type of guarantee.

Securitizations Representations and Warranties

As part of the Company's financing activities, the Company provides representations and warranties that certain assets pledged as collateral in secured borrowing arrangements conform to specified guidelines. Due diligence is performed by the Company, which is intended to ensure that asset guideline qualifications are met. If the assets pledged as collateral do not meet certain conforming guidelines, the Company may be required to replace, repurchase or sell such assets. In its credit card securitization activities, the Company would replace nonconforming receivables through the allocation of excess seller's interest or from additional transfers from the unrestricted pool of receivables. If the Company could not add enough receivables to satisfy the requirement, an early amortization (or repayment) of investors' interests would be triggered. In its student loan securitizations, the Company would generally repurchase the loans from the trust at the outstanding principal amount plus interest.

The maximum potential amount of future payments the Company could be required to make would be equal to the current outstanding balances of third-party investor interests in credit card asset-backed securities and the principal amount of any private student loan secured borrowings, plus any unpaid interest for the corresponding secured borrowings. The Company has recorded substantially all of the maximum potential amount of future payments in long-term borrowings on the Company's condensed consolidated statements of financial condition. The Company has not recorded any incremental contingent liability associated with its secured borrowing representations and warranties. Management believes that the probability of having to replace, repurchase or sell assets pledged as collateral under secured borrowing arrangements, including an early amortization event, is low.

Counterparty Settlement Guarantees

Diners Club and DFS Services LLC (on behalf of PULSE) have various counterparty exposures, which are listed below:

- *Merchant Guarantee.* Diners Club has entered into contractual relationships with certain international merchants, which generally include travel-related businesses, for the benefit of all Diners Club licensees. The licensees hold the primary liability to settle the transactions of their customers with these merchants. However, Diners Club retains a counterparty exposure if a licensee fails to meet its financial payment obligation to one of these merchants.
- *ATM Guarantee.* PULSE entered into contractual relationships with certain international ATM acquirers in which DFS Services LLC retains counterparty exposure if an issuer fails to fulfill its settlement obligation.
- *Global Network Alliance Guarantee.* Discover Network, Diners Club and PULSE have entered into contractual relationships with certain international payment networks in which DFS Services LLC retains the counterparty exposure if a network fails to fulfill its settlement obligation.

The maximum potential amount of future payments related to such contingent obligations is dependent upon the transaction volume processed between the time a potential counterparty defaults on its settlement and the time at which the Company disables the settlement of any further transactions for the defaulting party. The Company has some contractual remedies to offset these counterparty settlement exposures (such as letters of credit or pledged deposits), however, there is no limitation on the maximum amount the Company may be liable to pay.

The actual amount of the potential exposure cannot be quantified as the Company cannot determine whether particular counterparties will fail to meet their settlement obligations. In the event all licensees and/or issuers were to become unable to settle their transactions, the Company estimates its maximum potential counterparty exposures to these settlement guarantees would be approximately \$120 million as of March 31, 2023.

The Company believes that the estimated amounts of maximum potential future payments are not representative of the Company's actual potential loss exposure given Diners Club's and PULSE's insignificant historical losses from these counterparty exposures. As of March 31, 2023, the Company had not recorded any contingent liability in the condensed consolidated financial statements for these counterparty exposures and management believes that the probability of any payments under these arrangements is low.

Discover Network Merchant Chargeback Guarantees

The Company operates the Discover Network, issues payment cards and permits third parties to issue payment cards. The Company is contingently liable for certain transactions processed on the Discover Network in the event of a dispute between the payment card customer and a merchant. The contingent liability arises if the disputed transaction involves a merchant or merchant acquirer with whom the Discover Network has a direct relationship. If a dispute is resolved in the customer's favor, the Discover Network will credit or refund the disputed amount to the Discover Network card issuer, who in turn credits its customer's account. The Discover Network will then charge back the disputed amount of the payment card transaction to the merchant or merchant acquirer, where permitted by the applicable agreement, to seek recovery of amounts already paid to the merchant for payment card transactions. If the Discover Network is unable to collect the amount subject to dispute from the merchant or merchant acquirer (e.g., in the event of merchant default or dissolution or after expiration of the time period for chargebacks in the applicable agreement), the Discover Network will bear the loss for the amount credited or refunded to the customer. In most instances, a loss by the Discover Network is unlikely to arise in connection with payments on card transactions because most products or services are delivered when purchased and credits are issued by merchants on returned items in a timely fashion, thus minimizing the likelihood of cardholder disputes with respect to amounts paid by the Discover Network. However, where the product or service is not scheduled to be provided to the customer until a later date following the purchase, the likelihood of a contingent payment obligation by the Discover Network increases. Losses related to merchant chargebacks were not material for the three months ended March 31, 2023 and 2022.

The maximum potential amount of obligations of the Discover Network arising from such contingent obligations is estimated to be the portion of the total Discover Network transaction volume processed to date for which timely and valid disputes may be raised under applicable law and relevant issuer and customer agreements. There is no limitation on the maximum amount the Company may be liable to pay to issuers. However, the Company believes that such amount is not representative of the Company's actual potential loss exposure based on the Company's historical experience. The actual amount of the potential exposure cannot be quantified as the Company cannot determine whether the current or cumulative transaction volumes may include or result in disputed transactions.

The following table summarizes certain information regarding merchant chargeback guarantees (dollars in millions):

	For the Three Months Ended March 31,	
	2023	2022
Aggregate sales transaction volume ⁽¹⁾	\$ 60,833	\$ 57,153

(1) Represents transactions processed on the Discover Network for which a potential liability exists that, in aggregate, can differ from credit card sales volume.

The Company did not record any contingent liability in the condensed consolidated financial statements for merchant chargeback guarantees as of March 31, 2023 and December 31, 2022. The Company mitigates the risk of potential loss exposure by withholding settlement from merchants, obtaining third-party guarantees, or obtaining escrow deposits or letters of credit from certain merchant acquirers or merchants that are considered a higher risk due to various factors such as time delays in the delivery of products or services. As of March 31, 2023 and December 31, 2022, the Company had escrow deposits and settlement withholdings of \$12 million and \$11 million, respectively, which are recorded in interest-bearing deposit accounts and accrued expenses and other liabilities on the Company's condensed consolidated statements of financial condition.

13. Litigation and Regulatory Matters

In the normal course of business, from time to time, the Company has been named as a defendant in various legal actions, including arbitrations, class actions and other litigation, arising in connection with its activities. Certain of the actual or threatened legal actions include claims for substantial compensatory and/or punitive damages or claims for indeterminate amounts of damages. The litigation process is not predictable and can lead to unexpected results. The Company contests liability and/or the amount of damages as appropriate in each pending matter.

The Company has historically offered its customers an arbitration clause in its customer agreements. The arbitration clause allows the Company and its customers to quickly and economically resolve disputes. Additionally, the arbitration clause has in some instances limited the costs of, and the Company's exposure to, litigation. Future legal and regulatory challenges and prohibitions may cause the Company to discontinue its offering and use of such clauses. From time to time, the Company is involved in legal actions challenging its arbitration clause. Bills may be periodically introduced in Congress to directly or indirectly prohibit the use of pre-dispute arbitration clauses.

The Company is also involved, from time to time, in other reviews, investigations and proceedings (both formal and informal) by governmental agencies regarding the Company's business including, among other matters, consumer regulatory, accounting, tax and other operational matters. The investigations and proceedings may result in significant adverse judgments, settlements, fines, penalties, injunctions, decreases in regulatory ratings, customer restitution or other relief. These outcomes could materially impact the Company's condensed consolidated financial statements, increase its cost of operations, or limit the Company's ability to execute its business strategies and engage in certain business activities. Certain subsidiaries of the Company are subject to a consent order with the Consumer Financial Protection Bureau ("CFPB") regarding certain private student loan servicing practices, as described below. In addition, the Company is currently engaged in a review of Discover Bank's card product classification practices (which determine how certain credit cards are assigned to network product categories) and related risk management and governance issues. The Company is discussing these matters with, and is responding to inquiries on them from, various regulators and agencies. Pursuant to powers granted under federal banking laws, regulatory agencies have broad and sweeping discretion and may assess civil money penalties, require changes to certain business practices or require customer restitution at any time.

In accordance with applicable accounting guidance, the Company establishes an accrued liability for legal and regulatory matters when those matters present loss contingencies that are both probable and estimable. Litigation and regulatory settlement-related expenses were immaterial for the three months ended March 31, 2023 and 2022.

There may be an exposure to loss in excess of any amounts accrued. The Company believes the estimate of the aggregate range of reasonably possible losses (meaning the likelihood of losses is more than remote but less than likely), in excess of the amounts that the Company has accrued for legal and regulatory proceedings, is up to \$180 million as of March 31, 2023. This estimated range of reasonably possible losses is based on currently available information for those proceedings in which the Company is involved and considers the Company's best estimate of such losses for those matters for which an estimate can be made. It does not represent the Company's maximum potential loss exposure. Various aspects of the legal proceedings underlying the estimated range will change from time to time and actual results may vary significantly from the estimate.

The Company's estimated range noted above involves significant judgment, given the varying stages of the proceedings, the existence of numerous yet to be resolved issues, the breadth of the claims (often spanning multiple years and, in some cases, a wide range of business activities), unspecified damages and/or the novelty of the legal issues presented. The outcome of pending matters could adversely affect the Company's reputation and be material to the Company's condensed consolidated financial condition, operating results and cash flows for a particular future period, depending on, among other things, the level of the Company's income for such period.

In July 2015, the Company announced that its subsidiaries, Discover Bank, The Student Loan Corporation and Discover Products Inc. (the "Discover Subsidiaries"), agreed to a consent order with the CFPB with respect to certain private student loan servicing practices (the "2015 Order"). The 2015 Order expired in July 2020. In December 2020, the Discover Subsidiaries agreed to a consent order (the "2020 Order") with the CFPB resolving the agency's investigation into Discover Bank's compliance with the 2015 Order. In connection with the 2020 Order, Discover is required to implement a redress and compliance plan and must pay at least \$10 million in consumer redress to consumers who may have been harmed and has paid a \$25 million civil money penalty to the CFPB.

On March 8, 2016, a class-action lawsuit was filed against the Company, other credit card networks, other issuing banks and EMVCo in the U.S. District Court for the Northern District of California (B&R Supermarket, Inc., d/b/a Milam's Market, et al. v. Visa, Inc. et al.) alleging a conspiracy by defendants to shift fraud liability to merchants with the migration to the EMV security standard and chip technology. The plaintiffs assert joint and several liability among the defendants and seek unspecified damages, including treble damages, attorneys' fees, costs and injunctive relief. In May 2017, the Court entered an order transferring the entire action to a federal court in New York that is presiding over certain related claims that are pending in the actions consolidated as MDL 1720. In August 2020, the Court granted the plaintiffs' Motion to Certify a Class. The defendants appealed the ruling, which was denied in January 2021. Expert discovery closed on February 28, 2022. On June 3, 2022, the Court granted Plaintiffs' Motion to Approve Class Notices. The Company filed its renewed motion to compel arbitration, motion for summary judgment, and Daubert challenges on November 30, 2022, with briefing scheduled to close on July 27, 2023. The Company is not in a position at this time to assess the likely outcome or its exposure, if any, with respect to this matter. However, the Company will seek to defend itself vigorously against all claims asserted by the plaintiffs.

14. Fair Value Measurements

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Accounting Standards Codification ("ASC") Topic 820, *Fair Value Measurement*, provides a three-level hierarchy for classifying the inputs to valuation techniques used to measure fair value of financial instruments based on whether the inputs are observable or unobservable. It also requires certain disclosures about those measurements. The three-level valuation hierarchy is as follows:

- *Level 1*: Fair values determined by Level 1 inputs are defined as those that utilize quoted prices (unadjusted) in active markets for identical assets or liabilities that the Company has the ability to access.
- *Level 2*: Fair values determined by Level 2 inputs are those that utilize inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly. Level 2 inputs include quoted prices for similar assets and liabilities in active or inactive markets, quoted prices for the identical assets in an inactive market and inputs other than quoted prices that are observable for the asset or liability, such as interest rates and yield curves that are observable at commonly quoted intervals. The Company evaluates factors such as the frequency of transactions, the size of the bid-ask spread and the significance of adjustments made when considering transactions involving similar assets or liabilities to assess the relevance of those observed prices. If relevant and observable prices are available, the fair values of the related assets or liabilities would be classified as Level 2.
- *Level 3*: Fair values determined by Level 3 inputs are those based on unobservable inputs and include situations where there is little, if any, market activity for the asset or liability being valued. In instances where the inputs used to measure fair value may fall into different levels of the fair value hierarchy, the level in the fair value hierarchy in which the measurements are classified is based on the lowest level input that is significant to the fair value measurement in its entirety. Accordingly, the Company may utilize both observable and unobservable inputs in determining the fair values of financial instruments classified within the Level 3 category.

The Company evaluates the classification of each fair value measurement within the hierarchy at least quarterly.

The Company's assessment of the significance of a particular input to the fair value measurement in its entirety requires judgment and involves consideration of factors specific to the asset or liability. Furthermore, certain techniques used to measure fair value involve some degree of judgment and, as a result, are not necessarily indicative of the amounts the Company would realize in a current market exchange.

Assets and Liabilities Measured at Fair Value on a Recurring Basis

Assets and liabilities measured at fair value on a recurring basis are as follows (dollars in millions):

	Quoted Price in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Balance at March 31, 2023				
Assets				
Fair value - OCI				
U.S. Treasury and U.S. GSE securities	\$ 11,467	\$ 7	\$ —	\$ 11,474
Residential mortgage-backed securities - Agency	—	543	—	543
Available-for-sale investment securities	\$ 11,467	\$ 550	\$ —	\$ 12,017
Derivative financial instruments - cash flow hedges ⁽¹⁾	\$ —	\$ 6	\$ —	\$ 6
Fair value - Net income				
Marketable equity securities	\$ 31	\$ —	\$ —	\$ 31
Derivative financial instruments - fair value hedges ⁽¹⁾	\$ —	\$ 6	\$ —	\$ 6
Liabilities				
Fair value - OCI				
Derivative financial instruments - cash flow hedges ⁽¹⁾	\$ —	\$ 2	\$ —	\$ 2
Balance at December 31, 2022				
Assets				
Fair value - OCI				
U.S. Treasury and U.S. GSE securities	\$ 11,416	\$ 7	\$ —	\$ 11,423
Residential mortgage-backed securities - Agency	—	564	—	564
Available-for-sale investment securities	\$ 11,416	\$ 571	\$ —	\$ 11,987
Derivative financial instruments - cash flow hedges ⁽¹⁾	\$ —	\$ 1	\$ —	\$ 1
Fair value - Net income				
Marketable equity securities	\$ 41	\$ —	\$ —	\$ 41
Liabilities				
Fair value - OCI				
Derivative financial instruments - cash flow hedges ⁽¹⁾	\$ —	\$ 3	\$ —	\$ 3
Fair value - Net income				
Derivative financial instruments - fair value hedges ⁽¹⁾	\$ —	\$ 2	\$ —	\$ 2

(1) Derivative instrument carrying values in an asset or liability position are presented as part of other assets or accrued expenses and other liabilities, respectively, in the Company's condensed consolidated statements of financial condition.

Available-for-Sale Investment Securities

Investment securities classified as available-for-sale consist of U.S. Treasury and U.S. GSE securities and RMBS. The fair value estimates of investment securities classified as Level 1, consisting of U.S. Treasury securities, are determined based on quoted market prices for the same securities. The fair value estimates of U.S. GSE securities and RMBS are classified as Level 2 and are valued by maximizing the use of relevant observable inputs, including quoted prices for similar securities, benchmark yield curves and market-corroborated inputs.

The Company validates the fair value estimates provided by pricing services primarily by comparing to valuations obtained through other pricing sources. The Company evaluates pricing variances among different pricing sources to ensure that the valuations utilized are reasonable. The Company also corroborates the reasonableness of the fair value estimates with analysis of trends of significant inputs, such as market interest rate curves. The Company further performs due diligence in understanding the procedures and techniques performed by the pricing services to derive fair value estimates.

At March 31, 2023, amounts reported in RMBS reflect U.S. government agency and U.S. GSE obligations issued by Ginnie Mae, Fannie Mae and Freddie Mac with an aggregate par value of \$559 million, a weighted-average coupon of 4.06% and a weighted-average remaining maturity of four years.

Marketable Equity Securities

The Company holds non-controlling equity positions in payment service entities that have actively traded stock and therefore have readily determinable fair values. The Company classifies these equity securities as Level 1, the fair value estimates of which are determined based on quoted share prices for the same securities.

Derivative Financial Instruments

The Company's derivative financial instruments consist of interest rate swaps and foreign exchange forward contracts. These instruments are classified as Level 2 as their fair values are estimated using proprietary pricing models, containing certain assumptions based on readily observable market-based inputs, including interest rate curves, option volatility and foreign currency forward and spot rates. In determining fair values, the pricing models use widely accepted valuation techniques, including discounted cash flow analysis on the expected cash flows of each derivative. This analysis reflects the contractual terms of the derivatives, including the period to maturity and the observable market-based inputs. The fair values of the interest rate swaps are determined using the market standard methodology of netting the discounted future fixed cash receipts (or payments) and the discounted expected variable cash payments (or receipts). The variable cash payments are based on an expectation of future interest rates derived from the observable market interest rate curves. The Company considers collateral and master netting agreements that mitigate credit exposure to counterparties in determining the counterparty credit risk valuation adjustment. The fair values of the currency instruments are valued by comparing the contracted forward exchange rate pertaining to the specific contract maturities to the current market exchange rate.

The Company validates the fair value estimates of interest rate swaps primarily through comparison to the fair value estimates computed by the counterparties to each of the derivative transactions. The Company evaluates pricing variances among different pricing sources to ensure that the valuations utilized are reasonable. The Company also corroborates the reasonableness of the fair value estimates with analysis of trends of significant inputs, such as market interest rate curves. The Company performs due diligence in understanding the impact of any changes to the valuation techniques performed by proprietary pricing models before implementation, working closely with the third-party valuation service and reviewing the service's control objectives at least annually. The Company corroborates the fair value of foreign exchange forward contracts through independent calculation of the fair value estimates.

Assets and Liabilities Measured at Fair Value on a Non-Recurring Basis

The Company also has assets that, under certain conditions, are subject to measurement at fair value on a non-recurring basis. These assets include those associated with acquired businesses, including goodwill. For these assets, measurement at fair value in periods subsequent to the initial recognition of the assets may be applicable whenever one is tested for impairment. No impairments were recognized related to these assets during the three months ended March 31, 2023 and 2022.

Financial Instruments Measured at Other Than Fair Value

The following tables disclose the estimated fair value of the Company's financial assets and financial liabilities that are not required to be carried at fair value (dollars in millions):

	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total	Carrying Value
Balance at March 31, 2023					
Assets					
<i>Amortized cost</i>					
Residential mortgage-backed securities - Agency	\$ —	\$ 212	\$ —	\$ 212	\$ 231
Held-to-maturity investment securities	\$ —	\$ 212	\$ —	\$ 212	\$ 231
Net loan receivables	\$ —	\$ —	\$ 111,546	\$ 111,546	\$ 104,983
<i>Carrying value approximates fair value⁽¹⁾</i>					
Cash and cash equivalents	\$ 10,130	\$ —	\$ —	\$ 10,130	\$ 10,130
Restricted cash	\$ 33	\$ —	\$ —	\$ 33	\$ 33
Accrued interest receivables ⁽²⁾	\$ —	\$ 1,264	\$ —	\$ 1,264	\$ 1,264
Liabilities					
<i>Amortized cost</i>					
Time deposits ⁽³⁾	\$ —	\$ 35,026	\$ —	\$ 35,026	\$ 35,416
Long-term borrowings - owed to securitization investors	\$ —	\$ 8,734	\$ 79	\$ 8,813	\$ 9,095
Other long-term borrowings	—	8,664	—	8,664	9,068
Long-term borrowings	\$ —	\$ 17,398	\$ 79	\$ 17,477	\$ 18,163
<i>Carrying value approximates fair value⁽¹⁾</i>					
Accrued interest payables ⁽²⁾	\$ —	\$ 300	\$ —	\$ 300	\$ 300
Balance at December 31, 2022					
Assets					
<i>Amortized cost</i>					
Residential mortgage-backed securities - Agency	\$ —	\$ 199	\$ —	\$ 199	\$ 221
Held-to-maturity investment securities	\$ —	\$ 199	\$ —	\$ 199	\$ 221
Net loan receivables	\$ —	\$ —	\$ 110,796	\$ 110,796	\$ 104,746
<i>Carrying value approximates fair value⁽¹⁾</i>					
Cash and cash equivalents	\$ 8,856	\$ —	\$ —	\$ 8,856	\$ 8,856
Restricted cash	\$ 41	\$ —	\$ —	\$ 41	\$ 41
Accrued interest receivables ⁽²⁾	\$ —	\$ 1,211	\$ —	\$ 1,211	\$ 1,211
Liabilities					
<i>Amortized cost</i>					
Time deposits ⁽³⁾	\$ —	\$ 32,710	\$ —	\$ 32,710	\$ 33,070
Long-term borrowings - owed to securitization investors	\$ —	\$ 9,862	\$ 84	\$ 9,946	\$ 10,259
Other long-term borrowings	—	9,468	—	9,468	9,849
Long-term borrowings	\$ —	\$ 19,330	\$ 84	\$ 19,414	\$ 20,108
<i>Carrying value approximates fair value⁽¹⁾</i>					
Accrued interest payables ⁽²⁾	\$ —	\$ 308	\$ —	\$ 308	\$ 308

(1) The carrying values of these assets and liabilities approximate fair value due to their short-term nature.

(2) Accrued interest receivable and payable carrying values are presented as part of other assets and accrued expenses and other liabilities, respectively, in the Company's condensed consolidated statements of financial condition.

(3) Excludes deposits without contractually defined maturities for all periods presented.

15. Derivatives and Hedging Activities

The Company uses derivatives to manage its exposure to various financial risks. The Company does not enter into derivatives for trading or speculative purposes. Certain derivatives used to manage the Company's exposure to foreign currency are not designated as hedges and do not qualify for hedge accounting.

Derivatives may give rise to counterparty credit risk, which generally is mitigated through collateral arrangements as described under the sub-heading "— Collateral Requirements and Credit-Risk Related Contingency Features." The Company enters into derivative transactions with established dealers that meet minimum credit criteria established by the Company. All counterparties must be pre-approved before engaging in any transaction with the Company. The Company regularly monitors counterparties to ensure compliance with the Company's risk policies and limits. In determining the counterparty credit risk valuation adjustment for the fair values of derivatives, if any, the Company considers collateral and legally enforceable master netting agreements that mitigate credit exposure to related counterparties.

All derivatives are recorded in other assets at their gross positive fair values and in accrued expenses and other liabilities at their gross negative fair values. See Note 14: Fair Value Measurements for a description of the valuation methodologies used for derivatives. Cash collateral amounts associated with derivative positions that are cleared through an exchange are legally characterized as settlement of the derivative positions. Such collateral amounts are reflected as offsets to the associated derivatives balances recorded in other assets or in accrued expenses and other liabilities. Other cash collateral posted and held balances are recorded in other assets and deposits, respectively, in the condensed consolidated statements of financial condition. Collateral amounts recorded in the condensed consolidated statements of financial condition are based on the net collateral posted or held position for each applicable legal entity's master netting arrangement with each counterparty.

Derivatives Designated as Hedges

Derivatives designated and qualifying as a hedge of the exposure to variability in expected future cash flows arising from changes in interest rates, or other types of forecasted transactions, are considered cash flow hedges. Derivatives designated and qualifying as a hedge of the exposure to changes in the fair value of an asset, liability, or firm commitment attributable to a particular risk, such as interest rate risk, are considered fair value hedges.

Cash Flow Hedges

The Company uses interest rate swaps to manage its exposure to variability in cash flows related to changes in interest rates on interest-earning assets and funding instruments. These interest rate swaps qualify for hedge accounting in accordance with ASC Topic 815, *Derivatives and Hedging* ("ASC 815"). At March 31, 2023 and December 31, 2022, the Company's outstanding cash flow hedges primarily relate to interest receipts from credit card receivables and had an initial maximum period of four years and three years, respectively.

The change in the fair value of derivatives designated as cash flow hedges is recorded in OCI and is subsequently reclassified into earnings in the period that the hedged forecasted cash flows affect earnings. Amounts reported in AOCI related to derivatives at March 31, 2023, will be reclassified to interest income and interest expense as interest receipts and payments are accrued on the Company's then outstanding credit card receivables and certain floating-rate debt, respectively. During the next 12 months, the Company estimates it will reclassify \$30 million into pretax earnings related to its cash flow hedges.

Fair Value Hedges

The Company is exposed to changes in the fair value of its fixed-rate debt obligations due to changes in interest rates. The Company uses interest rate swaps to manage its exposure to changes in the fair value of certain fixed-rate long-term borrowings, including securitized debt and bank notes, attributable to changes in the respective benchmark rates. These interest rate swaps qualify as fair value hedges in accordance with ASC 815. Changes in the fair values of both (i) the derivatives and (ii) the hedged long-term borrowings attributable to the interest-rate risk being hedged are recorded in interest expense. The changes generally provide substantial offset to one another, with any difference recognized in interest expense.

Derivatives Not Designated as Hedges

Foreign Exchange Forward Contracts

The Company has foreign exchange forward contracts that are economic hedges and are not designated as accounting hedges. The Company enters into foreign exchange forward contracts to manage foreign currency risk. Changes in the fair value of these contracts are recorded in other income on the condensed consolidated statements of income.

Derivatives Cleared Through an Exchange

Cash variation margin payments on derivatives cleared through an exchange are legally considered settlement payments and are accounted for with corresponding derivative positions as one unit of account and not presented separately as collateral. With settlement payments on derivative positions cleared through this exchange reflected as offsets to the associated derivative asset and liability balances, the fair values of derivative instruments and collateral balances shown are generally reduced.

Derivatives Activity

The following table summarizes the fair value (including accrued interest) and outstanding notional amounts of derivative instruments and related collateral balances (dollars in millions):

	March 31, 2023				December 31, 2022			
	Notional Amount	Number of Outstanding Derivative Contracts	Derivative Assets	Derivative Liabilities	Notional Amount	Derivative Assets	Derivative Liabilities	
Derivatives designated as hedges								
Interest rate swaps—cash flow hedge	\$ 5,500	10	\$ 6	\$ 2	\$ 5,000	\$ 1	\$ 3	
Interest rate swaps—fair value hedge	\$ 4,100	5	6	—	\$ 4,425	—	2	
Derivatives not designated as hedges								
Foreign exchange forward contracts ⁽¹⁾	\$ 25	7	—	—	\$ 25	—	—	
Total gross derivative assets/liabilities ⁽²⁾			12	2		1	5	
Less: collateral held/posted ⁽³⁾			—	(2)		—	(5)	
Total net derivative assets/liabilities			\$ 12	\$ —		\$ 1	\$ —	

(1) The foreign exchange forward contracts have notional amounts of EUR 6 million, GBP 6 million, SGD 1 million, INR 788 million and AUD 2 million as of March 31, 2023, and notional amounts of EUR 6 million, GBP 6 million, SGD 1 million, INR 788 million and AUD 2 million as of December 31, 2022.

(2) In addition to the derivatives disclosed in the table, the Company enters into forward contracts to purchase when-issued mortgage-backed securities as part of its community reinvestment initiatives. At March 31, 2023 and December 31, 2022, the Company had one outstanding contract with a total notional amount of \$35 million and \$48 million, respectively, and immaterial fair values.

(3) Collateral amounts, which consist of cash and investment securities, are limited to the related derivative asset/liability balance and do not include excess collateral received/pledged.

The following amounts were recorded on the statements of financial condition related to cumulative basis adjustments for fair value hedges (dollars in millions):

	March 31, 2023		December 31, 2022	
	Carrying Amount of Hedged Liabilities	Cumulative Amount of Fair Value Hedging Adjustment Increasing the Carrying Amount of Hedged Liabilities ⁽¹⁾	Carrying Amount of Hedged Liabilities	Cumulative Amount of Fair Value Hedging Adjustment (Decreasing) the Carrying Amount of Hedged Liabilities ⁽¹⁾
Long-term borrowings	\$ 4,094	\$ 27	\$ 4,386	\$ (3)

(1) The balance includes \$23 million and \$28 million of cumulative hedging adjustments related to discontinued hedging relationships as of March 31, 2023 and December 31, 2022, respectively.

The following table summarizes the impact of the derivative instruments on income and indicates where within the condensed consolidated financial statements such impact is reported (dollars in millions):

	Location and Amount of (Losses) Gains Recognized on the Condensed Consolidated Statements of Income	
	Interest Expense	
	Long-Term Borrowings	Interest Income (Credit Card)
For the Three Months Ended March 31, 2023		
Total amounts of income and expense line items presented in the condensed consolidated statements of income, where the effects of fair value or cash flow hedges are recorded	\$ (189)	\$ 3,321
The effects of cash flow and fair value hedging		
Gains (losses) on cash flow hedging relationships		
Amounts reclassified from OCI into earnings	\$ 2	\$ (7)
Losses on fair value hedging relationships		
Losses on hedged items	\$ (35)	\$ —
Gains on interest rate swaps	21	—
Total losses on fair value hedging relationships	<u>\$ (14)</u>	<u>\$ —</u>
For the Three Months Ended March 31, 2022		
Total amounts of income and expense line items presented in the condensed consolidated statements of income, where the effects of fair value or cash flow hedges are recorded	\$ (117)	\$ 2,268
The effects of cash flow and fair value hedging		
Losses on cash flow hedging relationships		
Amounts reclassified from OCI into earnings	\$ (1)	\$ —
Gains on fair value hedging relationships		
Gains on hedged items	\$ 47	\$ —
Losses on interest rate swaps	(32)	—
Total gains on fair value hedging relationships	<u>\$ 15</u>	<u>\$ —</u>

For the impact of the derivative instruments on OCI, see Note 8: Accumulated Other Comprehensive Income.

Collateral Requirements and Credit-Risk Related Contingency Features

The Company has master netting arrangements and minimum collateral posting thresholds with its counterparties for its fair value and cash flow hedge interest rate swaps and foreign exchange forward contracts. The Company has not sought a legal opinion in relation to the enforceability of its master netting arrangements and, as such, does not report any of these positions on a net basis. Collateral is required by either the Company or its subsidiaries or the counterparty depending on the net fair value position of the derivatives held with that counterparty. These collateral receivable or payable amounts are generally not offset against the fair value of these derivatives but are recorded separately in other assets or deposits. Most of the Company's cash collateral amounts relate to positions cleared through an exchange and are reflected as offsets to the associated derivatives balances recorded in other assets and accrued expenses and other liabilities.

The Company also has agreements with certain of its derivative counterparties that contain a provision under which the Company could be declared in default on any of its derivative obligations if the Company defaults on any of its indebtedness, including default where the lender has not accelerated repayment of the indebtedness.

16. Segment Disclosures

The Company manages its business activities in two segments: Digital Banking and Payment Services.

- *Digital Banking*: The Digital Banking segment includes Discover-branded credit cards issued to individuals on the Discover Network and other consumer products and services, including private student loans, personal loans, home loans and other consumer lending and deposit products. The majority of Digital Banking revenues relate to interest income earned on the segment's loan products. Additionally, the Company's credit card products generate substantially all revenues related to discount and interchange, protection products and loan fee income.
- *Payment Services*: The Payment Services segment includes PULSE, an automated teller machine, debit and electronic funds transfer network; Diners Club, a global payments network; and the Company's Network Partners business, which provides payment transaction processing and settlement services on the Discover Network. The majority of Payment Services revenues relate to transaction processing revenue from PULSE and royalty and licensee revenue from Diners Club.

The business segment reporting provided to and used by the Company's chief operating decision-maker is prepared using the following principles and allocation conventions:

- The Company aggregates operating segments when determining reportable segments.
- Corporate overhead is not allocated between segments; all corporate overhead is included in the Digital Banking segment.
- Through its operation of the Discover Network, the Digital Banking segment incurs fixed marketing, servicing and infrastructure costs that are not specifically allocated among the segments, except for an allocation of direct and incremental costs driven by the Company's Payment Services segment.
- The Company's assets are not allocated among the operating segments in the information reviewed by the Company's chief operating decision-maker.
- The revenues of each segment are derived from external sources. The segments do not earn revenue from intercompany sources.
- Income taxes are not specifically allocated between the operating segments in the information reviewed by the Company's chief operating decision maker.

The following table presents segment data (dollars in millions):

	Digital Banking	Payment Services	Total
For the Three Months Ended March 31, 2023			
Interest income			
Credit card loans	\$ 3,321	\$ —	\$ 3,321
Private student loans	252	—	252
Personal loans	248	—	248
Other loans	64	—	64
Other interest income	192	—	192
Total interest income	4,077	—	4,077
Interest expense	945	—	945
Net interest income	3,132	—	3,132
Provision for credit losses	1,102	—	1,102
Other income	533	88	621
Other expense	1,342	41	1,383
Income before income taxes	\$ 1,221	\$ 47	\$ 1,268
For the Three Months Ended March 31, 2022			
Interest income			
Credit card loans	\$ 2,268	\$ —	\$ 2,268
Private student loans	190	—	190
Personal loans	206	—	206
Other loans	32	—	32
Other interest income	40	—	40
Total interest income	2,736	—	2,736
Interest expense	257	—	257
Net interest income	2,479	—	2,479
Provision for credit losses	154	—	154
Other income (loss)	486	(63)	423
Other expense	1,092	38	1,130
Income (loss) before income taxes	\$ 1,719	\$ (101)	\$ 1,618

17. Revenue from Contracts with Customers

ASC Topic 606, *Revenue from Contracts with Customers* ("ASC 606"), generally applies to the sales of any good or service for which no other specific accounting guidance is provided. ASC 606 defines a principles-based model under which revenue from a contract is allocated to the distinct performance obligations within the contract and recognized in income as each performance obligation is satisfied. The Company's revenue that is subject to this model includes discount and interchange, protection products fees, transaction processing revenue and certain amounts classified as other income.

The following table presents revenue from contracts with customers disaggregated by business segment and reconciles revenue from contracts with customers to total other income (dollars in millions):

	Digital Banking	Payment Services	Total
For the Three Months Ended March 31, 2023			
Other income subject to ASC 606			
Discount and interchange revenue, net ⁽¹⁾	\$ 321	\$ 20	\$ 341
Protection products revenue	43	—	43
Transaction processing revenue	—	67	67
Other income	3	19	22
Total other income subject to ASC 606 ⁽²⁾	367	106	473
Other income not subject to ASC 606			
Loan fee income	166	—	166
Gains (losses) on equity investments	—	(18)	(18)
Total other income (loss) not subject to ASC 606	166	(18)	148
Total other income by operating segment	\$ 533	\$ 88	\$ 621
For the Three Months Ended March 31, 2022			
Other income subject to ASC 606			
Discount and interchange revenue, net ⁽¹⁾	\$ 298	\$ 22	\$ 320
Protection products revenue	44	—	44
Transaction processing revenue	—	57	57
Other income	3	21	24
Total other income subject to ASC 606 ⁽²⁾	345	100	445
Other income not subject to ASC 606			
Loan fee income	140	—	140
Gains (losses) on equity investments	1	(163)	(162)
Total other income (loss) not subject to ASC 606	141	(163)	(22)
Total other income (loss) by operating segment	\$ 486	\$ (63)	\$ 423

(1) Net of rewards, including Cashback Bonus rewards, of \$716 million and \$635 million for the three months ended March 31, 2023 and 2022, respectively.

(2) Excludes \$6 million deposit product fees that are reported within net interest income for the three months ended March 31, 2023. Deposit product fees were immaterial for the three months ended March 31, 2022.

For a detailed description of the Company's significant revenue recognition accounting policies, see Note 2: Summary of Significant Accounting Policies to the consolidated financial statements in the Company's annual report on Form 10-K for the year ended December 31, 2022.

18. Subsequent Events

The Company has evaluated events and transactions that have occurred subsequent to March 31, 2023, and determined that there were no subsequent events that would require recognition or disclosure in the condensed consolidated financial statements.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our condensed consolidated financial statements and related notes included elsewhere in this quarterly report. This quarterly report contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements, which speak to our expected business and financial performance, among other matters, contain words such as "believe," "expect," "anticipate," "intend," "plan," "aim," "will," "may," "should," "could," "would," "likely," "forecast," and similar expressions. Such statements are based on the current beliefs and expectations of our management and are subject to significant risks and uncertainties. Actual results may differ materially from those set forth in the forward-looking statements. These forward-looking statements speak only as of the date of this quarterly report and there is no undertaking to update or revise them as more information becomes available.

The following factors, among others, could cause actual results to differ materially from those set forth in the forward-looking statements: changes in economic variables, such as the availability of consumer credit, the housing market, energy costs, the number and size of personal bankruptcy filings, the rate of unemployment, the levels of consumer confidence and consumer debt and investor sentiment; the impact of current, pending and future legislation, regulation, supervisory guidance and regulatory and legal actions, including, but not limited to, those related to accounting guidance, tax reform, financial regulatory reform, consumer financial services practices, anti-corruption and funding, capital and liquidity; the actions and initiatives of current and potential competitors; our ability to manage our expenses; our ability to successfully achieve card acceptance across our networks and maintain relationships with network participants and merchants; our ability to sustain and grow our private student loan, personal loan and home loan products; difficulty obtaining regulatory approval for, financing, closing, transitioning, integrating or managing the expenses of acquisitions of or investments in new businesses, products or technologies; our ability to manage our credit risk, market risk, liquidity risk, operational risk, legal and compliance risk and strategic risk; the availability and cost of funding and capital; access to deposit, securitization, equity, debt and credit markets; the impact of rating agency actions; the level and volatility of equity prices, commodity prices and interest rates, currency values, investments, other market fluctuations and other market indices; losses in our investment portfolio; limits on our ability to pay dividends and repurchase our common stock; limits on our ability to receive payments from our subsidiaries; fraudulent activities or material security breaches of our or others' key systems; our ability to remain organizationally effective; our ability to increase or sustain Discover card usage or attract new customers; our ability to maintain relationships with merchants; the effect of political, economic and market conditions, geopolitical events, climate change, pandemics and unforeseen or catastrophic events; our ability to introduce new products and services; our ability to manage our relationships with third-party vendors, as well as those with which we have no direct relationship such as our employees' internet service providers; our ability to maintain current technology and integrate new and acquired systems and technology; our ability to collect amounts for disputed transactions from merchants and merchant acquirers; our ability to attract and retain employees; our ability to protect our reputation and our intellectual property; our ability to comply with regulatory requirements; and new lawsuits, investigations or similar matters or unanticipated developments related to current matters. We routinely evaluate and may pursue acquisitions of or investments in businesses, products, technologies, loan portfolios or deposits, which may involve payment in cash or our debt or equity securities.

Additional factors that could cause our results to differ materially from those described below can be found in this section of this quarterly report and in "Risk Factors," "Business," and "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our annual report on Form 10-K for the year ended December 31, 2022, which is filed with the Securities and Exchange Commission ("SEC") and available at the SEC's internet site (<https://www.sec.gov>).

Introduction and Overview

Discover Financial Services ("DFS") is a digital banking and payment services company. We provide digital banking products and services and payment services through our subsidiaries. We offer our customers credit card loans, private student loans, personal loans, home loans and deposit products. We also operate the Discover Network, the PULSE network ("PULSE") and Diners Club International ("Diners Club"), collectively known as the Discover Global Network. The Discover Network processes transactions for Discover-branded credit and debit cards and provides payment transaction processing and settlement services. PULSE operates an electronic funds transfer network, providing financial institutions issuing debit cards on the PULSE network with access to ATMs domestically and internationally and merchant acceptance throughout the United States of America ("U.S.") for debit card transactions. Diners Club is a global payments network of licensees, which are generally financial institutions, that issue Diners Club branded credit and charge cards and/or provide card acceptance services.

Our primary revenues consist of interest income earned on loan receivables and fees earned from customers, financial institutions, merchants and issuers. The primary expenses required to operate our business include funding costs (interest expense), credit loss provisions, customer rewards and expenses incurred to grow, manage and service our loan receivables and networks. Our business activities are funded primarily through consumer deposits, securitization of loan receivables and the issuance of unsecured debt.

Quarter Highlights

The highlights below compare results as of and for the three months ended March 31, 2023, against results for the same period in the prior year.

- Net income was \$1.0 billion, or \$3.58 per diluted share, compared to net income of \$1.2 billion, or \$4.22 per diluted share, in the prior year.
- Total loans grew \$19.2 billion, or 21%, to \$112.7 billion.
- Credit card loans grew \$16.0 billion, or 22%, to \$89.8 billion.
- The net charge-off rate for credit card loans increased 126 basis points to 3.10% and the delinquency rate for credit card loans over 30 days past due increased 99 basis points to 2.76%.
- Direct-to-consumer deposits grew \$11.6 billion, or 18%, to \$75.3 billion.
- Payment Services transaction volume for the segment was \$85.1 billion, up 10%.

Outlook

The outlook below provides our current expectations for our financial results based on market conditions, the regulatory and legal environment and our business strategies.

- We expect continued loan growth driven by recent account growth, moderation in the payment rate and our current expectation of sales trends.
- Based on the current interest rate environment, net interest margin is expected to modestly increase in comparison to 2022.
- We expect the total net charge-off rate to increase, in comparison to the prior year, driven by continued credit normalization and seasoning of recent vintages.
- Total expenses are expected to increase, driven by investments in acquisition and brand, compliance initiatives, technology and analytics. We remain committed to managing expenses while continuing to make investments in profitable long-term growth.

Regulatory Environment and Developments

Banking

Capital Standards and Stress Testing

As a bank holding company, DFS is subject to mandatory supervisory stress tests every other year and is required to submit annual capital plans to the Federal Reserve based on forward-looking internal analysis of income and capital levels under baseline and stressful conditions. DFS is also subject to capital buffer requirements, including the Stress Capital Buffer ("SCB"), which requires maintenance of regulatory capital levels above a threshold based on the results of supervisory stress tests after accounting for planned dividend payments.

In January 2021, the Federal Reserve finalized regulatory amendments that made targeted changes to the capital planning, regulatory reporting and SCB requirements for firms subject to Category IV standards, including DFS, to be consistent with the Federal Reserve's regulatory tailoring framework. The final rules generally align to instructions the Federal Reserve previously provided to Category IV firms regarding their respective capital plan submissions. The amended rules also provide Category IV firms with the option to submit to supervisory stress tests during off years if they wish for the Federal Reserve to reset the stress test portion of their SCB requirement. The Federal Reserve also revised the scope of application of its existing regulatory guidance for capital planning to align with the tailoring framework. However, the timing

and substance of any additional changes to existing guidance or new guidance are uncertain. Moreover, following the failure of two domestic banks during March 2023, members of Congress, the President of the United States and various bank regulatory authorities have made public statements indicating a desire for additional prudential regulation for Category IV firms like DFS. While we cannot currently predict the timing or substance of any such regulatory change, if any such change were adopted, it could roll back some or all of the regulatory tailoring currently applicable to DFS or otherwise tighten the prudential regulatory requirements that would apply to DFS.

In June 2022, the Federal Reserve released results of the 2022 Comprehensive Capital Analysis and Review ("CCAR") exercise. Our capital levels demonstrated resiliency under stress, staying well above regulatory minimums. Based on these results, in August 2022, our new SCB was set at 2.5%, the lowest possible requirement. This new SCB is effective October 1, 2022, through September 30, 2023. In accordance with the capital plan rule amendments, we elected not to participate in the 2023 supervisory stress tests. Nevertheless, we submitted to the Federal Reserve on April 5, 2023, a capital plan based on a forward-looking internal assessment of income and capital under baseline and stressful conditions. The Federal Reserve will use our 2023 capital plan submission to assess our capital planning process and positions and to reset the portion of our SCB requirement that is based on four quarters of planned common stock dividends. We expect the Federal Reserve will provide these results in late June or early July 2023.

London Interbank Offered Rate

In July 2017, the UK Financial Conduct Authority ("FCA") announced that it would no longer encourage or compel banks to continue to contribute quotes and maintain the London Interbank Offered Rate ("LIBOR") after 2021. To support a smooth transition away from LIBOR, the Federal Reserve and the Federal Reserve Bank of New York convened the Alternative Reference Rates Committee ("ARRC"), a group of private-market participants tasked with facilitating a successful transition from U.S. dollar ("USD") LIBOR to a more robust reference rate. The ARRC identified the Secured Overnight Financing Rate ("SOFR") as its recommended alternative reference rate for USD LIBOR. The ARRC has also established several priorities and milestones to support the use of SOFR and SOFR-based indices, including developing contractual "fallback" language for capital markets and consumer products; providing clarity on legal, tax, accounting and regulatory matters; promoting broad outreach and education efforts around the LIBOR transition; and recommending spread adjustments for SOFR and SOFR-based indices, which will be of critical importance to market participants once USD LIBOR settings cease in 2023.

In March 2021, the FCA announced the future cessation and loss of representativeness for all LIBOR benchmark settings. While non-USD and several less frequently referenced USD LIBOR settings ceased publication immediately after December 31, 2021, commonly referenced USD LIBOR settings will cease publication immediately after June 30, 2023; this future cessation event will trigger fallback provisions in many financial contracts that require conversion of the benchmark index from LIBOR to an alternative rate. In July 2021, the ARRC announced its recommendation of forward-looking term rates based on SOFR as additional alternative reference rate options.

In December 2021, the Consumer Financial Protection Bureau ("CFPB") finalized a rule to facilitate transition from LIBOR, which became effective on April 1, 2022. Specifically, this final rule provides guidance on LIBOR replacements and the LIBOR transition for purposes of Regulation Z. We have communicated with the CFPB regarding our plans for the LIBOR transition.

A cross-functional team is overseeing and managing our transition away from the use of LIBOR. This team assesses evolving industry and marketplace norms and conventions for LIBOR-indexed instruments, evaluates the impacts stemming from the future cessation of LIBOR publication and oversees and takes actions to transition our LIBOR exposures to alternative benchmark rates, usually SOFR. Our existing LIBOR exposures are limited to two instruments — variable-rate student loans and capital markets securities.

As of March 31, 2023, LIBOR-indexed variable-rate loans comprised approximately 36% of our private student loan portfolio and approximately 4% of our aggregate loan portfolio. These outstanding student loans indexed to LIBOR will convert to a SOFR index in 2023 when 3-month USD LIBOR ceases to be a representative reference rate. As of November 2021, we no longer originate new variable-rate student loans indexed to LIBOR. Instead, new originations of such loans are indexed solely to 3-month term SOFR published by the Chicago Mercantile Exchange.

We ceased entering into new LIBOR-indexed interest rate derivatives in 2018 and have since actively eliminated LIBOR exposures in our derivatives portfolio. During the third quarter of 2021, we terminated our last LIBOR-indexed interest rate swap maturing after June 2023; our last LIBOR-indexed interest rate swap matured in January 2022.

Most of our capital markets securities indexed to USD LIBOR are floating-rate asset-backed securities. Beginning in 2018, we included fallback provisions in all newly issued securities that will facilitate an orderly transition from LIBOR to an appropriate reference rate, which may be based on SOFR, once 1- and 3-month LIBOR cease to be published after June 2023. Approximately \$1.5 billion of our capital markets securities that mature after June 2023 with no fallback provisions would be covered under federal legislation enacted in March 2022. This legislation will allow us to replace the LIBOR index with SOFR under a safe harbor provision. Approximately \$500 million of our capital markets securities have a rate reset in August 2023 that contain fallback provisions that are not covered under the federal LIBOR legislation; however, we may decide to exercise our right to call and redeem those securities on their reset date or rely on the existing fallback provisions.

We have prepared for the cessation of USD LIBOR by taking steps to avoid new exposures and actively reduce our remaining exposures. We completed scheduled transition work before year-end 2021, including providing our stakeholders with information about the cessation of USD LIBOR and how it will affect their contracts with us. The transition process will continue through the end of 2023.

Consumer Financial Services

The CFPB regulates consumer financial products and services and examines certain providers of consumer financial products and services, including Discover. The CFPB's authority includes rulemaking, supervisory and enforcement powers with respect to federal consumer protection laws; preventing "unfair, deceptive or abusive acts or practices" ("UDAAP") and ensuring that consumers have access to fair, transparent and competitive financial products and services. Historically, the CFPB's policy priorities focused on several financial products of the type we offer (e.g., credit cards and other consumer lending products). In addition, the CFPB is required by statute to undertake certain actions including its biennial review of the consumer credit card market.

Under Director Rohit Chopra's leadership, the CFPB's priorities have focused on and are expected to continue focusing on, among other things, increased enforcement of existing consumer protection laws, with a particular focus on fees charged to consumers, UDAAP, fair lending, student lending and servicing, debt collection and credit reporting. Additionally, detection of repeat offenders, such as companies that violate a formal court or agency order, has become a priority for the CFPB. Director Chopra, in March 2022, identified, as repeat offenders, several companies that have had multiple enforcement actions, including us. The CFPB has recently taken action against financial institutions for violating prior enforcement actions. Enhanced regulatory requirements, potential supervisory findings, or enforcement actions and ratings could negatively impact our ability to implement certain consumer-focused enhancements to product features and functionality and business strategies, limit or change our business practices, limit our consumer product offerings, cause us to invest more management time and resources in compliance efforts or limit our ability to obtain related required regulatory approvals. The additional expense, time and resources needed to comply with ongoing or new regulatory requirements may adversely impact the cost of and access to credit for consumers and results of business operations.

In December 2020, certain of our subsidiaries entered into a consent order with the CFPB regarding identified private student loan servicing practices. See Note 13: Litigation and Regulatory Matters to our condensed consolidated financial statements for more information.

Data Security and Privacy

Policymakers at the federal and state levels remain focused on enhancing data security and data breach incident response requirements. Furthermore, regulations and legislation at various levels of government have been proposed and enacted to augment consumer data privacy standards, including the capture and use of consumer biometrics. For example, the California Consumer Privacy Act ("CCPA"), which became effective in 2020, created a broad set of privacy rights and remedies modeled in part on the European Union's General Data Protection Regulation. The California Privacy Rights Act ("CPRA"), which became effective on January 1, 2023, amends the CCPA, enhancing consumer privacy protections and creating a new California Privacy Protection Agency ("CPPA"). The CPPA will begin enforcement of the CPRA on July 1, 2023. While the CPRA retains an exemption for information collected, processed, sold, or disclosed subject to the Gramm-Leach-Bliley Act, we continue to evaluate the impact of the CPRA, as well as other federal and state laws, on our businesses and other providers of consumer financial services.

Environmental, Social and Governance Matters

Environmental, social and governance ("ESG") issues, including climate change, human capital and governance practices, are a significant area of focus by lawmakers at the state and federal levels, regulatory agencies, shareholders and other stakeholders. Proposed legislation and rulemakings have been issued or are being considered, including proposals to require disclosure of climate, cybersecurity and other ESG metrics and risk. The potential impact to us of these legislative and regulatory developments is uncertain at this time.

In particular, in March 2022, the Securities and Exchange Commission proposed climate-related disclosure requirements. Through an enterprise-wide working group, we continue to assess the potential impact of the proposed rules, if adopted.

Segments

We manage our business activities in two segments, Digital Banking and Payment Services, based on the products and services provided. For a detailed description of the operations of each segment, as well as the allocation conventions used in our business segment reporting, see Note 16: Segment Disclosures to our condensed consolidated financial statements.

The following table presents segment data (dollars in millions):

	For the Three Months Ended March 31,	
	2023	2022
Digital Banking		
Interest income		
Credit card loans	\$ 3,321	\$ 2,268
Private student loans	252	190
Personal loans	248	206
Other loans	64	32
Other interest income	192	40
Total interest income	4,077	2,736
Interest expense	945	257
Net interest income	3,132	2,479
Provision for credit losses	1,102	154
Other income	533	486
Other expense	1,342	1,092
Income before income taxes	1,221	1,719
Payment Services		
Other income (loss)	88	(63)
Other expense	41	38
Income (loss) before income taxes	47	(101)
Total income before income taxes	\$ 1,268	\$ 1,618

The following table presents information on transaction volume (dollars in millions):

	For the Three Months Ended March 31,	
	2023	2022
Network Transaction Volume		
PULSE Network	\$ 65,268	\$ 59,836
Network Partners	10,628	10,683
Diners Club ⁽¹⁾	9,211	7,176
Total Payment Services	85,107	77,695
Discover Network — Proprietary ⁽²⁾	51,826	48,129
Total Network Transaction Volume	\$ 136,933	\$ 125,824
Transactions Processed on Networks		
Discover Network	850	831
PULSE Network	1,625	1,399
Total Transaction Processed on Networks	2,475	2,230
Credit Card Volume		
Discover Card Volume ⁽³⁾	\$ 54,129	\$ 49,379
Discover Card Sales Volume ⁽⁴⁾	\$ 50,588	\$ 46,329

- (1) Diners Club volume is derived from data provided by licensees for Diners Club branded cards issued outside North America and is subject to subsequent revision or amendment.
(2) Represents gross Discover card sales volume on the Discover Network.
(3) Represents Discover card activity related to sales net of returns, balance transfers, cash advances and other activity.
(4) Represents Discover card activity related to sales net of returns.

Digital Banking

Our Digital Banking segment reported pretax income of \$1.2 billion for the three months ended March 31, 2023, as compared to \$1.7 billion for the three months ended March 31, 2022.

Net interest income increased for the three months ended March 31, 2023, as compared to the three months ended March 31, 2022, primarily driven by a higher yield on loans and a higher average level of loan receivables, partially offset by higher funding costs. Interest income increased compared to the prior year primarily due to higher market rates and a higher average level of loan receivables. Interest expense increased compared to the prior year primarily due to higher funding costs driven by higher market rates and a larger funding base.

For the three months ended March 31, 2023, the provision for credit losses increased as compared to the three months ended March 31, 2022, primarily driven by loan growth and credit normalization. For a detailed discussion on provision for credit losses, see "— Loan Quality — Provision and Allowance for Credit Losses."

Total other income for the Digital Banking segment increased for the three months ended March 31, 2023, as compared to the three months ended March 31, 2022, primarily due to increases in loan fee income and net discount and interchange revenue. Loan fee income increased primarily due to a higher volume of late payments. The increase in discount and interchange revenue was partially offset by an increase in rewards, both of which were driven by higher sales volume.

Total other expense increased for the three months ended March 31, 2023, as compared to the three months ended March 31, 2022, primarily due to increases in employee compensation and benefits, professional fees and marketing and business development. The increase in employee compensation and benefits was driven primarily by higher headcount. Professional fees increased primarily due to increased consulting supporting consumer compliance initiatives and investments in technology. The increase in marketing and business development was primarily from growth investments in card and consumer banking.

Discover card sales volume was \$50.6 billion for the three months ended March 31, 2023, which was an increase of 9.2% as compared to the three months ended March 31, 2022. This volume growth was primarily driven by higher consumer spending.

Payment Services

Our Payment Services segment reported pretax income of \$47 million for the three months ended March 31, 2023, as compared to pretax loss of \$101 million for the three months ended March 31, 2022. The increase in segment pretax income was primarily due to smaller losses on equity investments, which were the result of smaller mark-to-market adjustments for equity investments measured at fair value.

Critical Accounting Estimates

In preparing our consolidated financial statements in conformity with accounting principles generally accepted in the U.S. ("GAAP"), management must make judgments and use estimates and assumptions about the effects of matters that are uncertain. For estimates that involve a high degree of judgment and subjectivity, it is possible that different estimates could reasonably be derived for the same period. For estimates that are particularly sensitive to changes in economic or market conditions, significant changes to the estimated amount from period to period are also possible. Management believes the current assumptions and other considerations used to estimate amounts reflected in our consolidated financial statements are appropriate. However, if actual experience differs from the assumptions and other considerations used in estimating amounts in our consolidated financial statements, the resulting changes could have a material effect on our consolidated results of operations and, in certain cases, could have a material effect on our consolidated financial condition. Management has identified the estimates related to our allowance for credit losses as a critical accounting estimate.

Allowance for Credit Losses

The allowance for credit losses was \$7.7 billion at March 31, 2023, which reflects a \$385 million build from the amount of the allowance for credit losses at December 31, 2022. The allowance for credit losses represents management's estimate of expected credit losses over the remaining expected life of our financial assets measured at amortized cost. Changes in the allowance for credit losses, and in the related provision for credit losses, can materially affect net income.

In estimating the expected credit losses, we use a combination of statistical models and qualitative analysis. There is a significant amount of judgment applied in selecting inputs and analyzing the results produced to estimate the allowance for credit losses. For more information on these judgments and our accounting policies and methodologies used to determine the allowance for credit losses, see "Management's Discussion and Analysis of Financial Condition and Results of Operations — Loan Quality," Note 4: Loan Receivables and Note 2: Summary of Significant Accounting Policies to our consolidated financial statements in our annual report on Form 10-K for the year ended December 31, 2022.

One of the key assumptions requiring significant judgment in estimating the current expected credit losses ("CECL") on a quarterly basis is the determination of the macroeconomic forecasts used in the loss forecast models. For the reasonable and supportable loss forecast period, we consider forecasts of multiple economic scenarios that generally include a base scenario with one or more optimistic (upside) or pessimistic (downside) scenarios. These scenarios comprise a variety of macroeconomic variables, including annualized gross domestic product growth and unemployment rate. The scenarios that are chosen each quarter and the amount of weighting given to each scenario depend on a variety of factors including recent economic events, leading economic indicators, views of internal and third-party economists and industry trends. Assumptions about the macroeconomic environment are inherently uncertain and, as a result, actual changes in the allowance for credit losses may be different from the simulated scenario presented below.

To demonstrate the sensitivity of the estimated credit losses to the macroeconomic scenarios, we measured the impact of altering the weighting of macroeconomic scenarios used in our loss forecast. Our allowance for credit losses would increase by approximately \$522 million at March 31, 2023 if we applied 100% weight to the most adverse scenario in our sensitivity analysis to reflect continued inflationary pressures, including persistent supply-chain disruptions and the influence of geopolitical events, as well as high interest rates and growing unemployment rates.

The sensitivity disclosed above is hypothetical. It is difficult to estimate how potential changes in any one factor or input, such as the weighting of macroeconomic forecasts, might affect the overall allowance for credit losses because we consider a variety of factors and inputs in estimating the allowance for credit losses. The macroeconomic scenarios used are constructed with interrelated projections of multiple economic variables and loss estimates are produced that consider the historical correlation of those economic variables with credit losses. The inputs in the macroeconomic scenarios may not change at the same rate and may not be consistent across all geographies or product types, and changes in factors and inputs may be directionally inconsistent, such that improvement in one factor or input may offset deterioration in others. As a result, the sensitivity analysis above does not necessarily reflect the nature and extent of future changes in the allowance for credit losses. It is intended to provide insights into the impact of different judgments about the economy on our modeled loss

estimates for the loan portfolio and does not imply any expectation of future losses. Furthermore, the hypothetical increase in our allowance for credit losses for loans does not incorporate the impact of management judgment for qualitative factors applied in the current allowance for credit losses, which may have a positive or negative effect on our actual financial condition and results of operations.

The overall economic environment directly impacts the macroeconomic variables that are used in the loss forecast models. If management used different assumptions about the economic environment in estimating expected credit losses, the impact to the allowance for credit losses could have a material effect on our consolidated financial condition and results of operations. In addition, if we experience significant instability in the economic environment, the uncertainty around the credit loss forecasts may increase, both due to the uncertainty of the economic forecasts and the challenges our models may have in incorporating them.

Earnings Summary

The following table outlines changes in our condensed consolidated statements of income (dollars in millions):

	For the Three Months Ended March 31,		2023 vs. 2022 Increase (Decrease)	
	2023	2022	\$	%
Interest income	\$ 4,077	\$ 2,736	\$ 1,341	49 %
Interest expense	945	257	688	268 %
Net interest income	3,132	2,479	653	26 %
Provision for credit losses	1,102	154	948	616 %
Net interest income after provision for credit losses	2,030	2,325	(295)	(13)%
Other income	621	423	198	47 %
Other expense	1,383	1,130	253	22 %
Income before income taxes	1,268	1,618	(350)	(22)%
Income tax expense	292	376	(84)	(22)%
Net income	\$ 976	\$ 1,242	\$ (266)	(21)%
Net income allocated to common stockholders	\$ 939	\$ 1,205	\$ (266)	(22)%

Net Interest Income

The tables that follow this section have been provided to supplement the discussion below and provide further analysis of net interest income, net interest margin and the impact of rate and volume changes on net interest income. Net interest income represents the difference between interest income earned on our interest-earning assets and the interest expense incurred to finance those assets. We analyze net interest income in total by calculating net interest margin (net interest income as a percentage of average total loan receivables) and net yield on interest-earning assets (net interest income as a percentage of average total interest-earning assets). We also separately consider the impact of the level of loan receivables and the related interest yield and the impact of the cost of funds related to each of our funding sources, along with the income generated by our liquidity portfolio, on net interest income.

Our interest-earning assets consist of: (i) cash and cash equivalents primarily related to amounts on deposit with the Federal Reserve Bank of Philadelphia, (ii) restricted cash, (iii) other short-term investments, (iv) investment securities and (v) loan receivables. Our interest-bearing liabilities consist primarily of deposits, both direct-to-consumer and brokered, and long-term borrowings, including amounts owed to securitization investors. The following factors influence net interest income:

- The level and composition of loan receivables, including the proportion of credit card loans to other loans, as well as the proportion of loan receivables bearing interest at promotional rates as compared to standard rates;
- The credit performance of our loans, particularly with regard to charge-offs of finance charges, which reduce interest income;
- The terms of long-term borrowings and certificates of deposit upon initial offering, including maturity and interest rate;
- The interest rates necessary to attract and maintain direct-to-consumer deposits;
- The level and composition of other interest-earning assets, including our liquidity portfolio, and interest-bearing liabilities;
- Changes in the interest rate environment, including the levels of interest rates and the relationships among interest rate indices, such as the prime rate, the federal funds rate, the interest rate on reserve balances, LIBOR and SOFR; and
- The effectiveness of interest rate swaps in our interest rate risk management program.

Net interest income increased for the three months ended March 31, 2023, as compared to the three months ended March 31, 2022, primarily driven by a higher yield on loans and a higher average level of loan receivables, partially offset by higher funding costs. Interest income increased compared to the prior year primarily due to higher market rates and a higher average level of loan receivables. Interest expense increased compared to the prior year primarily due to higher funding costs driven by higher market rates and a larger funding base.

Average Balance Sheet Analysis

(dollars in millions)

	For the Three Months Ended March 31,					
	2023			2022		
	Average Balance	Yield/Rate	Interest	Average Balance	Yield/Rate	Interest
Assets						
Interest-earning assets						
Cash and cash equivalents	\$ 7,344	4.71 %	\$ 85	\$ 8,519	0.20 %	\$ 4
Restricted cash	588	4.05 %	6	774	0.02 %	NM
Investment securities	12,235	3.36 %	101	6,509	2.23 %	36
Loan receivables ⁽¹⁾						
Credit card loans ⁽²⁾⁽³⁾	89,460	15.06 %	3,321	73,042	12.59 %	2,268
Private student loans	10,546	9.68 %	252	10,381	7.41 %	190
Personal loans	8,155	12.35 %	248	6,909	12.09 %	206
Other	3,888	6.64 %	64	2,359	5.60 %	32
Total loan receivables	112,049	14.06 %	3,885	92,691	11.80 %	2,696
Total interest-earning assets	132,216	12.51 %	4,077	108,493	10.23 %	2,736
Allowance for credit losses	(7,307)			(6,818)		
Other assets	6,494			6,248		
Total assets ⁽⁴⁾	\$ 131,403			\$ 107,923		
Liabilities and Stockholders' Equity						
Interest-bearing liabilities						
Interest-bearing deposits						
Time deposits	\$ 33,194	3.17 %	\$ 259	\$ 19,924	1.53 %	\$ 75
Money market deposits	8,769	3.77 %	82	8,207	0.59 %	12
Other interest-bearing savings deposits	49,255	3.42 %	415	42,487	0.50 %	52
Total interest-bearing deposits	91,218	3.36 %	756	70,618	0.80 %	139
Borrowings						
Short-term borrowings	—	— %	—	667	0.49 %	1
Securitized borrowings ⁽⁵⁾⁽⁶⁾⁽⁷⁾	9,667	3.67 %	87	7,739	1.29 %	24
Other long-term borrowings ⁽⁶⁾⁽⁷⁾⁽⁸⁾	9,372	4.40 %	102	9,432	3.99 %	93
Total borrowings	19,039	4.03 %	189	17,838	2.68 %	118
Total interest-bearing liabilities	110,257	3.48 %	945	88,456	1.18 %	257
Other liabilities and stockholders' equity ⁽⁹⁾	21,146			19,467		
Total liabilities and stockholders' equity	\$ 131,403			\$ 107,923		
Net interest income			\$ 3,132			\$ 2,479
Net interest margin ⁽¹⁰⁾		11.34 %			10.85 %	
Net yield on interest-earning assets ⁽¹¹⁾		9.61 %			9.27 %	
Interest rate spread ⁽¹²⁾		9.03 %			9.05 %	

(1) Average balances of loan receivables and yield calculations include non-accruing loans. If the non-accruing loan balances were excluded, there would not be a material impact on the amounts reported above.

(2) Interest income on credit card loans includes \$105 million and \$76 million of amortization of balance transfer fees for the three months ended March 31, 2023 and 2022, respectively.

(3) Includes the impact of interest rate swap agreements used to change a portion of floating-rate assets to fixed-rate assets for the three months ended March 31, 2023 and 2022.

(4) The return on average assets, based on net income, was 0.74% and 1.15% for the three months ended March 31, 2023 and 2022, respectively.

(5) Includes the impact of one terminated derivative formerly designated as a cash flow hedge for the three months ended March 31, 2023 and 2022.

(6) Includes the impact of interest rate swap agreements used to change a portion of fixed-rate funding to floating-rate funding for the three months ended March 31, 2023 and 2022.

(7) Includes the impact of terminated derivatives formerly designated as fair value hedges for the three months ended March 31, 2023 and 2022.

(8) Includes the impact of interest rate swap agreements used to change a portion of floating-rate funding to fixed-rate funding for the three months ended March 31, 2023.

(9) The return on average stockholders' equity, based on net income, was 27.00% and 9.00% for the three months ended March 31, 2023 and 2022, respectively.

(10) Net interest margin represents net interest income as a percentage of average total loan receivables.

(11) Net yield on interest-earning assets represents net interest income as a percentage of average total interest-earning assets.

(12) Interest rate spread represents the difference between the rate on total interest-earning assets and the rate on total interest-bearing liabilities.

Loan Quality

Loan receivables consist of the following (dollars in millions):

	March 31, 2023	December 31, 2022
Credit card loans	\$ 89,755	\$ 90,113
Other loans		
Private student loans	10,480	10,308
Personal loans	8,374	7,998
Other loans	4,065	3,701
Total other loans	22,919	22,007
Total loan receivables	112,674	112,120
Allowance for credit losses	(7,691)	(7,374)
Net loan receivables	\$ 104,983	\$ 104,746

Provision and Allowance for Credit Losses

Provision for credit losses is the expense related to maintaining the allowance for credit losses at an appropriate level to absorb the estimate of credit losses anticipated over the remaining expected life of loan receivables at each period end date. In deriving the estimate of expected credit losses, we consider the collectability of principal, interest and fees associated with our loan receivables. We also consider expected recoveries of amounts that were either previously charged-off or are expected to be charged-off. Establishing the estimate for expected credit losses requires significant management judgment. The factors that influence the provision for credit losses include:

- Increases or decreases in outstanding loan balances, including:
 - Changes in consumer spending, payment and credit utilization behaviors;
 - The level of new account and loan originations and loan maturities; and
 - Changes in the overall mix of accounts and products within the portfolio;
- The credit quality of the loan portfolio, which reflects our credit granting practices and the effectiveness of collection efforts, among other factors;
- The impact of general economic conditions on the consumer, including national and regional conditions, unemployment levels, bankruptcy trends and interest rate movements;
- The level and direction of historical losses; and
- Regulatory changes or new regulatory guidance.

Refer to "Management's Discussion and Analysis of Financial Condition and Results of Operations — Critical Accounting Estimates — Allowance for Credit Losses" and Note 3: Loan Receivables to our condensed consolidated financial statements for more details on how we estimate the allowance for credit losses.

The following tables provide changes in our allowance for credit losses (dollars in millions):

	For the Three Months Ended March 31, 2023				
	Credit Card Loans	Private Student Loans	Personal Loans	Other Loans	Total Loans
Balance at December 31, 2022	\$ 5,883	\$ 839	\$ 595	\$ 57	\$ 7,374
Cumulative effect of ASU No. 2022-02 adoption ⁽¹⁾	(66)	—	(2)	—	(68)
Balance at January 1, 2023	5,817	839	593	57	7,306
Additions					
Provision for credit losses ⁽²⁾	1,002	60	68	5	1,135
Deductions					
Charge-offs	(879)	(33)	(54)	—	(966)
Recoveries	195	6	15	—	216
Net charge-offs	(684)	(27)	(39)	—	(750)
Balance at March 31, 2023	<u>\$ 6,135</u>	<u>\$ 872</u>	<u>\$ 622</u>	<u>\$ 62</u>	<u>\$ 7,691</u>
	For the Three Months Ended March 31, 2022				
	Credit Card Loans	Private Student Loans	Personal Loans	Other Loans	Total Loans
Balance at December 31, 2021	\$ 5,273	\$ 843	\$ 662	\$ 44	\$ 6,822
Additions					
Provision for credit losses ⁽²⁾	178	45	(30)	—	193
Deductions					
Charge-offs	(541)	(24)	(38)	—	(603)
Recoveries	210	6	19	—	235
Net charge-offs	(331)	(18)	(19)	—	(368)
Balance at March 31, 2022	<u>\$ 5,120</u>	<u>\$ 870</u>	<u>\$ 613</u>	<u>\$ 44</u>	<u>\$ 6,647</u>

(1) Represents the adjustment to the allowance for credit losses as a result of the adoption of ASU No. 2022-02 on January 1, 2023.

(2) Excludes a \$33 million and \$39 million adjustment to the liability for expected credit losses on unfunded commitments for the three months ended March 31, 2023 and 2022, respectively, as the liability is recorded in accrued expenses and other liabilities in our condensed consolidated statements of financial condition.

The allowance for credit losses was approximately \$7.7 billion at March 31, 2023, which reflects a \$385 million build from the amount of the allowance for credit losses at December 31, 2022. The build in the allowance for credit losses for the three months ended March 31, 2023 was primarily driven by a modestly more pessimistic economic outlook and growth in revolving loan balances.

The allowance estimation process begins with a loss forecast that uses certain macroeconomic variables and multiple macroeconomic scenarios among its inputs. In estimating the allowance at March 31, 2023, we used a macroeconomic forecast that projected the following weighted average amounts: (i) unemployment rate ending 2023 at 4.7% and peaking at 4.8% in early 2024 and (ii) 0.96% growth rate in real gross domestic product in 2023.

In estimating expected credit losses, we considered the uncertainties associated with borrower behavior and payment trends, as well as recent and expected macroeconomic conditions, such as high consumer price inflation and the fiscal and monetary policy responses to that inflation. The Federal Reserve raised its federal funds rate target range substantially during 2022 in an effort to slow economic growth and reduce inflation. Most economists and financial market participants expect U.S. economic growth and inflation to continue to slow during 2023 as the economy responds to the lagged effects of tighter monetary policy and credit conditions, which may contract further after the failure of two domestic banks in March.

The forecast period we deemed to be reasonable and supportable was 18 months for all periods presented. The 18-month reasonable and supportable forecast period was deemed appropriate given the current economic conditions. For all periods presented, we determined that a reversion period of 12 months was appropriate for the same reason. We applied a weighted reversion method to provide a more reasonable transition to historical losses for all loan products for all periods presented.

The provision for credit losses is the amount of expense realized after considering the level of net charge-offs in the period and the required amount of allowance for credit losses at the balance sheet date. For the three months ended March 31, 2023, the provision for credit losses increased by \$942 million compared to the same period in 2022, primarily driven by loan growth and credit normalization.

Net Charge-offs

Our net charge-offs include the principal amount of losses charged off less principal recoveries and exclude charged-off and recovered interest and fees and fraud losses. Charged-off and recovered interest and fees are recorded in interest income and loan fee income, respectively, which is effectively a reclassification of the provision for credit losses, while fraud losses are recorded in other expense.

The following table presents amounts and rates of net charge-offs of key loan products (dollars in millions):

	For the Three Months Ended March 31,			
	2023		2022	
	\$	%	\$	%
Credit card loans	\$ 684	3.10 %	\$ 331	1.84 %
Private student loans	\$ 27	1.04 %	\$ 18	0.69 %
Personal loans	\$ 39	1.94 %	\$ 19	1.12 %

The net charge-offs and net charge-off rate for credit card loans increased for the three months ended March 31, 2023, when compared to the same period in 2022, primarily due to continued credit normalization and the seasoning of vintages from the past two years. The net charge-offs and net charge-off rate for private student and personal loans increased for the three months ended March 31, 2023, when compared to the same period in 2022, primarily due to continued credit normalization.

Delinquencies

Delinquencies are an indicator of credit quality at a point in time. A loan balance is considered delinquent when contractual payments on the loan become 30 days past due.

The following table presents the amounts and delinquency rates of key loan products that are 30 and 90 days or more delinquent, and loan receivables that are not accruing interest regardless of delinquency (dollars in millions):

	March 31, 2023		December 31, 2022	
	\$	%	\$	%
Loans 30 or more days delinquent				
Credit card loans	\$ 2,477	2.76 %	\$ 2,278	2.53 %
Private student loans	\$ 211	2.02 %	\$ 212	2.05 %
Personal loans	\$ 76	0.91 %	\$ 63	0.80 %
Total loan receivables	\$ 2,791	2.48 %	\$ 2,578	2.30 %
Loans 90 or more days delinquent				
Credit card loans	\$ 1,204	1.34 %	\$ 1,028	1.14 %
Private student loans	\$ 54	0.52 %	\$ 45	0.43 %
Personal loans	\$ 19	0.23 %	\$ 16	0.21 %
Total loan receivables	\$ 1,290	1.15 %	\$ 1,101	0.98 %
Loans not accruing interest	\$ 260	0.23 %	\$ 214	0.19 %

The 30-day delinquency rates for credit card and personal loans at March 31, 2023, increased compared to December 31, 2022, primarily driven by credit normalization and the seasoning of vintages from the past two years. The 30-day delinquency rate for private student loans remained relatively flat at March 31, 2023, compared to December 31, 2022.

The 90-day delinquency rates for credit card and private student loans at March 31, 2023, increased compared to December 31, 2022, primarily driven by credit normalization. The increase in the 90-day delinquency rate for credit card loans was also driven by the seasoning of vintages from the past two years. The 90-day delinquency rates for personal loans remained relatively flat at March 31, 2023, compared to December 31, 2022.

Modified and Restructured Loans

For information regarding modified and restructured loans, see Note 3: Loan Receivables to our condensed consolidated financial statements.

Other Income

The following table presents the components of other income (dollars in millions):

	For the Three Months Ended March 31,		2023 vs. 2022 Increase (Decrease)	
	2023	2022	\$	%
Discount and interchange revenue, net ⁽¹⁾	\$ 341	\$ 320	\$ 21	7 %
Protection products revenue	43	44	(1)	(2)%
Loan fee income	166	140	26	19 %
Transaction processing revenue	67	57	10	18 %
Losses on equity investments	(18)	(162)	144	(89)%
Other income	22	24	(2)	(8)%
Total other income	\$ 621	\$ 423	\$ 198	47 %

(1) Net of rewards, including Cashback Bonus rewards, of \$716 million and \$635 million for the three months ended March 31, 2023 and 2022, respectively.

Total other income increased for the three months ended March 31, 2023, as compared to the three months ended March 31, 2022, primarily due to smaller losses on equity investments and increases in loan fee income and net discount and interchange revenue. The smaller losses on equity investments were the result of smaller mark-to-market adjustments for equity investments measured at fair value. Loan fee income increased primarily due to a higher volume of late payments. The increase in discount and interchange revenue was partially offset by an increase in rewards, both of which were driven by higher sales volume.

Other Expense

The following table represents the components of other expense (dollars in millions):

	For the Three Months Ended March 31,		2023 vs. 2022 Increase (Decrease)	
	2023	2022	\$	%
Employee compensation and benefits	\$ 625	\$ 500	\$ 125	25 %
Marketing and business development	241	192	49	26 %
Information processing and communications	139	125	14	11 %
Professional fees	232	177	55	31 %
Premises and equipment	22	24	(2)	(8)%
Other expense	124	112	12	11 %
Total other expense	\$ 1,383	\$ 1,130	\$ 253	22 %

Total other expense increased for the three months ended March 31, 2023, as compared to the three months ended March 31, 2022, primarily due to increases in employee compensation and benefits, professional fees and marketing, and business development. The increase in employee compensation and benefits was driven primarily by higher headcount. Professional fees increased primarily due to increased consulting supporting consumer compliance initiatives and investments in technology. The increase in marketing and business development was primarily from growth investments in card and consumer banking.

Income Tax Expense

The following table presents the calculation of the effective income tax rate (dollars in millions):

	For the Three Months Ended March 31,	
	2023	2022
Income before income taxes	\$ 1,268	\$ 1,618
Income tax expense	\$ 292	\$ 376
Effective income tax rate	23.0 %	23.3 %

Liquidity and Capital Resources

Funding and Liquidity

We seek to maintain stable, diversified and cost-effective funding sources and a strong liquidity profile to fund our business and repay or refinance our maturing obligations under normal operating conditions and periods of economic or financial stress. In managing our liquidity risk, we seek to maintain a prudent liability maturity profile and ready access to an ample store of primary and contingent liquidity sources. Our primary funding sources include direct-to-consumer and brokered deposits, public term asset-backed securitizations and other short-term and long-term borrowings. Our primary liquidity sources include a portfolio composed of highly liquid, unencumbered assets, including cash and cash equivalents and investment securities, as well as secured borrowing capacity through private term asset-backed securitizations and Federal Home Loan Bank ("FHLB") advances. In addition, we have unused borrowing capacity at the Federal Reserve discount window, which provides another source of contingent liquidity.

Funding Sources

Deposits

We obtain deposits from consumers directly or through affinity relationships ("direct-to-consumer deposits"). Additionally, we obtain deposits through third-party securities brokerage firms that offer our deposits to their customers ("brokered deposits"). Direct-to-consumer deposit products include savings accounts, certificates of deposit, money market accounts, IRA savings accounts, IRA certificates of deposit and checking accounts. We gather these deposits from retail customers of our bank, many of whom have more than one Discover product. These deposits originate from a large and diverse customer base, and therefore, the majority of these deposit account balances are insured according to the Federal Deposit Insurance Corporation's ("FDIC") insurance limits. Our cost of insuring these deposits is likely to rise as the FDIC recently stated it plans, as required by law, to charge banks a special assessment to cover the cost of losses to the Deposit Insurance Fund incurred after the failure of two domestic banks in March 2023. Brokered deposit products include certificates of deposit and sweep accounts. In accordance with the FDIC final rule on revisions to its brokered deposits regulation, we no longer categorize certain retail deposit products such as affinity deposits and deposits generated through certain sweep deposit relationships as brokered for regulatory reporting purposes. At March 31, 2023, we had \$75.3 billion of direct-to-consumer deposits and \$20.4 billion of brokered deposits, of which there are \$78.3 billion of deposit balances due in less than one year and \$17.4 billion of deposit balances due in one year or thereafter.

Credit Card Securitization Financing

We securitize credit card receivables as a source of funding. We access the asset-backed securitization market using the Discover Card Master Trust I ("DCMT") and the Discover Card Execution Note Trust ("DCENT"). In connection with our securitization transactions, credit card receivables are transferred to DCMT. DCMT has issued a certificate representing the beneficial interest in its credit card receivables to DCENT. We issue DCENT DiscoverSeries notes in public and private transactions, which are collateralized by the beneficial interest certificate held by DCENT. From time to time, we may add credit card receivables to DCMT to create sufficient funding capacity for future securitizations while managing seller's interest. We retain significant exposure to the performance of the securitized credit card receivables through holding the seller's interest and subordinated classes of DCENT DiscoverSeries notes. At March 31, 2023, we had \$9.0 billion of outstanding public asset-backed securities and \$3.2 billion of outstanding subordinated asset-backed securities that had been issued to our wholly-owned subsidiaries.

The securitization structures include certain features designed to protect investors. The primary feature relates to the availability and adequacy of cash flows in the securitized pool of receivables to meet contractual requirements, the insufficiency of which triggers early repayment of the securities. We refer to this as "economic early amortization," which is based on excess spread levels. Excess spread is the amount by which income received with respect to the securitized credit card receivables during a collection period including interest collections, fees and interchange, exceeds the fees and expenses of DCENT during such collection period, including interest expense, servicing fees and charged-off receivables. In the event of an economic early amortization, which would occur if the excess spread fell below 0% on a three-month rolling average basis, we would be required to repay all outstanding securitized borrowings using available collections received with respect to the securitized credit card receivables. For the three months ended March 31, 2023, the DiscoverSeries three-month rolling average excess spread was 14.45%. The period of ultimate repayment would be determined by the amount and timing of collections received.

Through our wholly-owned indirect subsidiary, Discover Funding LLC, we are required to maintain an interest in a contractual minimum level of receivables in DCMT in excess of the face value of outstanding investors' interests. This minimum interest is referred to as the minimum seller's interest. The required minimum seller's interest in the pool of trust receivables is approximately 7% in excess of the total investors' interests, which includes interests held by third parties as well as those interests held by us. If the level of receivables in DCMT were to fall below the required minimum, we would be required to add receivables from the unrestricted pool of receivables, which would increase the amount of credit card receivables restricted for securitization investors. A decline in the amount of the excess seller's interest could occur if balance repayments and charge-offs exceeded new lending on the securitized accounts or as a result of changes in total outstanding investors' interests. Seller's interest exhibits seasonality as higher receivable balance repayments tend to occur in the first calendar year quarter. If we could not add enough receivables to satisfy the minimum seller's interest requirement, an early amortization (or repayment) of investors' interests would be triggered.

An early amortization event would impair our liquidity and may require us to utilize our available non-securitization-related contingent liquidity or rely on alternative funding sources, which may or may not be available at the time. We have several strategies we can deploy to prevent an early amortization event. For instance, we could add receivables to DCMT, which would reduce our available borrowing capacity at the Federal Reserve discount window. As of March 31, 2023, there were \$24.5 billion of credit card receivables in the trust and no accounts were added to those restricted for securitization investors for the three months ended March 31, 2023. Alternatively, we could employ structured discounting, which was used effectively in 2009 to bolster excess spread and mitigate early amortization risk.

The following table summarizes expected contractual maturities of the investors' interests in credit card securitizations, excluding those that have been issued to our wholly-owned subsidiaries (dollars in millions):

At March 31, 2023	Total	Less Than One Year	One Year and Thereafter
Scheduled maturities of borrowings - owed to credit card securitization investors	\$ 9,016	\$ 300	\$ 8,716

The "AAA(sf)" and "Aaa(sf)" ratings of the DCENT DiscoverSeries Class A Notes issued to date have been based, in part, on an FDIC rule, which created a safe harbor that provides that the FDIC, as conservator or receiver, will not use its power to disaffirm or repudiate contracts, seek to reclaim or recover assets transferred in connection with a securitization, or recharacterize assets transferred in connection with a securitization as assets of the insured depository institution, provided such transfer satisfies the conditions for sale accounting treatment under previous GAAP. Although the implementation of Financial Accounting Standards Board ("FASB") Accounting Standards Codification Topic 860, *Transfers and Servicing*, no longer qualified certain transfers of assets for sale accounting treatment, the FDIC approved a final rule that preserved the safe-harbor treatment applicable to revolving trusts and master trusts, including DCMT, so long as those trusts would have satisfied the original FDIC safe harbor if evaluated under GAAP pertaining to transfers of financial assets in effect prior to December 2009. However, other legislative and regulatory developments may impact our ability or desire to issue asset-backed securities in the future.

Federal Home Loan Bank Advances

Discover Bank is a member bank of the FHLB of Chicago, one of 11 FHLBs that, along with the Office of Finance, compose the FHLB System. The FHLBs are government-sponsored enterprises of the U.S. ("U.S. GSEs") chartered to improve the availability of funds to support home ownership. As such, senior debt obligations of the FHLBs feature the same credit ratings as U.S. Treasury securities and are considered high-quality liquid assets for bank regulatory purposes.

Consequently, the FHLBs benefit from consistent capital market access during nearly all macroeconomic and financial market conditions and low funding costs, which they pass on to their member banks when they borrow advances. Thus, we consider FHLB advances a stable and reliable funding source for Discover Bank for short-term contingent liquidity and long-term asset-liability management.

As a member of the FHLB of Chicago, Discover Bank has access to short- and long-term advance structures with maturities ranging from overnight to 30 years. At March 31, 2023, we had total committed borrowing capacity of \$2.6 billion based on the amount and type of assets pledged, of which \$525 million of long-term advances were outstanding with the FHLB of Chicago. Under certain stressed conditions, we could pledge our liquidity portfolio securities and borrow against them at a modest reduction to their value.

Other Long-Term Borrowings—Corporate and Bank Debt

The following table provides a summary of Discover Financial Services (Parent Company) and Discover Bank outstanding fixed-rate debt (dollars in millions):

At March 31, 2023	Principal Amount Outstanding	
Discover Financial Services (Parent Company) fixed-rate senior notes, maturing 2024-2032	\$	3,350
Discover Financial Services (Parent Company) fixed-rate retail notes, maturing 2023-2031	\$	155
Discover Bank fixed-rate senior bank notes, maturing 2023-2030	\$	4,550
Discover Bank fixed-rate subordinated bank notes, maturing 2028	\$	500

At March 31, 2023, \$548 million of interest on our fixed-rate debt is due in less than one year and \$1.5 billion of interest is due in one year and thereafter. See Note 6: Long-Term Borrowings to our condensed consolidated financial statements for more information on the maturities of our long-term borrowings. Certain DFS senior notes require us to offer to repurchase the notes at a price equal to 101% of their aggregate principal amount plus accrued and unpaid interest in the event of a change of control involving us and corresponding ratings downgrade below investment grade.

Short-Term Borrowings

As part of our regular funding strategy, we may, from time to time, borrow short-term funds in the federal funds market or the repurchase ("repo") market through repurchase agreements. Federal funds are short-term, unsecured loans between banks or other financial entities with a Federal Reserve account. Funds borrowed in the repo market are short-term, collateralized loans, usually secured with highly rated investment securities such as U.S. Treasury bills or notes, or mortgage bonds or debentures issued by government agencies or U.S. GSEs. At March 31, 2023, there were no outstanding balances in the federal funds market or under repurchase agreements.

Additional Funding Sources

Private Asset-Backed Securitizations

We have access to committed borrowing capacity through privately placed asset-backed securitizations. While we may utilize funding from these private securitizations from time to time for normal business operations, their committed nature also makes them a reliable contingency funding source. Therefore, we reserve some undrawn capacity, informed by our liquidity stress test results, for potential contingency funding needs. At March 31, 2023, we had a total committed capacity of \$3.5 billion, none of which was drawn. We seek to ensure the stability and reliability of these securitizations by staggering their maturity dates, renewing them well ahead of their scheduled maturity dates and periodically drawing them for operational tests and seasonal funding needs.

Federal Reserve

Discover Bank has access to the Federal Reserve Bank of Philadelphia's discount window. As of March 31, 2023, Discover Bank had \$43.8 billion of available borrowing capacity through the discount window based on the amount and type of assets pledged, primarily consumer loans. As of March 31, 2023, we have no borrowings outstanding under the discount window and reserve this capacity as a source of contingent liquidity.

Funding Uses

Our primary uses of funds include the extensions of loans and credit to customers, primarily through Discover Bank; the maintenance of sufficient working capital for routine operations; the service of our debt and capital obligations, including interest, principal and dividend payments; and the purchase of investment securities for our liquidity portfolio.

In addition to originating consumer loans to new customers, we also extend credit to existing customers, which primarily arises from agreements for unused lines of credit on certain credit cards and certain other loan products, provided there is no violation of conditions established in the related agreement. At March 31, 2023, our unused credit arrangements were approximately \$229.1 billion. These arrangements, substantially all of which we can terminate at any time and which do not necessarily represent future cash requirements, are periodically reviewed based on account usage, customer creditworthiness and loan qualification.

In the normal course of business, we enter into various contracts for goods and services, such as consulting, outsourcing, data, sponsorships, software licenses, telecommunications and global merchant acceptance, among other things. These contracts are legally binding and specify all significant terms, including any applicable fixed future cash payments.

As of March 31, 2023, we have debt obligations, common stock and preferred stock outstanding. Refer to “— Funding Sources” and “— Capital” for more information related to our debt obligations and capital service, respectively, and the timing of expected payments.

We assess funding uses and liquidity needs under stressed and normal operating conditions, considering primary uses of funding, such as on-balance sheet loans and contingent uses of funding, such as the need to post additional collateral for derivatives positions. To anticipate funding needs under stress, we conduct liquidity stress tests to assess the impact of idiosyncratic, systemic and hybrid (i.e., idiosyncratic and systemic) scenarios with varying levels of liquidity risk reflecting a range of stress severity. If we determine we have excess cash and cash equivalents above what is required for daily operations, we may invest in highly liquid, unencumbered assets that we expect to be able to convert to cash quickly and with little loss of value using the repo market or outright sales.

Guarantees

Guarantees are contracts or indemnification agreements that may require us to make payments to a guaranteed party based on changes in an underlying asset, liability, or equity security of a guaranteed party, rate or index. Also included in guarantees are contracts that may require the guarantor to make payments to a guaranteed party based on another entity’s failure to perform under an agreement. Our guarantees relate to transactions processed on the Discover Network and certain transactions processed by PULSE and Diners Club. In the ordinary course of business, we guarantee payment on behalf of subsidiaries relating to contractual obligations with external parties. The activities of the subsidiaries covered by any such guarantees are included in our consolidated financial statements. See Note 12: Commitments, Contingencies and Guarantees to our consolidated financial statements for further discussion regarding our guarantees.

Credit Ratings

Our borrowing costs and capacity in certain funding markets, including those for securitizations and unsecured senior and subordinated debt, may be affected by the credit ratings of DFS, Discover Bank and the securitization trusts. Downgrades in these credit ratings could result in higher interest expense on our unsecured debt and asset securitizations, as well as higher credit enhancement requirements for both our public and private asset securitizations. In addition to increased funding costs, deterioration in our credit ratings could reduce our borrowing capacity in the unsecured debt and asset securitization capital markets.

On March 7, 2023, Moody's Investors Service upgraded the long-term credit ratings and assessments of DFS and Discover Bank. Moody's noted the ratings upgrade reflected our solid market position in the U.S. general purpose credit card and other consumer lending markets, as well as our strong profitability, prudent credit underwriting, conservative risk management and anticipated resilience to a severe economic downturn because of good asset quality and balance sheet management. The table below reflects our current credit ratings and outlooks:

	Moody's Investors Service	Standard & Poor's	Fitch Ratings
Discover Financial Services			
Senior unsecured debt	Baa2	BBB-	BBB+
Outlook for Discover Financial Services senior unsecured debt	Stable	Stable	Stable
Discover Bank			
Senior unsecured debt	Baa1	BBB	BBB+
Outlook for Discover Bank senior unsecured debt	Stable	Stable	Stable
Subordinated debt	Baa1	BBB-	BBB
Discover Card Execution Note Trust (DCENT)			
Class A ⁽¹⁾	Aaa(sf)	AAA(sf)	AAA(sf)

(1) An "sf" in the rating denotes rating agency identification for structured finance product ratings.

A credit rating is not a recommendation to buy, sell or hold securities and may be subject to revision or withdrawal at any time by the assigning rating organization. Each rating should be evaluated independently of any other rating. A credit rating outlook reflects an agency's opinion regarding the likely rating direction over the medium term, often a period of about a year, and indicates the agency's belief that the issuer's credit profile is consistent with its current rating level at that point in time.

Liquidity

We seek to ensure that we have adequate liquidity to sustain business operations, fund asset growth and satisfy debt obligations under stressed and normal operating conditions. In addition to the funding sources discussed in the previous section, we also maintain highly liquid, unencumbered assets in our liquidity portfolio that we expect to be able to convert to cash quickly and with little loss of value using either the repo market or outright sales.

We maintain a liquidity risk and funding management policy, which outlines the overall framework and general principles we follow in managing liquidity risk across our business. The Board of Directors approves the policy and the Asset and Liability Management Committee (the "ALCO") is responsible for its implementation. Additionally, we maintain a liquidity management framework document that outlines the general strategies, objectives and principles we utilize to manage our liquidity position and the various liquidity risks inherent in our business model. We seek to balance the trade-offs between maintaining too much liquidity, which may be costly, with having too little liquidity, which could cause financial distress. The ALCO, chaired by our Treasurer, has cross-functional membership and manages liquidity risk centrally. The ALCO monitors the liquidity risk profiles of DFS and Discover Bank and oversees any actions Corporate Treasury may take to ensure that we maintain ready access to our funding sources and sufficient liquidity to meet current and projected needs. In addition, the ALCO and our Board of Directors regularly review our compliance with our liquidity limits at DFS and Discover Bank, which are established in accordance with the liquidity risk appetite set by our Board of Directors.

We employ a variety of metrics to monitor and manage liquidity. We utilize early warning indicators ("EWIs") to detect emerging liquidity stress events and a reporting and escalation process designed to be consistent with regulatory guidance. The EWIs include both idiosyncratic and systemic measures and are monitored daily and reported to the ALCO regularly. A warning from one or more of these indicators triggers prompt review and decision-making by our senior management team and, in certain instances, may lead to the convening of a senior-level response team and activation of our contingency funding plan.

In addition, we conduct liquidity stress tests regularly and ensure contingency funding is in place to address potential liquidity shortfalls. We evaluate a range of stress scenarios that are designed to follow regulatory requirements, including idiosyncratic, systemic and a combination of such events that could impact funding sources and our ability to meet liquidity needs. These scenarios measure the projected liquidity position at DFS and Discover Bank across a range of time horizons by comparing estimated contingency funding needs to available contingent liquidity.

Our primary contingency liquidity sources include our liquidity portfolio securities, which we could sell, repo or borrow against, and private securitizations with unused borrowing capacity. In addition, we could borrow FHLB advances by pledging securities to the FHLB of Chicago. Moreover, we have unused borrowing capacity with the Federal Reserve discount window, which provides an additional source of contingency liquidity. We seek to maintain sufficient liquidity to satisfy all maturing obligations and fund business operations for at least 12 months in a severe stress environment. In such an environment, we may also take actions to curtail the size of our balance sheet, which would reduce the need for funding and liquidity.

At March 31, 2023, our liquidity portfolio was composed of highly liquid, unencumbered assets, including cash and cash equivalents and investment securities. Cash and cash equivalents were primarily deposits with the Federal Reserve. Investment securities primarily included debt obligations of the U.S. Treasury and U.S. GSEs and residential mortgage-backed securities ("RMBS") issued by U.S. government agencies or U.S. GSEs. These investments, nearly all of which are classified as available-for-sale, are considered highly liquid and we expect to have the ability to raise cash by selling them, utilizing repurchase agreements or pledging certain of these investments to access secured funding. The size and composition of our liquidity portfolio may fluctuate based on the size of our balance sheet as well as operational requirements, market conditions and interest rate risk management objectives.

At March 31, 2023, our liquidity portfolio and undrawn credit facilities were \$70.8 billion, which was \$3.5 billion higher than the balance at December 31, 2022. Our liquidity portfolio and undrawn credit facilities grew primarily as a result of the purchase of treasury securities and additional borrowing capacity with the Federal Reserve. During the three months ended March 31, 2023 and December 31, 2022, the average balance of our liquidity portfolio was \$19.5 billion and \$16.3 billion, respectively. Our liquidity portfolio and undrawn facilities consist of the following (dollars in millions):

	March 31, 2023	December 31, 2022
Liquidity portfolio		
Cash and cash equivalents ⁽¹⁾	\$ 9,354	\$ 7,585
Investment securities ⁽²⁾	12,096	12,213
Total liquidity portfolio	21,450	19,798
Private asset-backed securitizations ⁽³⁾	3,500	3,500
Federal Home Loan Bank of Chicago	2,056	1,712
Primary liquidity sources	27,006	25,010
Federal Reserve discount window ⁽³⁾	43,780	42,268
Total liquidity portfolio and undrawn credit facilities	\$ 70,786	\$ 67,278

(1) Cash in the process of settlement and restricted cash are excluded from cash and cash equivalents for liquidity purposes.

(2) Excludes \$132 million and \$97 million of U.S. Treasury securities that have been pledged as swap collateral in lieu of cash as of March 31, 2023 and December 31, 2022, respectively.

(3) See "— Additional Funding Sources" for additional information.

Bank Holding Company Liquidity

The primary uses of funds at the unconsolidated DFS level include debt service obligations (interest payments and return of principal) and capital service and management activities, including dividend payments on capital instruments and the periodic repurchase of shares of our common stock. Our primary sources of funds at the bank holding company level include the proceeds from the issuance of unsecured debt and capital securities, as well as dividends from our subsidiaries, notably Discover Bank. Under periods of idiosyncratic or systemic stress, the bank holding company could lose or experience impaired access to the capital markets. In addition, our regulators have the discretion to restrict dividend payments from Discover Bank to the bank holding company.

We utilize a measure referred to as Number of Months of Pre-Funding to determine the length of time DFS can meet upcoming funding obligations, including common and preferred stock dividend payments and debt service obligations using existing cash resources. In managing this metric, we structure our debt maturity schedule to manage prudently the amount of debt maturing within a short period. See Note 6: Long-Term Borrowings to our condensed consolidated financial statements for further information regarding our debt.

Capital

Our primary sources of capital are the earnings generated by our businesses and the proceeds from issuances of capital securities. We seek to manage capital to a level and composition sufficient to support our businesses' growth, account for their risks, and meet regulatory requirements, rating agency targets and debt investor expectations. Within these constraints, we are focused on deploying capital in a manner that provides attractive returns to our stockholders. The level, composition and utilization of capital are influenced by changes in the economic environment, strategic initiatives and legislative and regulatory developments.

Under regulatory capital requirements adopted by the Federal Reserve and the FDIC, DFS, along with Discover Bank, must maintain minimum capital levels. Failure to meet minimum capital requirements can result in the initiation of certain mandatory and possibly additional discretionary actions by regulators that, if undertaken, could limit our business activities and have a direct material effect on our financial condition and operating results. We must meet specific capital requirements that involve quantitative measures of assets, liabilities and certain off-balance sheet items, as calculated under regulatory guidance and regulations. Current or future legislative or regulatory reforms, such as those related to the adoption of the CECL accounting model, may require us to hold more capital or adversely impact our capital level. We consider the potential impacts of these reforms in managing our capital position.

DFS and Discover Bank are subject to regulatory capital rules issued by the Federal Reserve and the FDIC, respectively, under the Basel Committee's December 2010 framework ("Basel III rules"). Under the Basel III rules, DFS and Discover Bank are classified as "standardized approach" entities as they are U.S. banking organizations with consolidated total assets over \$50 billion but not exceeding \$250 billion and consolidated total on-balance sheet foreign exposures less than \$10 billion. The Basel III rules require DFS and Discover Bank to maintain minimum risk-based capital and leverage ratios and define what constitutes capital for purposes of calculating those ratios.

In accordance with the final rule on the impact of CECL on regulatory capital, we have elected to phase in the impact over three years, beginning in 2022. By electing this option, our Common Equity Tier 1 ("CET1") capital ratios are higher than they otherwise would have been. The phase-in of the CECL accounting model decreased CET1 by \$1.1 billion as of January 1, 2023. For additional information regarding the risk-based capital and leverage ratios, see Note 11: Capital Adequacy to our condensed consolidated financial statements.

On March 4, 2020, the Federal Reserve announced the SCB final rule, which imposes limitations on DFS' capital distributions if we do not maintain our risk-based capital ratios above stated regulatory minimum ratios based on the results of supervisory stress tests. Under this rule, DFS is required to assess whether our planned capital actions are consistent with the effective capital distribution limitations that will apply on a pro-forma basis throughout the planning horizon.

The SCB requirement is institution-specific and is calculated as the greater of (i) 2.5% and (ii) the sum of (a) the difference between DFS' actual CET1 ratio at the beginning of the forecast and the projected minimum CET1 ratio based on the Federal Reserve's models in its nine-quarter Severely Adverse stress scenario, plus (b) the sum of the dollar amount of DFS' planned common stock dividend distributions for each of the fourth through seventh quarters of its nine-quarter capital planning horizon, expressed as a percentage of risk-weighted assets. For Category IV firms, including DFS, the Federal Reserve calculates each firm's SCB biennially in even-numbered calendar years, and did so in 2022. Based on the results of the 2022 CCAR exercise released by the Federal Reserve, our new SCB was set at 2.5%, the lowest possible requirement, effective October 1, 2022, through September 30, 2023. In odd-numbered years, each firm subject to Category IV standards that did not opt-in to such year's supervisory stress tests as part of the Federal Reserve's CCAR process receives an adjusted SCB requirement that is updated to reflect its planned common stock dividends per the firm's annual capital plan. We elected not to opt-in for 2023 and submitted a capital plan to the Federal Reserve on April 5, 2023, and we expect results will be provided in late June or early July 2023. See "— Regulatory Environment and Developments — Banking — Capital Standards and Stress Testing" for additional information.

At March 31, 2023, DFS and Discover Bank met the requirements for "well-capitalized" status under the Federal Reserve's Regulation Y and the prompt corrective action rules and corresponding FDIC requirements, respectively, exceeding the regulatory minimums to which they were subject under the applicable rules.

Basel III rules also require disclosures relating to market discipline. This series of disclosures is commonly referred to as "Pillar 3." The objective is to increase the transparency of capital requirements for banking organizations. We are required to make prescribed regulatory disclosures quarterly regarding our capital structure, capital adequacy, risk exposures and risk-

weighted assets. We make the Pillar 3 disclosures publicly available on our website in a report called "Basel III Regulatory Capital Disclosures."

We disclose tangible common equity, which represents common equity less goodwill and intangibles. Management believes that common stockholders' equity excluding goodwill and intangibles is meaningful to investors as a measure of our true net asset value. At March 31, 2023, tangible common equity is considered to be a non-GAAP financial measure as it is not formally defined by GAAP or codified in the federal banking regulations. Other financial services companies may also disclose this measure and definitions may vary. We advise users of this information to exercise caution in comparing this measure for different companies.

The following table reconciles total common stockholders' equity (a GAAP financial measure) to tangible common equity (dollars in millions):

	March 31, 2023	December 31, 2022
Total common stockholders' equity ⁽¹⁾	\$ 13,259	\$ 13,534
Less: goodwill	(255)	(255)
Tangible common equity	<u>\$ 13,004</u>	<u>\$ 13,279</u>

(1) Total common stockholders' equity is calculated as total stockholders' equity less preferred stock.

Our Board of Directors declared the following common stock dividends during 2023 and 2022:

Declaration Date	Record Date	Payment Date	Dividend per Share
2023			
April 17, 2023	May 25, 2023	June 08, 2023	\$ 0.70
January 17, 2023	February 23, 2023	March 09, 2023	0.60
Total common stock dividends			<u>\$ 1.30</u>
2022			
October 18, 2022	November 23, 2022	December 08, 2022	\$ 0.60
July 20, 2022	August 25, 2022	September 08, 2022	0.60
April 27, 2022	May 26, 2022	June 09, 2022	0.60
January 18, 2022	February 17, 2022	March 03, 2022	0.50
Total common stock dividends			<u>\$ 2.30</u>

Our Board of Directors declared the following Series C preferred stock dividends during 2023 and 2022:

Declaration Date	Record Date	Payment Date	Dividend per Depository Share
2023			
January 17, 2023	April 14, 2023	May 01, 2023	\$ 27.50
Total Series C preferred stock dividends			<u>\$ 27.50</u>
2022			
July 20, 2022	October 14, 2022	October 31, 2022	\$ 27.50
January 18, 2022	April 15, 2022	May 02, 2022	27.50
Total Series C preferred stock dividends			<u>\$ 55.00</u>

Our Board of Directors declared the following Series D preferred stock dividends during 2023 and 2022:

Declaration Date	Record Date	Payment Date	Dividend per Depository Share
2023			
January 17, 2023	March 08, 2023	March 23, 2023	\$ 30.625
Total Series D preferred stock dividends			\$ 30.625
2022			
July 20, 2022	September 08, 2022	September 23, 2022	\$ 30.625
January 18, 2022	March 08, 2022	March 23, 2022	30.625
Total Series D preferred stock dividends			\$ 61.250

Our Board of Directors approved a new share repurchase program in April 2023. The new program authorizes up to \$2.7 billion of share repurchases through June 30, 2024, and replaced the prior \$4.2 billion share repurchase program. If and when we repurchase our shares under the program, we may use various methods, including open market purchases, privately negotiated transactions or other purchases, including block trades, accelerated share repurchase transactions, or any combination of such methods. During the three months ended March 31, 2023, we repurchased approximately 11.3 million shares for approximately \$1.2 billion.

The amount and size of any future dividends and share repurchases will depend on our results of operations, financial condition, capital levels, cash requirements, future prospects, regulatory review and other factors. The declaration and payment of future dividends and the amount thereof are subject to the discretion of our Board of Directors. Holders of our shares of common stock are subject to the prior dividend rights of holders of our preferred stock or the depositary shares representing such preferred stock outstanding. No dividend may be declared or paid or set aside for payment on our common stock if full dividends have not been declared and paid on all outstanding shares of preferred stock in any dividend period. In addition, as noted above, banking laws and regulations and our banking regulators may limit our ability to pay dividends and make share repurchases, including limitations on the extent our banking subsidiary (Discover Bank) can provide funds to us through dividends, loans or otherwise. Further, current or future regulatory reforms may require us to hold more capital or could adversely impact our capital level. As a result, there can be no assurance that we will declare and pay any dividends or repurchase any shares of our common stock in the future.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

Market risk refers to the risk that a change in the level of one or more market prices, rates, indices, correlations or other market factors will result in losses for an investment position or portfolio. We are exposed to market risk primarily from changes in interest rates.

Interest Rate Risk

We borrow money from various depositors and institutions to provide loans to our customers and invest in other assets and our business. These loans to customers and other assets earn interest, which we use to pay interest on the money borrowed. Our net interest income and, therefore, earnings will be reduced if the interest rate earned on assets increases at a slower pace than the interest rate paid on our borrowings. Changes in interest rates and our competitors' responses to those changes may influence customer payment rates, loan balances or deposit account activity. As a result, we may incur higher funding costs that could decrease our earnings.

Our interest rate risk management policies are designed to measure and manage the potential volatility of earnings that may arise from changes in interest rates by having a portfolio that reflects our mix of variable- and fixed-rate assets and liabilities. To the extent that the repricing characteristics of the assets and liabilities in a particular portfolio are not sufficiently matched, we may utilize interest rate derivative contracts, such as swap agreements, to achieve our objectives. Interest rate swap agreements effectively convert the underlying asset or liability from fixed- to floating-rate or from floating- to fixed-rate. See Note 15: Derivatives and Hedging Activities to our condensed consolidated financial statements for information on our derivatives activity.

We use an interest rate sensitivity simulation to assess our interest rate risk exposure. For purposes of presenting the possible earnings effect of a hypothetical, adverse change in interest rates over the 12 months from our reporting date, we assume that all interest-rate-sensitive assets and liabilities are subject to a hypothetical, immediate 100 basis point change in interest rates relative to market consensus expectations as of the beginning of the period. The sensitivity simulation includes the hypothetical assumption that all relevant types of interest rates would change instantaneously, simultaneously and to the same degree.

Our interest-rate-sensitive assets include our variable-rate loan receivables and certain assets in our liquidity portfolio. We have limitations on our ability to mitigate interest rate risk by adjusting rates on existing balances. Further, competitive actions may limit our ability to increase the rates that we charge to customers for new loans. At March 31, 2023, the majority of our credit card and private student loans charge variable rates. Fixed-rate assets that will mature or otherwise contractually reset to a market-based indexed rate or other fixed-rate prior to the end of the 12-month measurement period are considered to be rate sensitive. The latter category includes certain revolving credit card loans that may be offered at below-market rates for an introductory period, such as balance transfers and special promotional programs, after which the loans will contractually reprice in accordance with our normal market-based pricing structure. For assets with a fixed interest rate that contractually will, or is assumed to, reset to a market-based indexed rate or other fixed rate during the next 12 months, earnings sensitivity is measured from the expected repricing date. In addition, for all interest rate sensitive assets, earnings sensitivity is calculated net of expected credit losses. For purposes of this analysis, expected credit losses are assumed to remain unchanged relative to our baseline expectations over the analysis horizon.

Interest-rate-sensitive liabilities are assumed to be those for which the stated interest rate is not contractually fixed for the next 12 months. Thus, liabilities that vary with changes in a market-based index, such as the federal funds rate or SOFR, which will reset before the end of the next 12 months, or liabilities that have fixed rates at the fiscal period end but will mature and are assumed to be replaced with a market-based indexed rate prior to the end of the next 12 months, are also considered to be rate sensitive. For these fixed-rate liabilities, earnings sensitivity is measured from the expected maturity date.

Net interest income sensitivity simulations require assumptions regarding market conditions, consumer behavior and the growth and composition of our balance sheet. The degree by which our deposit rates change when benchmark interest rates change, our deposit “beta,” is one of the most significant of these assumptions. Assumptions about deposit beta and other matters are inherently uncertain and, as a result, actual earnings may differ from the simulated earnings presented below. Our actual earnings depend on multiple factors including, but not limited to, the direction and timing of changes in interest rates, the movement of short-term interest rates relative to long-term rates, balance sheet composition, competitor actions affecting pricing decisions in our loans and deposits, the mix of promotional balances in our card portfolio, the level of interest charge-offs and recoveries, the influence of loan repayment rates on revolving balances and strategic actions undertaken by our management.

Our current short-term interest rate risk position is modestly asset-sensitive, but we have taken actions to bring our net interest income sensitivity closer to neutral as the Federal Reserve has slowed its pace of monetary policy tightening and the outlook for near-term U.S. economic growth may be weakening. The following table shows the impacts to net interest income over the following 12-month period that we estimate would result from an immediate and parallel change in interest rates affecting all interest rate sensitive assets and liabilities (dollars in millions):

Basis point change	At March 31, 2023		At December 31, 2022	
	\$	%	\$	%
+100	\$ 187	1.36 %	\$ 183	1.40 %
-100	\$ (193)	(1.40)%	\$ (190)	(1.45)%

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended (the "Exchange Act")), which are designed to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified by the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of the end of the period covered by this report.

Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting (as such term is defined in Exchange Act Rule 13a-15(f) and 15d-15(f)) that occurred during the period covered by this report that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Glossary of Acronyms

- **ALCO:** Asset and Liability Management Committee
- **AOCI:** Accumulated Other Comprehensive Income (Loss)
- **ARRC:** Alternative Reference Rates Committee
- **ASC:** Accounting Standards Codification
- **ASU:** Accounting Standards Update
- **CCAR:** Comprehensive Capital Analysis and Review
- **CCPA:** California Consumer Privacy Act
- **CECL:** Current Expected Credit Loss
- **CET1:** Common Equity Tier 1
- **CFPB:** Consumer Financial Protection Bureau
- **CPPA:** California Privacy Protection Agency
- **CPRA:** California Privacy Rights Act
- **DCENT:** Discover Card Execution Note Trust
- **DCMT:** Discover Card Master Trust I
- **DFS:** Discover Financial Services
- **EPS:** Earnings Per Share
- **ESG:** Environmental, Social and Governance
- **EWI:** Early Warning Indicator
- **FASB:** Financial Accounting Standards Board
- **FCA:** UK Financial Conduct Authority
- **FDIC:** Federal Deposit Insurance Corporation
- **FHLB:** Federal Home Loan Bank
- **GAAP:** Accounting Principles Generally Accepted in the United States
- **IRS:** Internal Revenue Service
- **LIBOR:** London Interbank Offered Rate
- **OCI:** Other Comprehensive Income (Loss)
- **RMBS:** Residential Mortgage-Backed Securities
- **SCB:** Stress Capital Buffer
- **SEC:** Securities and Exchange Commission
- **SOFR:** Secured Overnight Financing Rate
- **TDR:** Troubled Debt Restructuring
- **UDAAP:** Unfair, Deceptive or Abusive Acts or Practices
- **U.S.:** United States of America
- **USD:** United States Dollar
- **U.S. GSE:** Government-sponsored Enterprise of the U.S.
- **VIE:** Variable Interest Entity

Part II. OTHER INFORMATION

Item 1. Legal Proceedings

See Note 13: Litigation and Regulatory Matters to our condensed consolidated financial statements for a description of legal proceedings.

Item 1A. Risk Factors

There have been no material changes to the risk factors disclosed in our Annual Report on Form 10-K for the year ended December 31, 2022.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

Issuer Purchases of Equity Securities

The following table sets forth information regarding purchases of our common stock related to our share repurchase program and employee transactions made by us or on our behalf during the most recent quarter.

Period	Total Number of Shares Purchased	Average Price Paid Per Share⁽³⁾	Total Number of Shares Purchased as Part of Publicly Announced Plan or Program⁽¹⁾	Maximum Dollar Value of Shares that may yet be purchased under the Plans or Programs⁽¹⁾
January 1 - 31, 2023				
Repurchase program ⁽¹⁾	3,783,000	\$ 104.85	3,783,000	\$ 2,392,991,230
Employee transactions ⁽²⁾	584	\$ 97.83	N/A	N/A
February 1 - 28, 2023				
Repurchase program ⁽¹⁾	3,157,000	\$ 114.46	3,157,000	\$ 2,031,648,805
Employee transactions ⁽²⁾	270,411	\$ 115.83	N/A	N/A
March 1 - 31, 2023				
Repurchase program ⁽¹⁾	4,341,133	\$ 101.82	4,341,133	\$ 1,589,626,286
Employee transactions ⁽²⁾	257	\$ 114.77	N/A	N/A
Total				
Repurchase program ⁽¹⁾	11,281,133	\$ 106.37	11,281,133	\$ 1,589,626,286
Employee transactions ⁽²⁾	271,252	\$ 115.79	N/A	N/A

- (1) In April 2023, our Board of Directors approved a new share repurchase program authorizing the purchase of up to \$2.7 billion of our outstanding shares of common stock through June 30, 2024. This share repurchase authorization replaced our prior \$4.2 billion share repurchase program.
- (2) Reflects shares withheld (under the terms of grants under employee stock compensation plans) to offset tax withholding obligations that occur upon the delivery of outstanding shares underlying restricted stock units or upon the exercise of stock options
- (3) Average price paid per share excludes any excise tax.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

None.

Item 5. Other Information

None.

Item 6. Exhibits

See "Exhibit Index" for documents filed herewith and incorporated herein by reference.

Exhibit Index

Exhibit Number	Description
10.1	Form 2023 Award Certificate for Restricted Stock Units under Discover Financial Services Amended and Restated 2014 Omnibus Incentive Plan.
10.2	Form 2023 Award Certificate for Performance Stock Units under Discover Financial Services Amended and Restated 2014 Omnibus Incentive Plan.
10.3	Form 2023 Special Award Certificate for Restricted Stock Units under Discover Financial Services Amended and Restated 2014 Omnibus Incentive Plan.
31.1	Certification of Chief Executive Officer pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934.
31.2	Certification of Chief Financial Officer pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934.
32.1	Certification of Chief Executive Officer and Chief Financial Officer pursuant to Section 1350 of Chapter 63 of Title 18 of the United States Code.
101	Interactive Data File — the following financial statements from Discover Financial Services Quarterly Report on Form 10-Q formatted in inline XBRL: (1) Condensed Consolidated Statements of Financial Condition, (2) Condensed Consolidated Statements of Income, (3) Condensed Consolidated Statements of Comprehensive Income, (4) Condensed Consolidated Statements of Changes in Stockholders' Equity, (5) Condensed Consolidated Statements of Cash Flows and (6) Notes to the Condensed Consolidated Financial Statements.
104	Cover Page Interactive Data File — the cover page from Discover Financial Services Quarterly Report on Form 10-Q formatted in inline XBRL and contained in Exhibit 101.

Signature

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

Discover Financial Services
(Registrant)

By:

/s/ JOHN T. GREENE

John T. Greene
Executive Vice President, Chief Financial Officer

Date: April 24, 2023

**Discover Financial Services
Amended and Restated 2014 Omnibus Incentive Plan
2023 Award Certificate for Restricted Stock Units**

This Award Certificate describes the terms and conditions under which you are being granted an Award of Restricted Stock Units (“RSUs”) under the Discover Financial Services Amended and Restated 2014 Omnibus Incentive Plan (the “Plan”), which constitutes part of your discretionary long-term incentive compensation. This Award Certificate applies only to Awards granted hereunder and other Awards are governed by terms of the applicable Award Certificate.

A copy of the Plan can be found on the E*TRADE website at www.etrade.com, or such other vendor as the Company may choose to administer the Plan. Capitalized terms under in this Award Certificate have the meanings ascribed in the Plan unless otherwise stated herein.

The full terms of your Award are set out in this Award Certificate, the Plan and any applicable policy adopted by the Committee or its delegate in respect of the Plan and Awards thereunder that is applicable to this Award. In the event of a conflict between the Plan and this Award Certificate, the terms of the Plan control.

Award Recipient	%%FIRST_NAME%- %LAST_NAME%-
Employee / Participant ID	%%EMPLOYEE_IDENTIFIER%-
Issuer	Discover Financial Services
Award Type	Restricted Stock Units (RSUs)
Date of the Award	%%OPTION_DATE,'Month DD, YYYY'%-
Number of Awarded Units	%%TOTAL_SHARES_GRANTED,'999,999,999'%- RSUs
Vesting	Your RSUs will vest as follows provided you remain continuously employed by the Company through the applicable below Scheduled Vesting Date: Number of Shares Vesting Date %%SHARES_PERIOD1,'999,999,999'%- %%VEST_DATE_PERIOD1,'Month DD, YYYY'%- %%SHARES_PERIOD2,'999,999,999'%- %%VEST_DATE_PERIOD2,'Month DD, YYYY'%- %%SHARES_PERIOD3,'999,999,999'%- %%VEST_DATE_PERIOD3,'Month DD, YYYY'%-
Settlement	Your awards will be converted and settled in shares of Company stock pursuant to Section 8 of the Plan and Section 1(b) of this Award Certificate unless your primary place of employment is located outside the United States in which case your shares may be settled in cash. See <u>Appendix A <i>International Supplement</i></u> , for additional information.
Restrictive Covenants & Clawbacks	You may be subject to repayment provisions triggered in the event of your violation of a restrictive covenant, including non-solicitation and non-competition requirements, more fully described in this Award Certificate. You are also subject to a clawback provision in the event of restatement of the Company's financial performance.
Non-U.S. Employees	If you are employed outside the United States, please reference the " <i>International Supplement</i> " included herein as <u>Appendix A</u> , which contains supplemental terms and conditions for your RSU Award.

You will earn RSUs included in your RSU Award only if you (1) remain in continuous Employment through the applicable Scheduled Vesting Dates (subject to limited exceptions set forth herein), (2) are not found to be subject to the forfeiture, cancellation, or clawback provisions set forth in Section 8 below, and (3) satisfy obligations you owe to the Company as set forth in Section 10 below. If the Company deems appropriate and in its sole discretion, the Company may require you to provide a written certification or other evidence, from time to time, to confirm that none of the circumstances described in Section 8 below exist or have occurred, including upon a termination of Employment and/or during a specified period of time prior to the applicable Scheduled Vesting Dates. If you fail to timely provide any required certification or other evidence, the Company may cancel your RSU Award. It is your responsibility to provide the Human Resources Department with your up-to-date contact information.

1. Vesting Schedule; Conversion.

(a) Vesting Schedule. Your RSUs will vest according to the Scheduled Vesting Dates set forth in this Award Certificate, provided you remain continuously employed through such dates, unless earlier vesting is required pursuant to Section 4, 5 or 6 of this Award Certificate.

(b) Conversion.

(1) Except as otherwise provided in this Award Certificate, each of your vested RSUs will convert to one share of Stock on or as soon as possible following the applicable Scheduled Vesting Date.

(2) Subject to the provisions of the Plan and this Award Certificate, as well as any transfer restrictions imposed by the Company or applicable pursuant to securities laws, Shares to which you are entitled following conversion of RSUs under any provision of this Award Certificate shall be delivered to you (or your beneficiary or estate, as applicable) as soon as administratively practicable after the Scheduled Vesting Date

(c) Accelerated Conversion. The Committee, in its sole discretion, may determine that any RSUs may be converted to Shares prior to the Scheduled Vesting Date subject to compliance with all Legal Requirements.

(d) Rule of Construction for Timing of Conversion. Whenever this Award Certificate provides for RSUs to convert to Shares on the Scheduled Vesting Date or upon an accelerated or different specified event or date, such conversion will be considered to have been timely made, and neither you nor any of your beneficiaries nor your estate shall have any claim against the Company for damages based on a delay in conversion of your RSUs (or delivery of Shares following conversion), and the Company shall have no liability to you (or to any of your beneficiaries or your estate) in respect of any such delay, as long as conversion is made by December 31 of the year in which occurs the Scheduled Vesting Date or such other specified event or date or, if later, by the 15th day of the third calendar month following such specified event or date.

2. Special Provisions for Certain “Specified Employees”.

If Discover reasonably considers you to be one of its “specified employees” as defined in Section 409A of the Internal Revenue Code at the time of the termination of your Employment, any RSUs that constitute deferred compensation under Section 409A of the Internal Revenue Code that are payable upon termination of Employment will not convert to Shares until the date

that is six months after the termination of your Employment (or the date of your death, if such event occurs earlier).

3. Dividend Equivalent Payments.

Until your RSUs convert to Shares, if Discover pays a regular or ordinary cash dividend on its common stock, you will be paid a dividend equivalent for your vested and unvested RSUs. No dividend equivalents will be paid to you on any canceled RSUs. Discover, in its discretion, will decide on the form of payment and may pay dividend equivalents in Shares, in cash or in a combination thereof. Discover will pay the dividend equivalents as soon as administratively practicable (and in any event within thirty (30) days) after Discover pays the corresponding dividend on its common stock.

4. Death; Disability; Retirement.

The following special vesting and payment terms apply to your RSUs:

(a) **Death.** If your Employment terminates due to your death, all RSUs subject to this Award Certificate will vest, convert to Shares and be delivered to your beneficiary or your estate on or as soon as administratively practicable after the Scheduled Vesting Date.

(b) **Disability.** If your Employment terminates due to Disability, all RSUs subject to this Award Certificate will vest, convert to Shares, and be delivered to you on or as soon as administratively practicable after the Scheduled Vesting Date.

(c) **Retirement.** If your Employment terminates due to Retirement, the number of RSUs that will vest on your Scheduled Vesting Date, will be determined by multiplying the RSUs subject to this Award Certificate by the Pro Ration Fraction, calculated through the date your Employment terminates, and converting to Shares, to be delivered to you on or as soon as administratively practicable after your Scheduled Vesting Date.

5. Termination Due to Reduction in Force; Position Elimination; or Increase/Addition of Skills Required for Current Position.

If the Company terminates your Employment due to a reduction in force, an elimination of your position, or as a result of an increase or addition of skills required of your current position, each as determined by the Company in its sole discretion, the number of RSUs that will be prorated on the date your Employment terminates will be determined by multiplying the RSUs subject to this Award Certificate by the Pro Ration Fraction. These RSUs will vest and convert to Shares on the sixtieth (60th) day following your termination of Employment, subject to Section 2 above, *provided* that you sign (and do not revoke) an agreement and release of claims satisfactory to the Company and be delivered to you on or as soon as administratively practicable after your Scheduled Vesting Date.

6. Change in Control.

(a) **Termination in Connection with Change in Control.** If the Company terminates your Employment other than for Cause, or if you terminate your Employment for Good Reason, within six months prior to or within 24 months after a Change in Control, your RSUs will immediately vest and convert to Shares on the later of the date of a Change in Control or the date of your termination following a Change in Control, as applicable and be delivered as soon as administratively practicable thereafter.

(b) Stock Consideration. In the event of a Change in Control which results from a transaction pursuant to which the shareholders of Discover receive shares of common stock of an acquiring entity that are registered under Section 12 of the Exchange Act (as defined in Section 24(b)(1)), unless otherwise determined by the Committee, in its sole discretion prior to such Change in Control, there shall be substituted for each Share subject to this Award Certificate the number and class of shares of common stock of the acquiring entity into which each outstanding Share shall be converted pursuant to such Change in Control transactions, and this Award Certificate shall otherwise continue in effect.

(c) Non-stock Consideration. In the event of a Change in Control which results from a transaction pursuant to which the shareholders of Discover receive consideration other than shares of common stock of the Acquirer that are registered under Section 12 of the Exchange Act, the value of the RSUs hereunder shall, unless otherwise determined by the Committee, in its sole discretion prior to such Change in Control, be converted into a right to receive the cash or other consideration received by the shareholders of Discover in such transaction, and this Award Certificate shall otherwise continue in effect.

7. Termination of Employment.

Your unvested RSUs will be canceled if your Employment terminates for any reason other than under the circumstances set forth in Section 4, 5 or 6 of this Award Certificate.

8. Forfeiture/Cancellation/Clawback of RSU Awards Under Certain Circumstances.

(a) Breach of Restrictive Covenants. RSUs are not earned until the applicable Scheduled Vesting Date and will be canceled prior to the applicable Scheduled Vesting Date under any of the circumstances set forth below. Although you will become the beneficial owner of Shares following conversion of your RSUs, the Company may, upon notice, issue a transfer restriction with respect to your Shares following conversion of your RSUs pending any investigation or other review that impacts the determination as to whether the RSUs are or may be cancellable under the circumstances set forth below. The Shares underlying such RSUs shall be forfeited and recoverable in the event the Company determines that the RSUs were cancellable under the circumstances set forth below. Notwithstanding any provision of this Award Certificate to the contrary, in the event that at any time prior to one year after the termination of your Employment or service with the Company, you (i) engage in Wrongful Solicitation, (ii) breach your obligations to the Company under a confidentiality, intellectual property or other restrictive covenant, or (iii) for those Participants classified by the Company as an officer of Discover Financial Services or one of its Subsidiaries on the date of grant, engage in Competitive Activity, with respect to each such incidence of violation you shall be required to:

(1) pay to the Company an amount in cash equal to the value of the Shares that vested and converted on or after, or within one year prior to, your termination of Employment, which value shall be determined by the Company, in its sole discretion, and shall include an amount for tax adjustments appropriate to reflect your obligation to repay such amounts due to your breach of the restrictive covenants; or

(2) transfer to the Company the number of Shares that vested and converted on or after, or within one year prior to, your termination of Employment, plus an amount calculated by the Company, in its sole discretion, for tax adjustments appropriate to reflect your obligation to transfer such common stock due to your breach of the restrictive covenants.

In the event of multiple incidences of breach of this provision of the Award Certificate (e.g., in the event of violation of the non-solicitation provision following engaging in Competitive Activity), the repayment amount will be additive for each incidence of violation, not to exceed two times the amount calculated under paragraph 8(a)(1) and (2) above. If you engage in Wrongful Solicitation or engage in a Competing Activity, in addition to the remedies described in Section 8(a), the Company may also take such action at equity or in law as it deems appropriate to enforce the provisions of the applicable restrictive covenant, including pursuing injunctive relief.

The Company recommends that before accepting this Award Certificate, you consult with an attorney of your choice regarding the restrictive covenants described herein. You acknowledge that you have been provided at least fourteen (14) calendar days to review the applicable restrictive covenants prior to having the accept the award.

(b) Clawback. In the event and to the extent the Committee reasonably determines that the performance considered by the Committee, and on the basis of which the amount of RSUs were granted or converted to Shares, was based on Discover's material noncompliance with any financial reporting requirement under the securities laws or Company policy which requires Discover to file a restatement of its financial statements within three years of the Date of the Award, you will be required to comply with paragraphs (1) and (2) (as applicable) below to repay to the Company an amount equal to the number of RSUs which were granted or the Shares converted hereunder less the number of RSUs that would have been granted or Shares converted had your RSUs been granted or converted based on compliance with any such financial reporting requirement under the securities laws or Company policy (such number of RSUs, the "**Clawback RSUs**," to be determined in each case by the Committee in its sole discretion and before satisfaction of tax or other withholding obligations pursuant to Section 9):

(1) You shall forfeit a number of RSUs hereunder equal to the Clawback RSUs. In the event such forfeited RSUs are less than the Clawback RSUs, then you shall comply with the following paragraph 2.

(2) You shall be required

(A) to pay to the Company an amount in cash equal to the value of the Shares that vested and converted hereunder, which value shall be determined using a valuation method established by the Company, in its sole discretion, and shall include an amount for tax adjustments appropriate to reflect your obligation to repay such amounts due to the restatement of the Company's financial statements; or

(B) transfer to the Company the number of Shares that vested and converted hereunder, plus such amount calculated by the Company, in its sole discretion, for tax adjustments appropriate to reflect your obligation to repay such amounts due to the restatement of the Company's financial statements.

By accepting the RSUs you hereby agree and acknowledge that you are obligated to cooperate with and provide all assistance necessary to the Company to recover or recoup the RSUs or amounts paid under the Plan that are subject to the clawback pursuant to applicable securities laws or Company policy. Such cooperation and assistance shall include, but is not limited to, executing, completing and submitting and documentation necessary to recover or recoup any RSUs or amounts paid pursuant to RSUs.

(c) **Risk Review.** For select Covered Employees, as defined and identified by the Company, no RSUs will convert to Shares until the Chief Human Resources & Administrative Officer receives confirmation from the Chief Risk Officer, or their delegate, that a review has been completed by the Chief Risk Officer, or their delegate, to determine whether you engaged in any willful or reckless violation of the Company's risk policies. If the Chief Risk Officer, or their delegate, finds any such violation or breach, then the Company may determine that all or a portion of your RSUs will be forfeited. Based on this assessment, the Company may determine that all or a portion of your RSUs will be forfeited.

(d) **Investigative Holds.** In the event that the Company has either commenced an investigation of a matter that you oversaw or were involved in or has evidence that may require investigation of a matter that you oversaw or were involved in, in either case concerning a breach of one of the obligations hereunder or a serious violation of Company policy, the Company may freeze your account and effectuate a transfer restriction such that your converted and delivered RSUs and any shares associated therewith may not be sold or transferred until such time as the Company reasonably believes the matter to be resolved.

(e) **Authorization.** You authorize the Company to deduct any amount or amounts owed by you pursuant to this Section 8 from any amounts payable by or on behalf of the Company to you, including, without limitation, any amount payable to you as salary, wages, paid time off, bonus, severance, change in control severance or the conversion of any equity-based award. This right of offset shall not be an exclusive remedy and the Company's election not to exercise this right of offset with respect to any amount payable to you shall not constitute a waiver of this right of offset with respect to any other amount payable to you or any other remedy. You further acknowledge and authorize the Company to take the actions described in this Section 8, including those describe in Section 8(d).

9. **Tax and Other Withholding Obligations.**

Subject to rules and procedures established by Discover, you may be eligible to elect to satisfy the tax or other withholding obligations arising upon conversion of your RSUs or upon any taxable event by paying cash or by having Discover withhold Shares or by tendering Shares, in each case in an amount sufficient to satisfy the tax or other withholding obligations. Shares withheld or tendered will be valued using the fair market value of Stock on the date the Shares are scheduled to convert, or otherwise become taxable, as applicable, using a valuation methodology established by Discover.

10. **Satisfaction of Obligations.**

Notwithstanding any other provision of this Award Certificate, the Company may, in its sole discretion, take various actions affecting your RSUs in order to collect amounts sufficient to satisfy any obligation that you owe to the Company and any tax or other withholding obligations. The Company's determination of the amount that you owe the Company shall be conclusive. The fair market value of Stock for purposes of the following provisions shall be determined using a valuation methodology established by Company. The actions that may be taken by Discover pursuant to this Section 10 include, but are not limited to, the following:

(a) **Withholding of Shares.** Upon conversion of RSUs, including any accelerated conversion pursuant to Sections 4, 5, or 6 above, or, if later, upon delivery of the Shares, the Company may withhold a number of Shares sufficient to satisfy any obligation that you owe to the Company and any tax or other withholding obligations whether national, federal, state or local tax withholding obligations including any social insurance contributions or employment tax obligation. The Company shall determine the number of Shares to be withheld by dividing the dollar value of your obligation to the Company and any tax or other

withholding obligations by the fair market value of Stock on the date the Shares are scheduled to convert, or otherwise become taxable, as applicable. To the extent that the Company retains any Shares or reduces the number of RSUs to cover the withholding obligations, it will do so at the applicable minimum statutory rate or other applicable withholding rate(s). Should the Company withhold in excess of the actual tax withholding obligation, the Company will apply the excess withholding to another compensation tax liability.

(b) Netting of Accelerated RSUs. In order to satisfy any taxes due upon an event which is earlier than conversion, Discover, in its sole discretion, may accelerate the vesting and conversion of all or a portion of your unvested RSUs. The Company shall determine the number of RSUs to be accelerated and converted by dividing the dollar value of your tax obligations upon such event by the fair market value of Stock on the date of accelerated conversion. Accelerated and converted RSUs shall not exceed the value of taxes due upon such event and the resulting Shares will be withheld by the Company.

(c) Withholding of Other Compensation. Discover may withhold the payment of dividend equivalents on your RSUs or any other compensation or payments due from Discover to ensure satisfaction of any obligation that you owe the Company or any tax or other withholding obligations or Discover may permit you to satisfy such tax or other withholding obligation by paying such obligation in immediately available funds.

(d) Mobile Employees. You are liable and responsible for all taxes and social insurance contributions owed in connection with the Award, regardless of any action the Company takes with respect to any tax withholding obligations that arise in connection with the Award. The Company does not make any representation or undertaking regarding the tax treatment or the treatment of any tax withholding in connection with the grant, vesting or payment of the Award. The Company does not commit and is under no obligation to structure the Award to reduce or eliminate your tax liability. Further, you may be subject to individual income taxation (and possibly social security or other applicable personal or payroll taxes) in each jurisdiction where you have performed services for the Company between the Award Date and the Vesting Date. Taxes for which you are liable, if applicable, may be withheld and deposited by the Company in each jurisdiction in which you have performed services regardless of your status as a resident or non-resident in one or more of the jurisdictions that have a right to impose taxation. You agree that you will comply with all United States and foreign individual income tax return filing obligations that may be imposed with respect to the Award.

11. Nontransferability.

You may not sell, pledge, hypothecate, assign or otherwise transfer your RSUs, other than as provided in Section 12 (which allows you to designate a beneficiary or beneficiaries in the event of your death) or by will or the laws of descent and distribution.

12. Designation of a Beneficiary.

You may make a revocable designation of beneficiary or beneficiaries to receive all or part of the Shares and any dividend equivalents credited to you pursuant to Section 3 hereof to be paid under this Award Certificate in the event of your death. Absent a designation on file, distributions pursuant to Section 4 will be made to your estate. To make a beneficiary designation, you must complete and file the online form provided by E*TRADE, or such other vendor as the Company may choose to administer the Plan. If you previously filed a designation of beneficiary form for your equity awards with the Human Resources Department, such form will also apply to the RSUs granted pursuant to this RSU Award. You may replace or revoke

your beneficiary designation at any time, and the Company will rely on your most recent designation on file for purposes of beneficiary designation.

13. Ownership and Possession.

(a) **Generally.** Except as specified in Section 3 with respect to Dividend Equivalents, you will not have any rights as a shareholder with respect to your RSU Awards or in the Shares corresponding to your RSUs prior to conversion of your RSUs.

(b) **Following Conversion.** Subject to the terms and conditions of this Award Certificate, following conversion of your RSUs you will be the beneficial owner of the shares issued to you net of taxes, and you will be entitled to all rights of ownership, including voting rights and the right to receive cash or stock dividends or other distributions paid on such shares.

14. Securities Law Matters.

Shares issued upon conversion of your RSUs may be subject to restrictions on transfer by virtue of the Securities Act of 1933, as amended. Discover may advise the transfer agent to place a stop order against such shares if it determines that such an order is necessary or advisable. Because Stock will only be maintained in book-entry form, you will not receive a stock certificate representing your interest in such shares.

15. Compliance with Laws and Regulations.

Any sale, assignment, transfer, pledge, mortgage, encumbrance or other disposition of Shares issued upon conversion of your RSUs (whether directly or indirectly, whether or not for value, and whether or not voluntary) must be made in compliance with any applicable constitution, rule, regulation, or policy of any of the exchanges or associations or other institutions with which the Company or a Related Employer has membership or other privileges, and any applicable law, or applicable rule or regulation of any governmental agency, self-regulatory organization or state or federal regulatory body.

16. No Entitlements.

(a) **No Right to Continued Employment.** This RSU Award is not an employment agreement, and nothing in this Award Certificate, the International Supplement, if applicable, or the Plan shall alter your status as an “at-will” employee of the Company or your Employment status at a Related Employer, nor does anything herein constitute a promise of continued employment or re-employment.

(b) **No Right to Future Awards.** This RSU Award is discretionary and does not confer on you any right or entitlement to receive another award of RSUs, any other equity-based award or any other award at any time in the future or in respect of any future period.

(c) **No Effect on Future Employment Compensation.** This RSU Award is discretionary and does not confer on you any right or entitlement to receive compensation in any specific amount for any future fiscal year, and does not diminish in any way the Company’s discretion to determine the amount, if any, of your compensation. In addition, this RSU Award is not part of your base salary or wages and will not be taken into account in determining any other Employment-related rights you may have, such as rights to pension or severance pay, end of service payments, bonuses, long-service awards or similar payments and in no event shall be considered as compensation for, or relating in any way to, past services for the Company.

(d) Termination of Employment. In consideration of the grant of the Award, no claim or entitlement to compensation or damages shall arise from termination of the Award or diminution in value of the Award or Shares acquired through vesting of the Award resulting from termination of your employment by the Company (for any reason whatsoever and whether or not in breach of local labor laws) and you irrevocably release the Company and the Related Employer from any such claim that may arise; if, notwithstanding the foregoing, any such claim is found by a court of competent jurisdiction to have arisen, then, by signing this Agreement, you will be deemed irrevocably to have waived your entitlement to pursue such claim; and in the event of termination of your employment (whether or not in breach of local labor laws), your right to receive the Award and vest in the Award under the Plan, if any, will terminate effective as of the date that you are no longer actively employed and will not be extended by any notice period mandated under local law (e.g., active employment would not include a period of “garden leave” or similar period pursuant to local law); Discover shall have the exclusive discretion to determine when you are no longer actively employed for purposes of your Award.

(e) Language. If you have received this Agreement or any other document related to the Plan translated into a language other than English and if the translated version is different than the English version, the English version will control.

(f) Award Terms Control. In the event of any conflict between any terms applicable to equity awards in any employment agreement, offer letter or other arrangement that you have entered into with the Company and the terms set forth in this Award Certificate, the latter shall control.

17. Consents.

Your RSU Award is conditioned upon the Company’s making of all filings and the receipt of all consents or authorizations required to comply with, or required to be obtained under, applicable local law.

In accepting this RSU Award, you consent to the collection, use and transfer, in electronic or other form, of your personal data by and among, as applicable, the Company and any other possible recipients for the purpose of implementing, administering and managing your participation in the Plan, as well as for the purpose of the Company’s compliance with applicable law, including, without limitation, Section 953(b) of the Dodd-Frank Wall Street Reform and Consumer Protection Act. You understand that the recipients of your personal data may be located in the U.S. or elsewhere, and the recipients’ country may have different data privacy laws and protections than your country. You understand that you may request a list with the names and addresses of any potential recipients of your personal data, view the personal data, request additional information about the storage of your personal data, require any necessary amendments to your personal data or refuse or withdraw your consent by contacting your local human resources representative, in any case without cost. You understand, however, that refusing or withdrawing your consent may affect your ability to participate in the Plan.

18. Electronic Delivery and Consent to Electronic Participation.

The Company may, in its sole discretion, decide to deliver any documents related to the RSU Award and participation in the Plan or future RSU Awards by electronic means. You hereby consent to receive such documents by electronic delivery and to participate in the Plan through an online or electronic system established and maintained by the Company or another third party designated by the Company, including the acceptance of RSU Awards and the execution of the RSU agreements through electronic signature. Electronic acceptance of this Award Certificate through the E*TRADE website, or such other vendor as the Company may choose to administer the Plan, shall be required and binding on you. Where electronic

acceptance may not be permitted under applicable law, the Company may also request and require your physical signature. Your acceptance affirms your agreement to all the terms and conditions set forth in this Award Certificate and acceptance of the Award subject thereto. Not providing this acceptance within the timeframe stipulated may result in the Company forfeiting all or a portion of this Award.

19. Award Modification.

The Committee reserves the right to modify or amend unilaterally the terms and conditions of your RSUs, without first asking your consent, or to waive any terms and conditions that operate in favor of Discover. These amendments may include (but are not limited to) changes that the Committee considers necessary or advisable as a result of changes in any, or the adoption of any new, Legal Requirement. The Committee may not modify your RSUs in a manner that would materially impair your rights in your RSUs without your consent; *provided, however*, that the Committee may, without your consent, amend or modify your RSUs in any manner that the Committee considers necessary or advisable to comply with or reflect the application of any Legal Requirement or to ensure that your RSUs are not subject to United States federal, state or local income tax or any equivalent taxes in territories outside the United States prior to payment. Notwithstanding any provisions of this Award Certificate to the contrary, to the extent you transfer employment outside of the United States, the Award shall be subject to any special terms and conditions as Discover may need to establish to comply with local laws, rules, and regulations or to facilitate the operation and administration of the Award and the Plan in the country to which you transfer employment (or Discover may establish alternative terms and conditions as may be necessary or advisable to accommodate your transfer). Discover will notify you of any amendment of your RSUs that affects your rights. Any amendment or waiver of a provision of this Award Certificate (other than any amendment or waiver applicable to all recipients generally), which amendment or waiver operates in your favor or confers a benefit on you, must be in writing and signed by the Chief Human Resources & Administrative Officer to be effective.

20. Severability.

In the event the Committee determines that any provision of this Award Certificate would cause you to be in constructive receipt for United States federal or state income tax purposes of any portion of your RSU Award, then such provision will be considered null and void and this Award Certificate will be construed and enforced as if the provision had not been included in this Award Certificate as of the date such provision was determined to cause you to be in constructive receipt of any portion of your RSU Award.

21. Successors.

This Award Certificate shall be binding upon and inure to the benefit of any successor or successors of Discover and any person or persons who shall, upon your death, acquire any rights hereunder in accordance with this Award Certificate or the Plan.

22. Governing Law.

This Award Certificate and the related legal relations between you and Discover will be governed by and construed in accordance with the laws of the State of Delaware, without regard to any conflicts or choice of law, rule or principle that might otherwise refer the interpretation of the RSU Award to the substantive law of another jurisdiction. The Company and you agree that the jurisdiction and venue for any disputes arising under, or any action brought to enforce (or otherwise relating to), the Plan or this Award Certificate shall be exclusively in the courts in the State of Illinois, Counties of Cook or Lake, including the federal courts located therein (should

federal jurisdiction exist), and the Company and you hereby submit and consent to said jurisdiction and venue.

23. Section 409A.

To the extent necessary or advisable to comply with Section 409A of the Internal Revenue Code, with respect to any provision of this Award Certificate that provides for vested RSUs to convert to Shares on or as soon as administratively practicable after a specified event or date, such conversion will be made by the later of the end of the calendar year in which the specified event or date occurs or the 15th day of the third calendar month following the specified event or date.

24. Defined Terms.

For purposes of this Award Certificate, the following terms shall have the meanings set forth below:

(a) “Cause” means:

(1) any act or omission which constitutes a material breach of your obligations to the Company or your failure or refusal to perform satisfactorily any duties reasonably required of you, which breach, failure or refusal (if susceptible to cure) is not corrected (other than failure to correct by reason of your incapacity due to Disability) within ten (10) business days after written notification thereof to you by the Company;

(2) any act or omission by you that constitutes (i) fraud or intentional misrepresentation, (ii) embezzlement, misappropriation or conversion of assets of, or business opportunities considered by, the Company or (iii) any other act which has caused or may reasonably be expected to cause material injury to the interest or business reputation of the Company; or

(3) your violation of any securities, commodities or banking laws, any rules or regulations issued pursuant to such laws, or rules or regulations of any securities or commodities exchange or association of which the Company is a member or of any policy of the Company relating to compliance with any of the foregoing.

(b) “Change in Control” means, except as provided otherwise below, the first to occur of any of the following events:

(1) except as otherwise provided in clause (3) below, any person (as defined in Section 3(a)(9) of the Securities Exchange Act of 1934 (the “Exchange Act”), as such term is modified in Sections 13(d) and 14(d) of the Exchange Act), other than (i) any employee plan established by the Company or any of its Subsidiaries, (ii) any group of employees holding shares subject to agreements relating to the voting of such shares, (iii) the Company or any of its affiliates (as defined in Rule 12b-2 promulgated under the Exchange Act), (iv) an underwriter temporarily holding securities pursuant to an offering of such securities, or (v) a corporation owned, directly or indirectly, by shareholders of the Company in substantially the same proportions as their ownership of the Company, either (x) acquires ownership of stock of the Company that, together with stock held by such person (not including the stock owned by such person any stock acquired directly from the Company other than in connection with the acquisition by the Company of a business), constitutes more than fifty percent (50%) of the total fair market value of the stock of the Company (but only if such person did not own more than fifty percent (50%) of the total fair market value of the stock of the Company prior to the acquisition of

additional stock), or (y) acquires (or has acquired during the twelve-month period ending on the date of the most recent acquisition by such person) ownership of the stock of the Company possessing thirty percent (30%) or more of the total voting power of the stock of the Company (but only if such person did not own thirty percent (30%) or more of the total voting power of the stock of the Company prior to the acquisition of additional stock and not including the stock owned by such person any stock acquired directly from the Company other than in connection with the acquisition by the Company of a business);

(2) a change in the composition of the Board during any twelve-month period, such that individuals who, as of the Date of the Award, constitute the Board (the “Incumbent Board”) cease for any reason to constitute at least a majority of the Board; provided, however, that any individual becoming a member of the Board subsequent to the date of Date of the Award whose election, or nomination for election by the Company’s shareholders, was approved by a vote of at least a majority of the directors then comprising the Incumbent Board shall be considered as though such individual were a member of the Incumbent Board;

(3) the consummation of a merger or consolidation of the Company with any other corporation or other entity, or the issuance of voting securities in connection with a merger or consolidation of the Company (or any direct or indirect subsidiary of the Company) pursuant to applicable stock exchange requirements, other than (i) a merger or consolidation which results in the securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into securities of the surviving entity or any parent thereof), in combination with the ownership of any trustee or other fiduciary holding securities under an employee benefit plan of the Company or any of its subsidiaries, at least fifty percent (50%) of the combined voting power of the voting securities of the Company or such surviving entity or any parent thereof outstanding immediately after such merger or consolidation, or (ii) a merger or consolidation effected to implement a recapitalization of the Company (or similar transaction) in which no person (determined pursuant to clause (1) above) is or becomes the beneficial owner, directly or indirectly, of securities of the Company (not including in the securities beneficially owned by such person any securities acquired directly from the Company or its affiliates other than in connection with the acquisition by the Company or its affiliates of a business) representing thirty percent (30%) or more of the total voting power of the stock of the Company (but only if such person did not own thirty percent (30%) or more of the total voting power of the stock of the Company prior to the acquisition of additional securities);

(4) the complete liquidation of the Company or the sale or disposition by the Company of all or substantially all of the Company’s assets, other than a sale or disposition by the Company of all or substantially all of the Company’s assets to (i) a shareholder of the Company (immediately before the asset transfer) in exchange for or with respect to the Company’s stock, (ii) an entity, at least fifty percent (50%) of the total value or voting power of which is owned, directly or indirectly, either by the Company or by a person or more than one person acting as a group, that owns fifty percent (50%) or more of the total value or voting power of all the outstanding stock of the Company, or (iii) a person, or more than one person acting as a group, that owns, directly or indirectly, fifty percent (50%) or more of the total value or voting power of all the outstanding stock of the Company; provided, however, that a Change in Control pursuant to this clause (4) shall not be deemed to have occurred unless a person (determined pursuant to clause (1) above) or persons acting as a group acquires (or has acquired during the twelve-month period ending on the date of the most recent acquisition by such person or persons) assets from the Company that have a total gross fair market value equal to or more than forty

percent (40%) of the total gross fair market value of all of the assets of the Company immediately before such acquisition or acquisitions.

Notwithstanding the foregoing, with respect to a Change in Control of Discover, no Change in Control shall be deemed to have occurred if there is consummated any transaction or series of integrated transactions immediately following which the beneficial holders of the Company's common stock immediately prior to such transaction or series of transactions continue to have substantially the same proportionate ownership in an entity which owns substantially all of the assets of the Company immediately prior to such transaction or series of transactions.

(c) **“Chief Human Resources & Administrative Officer”** means the chief human resources & administrative officer of Discover, any successor chief human resources & administrative officer, or any other individual or committee appointed by the chief executive officer of Discover with the power and authority of the chief human resources & administrative officer.

(d) **“Chief Risk Officer”** means the chief risk officer of Discover, any successor chief risk officer, or any other individual or committee appointed by the chief executive officer of Discover with the power and authority of the chief risk officer.

(e) **“Competitive Activity”** means:

(1) becoming, or entering into any arrangement as, an employee, officer, partner, member, proprietor, director, independent contractor, consultant, advisor, representative or agent of, or serving in any similar position or capacity with, a Competitor, where you will be responsible for providing, or managing or supervising others who are providing, services (i) that are similar or substantially related to the services that you provided to the Company, or (ii) that you had direct or indirect managerial or supervisory responsibility for at the Company, or (iii) that call for the application of the same or similar specialized knowledge or skills as those utilized by you in your services for the Company, in each such case, at any time during the year preceding the termination of your employment with the Company; or

(2) either alone or in concert with others, forming, or acquiring a five percent (5%) or greater equity ownership, voting interest or profit participation in, a Competitor.

(f) **“Competitor”** means any corporation, partnership or other entity that engages in (or that owns a significant interest in any corporation, partnership or other entity that engages in) (1) the business of consumer lending, including, without limitation, credit card issuance or electronic payment services, or (2) any other business in which you have been involved in or had significant knowledge of, which has been conducted by the Company at any time during your employment with the Company. For the avoidance of doubt, a competitor of any entity which results from a corporate transaction involving the Company that constitutes a Change in Control shall be considered a Competitor for purposes of this Award Certificate.

(g) **“Covered Employee”** means an employee who, as of the Date of the Award, has been identified as a covered employee by Human Resources.

(h) **“Date of the Award”** means the date set forth in this Award Certificate.

(i) **“Disability”** means a “permanent and total disability,” as defined in Section 22(e)(3) of the Internal Revenue Code.

(j) **“Employed”** and **“Employment”** refer to employment with the Company and/or Related Employment.

(k) **“Good Reason”** means the occurrence of any of the following upon, or within six (6) months prior to or twenty-four (24) months after the occurrence of a Change in Control of Discover without your prior written consent:

(1) Any material diminution in your assigned duties, responsibilities and/or authority, including the assignment to you of any duties, responsibilities or authority inconsistent with the duties, responsibilities and authority assigned to you, immediately prior to such assignment;

(2) A material diminution in the authority, duties, or responsibilities of the supervisor to whom you are required to report;

(3) Any material reduction in your base compensation; provided, however, that Company-initiated across-the-board reductions in compensation affecting substantially all eligible Company employees shall alone not be considered “Good Reason,” unless the compensation reductions exceed twenty percent (20%) of your base compensation;

(4) A material diminution of the budget over which you have authority;

(5) The Company’s requiring you to be based at a location that (i) is in excess of thirty-five (35) miles from the location of your principal job location or office immediately prior to the Change in Control, or (ii) results in an increase in your normal daily commuting time by more than ninety (90) minutes, except for required travel on Company’s business to an extent substantially consistent with your then present business travel obligations; or

(6) Any other action or inaction that constitutes a material breach by the Company of any agreement pursuant to which you provide services to the Company.

For purposes of paragraphs (1) through (6) above, the duties, responsibilities and/or authority assigned to you shall be deemed to be the greatest of those in effect prior to or after the Change in Control. Unless you become Disabled, your right to terminate your Employment for Good Reason shall not be affected by your incapacity due to physical or mental illness. Your continued Employment shall not constitute consent to, or a waiver of rights with respect to, any circumstance constituting Good Reason. Notwithstanding the foregoing, Good Reason shall not exist unless you give the Company written notice thereof within thirty (30) days after its occurrence and the Company shall not have remedied the action within thirty (30) days after such written notice.

(l) **“Internal Revenue Code”** means the United States Internal Revenue Code of 1986, as amended, and the rules, regulations and guidance thereunder.

(m) **“Legal Requirement”** means any law, regulation, ruling, judicial decision, accounting standard, regulatory guidance or other legal requirement (including any foreign legal requirements).

(n) **“Pro Ration Fraction”** means a fraction, not to exceed 1.0, the numerator of which is the number of completed months commencing on the first day of the calendar year

of the Date of the Award and ending on the effective date of your termination of Employment, and the denominator of which is 12.

(o) **“Related Employment”** means your employment with an employer other than the Company (such employer, herein referred to as a **“Related Employer”**), *provided*: (1) you undertake such employment at the written request or with the written consent of the Chief Human Resources & Administrative Officer; (2) immediately prior to undertaking such employment you were an employee of the Company or were engaged in Related Employment (as defined herein); and (3) such employment is recognized by the Company in its discretion as Related Employment; and, *provided further* that the Company may (i) determine at any time in its sole discretion that employment that was recognized by the Company as Related Employment no longer qualifies as Related Employment, and (ii) condition the designation and benefits of Related Employment on such terms and conditions as the Company may determine in its sole discretion. The designation of employment as Related Employment does not give rise to an employment relationship between you and the Company, or otherwise modify your and the Company’s respective rights and obligations.

(p) **“Retirement”** means the termination of your Employment by you or by the Company for any reason other than for Cause and other than due to your death or Disability, on or after the date on which:

- (1) you have attained age 55; and
- (2) you have attained a combined age and years of service of at least 65 years.

(q) **“Scheduled Vesting Date”** means the Scheduled Vesting Dates set forth in Award Certificate as the context requires.

(r) **“Wrongful Solicitation”** occurs upon either of the following events:

(1) while Employed, including during any notice period applicable to you in connection with the termination of your Employment, or within one year after the termination of your Employment, directly or indirectly in any capacity (including through any person, corporation, partnership or other business entity of any kind), you hire or solicit, recruit, induce, entice, influence or encourage any Company employee to leave the Company or become hired or engaged by another firm; *provided, however*, that this clause shall apply only to employees with whom you worked or had professional or business contact, or who worked in or with your business unit, during any notice period applicable to you in connection with the termination of your Employment or during the one year preceding notice of the termination of your Employment; or

(2) while Employed, including during any notice period applicable to you in connection with the termination of your Employment, or within one year after the termination of your Employment, directly or indirectly in any capacity (including through any person, corporation, partnership or other business entity of any kind), you solicit or entice away or in any manner attempt to persuade any client or customer, or prospective client or customer, of the Company (i) to discontinue or diminish his, her or its relationship or prospective relationship with the Company or (ii) to otherwise provide his, her or its business to any person, corporation, partnership or other business entity which engages in any line of business in which the Company is engaged (other than the Company); *provided, however*, that this clause shall apply only to clients or customers, or prospective clients or customers, that you worked for on an actual or prospective project or assignment during any notice period applicable to you in connection with the

termination of your Employment or during the one year preceding notice of the termination of your Employment.

IN WITNESS WHEREOF, Discover has duly executed and delivered this Award Certificate as of the Date of the Award.

DISCOVER FINANCIAL SERVICES

By:

R. Andy Eichfeld
EVP, Chief Human Resources & Administrative Officer

**Discover Financial Services
International Supplement**

This International Supplement to the Award Certificate ("International Supplement") contains supplemental terms and conditions for the RSU Award ("Equity Award") to employees of Discover Financial Services (or the relevant affiliated company) located in certain jurisdictions outside of the United States. The terms included in this International Supplement are intended to ensure compliance with the laws of the country in which you are Employed or, in certain instances, to make the awards more tax efficient in your country.

You have also received an Award Certificate applicable to your award. The Award Certificate, together with this International Supplement, collectively set forth the terms and conditions of your Equity Award. To the extent that this International Supplement amends, deletes or supplements any terms of the Award Certificate, this International Supplement shall control.

Capitalized terms that are used without definition in this International Supplement have the meanings assigned in the Plan or the Award Certificate.

All Employees Located Outside the United States.

If you are Employed outside of the United States, please note that your Equity Award is offered, issued and administered by Discover Financial Services, a Delaware corporation, and your local employer is not involved in the grant of awards under such equity incentive program. All documents related to your Equity Award, including the Award Certificate, this International Supplement and the link by which you access these documents, originate and are maintained in the United States.

Your Equity Award is made in virtue of your Employment with, and your services performed for, the appropriate entities within the Company. However, your award does not form part of your entitlement to remuneration or benefits, whether pursuant to any contract of Employment to which you may be a party or otherwise. Similarly, the existence of a contract of Employment between you and any entity within the Company shall not confer on you any right or entitlement to participate in the Equity Award or to receive awards thereunder, or any expectation that you might participate in such equity incentive program or receive additional equity awards in the future. Your Equity Award, the Award Certificate, and/or this International Supplement does not constitute an employment contract and does not create an employment relationship or a promise of continued Employment for any period of time.

In addition, your Equity Award is not part of your base salary or wages and will not be taken into account (except to the extent otherwise required by local law) in determining any other employment-related rights you may have, such as rights to pension or severance pay.

Whether or not you have a contract of Employment with any entity within the Company, your rights and obligations under the terms of your office or Employment shall not be affected by your receipt of the Equity Award. By accepting your receipt of the Equity Award, you waive any and all rights to compensation or damages for any loss of the Equity Award in the event of your termination of your office or Employment for any reason whatsoever. This waiver applies whether or not such termination amounts to a wrongful or unfair dismissal.

You may be subject to applicable exchange control, currency control or similar financial laws that may affect your transactions with respect to your equity award, including without limitation, your ability to bring shares of Discover Financial Services common stock into your jurisdiction or to receive the proceeds of a sale of Discover Financial Services common stock in your jurisdiction. Moreover, you may be subject to certain notification, approval and/or repatriation obligations with respect to securities and funds you receive in connection with your awards. In addition the Company is not responsible for any foreign exchange fluctuations that change the value of your RSU Award. ***You are encouraged to consult your advisors to ascertain whether any restrictions or obligations apply to you.***

Your Equity Award has not been authorized or approved by any applicable securities authorities and may have been offered pursuant to an exemption from registration in your local jurisdiction. Similarly, no prospectus or similar offering or registration document has been prepared, authorized or approved by any applicable securities authorities in your jurisdiction. The grant of awards is being made only to employees of the Company and does not constitute and is not intended to be an offering to the public. For this reason, you must keep all award documents you receive, including but not limited to this International Supplement and the Award Certificate, confidential and you may not distribute or otherwise make public any award documents without the prior written consent of the Company. Moreover, you may not reproduce (in whole or in part) any award documents you receive. In addition, the shares of Company common stock you acquire upon vesting and conversion of your Equity Award may be subject to applicable restrictions on resale in your local jurisdiction. ***You are encouraged to consult your advisors to ascertain whether any restrictions or obligations apply to you.***

Employees in China.

If you are employed in China or are a Chinese national on international assignment outside of China for the Company, but your Equity Award was made in China and/or you will be taxed there, your Equity Award will be settled in cash. Rather than convert awards to shares pursuant to Section 1 of the Award Certificate and Sections 4 through 6 of the Award Certificate, the Company will convert your Equity Award to cash and the Company or your local employer will deliver the cash payment to you. You consent to this cash conversion in exchange for the Equity Award. All other terms and conditions of the Plan and the Award Certificate will otherwise apply to your Equity Award.

Employees in the United Kingdom or European Union.

If you are employed in the United Kingdom (or the European Union), the Company will act in accordance with the Data Protection Act of 2018 as amended from time to time and the General Data Protection Regulation as amended from time to time as applicable regarding any personal information which you provide to it in connection with your Equity Award (including the amount of the award) and you acknowledge the need for the processing of such personal information in order to facilitate your participation in such equity incentive program, for any purposes required by law or regulation, or for any other legitimate business purpose. By accepting your Equity Award, you acknowledge that from time to time, for the purposes described above, your personal information may be stored and processed by and disclosed and transferred to other offices and companies within the Company and to third parties, some of which are situated outside of the European Union and may not offer as high a level of protection for personal information as countries within the European Union.

The following provisions apply in lieu of those contained in the Award Certificate for employees in the United Kingdom.

Section 8(a)

The forfeiture, cancellation and/or clawback circumstances and events set forth in this Section 8 are designed, among other things, to incentivize compliance with the Company's policies (including, without limitation, the Company's risk policies and Code of Conduct), to protect the Company's interests in non-public, confidential and/or proprietary information, products, trade secrets, customer relationships, workforce stability, and other legitimate business interests, and to ensure an orderly transition of responsibilities. This Section 8 shall apply notwithstanding any other terms of this Award Certificate (except where sections in this Award Certificate specifically provide that the circumstances set forth in this Section 8 no longer apply).

(a) Conditions. Notwithstanding your satisfaction of the vesting conditions of this Award Certificate, RSUs are not earned: (1) until the applicable Scheduled Vesting Date; and (2) unless the conditions set forth in this section 8(a) below are met. Although you will become the beneficial owner of Shares following conversion of your RSUs, the Company may, upon notice, issue a transfer restriction with respect to your Shares following conversion of your RSUs pending any investigation or other review that impacts the determination as to whether the RSUs meet the conditions set forth below. The Shares underlying such RSUs shall not legally vest in you and shall be forfeited and recoverable in the event the Company determines that the conditions set forth in this section 8(a) below are not met. Notwithstanding any provision of this Award Certificate to the contrary, in order for legal ownership of the Shares to fully vest in you it is a strict condition that you must not at any time prior to one year after the termination of your Employment or service with the Company (i) engage, in Wrongful Solicitation, (ii) misuse the Company's confidential, proprietary information and/or intellectual property, as defined in your employment contract, the Company Code of Conduct, and/or any other relevant agreements or policies issued to you, or (iii) for those Participants classified by the Company as an officer of Discover Financial Services or one of its Subsidiaries on the date of grant, engage in Competitive Activity. If the conditions above are not met, you will:

(1) pay to the Company an amount in cash equal to the value of the Shares that vested and converted on or after, or within one year prior to, your termination of Employment, which value shall be determined by the Company, in its sole discretion, and shall include an amount for tax adjustments appropriate to reflect your obligation to repay such amounts due to you not meeting the conditions above; or

(2) transfer to the Company the number of Shares that vested and converted on or after, or within one year prior to, your termination of Employment, plus an amount calculated by the Company, in its sole discretion, for tax adjustments appropriate to reflect your obligation to transfer such common stock due to you not meeting the conditions above.

Section 24(e), (f) and (r)

(e) "Competitive Activity" means:

(1) becoming, or entering into any arrangement as, an employee, officer, partner, member, proprietor, director, independent contractor, consultant, advisor, representative or agent of, a Competitor, where you will be responsible for providing, or managing or supervising others who are providing, services (i) that are similar or substantially related to the services that you provided to the Company, or (ii) that you had direct or indirect managerial or supervisory responsibility for at the Company, or (iii) that call for the application of the same or similar specialized knowledge or skills as those utilized by you in your services for the Company, in each such case, at any time during the year preceding the earlier of the start of your notice period and the Employment; or

(2) either alone or in concert with others, forming, or acquiring a five percent (5%) or greater equity ownership, voting interest or profit participation in, a Competitor.

(f) **“Competitor”** means any corporation, partnership or other entity that engages in (or that owns a significant interest in any corporation, partnership or other entity that engages in) (1) the business of consumer lending, including, without limitation, credit card issuance or electronic payment services, or (2) any other business which you have been materially involved in or had significant knowledge of, which has been conducted by the Company at any time during the two years preceding the termination of your Employment. For the avoidance of doubt, a competitor of any entity which results from a corporate transaction involving the Company that constitutes a Change in Control shall be considered a Competitor for purposes of this Award Certificate.

(r) **“Wrongful Solicitation”** occurs upon either of the following events:

(1) while Employed, including during any notice period applicable to you in connection with the termination of your Employment, and within one year after the termination of your Employment, directly or indirectly in any capacity (including through any person, corporation, partnership or other business entity of any kind), you hire or solicit, recruit, induce, entice, influence or encourage any Company employee to leave the Company or become hired or engaged by another firm; *provided, however*, that this clause shall apply only to employees of the Company who had access to confidential information of the Company and (i) were employed at the level of officer or above, or (ii) who worked in or with your business unit or (iii) for whom you had direct or indirect responsibility, and in each case with whom you had material contact in the course of your Employment, at any time during the year preceding the earlier of the start of your notice period and the termination of your Employment; or

(2) while Employed, including during any notice period applicable to you in connection with the termination of your Employment, or within one year after the termination of your Employment, directly or indirectly in any capacity (including through any person, corporation, partnership or other business entity of any kind), you solicit or entice away or in any manner attempt to persuade any client or customer, or prospective client or customer, of the Company (i) to discontinue or diminish his, her or its relationship or prospective relationship with the Company or (ii) to otherwise provide his, her or its business to any person, corporation, partnership or other business entity which engages in any line of business in which the Company is engaged (other than the Company); *provided, however*, that this clause shall apply only to clients or customers, or prospective clients or customers, that you worked for on an actual or prospective project or assignment during any notice period applicable to you in connection with the termination of your Employment or during the one year preceding notice of the termination of your Employment.

* * *

The Company recommends that you seek advice of your tax advisors regarding the tax treatment of your awards.

**Discover Financial Services
Amended and Restated 2014 Omnibus Incentive Plan
2023 Award Certificate for Performance Stock Units**

This Award Certificate describes the terms and conditions under which you are being granted an Award of Performance Stock Units (“PSUs”) under the Discover Financial Services Amended and Restated 2014 Omnibus Incentive Plan (the “Plan”), which constituted part of your discretionary long-term incentive compensation.

A copy of the Plan can be found on the E*TRADE website at www.etrade.com, or such other vendor as the Company may choose to administer the Plan. Capitalized terms under in this Award Certificate have the meanings ascribed in the Plan unless otherwise stated herein.

The full terms of your Award are set out in this Award Certificate, the Plan and any applicable policy adopted by the Committee or its delegate in respect of the Plan and Awards thereunder that is applicable to this Award. In the event of a conflict between the Plan and this Award Certificate, the terms of the Plan control.

Award Recipient	%%FIRST_NAME%-%% %%LAST_NAME%-%
Employee / Participant ID	%%EMPLOYEE_IDENTIFIER%-%
Issuer	Discover Financial Services
Award Type	Performance Stock Units (PSUs)
Date of the Award	%%OPTION_DATE,'Month DD, YYYY'%-%
Number of Units Awarded At Target	%%TOTAL_SHARES_GRANTED,'999,999,999'%-% PSUs
Performance Period	January 1, 2023 to December 31, 2025
Scheduled Vesting Date	%%VEST_DATE_PERIOD1,'Month DD, YYYY'%-%
Performance Measures	<p>Your Target Award will be earned based on attainment of the following Performance Measures during the Performance Period.</p> <p>GAAP EPS Multiplier*</p> <p>GAAP EPS Minimum or less \$26.33 USD 0</p> <p>80% of GAAP EPS Target \$42.13 USD 0.5</p> <p>GAAP EPS Target \$52.66 USD 1.0</p> <p>GAAP EPS Maximum or greater (110% of target) \$57.93 USD 1.5</p> <p>* Multiplier will be interpolated on a straight-line basis for results between GAAP EPS performance levels.</p>
Settlement	Your awards will be converted and settled in shares of Company stock pursuant to Section 8 of the Plan and Section 3(b) of this Award Certificate unless your primary place of employment is located outside the United States in which case your shares may be settled in cash. See Appendix A <i>International Supplement</i> , for additional information.
Restrictive Covenants & Clawbacks	You may be subject to repayment provisions triggered in the event of your violation of a restrictive covenant, including non-solicitation and non-competition requirements, more fully described in this Award Certificate. You are also subject to a clawback provision in the event of restatement of the Company's financial performance.
Non-U.S. Employees	If you are employed outside the United States, please reference the " International Supplement " included herein as Appendix A , which contains supplemental terms and conditions for your PSU Award.

You will earn Performance Stock Units (“PSUs”) included in your PSU Award only if you (1) remain in continuous Employment through the applicable Scheduled Vesting Date(s) (subject to limited exceptions set forth herein), (2) are not found to be subject to the forfeiture, cancellation, or clawback provisions set forth in Section 10 below, and (3) satisfy obligations you owe to the Company as set forth in Section 12 below. If the Company deems appropriate and in its sole discretion, the Company may require you to provide a written certification or other evidence, from time to time, to confirm that none of the circumstances described in Section 10 below exist or have occurred, including upon a termination of Employment and/or during a specified period of time prior to the applicable Scheduled Vesting Date(s). If you fail to timely provide any required certification or other evidence, the Company may cancel your PSU Award. It is your responsibility to provide the Human Resources Department with your up-to-date contact information.

1. Performance Stock Units Generally.

Each PSU is a RSU that is subject to additional conditions as described herein and corresponds to one share of Stock. A PSU constitutes a contingent and unsecured promise by Discover to pay you one share of Discover common stock on the conversion date for the PSU. As the holder of PSUs, you have only the rights of a general unsecured creditor of Discover. No assets of the Company will be held or set aside as security for the obligations of the Company hereunder. You will not be a shareholder, and shall have no voting rights, with respect to the Shares corresponding to your PSUs unless and until your PSUs convert to Shares.

2. Performance Measures.

The portion, if any, of your Target Award that you can earn will be based on Discover GAAP EPS performance as set forth in this Award Certificate and the other terms and conditions of this Award Certificate, and may vary from zero to 1.5 times the number of PSUs included in your Target Award.

3. Vesting Schedule; Conversion.

(a) **Vesting Schedule.** Your PSUs earned in accordance with Section 2 will vest on the Scheduled Vesting Date, so long as you are continuously employed through the Scheduled Vesting Date unless earlier vested in accordance with Sections 6, 7 and 8 of this Award Certificate.

(b) **Conversion.**

(1) Except as otherwise provided in this Award Certificate, your earned and vested PSUs will convert to Shares (rounded to the nearest whole share) on the Scheduled Vesting Date.

(2) Subject to the provisions of the Plan and this Award Certificate, as well as any transfer restrictions imposed by the Company or applicable pursuant to securities laws, Shares delivered upon conversion of PSUs shall be delivered to you (or your beneficiary or estate, as applicable) as soon as administratively practicable after the Scheduled Vesting Date.

(c) **Accelerated Conversion.** The Committee, in its sole discretion, may determine that any PSUs may be converted to Shares prior to the Scheduled Vesting Date subject to compliance with all Legal Requirements.

(d) Rule of Construction for Timing of Conversion. Whenever this Award Certificate provides for PSUs to convert to Shares, or your dividend equivalents to be paid, on the Scheduled Vesting Date or upon an accelerated or different specified event or date, such conversion or payment will be considered to have been timely made, and neither you nor any of your beneficiaries nor your estate shall have any claim against the Company for damages based on a delay in conversion of your PSUs (or delivery of Shares following conversion) or payment of your dividend equivalents, as applicable, and the Company shall have no liability to you (or to any of your beneficiaries or your estate) in respect of any such delay, as long as conversion or payment, as applicable, is made by December 31 of the year in which occurs the Scheduled Vesting Date or such other specified event or date or, if later, by the 15th day of the third calendar month following such specified event or date.

4. Special Provisions for Certain “Specified Employees”.

If Discover reasonably considers you to be one of its “specified employees” as defined under Section 409A of the Internal Revenue Code at the time of the termination of your Employment, any PSUs that constitute deferred compensation under Section 409A of the Internal Revenue Code that are payable upon termination of Employment will not convert to Shares until the date that is six months after the termination of your Employment (or the date of your death, if such event occurs earlier).

5. Dividend Equivalent Payments.

If Discover pays a regular or ordinary dividend on its Stock, you will be credited with cash dividend equivalents with respect to your PSU Award in an amount equal to the amount of the dividend that would have been paid on a number of Shares corresponding to your Target Award. Discover will credit the dividend equivalents as soon as is administratively practicable after it pays the corresponding dividend on its Stock. Discover will decide on the form of payment and may pay dividend equivalents in Shares, in cash or in a combination thereof. Your dividend equivalents will vest and be paid at the same time as, and subject to the same vesting and cancellation provisions set forth in this Award Certificate with respect to, your PSUs (provided that, subject to Section 3(d), the dividend equivalents may be paid following the date on which the PSUs convert to Shares as soon as administratively practicable). The amount of dividend equivalents paid to you will be based on the number of PSUs that actually convert to Shares (and will be paid only if your PSUs convert to Shares), *provided* that such dividend equivalents will be reduced to the extent that application of the performance measures set forth in this Award Certificate results in your earning less than the Target Award and will be increased to the extent that application of those performance measures results in your earning more than the Target Award. (For example, if you earn eighty percent (80%) of the Target Award based on the performance measures, twenty percent (20%) of the dividend equivalents credited in respect of regular or ordinary dividends will be canceled.) The decision to pay a dividend and, if so, the amount of any such dividend, is determined by Discover in its sole discretion. No dividend equivalents will be paid to you on any canceled PSUs. Because dividend equivalent payments are considered part of your compensation for income tax purposes, they will be subject to applicable tax and other withholding obligations, as summarized in Section 11.

(a) Pro Rata Reduction. If your PSU Award is subject to a pro rata reduction upon the termination of your Employment (as described below) and your PSU Award is to be paid on a date following such termination, the amount of dividend equivalents credited to you in respect of regular or ordinary dividends paid on Stock following your termination shall continue to be based on the number of Shares corresponding to your Target Award, and the amount paid to you (subject to the other terms and conditions of this Award Certificate) shall be the amount calculated as provided above in this Section 5, in each case multiplied by the Pro Ration Fraction. If your PSU Award is subject to a pro rata reduction upon the termination of your

Employment and is paid out on such termination (as described below), the amount of dividend equivalents paid to you shall be calculated based on the number of Shares corresponding to your Target Award (adjusted, if applicable, as provided in this Section 5) multiplied by the Pro Ration Fraction.

(b) Effect of Cancellation. Notwithstanding the foregoing, in the event your PSU Award is canceled in full on or before the Scheduled Vesting Date, all dividend equivalents credited to you in respect of regular or ordinary dividends will be canceled.

6. Death; Disability; Retirement.

The following special vesting and payment terms apply to your PSUs:

(a) Death. If your Employment terminates due to your death, all PSUs subject to this Award Certificate will vest, convert to Shares and be delivered to your beneficiary or your estate on or as soon as administratively practicable after the Scheduled Vesting Date.

(b) Disability. If your Employment terminates due to Disability, all PSUs subject to this Award Certificate will vest, convert to Shares, and be delivered to you on or as soon as administratively practicable after the Scheduled Vesting Date.

(c) Retirement. If your Employment terminates due to Retirement, the number of PSUs that will vest on the Scheduled Vesting Date will be determined by multiplying (1) the number of Shares that would have been delivered to you, based on the performance measures described in this Award Certificate had you remained in Employment through the Scheduled Vesting Date, by (2) the Pro Ration Fraction. On the Scheduled Vesting Date, your PSUs will convert to Shares and be delivered to you.

7. Termination Due to Reduction in Force; Position Elimination; or Increase/Addition of Skills Required for Current Position.

If the Company terminates your Employment due to a reduction in force, an elimination of your position, or as a result of an increase or addition of skills required of your current position, each as determined by the Company in its sole discretion, the number of PSUs that will vest on the Scheduled Vesting Date will be determined by multiplying (a) the number of Shares that would have been delivered to you, based on the performance measures described in this Award Certificate had you remained in Employment through the Scheduled Vesting Date, by (b) the Pro Ration Fraction. These shares will convert to Shares and be delivered to you on the later of the Scheduled Vesting Date or the date that is sixty (60) days following your termination of Employment, *provided* that you sign (and do not revoke) an agreement and release of claims satisfactory to the Company.

8. Change in Control.

(a) During First Year of Performance Period. If, during the first year of the Performance Period, a Change in Control occurs, then your Target Award (including the value of any dividend equivalents theretofore credited to you) will be converted to a cash award valued as of the date of the Change in Control event as determined by the Company using the GAAP EPS Target multiplier set forth in this Award Certificate, the use of which shall be deemed to be a valuation using the target level. Any such cash award will be paid to you on the earlier of (1) the Scheduled Vesting Date or (2) the date when the Company terminates your Employment other than for Cause, or if you terminate your Employment for Good Reason. Notwithstanding the foregoing, if, following the Change in Control event but prior to the delivery of such cash award,

you voluntarily terminate your Employment other than for Good Reason or you are terminated for Cause, you will forfeit such cash award.

(b) After First Year of Performance Period. If, after the first year of the Performance Period, a Change in Control occurs, then your Target Award (including the value of any dividend equivalents theretofore credited to you) will be converted to a cash award valued as of date of the Change in Control event as determined by the Company based on the performance measures in this Award Certificate but applied as though the Performance Period ended with the last quarter of Discover ending simultaneously with or before the effective date of the Change in Control event, the use of which shall be deemed to be a valuation using the target level. Any such cash award will be paid to you on the earlier of (1) the Scheduled Vesting Date or (2) the date when the Company terminates your Employment other than for Cause, or if you terminate your Employment for Good Reason. Notwithstanding the foregoing, if, following the Change in Control event but prior to the delivery of such cash award, you voluntarily terminate your Employment other than for Good Reason or you are terminated for Cause, you will forfeit such cash award.

9. Termination of Employment.

(a) Your unvested PSUs will be canceled if your Employment terminates for any reason other than under the circumstances set forth in Section 6, 7 or 8 of this Award Certificate.

10. Forfeiture/Cancellation/Clawback of PSU Awards Under Certain Circumstances.

(a) Breach of Restrictive Covenants. PSUs (and any dividend equivalents credited thereon) are not earned until the applicable Scheduled Vesting Date and will be canceled prior to the applicable Scheduled Vesting Date under any of the circumstances set forth below. Although you will become the beneficial owner of Shares following conversion of your PSUs, the Company may, upon notice, issue a transfer restriction with respect to your Shares following conversion of your PSUs (and any dividend equivalents credited thereon) pending any investigation or other review that impacts the determination as to whether the PSUs (and any dividend equivalents credited thereon) are or may be cancellable under the circumstances set forth below. The Shares underlying such PSUs (and any dividend equivalents credited thereon) shall be forfeited and recoverable in the event the Company determines that the PSUs were cancellable under the circumstances set forth below. Notwithstanding any provision of this Award Certificate to the contrary, in the event that at any time prior to one year after the termination of your Employment or service with the Company, you (i) engage in Wrongful Solicitation, (ii) breach your obligations to the Company under a confidentiality, intellectual property or other restrictive covenant, or (iii) for those Participants classified by the Company as an officer of Discover Financial Services or one of its Subsidiaries on the date of grant, engage in Competitive Activity, with respect to each such incidence of violation, you shall be required to:

(1) pay to the Company an amount in cash equal to the value of Shares that vested and converted on or after, or within one year prior to, your termination of Employment, which value shall be determined by the Company, in its sole discretion and shall include an amount for tax adjustments appropriate to reflect your obligation to repay such amounts due to your breach of the restrictive covenants; or

(2) transfer to the Company the number of Shares that vested and converted on or after, or within one year prior to, your termination of Employment, plus an amount calculated by the Company, in its sole discretion, for tax adjustments appropriate to reflect your obligation to transfer such common stock due to your breach of the restrictive covenants.

In the event of multiple incidences of breach of this provision of the Award Certificate (e.g., in the event of violation of the non-solicitation provision following engaging in Competitive Activity), the repayment amount will be additive for each incidence of violation, not to exceed two times the amount calculated under paragraph 10(a)(1) and (2) above. If you engage in Wrongful Solicitation or engage in a Competing Activity, in addition to the remedies described in Section 10(a), the Company may also take such action at equity or in law as it deems appropriate to enforce the provisions of the applicable restrictive covenant.

The Company recommends that before accepting this Award Certificate, you consult with an attorney of your choice regarding the restrictive covenants described herein. You acknowledge that you have been provided at least fourteen (14) calendar days to review the applicable restrictive covenants prior to having the accept the award.

(b) Clawback. In the event and to the extent the Committee reasonably determines that the performance considered by the Committee, and on the basis of which the amount of PSUs were granted or converted to Shares, was based on Discover's material noncompliance with any financial reporting requirement under the securities laws or Company policy which requires Discover to file a restatement of its financial statements, you will forfeit the number of PSUs that were granted or the Shares converted during the three-year period preceding the date on which Discover is required to prepare an accounting restatement, less the number of PSUs that would have been granted or Shares converted had your PSUs been granted based on compliance with any such financial reporting requirement under the securities laws or Company policy (such number of PSUs, the "**Clawback PSUs**", to be determined in each case by the Committee in its sole discretion and before satisfaction of tax or other withholding obligations pursuant to Section 11):

(1) In the event and to the extent the Committee reasonably determines that the performance certified by the Committee, and on the basis of which PSUs were converted to Shares, was based on Discover's material noncompliance with any financial reporting requirement under the securities laws which requires Discover to file a restatement of its financial statements, you will be required:

(A) to pay to the Company an amount in cash equal to the value of the Shares that vested and converted hereunder, which value shall be determined using a valuation method established by the Company, in its sole discretion, and shall include an amount for tax adjustments appropriate to reflect your obligation to repay such amounts due to the restatement of the Company's financial statements; or

(B) transfer to the Company the number of Shares that vested and converted hereunder, plus such amount calculated by the Company, in its sole discretion, for tax adjustments appropriate to reflect your obligation to repay such amounts due to the restatement of the Company's financial statements.

By accepting the PSUs you hereby agree and acknowledge that you are obligated to cooperate with and provide all assistance necessary to the Company to recover or recoup the PSUs or amounts paid under the Plan that are subject to the clawback pursuant to applicable securities laws or Company policy. Such cooperation and assistance shall include, but is not limited to, executing, completing and submitting and documentation necessary to recover or recoup any PSUs or amounts paid pursuant to PSUs.

(c) Risk Review. For select Covered Employees, as defined and identified by the Company, no PSUs will convert to Shares until (1) the Committee certifies the extent to which the performance criteria set forth in this Award Certificate have been satisfied, and (2) the

Chief Human Resources & Administrative Officer receives confirmation from the Chief Risk Officer, or their delegate, that a review has been completed by the Chief Risk Officer, or their delegate, to determine whether you engaged in any willful or reckless violation of the Company's risk policies. If the Chief Risk Officer, or their delegate, finds any such violation or breach, then the Company may determine that all or a portion of your PSUs will be forfeited. Based on this assessment, the Company may determine that all or a portion of your PSUs will be forfeited.

(d) Investigative Holds. In the event that the Company has either commenced an investigation of a matter that you oversaw or were involved in or has evidence that may require investigation of a matter that you oversaw or were involved in, in either case concerning a breach of one of the obligations hereunder or a serious violation of Company policy, the Company may freeze your account and effectuate a transfer restriction such that your converted and delivered PSUs and any Shares and dividend equivalents associated therewith may not be sold or transferred until such time as the Company reasonably believes the matter to be resolved.

(e) Authorization. You authorize the Company to deduct any amount or amounts owed by you pursuant to this Section 10 from any amounts payable by or on behalf of the Company to you, including, without limitation, any amount payable to you as salary, wages, paid time off, bonus, severance, change in control severance or the conversion of any equity-based award. This right of offset shall not be an exclusive remedy and the Company's election not to exercise this right of offset with respect to any amount payable to you shall not constitute a waiver of this right of offset with respect to any other amount payable to you or any other remedy. You further acknowledge and authorize the Company to take the actions described in this Section 10, including those described in Section 10(d).

11. Tax and Other Withholding Obligations.

Subject to rules and procedures established by Discover, you may be eligible to elect to satisfy the tax or other withholding obligations arising upon conversion of your PSUs or upon any taxable event by paying cash or by having Discover withhold Shares or by tendering Shares, in each case in an amount sufficient to satisfy the tax or other withholding obligations. Shares withheld or tendered will be valued using the fair market value of Stock on the date the Shares are scheduled to convert, or otherwise become taxable, as applicable, using a valuation methodology established by Discover.

12. Satisfaction of Obligations.

Notwithstanding any other provision of this Award Certificate, the Company may, in its sole discretion, take various actions affecting your PSUs in order to collect amounts sufficient to satisfy any obligation that you owe to the Company and any tax or other withholding obligations. The Company's determination of the amount that you owe the Company shall be conclusive. The fair market value of Stock for purposes of the following provisions shall be determined using a valuation methodology established by Company. The actions that may be taken by Discover pursuant to this Section 12 include, but are not limited to, the following:

(a) Withholding of Shares. Upon conversion of PSUs, including any accelerated conversion pursuant to Sections 6, 7, or 8 above, or, if later, upon delivery of the Shares, the Company may withhold a number of Shares sufficient to satisfy any obligation that you owe to the Company and any tax or other withholding obligations whether national, federal, state or local tax withholding obligations including any social insurance contributions or employment tax obligation. The Company shall determine the number of Shares to be withheld by dividing the dollar value of your obligation to the Company and any tax or other withholding obligations by the fair market value of Stock on the date the Shares are scheduled to convert, or

otherwise become taxable, as applicable. To the extent that the Company retains any Shares or reduces the number of PSUs to cover the withholding obligations, it will do so at the applicable minimum statutory rate or other applicable withholding rate(s). Should the Company withhold in excess of the actual tax withholding obligation, the Company will apply the excess withholding to another compensation tax liability.

(b) Withholding of Other Compensation. Discover may withhold the payment of dividend equivalents on your PSUs or any other compensation or payments due from Discover to ensure satisfaction of any obligation that you owe the Company or any tax or other withholding obligations or Discover may permit you to satisfy such tax or other withholding obligation by paying such obligation in immediately available funds.

(c) Mobile Employees. You are liable and responsible for all taxes and social insurance contributions owed in connection with the Award, regardless of any action the Company takes with respect to any tax withholding obligations that arise in connection with the Award. The Company does not make any representation or undertaking regarding the tax treatment or the treatment of any tax withholding in connection with the grant, vesting or payment of the Award. The Company does not commit and is under no obligation to structure the Award to reduce or eliminate your tax liability. Further, you may be subject to individual income taxation (and possibly social security or other applicable personal or payroll taxes) in each jurisdiction where you have performed services for the Company between the Award Date and the Vesting Date. Taxes for which you are liable, if applicable, may be withheld and deposited by the Company in each jurisdiction in which you have performed services regardless of your status as a resident or non-resident in one or more of the jurisdictions that have a right to impose taxation. You agree that you will comply with all United States and foreign individual income tax return filing obligations that may be imposed with respect to the Award.

13. Nontransferability.

You may not sell, pledge, hypothecate, assign or otherwise transfer your PSUs, other than as provided in Section 14 (which allows you to designate a beneficiary or beneficiaries in the event of your death) or by will or the laws of descent and distribution.

14. Designation of a Beneficiary.

You may make a revocable designation of beneficiary or beneficiaries to receive all or part of the Shares and any dividend equivalents credited to you pursuant to Section 5 hereof to be paid under this Award Certificate in the event of your death. Absent a designation on file, distributions pursuant to Section 6 will be made to your estate. To make a beneficiary designation, you must complete and file the online form provided by E*TRADE, or such other vendor as the Company may choose to administer the Plan. If you previously filed a designation of beneficiary form for your equity awards with the Human Resources Department, such form will also apply to the PSUs granted pursuant to this PSU Award. You may replace or revoke your beneficiary designation at any time, and the Company will rely on your most recent designation on file for purposes of beneficiary designation.

15. Ownership and Possession.

(a) Generally. You will not have any rights as a shareholder with respect to your PSU Awards or in the Shares corresponding to your PSUs prior to conversion of your PSUs. Prior to conversion of your PSUs, however, you will receive dividend equivalent credits, as set forth in Section 5 of this Award Certificate. To the extent necessary or advisable to comply with Section 409A of the Internal Revenue Code, with respect to any provision of this

Award Certificate that provides for vested PSUs to convert to Shares on or as soon as administratively practicable after a specified event or date, such conversion will be made by the later of the end of the calendar year in which the specified event or date occurs or the 15th day of the third calendar month following the specified event or date.

(b) Following Conversion. Subject to the terms and conditions of this Award Certificate, following conversion of your PSUs you will be the beneficial owner of the shares issued to you net of taxes, and you will be entitled to all rights of ownership, including voting rights and the right to receive cash or stock dividends or other distributions paid on the shares.

16. Securities Law Matters.

Shares issued upon conversion of your PSUs may be subject to restrictions on transfer by virtue of the Securities Act of 1933, as amended. Discover may advise the transfer agent to place a stop order against such shares if it determines that such an order is necessary or advisable. Because Stock will only be maintained in book-entry form, you will not receive a stock certificate representing your interest in such shares.

17. Compliance with Laws and Regulations.

Any sale, assignment, transfer, pledge, mortgage, encumbrance or other disposition of Shares issued upon conversion of your PSUs (whether directly or indirectly, whether or not for value, and whether or not voluntary) must be made in compliance with any applicable constitution, rule, regulation, or policy of any of the exchanges or associations or other institutions with which the Company or a Related Employer has membership or other privileges, and any applicable law, or applicable rule or regulation of any governmental agency, self-regulatory organization or state or federal regulatory body.

18. No Entitlements.

(a) No Right to Continued Employment. This PSU Award is not an employment agreement, and nothing in this Award Certificate, the International Supplement, if applicable, or the Plan shall alter your status as an “at-will” employee of the Company or your Employment status at a Related Employer nor does anything herein constitute a promise of continued employment or re-employment.

(b) No Right to Future Awards. This PSU Award is discretionary and does not confer on you any right or entitlement to receive another award of PSUs, any other equity-based award or any other award at any time in the future or in respect of any future period.

(c) No Effect on Future Employment Compensation. This PSU Award is discretionary and does not confer on you any right or entitlement to receive compensation in any specific amount for any future fiscal year, and does not diminish in any way the Company’s discretion to determine the amount, if any, of your compensation. In addition, this PSU Award is not part of your base salary or wages and will not be taken into account in determining any other Employment-related rights you may have, such as rights to pension or severance pay, end of service payments, bonuses, long-service awards or similar payments and in no event shall be considered as compensation for, or relating in any way to, past services for the Company.

(d) Termination of Employment. In consideration of the grant of the Award, no claim or entitlement to compensation or damages shall arise from termination of the Award or diminution in value of the Award or Shares acquired through vesting of the Award resulting from termination of your employment by the Company (for any reason whatsoever and whether or not in breach of local labor laws) and you irrevocably release the Company and the Related

Employer from any such claim that may arise; if, notwithstanding the foregoing, any such claim is found by a court of competent jurisdiction to have arisen, then, by signing this Agreement, you will be deemed irrevocably to have waived your entitlement to pursue such claim; and in the event of termination of your employment (whether or not in breach of local labor laws), your right to receive the Award and vest in the Award under the Plan, if any, will terminate effective as of the date that you are no longer actively employed and will not be extended by any notice period mandated under local law (e.g., active employment would not include a period of “garden leave” or similar period pursuant to local law); Discover shall have the exclusive discretion to determine when you are no longer actively employed for purposes of your Award.

(e) Language. If you have received this Agreement or any other document related to the Plan translated into a language other than English and if the translated version is different than the English version, the English version will control.

(f) Award Terms Control. In the event of any conflict between any terms applicable to equity awards in any employment agreement, offer letter or other arrangement that you have entered into with the Company and the terms set forth in this Award Certificate, the latter shall control.

19. Consents.

Your PSU Award is conditioned upon the Company’s making of all filings and the receipt of all consents or authorizations required to comply with, or required to be obtained under, applicable local law.

In accepting this PSU Award, you consent to the collection, use and transfer, in electronic or other form, of your personal data by and among, as applicable, the Company and any other possible recipients for the purpose of implementing, administering and managing your participation in the Plan, as well as for the purpose of the Company’s compliance with applicable law, including, without limitation, Section 953(b) of the Dodd-Frank Wall Street Reform and Consumer Protection Act. You understand that the recipients of your personal data may be located in the U.S. or elsewhere, and the recipients’ country may have different data privacy laws and protections than your country. You understand that you may request a list with the names and addresses of any potential recipients of your personal data, view the personal data, request additional information about the storage of your personal data, require any necessary amendments to your personal data or refuse or withdraw your consent by contacting your local human resources representative, in any case without cost. You understand, however, that refusing or withdrawing your consent may affect your ability to participate in the Plan.

20. Electronic Delivery and Consent to Electronic Participation.

The Company may, in its sole discretion, decide to deliver any documents related to the PSU Award and participation in the Plan or future PSU Awards by electronic means. You hereby consent to receive such documents by electronic delivery and to participate in the Plan through an online or electronic system established and maintained by the Company or another third party designated by the Company, including the acceptance of PSU Awards and the execution of the PSU agreements through electronic signature. Electronic acceptance of this Award Certificate through the E*TRADE website, or such other vendor as the Company may choose to administer the Plan, shall be required and binding on you. Where electronic acceptance may not be permitted under applicable law, the Company may also request and require your physical signature. Your acceptance affirms your agreement to all the terms and conditions set forth in this Award Certificate and acceptance of the Award subject thereto. Not providing this acceptance within the timeframe stipulated may result in the Company forfeiting all or a portion of this Award.

21. Award Modification.

The Committee reserves the right to modify or amend unilaterally the terms and conditions of your PSUs, without first asking your consent, or to waive any terms and conditions that operate in favor of Discover. These amendments may include (but are not limited to) changes that the Committee considers necessary or advisable as a result of changes in any, or the adoption of any new, Legal Requirement. The Committee may not modify your PSUs in a manner that would materially impair your rights in your PSUs without your consent; *provided, however*, that the Committee may, without your consent, amend or modify your PSUs in any manner that the Committee considers necessary or advisable to comply with or reflect the application of any Legal Requirement or to ensure that your PSUs are not subject to United States federal, state or local income tax or any equivalent taxes in territories outside the United States prior to payment. Notwithstanding any provisions of this Award Certificate to the contrary, to the extent you transfer employment outside of the United States, the Award shall be subject to any special terms and conditions as Discover may need to establish to comply with local laws, rules, and regulations or to facilitate the operation and administration of the Award and the Plan in the country to which you transfer employment (or Discover may establish alternative terms and conditions as may be necessary or advisable to accommodate your transfer). Discover will notify you of any amendment of your PSUs that affects your rights. Any amendment or waiver of a provision of this Award Certificate (other than any amendment or waiver applicable to all recipients generally), which amendment or waiver operates in your favor or confers a benefit on you, must be in writing and signed by the Chief Human Resources & Administrative Officer to be effective.

22. Severability.

In the event the Committee determines that any provision of this Award Certificate would cause you to be in constructive receipt for United States federal or state income tax purposes of any portion of your PSU Award, then such provision will be considered null and void and this Award Certificate will be construed and enforced as if the provision had not been included in this Award Certificate as of the date such provision was determined to cause you to be in constructive receipt of any portion of your PSU Award.

23. Successors.

This Award Certificate shall be binding upon and inure to the benefit of any successor or successors of Discover and any person or persons who shall, upon your death, acquire any rights hereunder in accordance with this Award Certificate or the Plan.

24. Governing Law.

This Award Certificate and the related legal relations between you and Discover will be governed by and construed in accordance with the laws of the State of Delaware, without regard to any conflicts or choice of law, rule or principle that might otherwise refer the interpretation of the PSU Award to the substantive law of another jurisdiction. The Company and you agree that the jurisdiction and venue for any disputes arising under, or any action brought to enforce (or otherwise relating to), the Plan or this Award Certificate shall be exclusively in the courts in the State of Illinois, Counties of Cook or Lake, including the federal courts located therein (should federal jurisdiction exist), and the Company and you hereby submit and consent to said jurisdiction and venue.

25. Section 409A.

To the extent necessary or advisable to comply with Section 409A of the Internal Revenue Code, with respect to any provision of this Award Certificate that provides for vested PSUs and/or dividend equivalents to convert to Shares or delivered in cash on or as soon as administratively practicable after a specified event or date, such conversion will be made by the later of the end of the calendar year in which the specified event or date occurs or the 15th day of the third calendar month following the specified event or date.

26. Defined Terms.

For purposes of this Award Certificate, the following terms shall have the meanings set forth below:

(a) “Cause” means:

(1) any act or omission which constitutes a material breach of your obligations to the Company or your failure or refusal to perform satisfactorily any duties reasonably required of you, which breach, failure or refusal (if susceptible to cure) is not corrected (other than failure to correct by reason of your incapacity due to Disability) within ten (10) business days after written notification thereof to you by the Company;

(2) any act or omission by you that constitutes (i) fraud or intentional misrepresentation, (ii) embezzlement, misappropriation or conversion of assets of, or business opportunities considered by, the Company or (iii) any other act which has caused or may reasonably be expected to cause material injury to the interest or business reputation of the Company; or

(3) your violation of any securities, commodities or banking laws, any rules or regulations issued pursuant to such laws, or rules or regulations of any securities or commodities exchange or association of which the Company is a member or of any policy of the Company relating to compliance with any of the foregoing.

(b) “Change in Control” means, except as provided otherwise below, the first to occur of any of the following events:

(1) except as otherwise provided in clause (3) below, any person (as defined in Section 3(a)(9) of the Securities Exchange Act of 1934 (the “Exchange Act”), as such term is modified in Sections 13(d) and 14(d) of the Exchange Act), other than (i) any employee plan established by the Company or any of its Subsidiaries, (ii) any group of employees holding shares subject to agreements relating to the voting of such shares, (iii) the Company or any of its affiliates (as defined in Rule 12b-2 promulgated under the Exchange Act), (iv) an underwriter temporarily holding securities pursuant to an offering of such securities, or (v) a corporation owned, directly or indirectly, by shareholders of the Company in substantially the same proportions as their ownership of the Company, either (x) acquires ownership of stock of the Company that, together with stock held by such person (not including the stock owned by such person any stock acquired directly from the Company other than in connection with the acquisition by the Company of a business), constitutes more than fifty percent (50%) of the total fair market value of the stock of the Company (but only if such person did not own more than fifty percent (50%) of the total fair market value of the stock of the Company prior to the acquisition of additional stock), or (y) acquires (or has acquired during the twelve-month period ending on the date of the most recent acquisition by such person) ownership of the stock of the Company possessing thirty percent (30%) or more of the total voting power of the stock of the Company (but only if such person did not own thirty percent (30%) or more of the total voting power of the stock of the Company prior to the acquisition of additional stock

and not including the stock owned by such person any stock acquired directly from the Company other than in connection with the acquisition by the Company of a business);

(2) a change in the composition of the Board during any twelve-month period, such that individuals who, as of the Date of the Award, constitute the Board (the “Incumbent Board”) cease for any reason to constitute at least a majority of the Board; provided, however, that any individual becoming a member of the Board subsequent to the date of Date of the Award whose election, or nomination for election by the Company’s shareholders, was approved by a vote of at least a majority of the directors then comprising the Incumbent Board shall be considered as though such individual were a member of the Incumbent Board;

(3) the consummation of a merger or consolidation of the Company with any other corporation or other entity, or the issuance of voting securities in connection with a merger or consolidation of the Company (or any direct or indirect subsidiary of the Company) pursuant to applicable stock exchange requirements, other than (i) a merger or consolidation which results in the securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into securities of the surviving entity or any parent thereof), in combination with the ownership of any trustee or other fiduciary holding securities under an employee benefit plan of the Company or any of its subsidiaries, at least fifty percent (50%) of the combined voting power of the voting securities of the Company or such surviving entity or any parent thereof outstanding immediately after such merger or consolidation, or (ii) a merger or consolidation effected to implement a recapitalization of the Company (or similar transaction) in which no person (determined pursuant to clause (1) above) is or becomes the beneficial owner, directly or indirectly, of securities of the Company (not including in the securities beneficially owned by such person any securities acquired directly from the Company or its affiliates other than in connection with the acquisition by the Company or its affiliates of a business) representing thirty percent (30%) or more of the total voting power of the stock of the Company (but only if such person did not own thirty percent (30%) or more of the total voting power of the stock of the Company prior to the acquisition of additional securities);

(4) the complete liquidation of the Company or the sale or disposition by the Company of all or substantially all of the Company’s assets, other than a sale or disposition by the Company of all or substantially all of the Company’s assets to (i) a shareholder of the Company (immediately before the asset transfer) in exchange for or with respect to the Company’s stock, (ii) an entity, at least fifty percent (50%) of the total value or voting power of which is owned, directly or indirectly, either by the Company or by a person or more than one person acting as a group, that owns fifty percent (50%) or more of the total value or voting power of all the outstanding stock of the Company, or (iii) a person, or more than one person acting as a group, that owns, directly or indirectly, fifty percent (50%) or more of the total value or voting power of all the outstanding stock of the Company; provided, however, that a Change in Control pursuant to this clause (4) shall not be deemed to have occurred unless a person (determined pursuant to clause (1) above) or persons acting as a group acquires (or has acquired during the twelve-month period ending on the date of the most recent acquisition by such person or persons) assets from the Company that have a total gross fair market value equal to or more than forty percent (40%) of the total gross fair market value of all of the assets of the Company immediately before such acquisition or acquisitions.

Notwithstanding the foregoing, with respect to a Change in Control of Discover, no Change in Control shall be deemed to have occurred if there is consummated any

transaction or series of integrated transactions immediately following which the beneficial holders of the Company's common stock immediately prior to such transaction or series of transactions continue to have substantially the same proportionate ownership in an entity which owns substantially all of the assets of the Company immediately prior to such transaction or series of transactions.

(c) **“Chief Human Resources & Administrative Officer”** means the chief human resources & administrative officer of Discover, any successor chief human resources & administrative officer, or any other individual or committee appointed by the chief executive officer of Discover with the power and authority of the chief human resources & administrative officer.

(d) **“Chief Risk Officer”** means the chief risk officer of Discover, any successor chief risk officer, or any other individual or committee appointed by the chief executive officer of Discover with the power and authority of the chief risk officer.

(e) **“Competitive Activity”** means:

(1) becoming, or entering into any arrangement as, an employee, officer, partner, member, proprietor, director, independent contractor, consultant, advisor, representative or agent of, or serving in any similar position or capacity with, a Competitor, where you will be responsible for providing, or managing or supervising others who are providing, services (i) that are similar or substantially related to the services that you provided to the Company, or (ii) that you had direct or indirect managerial or supervisory responsibility for at the Company, or (iii) that call for the application of the same or similar specialized knowledge or skills as those utilized by you in your services for the Company, in each such case, at any time during the year preceding the termination of your employment with the Company; or

(2) either alone or in concert with others, forming, or acquiring a five percent (5%) or greater equity ownership, voting interest or profit participation in, a Competitor.

(f) **“Competitor”** means any corporation, partnership or other entity that engages in (or that owns a significant interest in any corporation, partnership or other entity that engages in) (1) the business of consumer lending, including, without limitation, credit card issuance or electronic payment services, or (2) any other business in which you have been involved in or had significant knowledge of, which has been conducted by the Company at any time during your employment with the Company. For the avoidance of doubt, a competitor of any entity which results from a corporate transaction involving the Company that constitutes a Change in Control shall be considered a Competitor for purposes of this Award Certificate.

(g) **“Covered Employee”** means an employee who, as of the Date of the Award, has been identified as a covered employee by Human Resources.

(h) **“Date of the Award”** means the date set forth in this Award Certificate.

(i) **“Disability”** means a “permanent and total disability,” as defined in Section 22(e)(3) of the Internal Revenue Code.

(j) **“Discover GAAP EPS”** means sum of GAAP EPS for each fiscal year within the Performance Period.

(k) **“Employed”** and **“Employment”** refer to employment with the Company and/or Related Employment.

(l) **“EPS”** means fully-diluted earnings per share as defined by U.S. GAAP, excluding unusual or non-recurring events identified in the Plan and not reflected in business plan assumptions, as determined by the Committee.

(m) **“Good Reason”** means the occurrence of any of the following upon, or within six (6) months prior to or twenty-four (24) months after the occurrence of a Change in Control of Discover without your prior written consent:

(1) any material diminution in your assigned duties, responsibilities and/or authority, including the assignment to you of any duties, responsibilities or authority inconsistent with the duties, responsibilities and authority assigned to you, immediately prior to such assignment;

(2) a material diminution in the authority, duties, or responsibilities of the supervisor to whom you are required to report;

(3) any material reduction in your base compensation; provided, however, that Company-initiated across-the-board reductions in compensation affecting substantially all eligible Company employees shall alone not be considered “Good Reason,” unless the compensation reductions exceed twenty percent (20%) of your base compensation;

(4) a material diminution of the budget over which you have authority;

(5) The Company’s requiring you to be based at a location that (i) is in excess of thirty-five (35) miles from the location of your principal job location or office immediately prior to the Change in Control, or (ii) results in an increase in your normal daily commuting time by more than ninety (90) minutes, except for required travel on Company’s business to an extent substantially consistent with your then present business travel obligations; or

(6) any other action or inaction that constitutes a material breach by the Company of any agreement pursuant to which you provide services to the Company.

For purposes of paragraphs (1) through (6) above, the duties, responsibilities and/or authority assigned to you shall be deemed to be the greatest of those in effect prior to or after the Change in Control. Unless you become Disabled, your right to terminate your Employment for Good Reason shall not be affected by your incapacity due to physical or mental illness. Your continued Employment shall not constitute consent to, or a waiver of rights with respect to, any circumstance constituting Good Reason. Notwithstanding the foregoing, Good Reason shall not exist unless you give the Company written notice thereof within thirty (30) days after its occurrence and the Company shall not have remedied the action within thirty (30) days after such written notice

(n) **“Internal Revenue Code”** means the United States Internal Revenue Code of 1986, as amended, and the rules, regulations and guidance thereunder.

(o) **“Legal Requirement”** means any law, regulation, ruling, judicial decision, accounting standard, regulatory guidance or other legal requirement (including any foreign legal requirements).

(p) “**GAAP EPS**” means EPS as defined in the Award Certificate, excluding reserves.

(q) “**Performance Period**” means the period set forth in the Award Certificate.

(r) “**Pro Ration Fraction**” means a fraction, not to exceed 1.0, the numerator of which is the number of completed months commencing on the first day of the Performance Period and ending on the effective date of your termination of Employment and the denominator of which is 12.

(s) “**Related Employment**” means your employment with an employer other than the Company (such employer, herein referred to as a “**Related Employer**”), *provided*: (1) you undertake such employment at the written request or with the written consent of the Chief Human Resources & Administrative Officer; (2) immediately prior to undertaking such employment you were an employee of the Company or were engaged in Related Employment (as defined herein); and (3) such employment is recognized by the Company in its discretion as Related Employment; and, *provided further* that the Company may (i) determine at any time in its sole discretion that employment that was recognized by the Company as Related Employment no longer qualifies as Related Employment, and (ii) condition the designation and benefits of Related Employment on such terms and conditions as the Company may determine in its sole discretion. The designation of employment as Related Employment does not give rise to an employment relationship between you and the Company, or otherwise modify your and the Company’s respective rights and obligations.

(t) “**Retirement**” means the termination of your Employment by you or by the Company for any reason other than for Cause and other than due to your death or Disability, on or after the date on which:

(1) you have attained age 55; and

(2) you have attained a combined age and years of service of at least 65 years.

(u) “**Scheduled Vesting Date**” means the Scheduled Vesting Date set forth in Award Certificate as the context requires.

(v) “**Target Award**” means the number of PSUs that has been communicated to you separately and that will be earned, subject to the other terms and conditions of this Award Certificate, if the GAAP EPS Target is achieved.

(w) “**Wrongful Solicitation**” occurs upon either of the following events:

(1) while Employed, including during any notice period applicable to you in connection with the termination of your Employment, or within one year after the termination of your Employment, directly or indirectly in any capacity (including through any person, corporation, partnership or other business entity of any kind), you hire or solicit, recruit, induce, entice, influence or encourage any Company employee to leave the Company or become hired or engaged by another firm; provided, however, that this clause shall apply only to employees with whom you worked or had professional or business contact, or who worked in or with your business unit, during any notice period applicable to you in connection with the termination of your Employment or during the one year preceding notice of the termination of your Employment; or

(2) while Employed, including during any notice period applicable to you in connection with the termination of your Employment, or within one year after the termination of your Employment, directly or indirectly in any capacity (including through any person, corporation, partnership or other business entity of any kind), you solicit or entice away or in any manner attempt to persuade any client or customer, or prospective client or customer, of the Company (i) to discontinue or diminish his, her or its relationship or prospective relationship with the Company or (ii) to otherwise provide his, her or its business to any person, corporation, partnership or other business entity which engages in any line of business in which the Company is engaged (other than the Company); *provided, however*, that this clause shall apply only to clients or customers, or prospective clients or customers, that you worked for on an actual or prospective project or assignment during any notice period applicable to you in connection with the termination of your Employment or during the one year preceding notice of the termination of your Employment.

IN WITNESS WHEREOF, Discover has duly executed and delivered this Award Certificate as of the Date of the Award.

DISCOVER FINANCIAL SERVICES

By:

R. Andy Eichfeld
EVP, Chief Human Resources & Administrative Officer

**Discover Financial Services
International Supplement**

This International Supplement to the Award Certificate for Performance Stock Units ("International Supplement") contains supplemental terms and conditions for the Performance Stock Unit award ("Equity Award") to employees of Discover Financial Services (or the relevant affiliated company) located in certain jurisdictions outside of the United States. The terms included in this International Supplement are intended to ensure compliance with the laws of the country in which you are Employed or, in certain instances, to make the awards more tax efficient in your country.

You have also received an Award Certificate applicable to your award. The Award Certificate, together with this International Supplement, collectively set forth the terms and conditions of your Equity Award. To the extent that this International Supplement amends, deletes or supplements any terms of the Award Certificate, this International Supplement shall control.

Capitalized terms that are used without definition in this International Supplement have the meanings assigned in the Plan or the Award Certificate.

All Employees Located Outside the United States.

If you are Employed outside of the United States, please note that your Equity Award is offered, issued and administered by Discover Financial Services, a Delaware corporation, and your local employer is not involved in the grant of awards under such equity incentive program. All documents related to your Equity Award, including the Award Certificate, this International Supplement and the link by which you access these documents, originate and are maintained in the United States.

Your Equity Award is made in virtue of your Employment with, and your services performed for, the appropriate entities within the Company. However, your award does not form part of your entitlement to remuneration or benefits, whether pursuant to any contract of Employment to which you may be a party or otherwise. Similarly, the existence of a contract of Employment between you and any entity within the Company shall not confer on you any right or entitlement to participate in the Equity Award or to receive awards thereunder, or any expectation that you might participate in such equity incentive program or receive additional equity awards in the future. Your Equity Award, the Award Certificate, and/or this International Supplement does not constitute an employment contract and does not create an employment relationship or a promise of continued Employment for any period of time.

In addition, your Equity Award is not part of your base salary or wages and will not be taken into account (except to the extent otherwise required by local law) in determining any other employment-related rights you may have, such as rights to pension or severance pay.

Whether or not you have a contract of Employment with any entity within the Company, your rights and obligations under the terms of your office or Employment shall not be affected by your receipt of the Equity Award. By accepting your receipt of the Equity Award, you waive any and all rights to compensation or damages for any loss of the Equity Award in the event of your termination of your office or Employment for any reason whatsoever. This waiver applies whether or not such termination amounts to a wrongful or unfair dismissal.

You may be subject to applicable exchange control, currency control or similar financial laws that may affect your transactions with respect to your equity award, including without limitation, your ability to bring shares of Discover Financial Services common stock into your jurisdiction or to receive the proceeds of a sale of Discover Financial Services common stock in your jurisdiction. Moreover, you may be subject to certain notification, approval and/or repatriation obligations with respect to securities and funds you receive in connection with your awards. In addition the Company is not responsible for any foreign exchange fluctuations that change the value of your PSU Award. ***You are encouraged to consult your advisors to ascertain whether any restrictions or obligations apply to you.***

Your Equity Award has not been authorized or approved by any applicable securities authorities and may have been offered pursuant to an exemption from registration in your local jurisdiction. Similarly, no prospectus or similar offering or registration document has been prepared, authorized or approved by any applicable securities authorities in your jurisdiction. The grant of awards is being made only to employees of the Company and does not constitute and is not intended to be an offering to the public. For this reason, you must keep all award documents you receive, including but not limited to this International Supplement and the Award Certificate, confidential and you may not distribute or otherwise make public any award documents without the prior written consent of the Company. Moreover, you may not reproduce (in whole or in part) any award documents you receive. In addition, the shares of Company common stock you acquire upon vesting and conversion of your Equity Award may be subject to applicable restrictions on resale in your local jurisdiction. ***You are encouraged to consult your advisors to ascertain whether any restrictions or obligations apply to you.***

Employees in China.

If you are employed in China or are a Chinese national on international assignment outside of China for the Company, but your Equity Award was made in China and/or you will be taxed there, your Equity Award will be settled in cash. Rather than convert awards to shares pursuant to Section 3 of the Award Certificate and Sections 6 through 8 of the Award Certificate, the Company will convert your Equity Award to cash and the Company or your local employer will deliver the cash payment to you. You consent to this cash conversion in exchange for the Equity Award. All other terms and conditions of the Plan and the Award Certificate will otherwise apply to your Equity Award.

Employees in the United Kingdom or European Union.

If you are employed in the United Kingdom (or the European Union), the Company will act in accordance with the Data Protection Act of 2018 as amended from time to time and the General Data Protection Regulation as amended from time to time as applicable regarding any personal information which you provide to it in connection with your Equity Award (including the amount of the award) and you acknowledge the need for the processing of such personal information in order to facilitate your participation in such equity incentive program, for any purposes required by law or regulation, or for any other legitimate business purpose. By accepting your Equity Award, you acknowledge that from time to time, for the purposes described above, your personal information may be stored and processed by and disclosed and transferred to other offices and companies within the Company and to third parties, some of which are situated outside of the European Union and may not offer as high a level of protection for personal information as countries within the European Union.

The following provisions apply in lieu of those contained in the Award Certificate for employees in the United Kingdom.

Section 10(a)

The forfeiture, cancellation and/or clawback circumstances and events set forth in this Section 10 are designed, among other things, to incentivize compliance with the Company's policies (including, without limitation, the Company's risk policies and Code of Conduct), to protect the Company's interests in non-public, confidential and/or proprietary information, products, trade secrets, customer relationships, workforce stability, and other legitimate business interests, and to ensure an orderly transition of responsibilities. This Section 10 shall apply notwithstanding any other terms of this Award Certificate (except where sections in this Award Certificate specifically provide that the circumstances set forth in this Section 10 no longer apply).

(a) Conditions. Notwithstanding your satisfaction of the vesting conditions of this Award Certificate, RSUs are not earned: (1) until the applicable Scheduled Vesting Date; and (2) unless the conditions set forth in this section 10(a) below are met. Although you will become the beneficial owner of Shares following conversion of your RSUs, the Company may, upon notice, issue a transfer restriction with respect to your Shares following conversion of your RSUs pending any investigation or other review that impacts the determination as to whether the RSUs meet the conditions set forth below. The Shares underlying such RSUs shall not legally vest in you and shall be forfeited and recoverable in the event the Company determines that the conditions set forth in this section 10(a) below are not met. Notwithstanding any provision of this Award Certificate to the contrary, in order for legal ownership of the Shares to fully vest in you it is a strict condition that you must not at any time prior to one year after the termination of your Employment or service with the Company (i) engage in Wrongful Solicitation, (ii) misuse the Company's confidential, proprietary information and/or intellectual property, as defined in your employment contract, the Company Code of Conduct, and/or any other relevant agreements or policies issued to you, or (iii) for those Participants classified by the Company as an officer of Discover Financial Services or one of its Subsidiaries on the date of grant, engage in Competitive Activity. If the conditions above are not met, you will:

(1) pay to the Company an amount in cash equal to the value of the Shares that vested and converted on or after, or within one year prior to, your termination of Employment, which value shall be determined by the Company, in its sole discretion, and shall include an amount for tax adjustments appropriate to reflect your obligation to repay such amounts due to you not meeting the conditions above; or

(2) transfer to the Company the number of Shares that vested and converted on or after, or within one year prior to, your termination of Employment, plus an amount calculated by the Company, in its sole discretion, for tax adjustments appropriate to reflect your obligation to transfer such common stock due to you not meeting the conditions above.

Section 24(e), (f) and (v)

(e) "Competitive Activity" means:

(1) becoming, or entering into any arrangement as, an employee, officer, partner, member, proprietor, director, independent contractor, consultant, advisor, representative or agent of, a Competitor, where you will be responsible for providing, or managing or supervising others who are providing, services (i) that are similar or substantially related to the services that you provided to the Company, or (ii) that you had direct or indirect managerial or supervisory responsibility for at the Company, or (iii) that call for the application of the same or similar specialized knowledge or skills as those

utilized by you in your services for the Company, in each such case, at any time during the year preceding the earlier of the start of your notice period and the Employment; or

(2) either alone or in concert with others, forming, or acquiring a five percent (5%) or greater equity ownership, voting interest or profit participation in, a Competitor.

(f) **“Competitor”** means any corporation, partnership or other entity that engages in (or that owns a significant interest in any corporation, partnership or other entity that engages in) (1) the business of consumer lending, including, without limitation, credit card issuance or electronic payment services, or (2) any other business which you have been materially involved in or had significant knowledge of, which has been conducted by the Company at any time during the two years preceding the termination of your Employment. For the avoidance of doubt, a competitor of any entity which results from a corporate transaction involving the Company that constitutes a Change in Control shall be considered a Competitor for purposes of this Award Certificate.

(v) **“Wrongful Solicitation”** occurs upon either of the following events:

(1) while Employed, including during any notice period applicable to you in connection with the termination of your Employment, and within one year after the termination of your Employment, directly or indirectly in any capacity (including through any person, corporation, partnership or other business entity of any kind), you hire or solicit, recruit, induce, entice, influence or encourage any Company employee to leave the Company or become hired or engaged by another firm; *provided, however*, that this clause shall apply only to employees of the Company who had access to confidential information of the Company and (i) were employed at the level of officer or above, or (ii) who worked in or with your business unit or (iii) for whom you had direct or indirect responsibility, and in each case with whom you had material contact in the course of your Employment, at any time during the year preceding the earlier of the start of your notice period and the termination of your Employment; or

(2) while Employed, including during any notice period applicable to you in connection with the termination of your Employment, or within one year after the termination of your Employment, directly or indirectly in any capacity (including through any person, corporation, partnership or other business entity of any kind), you solicit or entice away or in any manner attempt to persuade any client or customer, or prospective client or customer, of the Company (i) to discontinue or diminish his, her or its relationship or prospective relationship with the Company or (ii) to otherwise provide his, her or its business to any person, corporation, partnership or other business entity which engages in any line of business in which the Company is engaged (other than the Company); *provided, however*, that this clause shall apply only to clients or customers, or prospective clients or customers, that you worked for on an actual or prospective project or assignment during any notice period applicable to you in connection with the termination of your Employment or during the one year preceding notice of the termination of your Employment.

* * *

The Company recommends that you seek advice of your tax advisors regarding the tax treatment of your awards.

**Discover Financial Services
Amended and Restated 2014 Omnibus Incentive Plan
2023 Special Award Certificate for Restricted Stock Units**

This Award Certificate describes the terms and conditions under which you are being granted an Award of Restricted Stock Units (“RSUs”) under the Discover Financial Services Amended and Restated 2014 Omnibus Incentive Plan (the “Plan”), which constitutes part of your discretionary long-term incentive compensation. This Award Certificate applies only to Awards granted hereunder and other Awards are governed by terms of the applicable Award Certificate.

A copy of the Plan can be found on the E*TRADE website at www.etrade.com, or such other vendor as the Company may choose to administer the Plan. Capitalized terms under in this Award Certificate have the meanings ascribed in the Plan unless otherwise stated herein.

The full terms of your Award are set out in this Award Certificate, the Plan and any applicable policy adopted by the Committee or its delegate in respect of the Plan and Awards thereunder that is applicable to this Award. In the event of a conflict between the Plan and this Award Certificate, the terms of the Plan control.

Award Recipient	%%FIRST_NAME%- %LAST_NAME%-
Employee / Participant ID	%%EMPLOYEE_IDENTIFIER%-
Issuer	Discover Financial Services
Award Type	Restricted Stock Units (RSUs)
Date of the Award	%%OPTION_DATE,'Month DD, YYYY'%-
Number of Awarded Units	%%TOTAL_SHARES_GRANTED,'999,999,999'%- RSUs
Vesting	Your RSUs will vest as follows provided you remain continuously employed by the Company through the applicable below Scheduled Vesting Date: Number of Shares Vesting Date %%SHARES_PERIOD1,'999,999,999'%- %%VEST_DATE_PERIOD1,'Month DD, YYYY'%- %%SHARES_PERIOD2,'999,999,999'%- %%VEST_DATE_PERIOD2,'Month DD, YYYY'%- %%SHARES_PERIOD3,'999,999,999'%- %%VEST_DATE_PERIOD3,'Month DD, YYYY'%- %%SHARES_PERIOD4,'999,999,999'%- %%VEST_DATE_PERIOD4,'Month DD, YYYY'%- %%SHARES_PERIOD5,'999,999,999'%- %%VEST_DATE_PERIOD5,'Month DD, YYYY'%-
Settlement	Your awards will be converted and settled in shares of Company stock pursuant to Section 8 of the Plan and Section 1(b) of this Award Certificate unless your primary place of employment is located outside the United States in which case your shares may be settled in cash. See Appendix A <i>International Supplement</i> , for additional information.
Restrictive Covenants & Clawbacks	You may be subject to repayment provisions triggered in the event of your violation of a restrictive covenant, including non-solicitation and non-competition requirements, more fully described in this Award Certificate. You are also subject to a clawback provision in the event of restatement of the Company's financial performance.
Non-U.S. Employees	If you are employed outside the United States, please reference the " <i>International Supplement</i> " included herein as Appendix A , which contains supplemental terms and conditions for your RSU Award.

You will earn RSUs included in your RSU Award only if you (1) remain in continuous Employment through the applicable Scheduled Vesting Dates (subject to limited exceptions set forth herein), (2) are not found to be subject to the forfeiture, cancellation, or clawback provisions set forth in Section 8 below, and (3) satisfy obligations you owe to the Company as set forth in Section 10 below. If the Company deems appropriate and in its sole discretion, the Company may require you to provide a written certification or other evidence, from time to time, to confirm that none of the circumstances described in Section 8 below exist or have occurred, including upon a termination of Employment and/or during a specified period of time prior to the applicable Scheduled Vesting Dates. If you fail to timely provide any required certification or other evidence, the Company may cancel your RSU Award. It is your responsibility to provide the Human Resources Department with your up-to-date contact information.

1. Vesting Schedule; Conversion.

(a) Vesting Schedule. Your RSUs will vest according to the Scheduled Vesting Dates set forth in this Award Certificate, provided you remain continuously employed through such dates, unless earlier vesting is required pursuant to Section 4, 5 or 6 of this Award Certificate.

(b) Conversion.

(1) Except as otherwise provided in this Award Certificate, each of your vested RSUs will convert to one share of Stock on or as soon as possible following the applicable Scheduled Vesting Date.

(2) Subject to the provisions of the Plan and this Award Certificate, as well as any transfer restrictions imposed by the Company or applicable pursuant to securities laws, Shares to which you are entitled following conversion of RSUs under any provision of this Award Certificate shall be delivered to you (or your beneficiary or estate, as applicable) as soon as administratively practicable after the Scheduled Vesting Date

(c) Accelerated Conversion. The Committee, in its sole discretion, may determine that any RSUs may be converted to Shares prior to the Scheduled Vesting Date subject to compliance with all Legal Requirements.

(d) Rule of Construction for Timing of Conversion. Whenever this Award Certificate provides for RSUs to convert to Shares on the Scheduled Vesting Date or upon an accelerated or different specified event or date, such conversion will be considered to have been timely made, and neither you nor any of your beneficiaries nor your estate shall have any claim against the Company for damages based on a delay in conversion of your RSUs (or delivery of Shares following conversion), and the Company shall have no liability to you (or to any of your beneficiaries or your estate) in respect of any such delay, as long as conversion is made by December 31 of the year in which occurs the Scheduled Vesting Date or such other specified event or date or, if later, by the 15th day of the third calendar month following such specified event or date.

2. Special Provisions for Certain “Specified Employees”.

If Discover reasonably considers you to be one of its “specified employees” as defined in Section 409A of the Internal Revenue Code at the time of the termination of your Employment, any RSUs that constitute deferred compensation under Section 409A of the Internal Revenue Code that are payable upon termination of Employment will not convert to Shares until the date

that is six months after the termination of your Employment (or the date of your death, if such event occurs earlier).

3. Dividend Equivalent Payments.

Until your RSUs convert to Shares, if Discover pays a regular or ordinary cash dividend on its common stock, you will be paid a dividend equivalent for your vested and unvested RSUs. No dividend equivalents will be paid to you on any canceled RSUs. Discover, in its discretion, will decide on the form of payment and may pay dividend equivalents in Shares, in cash or in a combination thereof. Discover will pay the dividend equivalents as soon as administratively practicable (and in any event within thirty (30) days) after Discover pays the corresponding dividend on its common stock.

4. Death; Disability.

The following special vesting and payment terms apply to your RSUs:

(a) Death. If your Employment terminates due to your death, all RSUs subject to this Award Certificate will vest, convert to Shares and be delivered to your beneficiary or your estate on or as soon as administratively practicable after the Scheduled Vesting Date.

(b) Disability. If your Employment terminates due to Disability, all RSUs subject to this Award Certificate will vest, convert to Shares, and be delivered to you on or as soon as administratively practicable after the Scheduled Vesting Date.

5. Termination Due to Reduction in Force; Position Elimination; or Increase/Addition of Skills Required for Current Position.

If the Company terminates your Employment due to a reduction in force, an elimination of your position, or as a result of an increase or addition of skills required of your current position, each as determined by the Company in its sole discretion, the number of RSUs that will be prorated on the date your Employment terminates will be determined by multiplying the RSUs subject to this Award Certificate by the Pro Ration Fraction. These RSUs will vest and convert to Shares on the sixtieth (60th) day following your termination of Employment, subject to Section 2 above, *provided* that you sign (and do not revoke) an agreement and release of claims satisfactory to the Company and be delivered to you on or as soon as administratively practicable after your Scheduled Vesting Date.

6. Change in Control.

(a) Termination in Connection with Change in Control. If the Company terminates your Employment other than for Cause, or if you terminate your Employment for Good Reason, within six months prior to or within 24 months after a Change in Control, your RSUs will immediately vest and convert to Shares on the later of the date of a Change in Control or the date of your termination following a Change in Control, as applicable and be delivered as soon as administratively practicable thereafter.

(b) Stock Consideration. In the event of a Change in Control which results from a transaction pursuant to which the shareholders of Discover receive shares of common stock of an acquiring entity that are registered under Section 12 of the Exchange Act (as defined in Section 24(b)(1)), unless otherwise determined by the Committee, in its sole discretion prior to such Change in Control, there shall be substituted for each Share subject to this Award Certificate the number and class of shares of common stock of the acquiring entity into which

each outstanding Share shall be converted pursuant to such Change in Control transactions, and this Award Certificate shall otherwise continue in effect.

(c) Non-stock Consideration. In the event of a Change in Control which results from a transaction pursuant to which the shareholders of Discover receive consideration other than shares of common stock of the Acquirer that are registered under Section 12 of the Exchange Act, the value of the RSUs hereunder shall, unless otherwise determined by the Committee, in its sole discretion prior to such Change in Control, be converted into a right to receive the cash or other consideration received by the shareholders of Discover in such transaction, and this Award Certificate shall otherwise continue in effect.

7. Termination of Employment.

Your unvested RSUs will be canceled if your Employment terminates for any reason other than under the circumstances set forth in Section 4, 5 or 6 of this Award Certificate.

8. Forfeiture/Cancellation/Clawback of RSU Awards Under Certain Circumstances.

(a) Breach of Restrictive Covenants. RSUs are not earned until the applicable Scheduled Vesting Date and will be canceled prior to the applicable Scheduled Vesting Date under any of the circumstances set forth below. Although you will become the beneficial owner of Shares following conversion of your RSUs, the Company may, upon notice, issue a transfer restriction with respect to your Shares following conversion of your RSUs pending any investigation or other review that impacts the determination as to whether the RSUs are or may be cancellable under the circumstances set forth below. The Shares underlying such RSUs shall be forfeited and recoverable in the event the Company determines that the RSUs were cancellable under the circumstances set forth below. Notwithstanding any provision of this Award Certificate to the contrary, in the event that at any time prior to one year after the termination of your Employment or service with the Company, you (i) engage in Wrongful Solicitation, (ii) breach your obligations to the Company under a confidentiality, intellectual property or other restrictive covenant, or (iii) for those Participants classified by the Company as an officer of Discover Financial Services or one of its Subsidiaries on the date of grant, engage in Competitive Activity, with respect to each such incidence of violation you shall be required to:

(1) pay to the Company an amount in cash equal to the value of the Shares that vested and converted on or after, or within one year prior to, your termination of Employment, which value shall be determined by the Company, in its sole discretion, and shall include an amount for tax adjustments appropriate to reflect your obligation to repay such amounts due to your breach of the restrictive covenants; or

(2) transfer to the Company the number of Shares that vested and converted on or after, or within one year prior to, your termination of Employment, plus an amount calculated by the Company, in its sole discretion, for tax adjustments appropriate to reflect your obligation to transfer such common stock due to your breach of the restrictive covenants.

In the event of multiple incidences of breach of this provision of the Award Certificate (e.g., in the event of violation of the non-solicitation provision following engaging in Competitive Activity), the repayment amount will be additive for each incidence of violation, not to exceed two times the amount calculated under paragraph 8(a)(1) and (2) above. If you engage in Wrongful Solicitation or engage in a Competing Activity, in addition to the remedies described in Section 8(a), the Company may also take such action at equity or in law as it deems

appropriate to enforce the provisions of the applicable restrictive covenant, including pursuing injunctive relief.

The Company recommends that before accepting this Award Certificate, you consult with an attorney of your choice regarding the restrictive covenants described herein. You acknowledge that you have been provided at least fourteen (14) calendar days to review the applicable restrictive covenants prior to having the accept the award.

(b) Clawback. In the event and to the extent the Committee reasonably determines that the performance considered by the Committee, and on the basis of which the amount of RSUs were granted or converted to Shares, was based on Discover's material noncompliance with any financial reporting requirement under the securities laws or Company policy which requires Discover to file a restatement of its financial statements within three years of the Date of the Award, you will be required to comply with paragraphs (1) and (2) (as applicable) below to repay to the Company an amount equal to the number of RSUs which were granted or the Shares converted hereunder less the number of RSUs that would have been granted or Shares converted had your RSUs been granted or converted based on compliance with any such financial reporting requirement under the securities laws or Company policy (such number of RSUs, the "**Clawback RSUs**," to be determined in each case by the Committee in its sole discretion and before satisfaction of tax or other withholding obligations pursuant to Section 9):

(1) You shall forfeit a number of RSUs hereunder equal to the Clawback RSUs. In the event such forfeited RSUs are less than the Clawback RSUs, then you shall comply with the following paragraph 2.

(2) You shall be required

(A) to pay to the Company an amount in cash equal to the value of the Shares that vested and converted hereunder, which value shall be determined using a valuation method established by the Company, in its sole discretion, and shall include an amount for tax adjustments appropriate to reflect your obligation to repay such amounts due to the restatement of the Company's financial statements; or

(B) transfer to the Company the number of Shares that vested and converted hereunder, plus such amount calculated by the Company, in its sole discretion, for tax adjustments appropriate to reflect your obligation to repay such amounts due to the restatement of the Company's financial statements.

By accepting the RSUs you hereby agree and acknowledge that you are obligated to cooperate with and provide all assistance necessary to the Company to recover or recoup the RSUs or amounts paid under the Plan that are subject to the clawback pursuant to applicable securities laws or Company policy. Such cooperation and assistance shall include, but is not limited to, executing, completing and submitting and documentation necessary to recover or recoup any RSUs or amounts paid pursuant to RSUs.

(c) Risk Review. For select Covered Employees, as defined and identified by the Company, no RSUs will convert to Shares until the Chief Human Resources & Administrative Officer receives confirmation from the Chief Risk Officer, or their delegate, that a review has been completed by the Chief Risk Officer, or their delegate, to determine whether you engaged in any willful or reckless violation of the Company's risk policies. If the Chief Risk Officer, or their delegate, finds any such violation or breach, then the Company

may determine that all or a portion of your RSUs will be forfeited. Based on this assessment, the Company may determine that all or a portion of your RSUs will be forfeited.

(d) Investigative Holds. In the event that the Company has either commenced an investigation of a matter that you oversaw or were involved in or has evidence that may require investigation of a matter that you oversaw or were involved in, in either case concerning a breach of one of the obligations hereunder or a serious violation of Company policy, the Company may freeze your account and effectuate a transfer restriction such that your converted and delivered RSUs and any shares associated therewith may not be sold or transferred until such time as the Company reasonably believes the matter to be resolved.

(e) Authorization. You authorize the Company to deduct any amount or amounts owed by you pursuant to this Section 8 from any amounts payable by or on behalf of the Company to you, including, without limitation, any amount payable to you as salary, wages, paid time off, bonus, severance, change in control severance or the conversion of any equity-based award. This right of offset shall not be an exclusive remedy and the Company's election not to exercise this right of offset with respect to any amount payable to you shall not constitute a waiver of this right of offset with respect to any other amount payable to you or any other remedy. You further acknowledge and authorize the Company to take the actions described in this Section 8, including those describe in Section 8(d).

9. Tax and Other Withholding Obligations.

Subject to rules and procedures established by Discover, you may be eligible to elect to satisfy the tax or other withholding obligations arising upon conversion of your RSUs or upon any taxable event by paying cash or by having Discover withhold Shares or by tendering Shares, in each case in an amount sufficient to satisfy the tax or other withholding obligations. Shares withheld or tendered will be valued using the fair market value of Stock on the date the Shares are scheduled to convert, or otherwise become taxable, as applicable, using a valuation methodology established by Discover.

10. Satisfaction of Obligations.

Notwithstanding any other provision of this Award Certificate, the Company may, in its sole discretion, take various actions affecting your RSUs in order to collect amounts sufficient to satisfy any obligation that you owe to the Company and any tax or other withholding obligations. The Company's determination of the amount that you owe the Company shall be conclusive. The fair market value of Stock for purposes of the following provisions shall be determined using a valuation methodology established by Company. The actions that may be taken by Discover pursuant to this Section 10 include, but are not limited to, the following:

(a) Withholding of Shares. Upon conversion of RSUs, including any accelerated conversion pursuant to Sections 4, 5, or 6 above, or, if later, upon delivery of the Shares, the Company may withhold a number of Shares sufficient to satisfy any obligation that you owe to the Company and any tax or other withholding obligations whether national, federal, state or local tax withholding obligations including any social insurance contributions or employment tax obligation. The Company shall determine the number of Shares to be withheld by dividing the dollar value of your obligation to the Company and any tax or other withholding obligations by the fair market value of Stock on the date the Shares are scheduled to convert, or otherwise become taxable, as applicable. To the extent that the Company retains any Shares or reduces the number of RSUs to cover the withholding obligations, it will do so at the applicable minimum statutory rate or other applicable withholding rate(s). Should the Company withhold in excess of the actual tax withholding obligation, the Company will apply the excess withholding to another compensation tax liability.

(b) Netting of Accelerated RSUs. In order to satisfy any taxes due upon an event which is earlier than conversion, Discover, in its sole discretion, may accelerate the vesting and conversion of all or a portion of your unvested RSUs. The Company shall determine the number of RSUs to be accelerated and converted by dividing the dollar value of your tax obligations upon such event by the fair market value of Stock on the date of accelerated conversion. Accelerated and converted RSUs shall not exceed the value of taxes due upon such event and the resulting Shares will be withheld by the Company.

(c) Withholding of Other Compensation. Discover may withhold the payment of dividend equivalents on your RSUs or any other compensation or payments due from Discover to ensure satisfaction of any obligation that you owe the Company or any tax or other withholding obligations or Discover may permit you to satisfy such tax or other withholding obligation by paying such obligation in immediately available funds.

(d) Mobile Employees. You are liable and responsible for all taxes and social insurance contributions owed in connection with the Award, regardless of any action the Company takes with respect to any tax withholding obligations that arise in connection with the Award. The Company does not make any representation or undertaking regarding the tax treatment or the treatment of any tax withholding in connection with the grant, vesting or payment of the Award. The Company does not commit and is under no obligation to structure the Award to reduce or eliminate your tax liability. Further, you may be subject to individual income taxation (and possibly social security or other applicable personal or payroll taxes) in each jurisdiction where you have performed services for the Company between the Award Date and the Vesting Date. Taxes for which you are liable, if applicable, may be withheld and deposited by the Company in each jurisdiction in which you have performed services regardless of your status as a resident or non-resident in one or more of the jurisdictions that have a right to impose taxation. You agree that you will comply with all United States and foreign individual income tax return filing obligations that may be imposed with respect to the Award.

11. Nontransferability.

You may not sell, pledge, hypothecate, assign or otherwise transfer your RSUs, other than as provided in Section 12 (which allows you to designate a beneficiary or beneficiaries in the event of your death) or by will or the laws of descent and distribution.

12. Designation of a Beneficiary.

You may make a revocable designation of beneficiary or beneficiaries to receive all or part of the Shares and any dividend equivalents credited to you pursuant to Section 3 hereof to be paid under this Award Certificate in the event of your death. Absent a designation on file, distributions pursuant to Section 4 will be made to your estate. To make a beneficiary designation, you must complete and file the online form provided by E*TRADE, or such other vendor as the Company may choose to administer the Plan. If you previously filed a designation of beneficiary form for your equity awards with the Human Resources Department, such form will also apply to the RSUs granted pursuant to this RSU Award. You may replace or revoke your beneficiary designation at any time, and the Company will rely on your most recent designation on file for purposes of beneficiary designation.

13. Ownership and Possession.

(a) Generally. Except as specified in Section 3 with respect to Dividend Equivalents, you will not have any rights as a shareholder with respect to your RSU Awards or in the Shares corresponding to your RSUs prior to conversion of your RSUs.

(b) Following Conversion. Subject to the terms and conditions of this Award Certificate, following conversion of your RSUs you will be the beneficial owner of the shares issued to you net of taxes, and you will be entitled to all rights of ownership, including voting rights and the right to receive cash or stock dividends or other distributions paid on such shares.

14. Securities Law Matters.

Shares issued upon conversion of your RSUs may be subject to restrictions on transfer by virtue of the Securities Act of 1933, as amended. Discover may advise the transfer agent to place a stop order against such shares if it determines that such an order is necessary or advisable. Because Stock will only be maintained in book-entry form, you will not receive a stock certificate representing your interest in such shares.

15. Compliance with Laws and Regulations.

Any sale, assignment, transfer, pledge, mortgage, encumbrance or other disposition of Shares issued upon conversion of your RSUs (whether directly or indirectly, whether or not for value, and whether or not voluntary) must be made in compliance with any applicable constitution, rule, regulation, or policy of any of the exchanges or associations or other institutions with which the Company or a Related Employer has membership or other privileges, and any applicable law, or applicable rule or regulation of any governmental agency, self-regulatory organization or state or federal regulatory body.

16. No Entitlements.

(a) No Right to Continued Employment. This RSU Award is not an employment agreement, and nothing in this Award Certificate, the International Supplement, if applicable, or the Plan shall alter your status as an “at-will” employee of the Company or your Employment status at a Related Employer, nor does anything herein constitute a promise of continued employment or re-employment.

(b) No Right to Future Awards. This RSU Award is discretionary and does not confer on you any right or entitlement to receive another award of RSUs, any other equity-based award or any other award at any time in the future or in respect of any future period.

(c) No Effect on Future Employment Compensation. This RSU Award is discretionary and does not confer on you any right or entitlement to receive compensation in any specific amount for any future fiscal year, and does not diminish in any way the Company’s discretion to determine the amount, if any, of your compensation. In addition, this RSU Award is not part of your base salary or wages and will not be taken into account in determining any other Employment-related rights you may have, such as rights to pension or severance pay, end of service payments, bonuses, long-service awards or similar payments and in no event shall be considered as compensation for, or relating in any way to, past services for the Company.

(d) Termination of Employment. In consideration of the grant of the Award, no claim or entitlement to compensation or damages shall arise from termination of the Award or diminution in value of the Award or Shares acquired through vesting of the Award resulting from termination of your employment by the Company (for any reason whatsoever and whether or not in breach of local labor laws) and you irrevocably release the Company and the Related Employer from any such claim that may arise; if, notwithstanding the foregoing, any such claim is found by a court of competent jurisdiction to have arisen, then, by signing this Agreement, you will be deemed irrevocably to have waived your entitlement to pursue such claim; and in the event of termination of your employment (whether or not in breach of local labor laws), your right to receive the Award and vest in the Award under the Plan, if any, will terminate effective

as of the date that you are no longer actively employed and will not be extended by any notice period mandated under local law (e.g., active employment would not include a period of “garden leave” or similar period pursuant to local law); Discover shall have the exclusive discretion to determine when you are no longer actively employed for purposes of your Award.

(e) **Language.** If you have received this Agreement or any other document related to the Plan translated into a language other than English and if the translated version is different than the English version, the English version will control.

(f) **Award Terms Control.** In the event of any conflict between any terms applicable to equity awards in any employment agreement, offer letter or other arrangement that you have entered into with the Company and the terms set forth in this Award Certificate, the latter shall control.

17. Consents.

Your RSU Award is conditioned upon the Company’s making of all filings and the receipt of all consents or authorizations required to comply with, or required to be obtained under, applicable local law.

In accepting this RSU Award, you consent to the collection, use and transfer, in electronic or other form, of your personal data by and among, as applicable, the Company and any other possible recipients for the purpose of implementing, administering and managing your participation in the Plan, as well as for the purpose of the Company’s compliance with applicable law, including, without limitation, Section 953(b) of the Dodd-Frank Wall Street Reform and Consumer Protection Act. You understand that the recipients of your personal data may be located in the U.S. or elsewhere, and the recipients’ country may have different data privacy laws and protections than your country. You understand that you may request a list with the names and addresses of any potential recipients of your personal data, view the personal data, request additional information about the storage of your personal data, require any necessary amendments to your personal data or refuse or withdraw your consent by contacting your local human resources representative, in any case without cost. You understand, however, that refusing or withdrawing your consent may affect your ability to participate in the Plan.

18. Electronic Delivery and Consent to Electronic Participation.

The Company may, in its sole discretion, decide to deliver any documents related to the RSU Award and participation in the Plan or future RSU Awards by electronic means. You hereby consent to receive such documents by electronic delivery and to participate in the Plan through an online or electronic system established and maintained by the Company or another third party designated by the Company, including the acceptance of RSU Awards and the execution of the RSU agreements through electronic signature. Electronic acceptance of this Award Certificate through the E*TRADE website, or such other vendor as the Company may choose to administer the Plan, shall be required and binding on you. Where electronic acceptance may not be permitted under applicable law, the Company may also request and require your physical signature. Your acceptance affirms your agreement to all the terms and conditions set forth in this Award Certificate and acceptance of the Award subject thereto. Not providing this acceptance within the timeframe stipulated may result in the Company forfeiting all or a portion of this Award.

19. Award Modification.

The Committee reserves the right to modify or amend unilaterally the terms and conditions of your RSUs, without first asking your consent, or to waive any terms and conditions

that operate in favor of Discover. These amendments may include (but are not limited to) changes that the Committee considers necessary or advisable as a result of changes in any, or the adoption of any new, Legal Requirement. The Committee may not modify your RSUs in a manner that would materially impair your rights in your RSUs without your consent; *provided, however*, that the Committee may, without your consent, amend or modify your RSUs in any manner that the Committee considers necessary or advisable to comply with or reflect the application of any Legal Requirement or to ensure that your RSUs are not subject to United States federal, state or local income tax or any equivalent taxes in territories outside the United States prior to payment. Notwithstanding any provisions of this Award Certificate to the contrary, to the extent you transfer employment outside of the United States, the Award shall be subject to any special terms and conditions as Discover may need to establish to comply with local laws, rules, and regulations or to facilitate the operation and administration of the Award and the Plan in the country to which you transfer employment (or Discover may establish alternative terms and conditions as may be necessary or advisable to accommodate your transfer). Discover will notify you of any amendment of your RSUs that affects your rights. Any amendment or waiver of a provision of this Award Certificate (other than any amendment or waiver applicable to all recipients generally), which amendment or waiver operates in your favor or confers a benefit on you, must be in writing and signed by the Chief Human Resources & Administrative Officer to be effective.

20. Severability.

In the event the Committee determines that any provision of this Award Certificate would cause you to be in constructive receipt for United States federal or state income tax purposes of any portion of your RSU Award, then such provision will be considered null and void and this Award Certificate will be construed and enforced as if the provision had not been included in this Award Certificate as of the date such provision was determined to cause you to be in constructive receipt of any portion of your RSU Award.

21. Successors.

This Award Certificate shall be binding upon and inure to the benefit of any successor or successors of Discover and any person or persons who shall, upon your death, acquire any rights hereunder in accordance with this Award Certificate or the Plan.

22. Governing Law.

This Award Certificate and the related legal relations between you and Discover will be governed by and construed in accordance with the laws of the State of Delaware, without regard to any conflicts or choice of law, rule or principle that might otherwise refer the interpretation of the RSU Award to the substantive law of another jurisdiction. The Company and you agree that the jurisdiction and venue for any disputes arising under, or any action brought to enforce (or otherwise relating to), the Plan or this Award Certificate shall be exclusively in the courts in the State of Illinois, Counties of Cook or Lake, including the federal courts located therein (should federal jurisdiction exist), and the Company and you hereby submit and consent to said jurisdiction and venue.

23. Section 409A.

To the extent necessary or advisable to comply with Section 409A of the Internal Revenue Code, with respect to any provision of this Award Certificate that provides for vested RSUs to convert to Shares on or as soon as administratively practicable after a specified event or date, such conversion will be made by the later of the end of the calendar year in which the

specified event or date occurs or the 15th day of the third calendar month following the specified event or date.

24. Defined Terms.

For purposes of this Award Certificate, the following terms shall have the meanings set forth below:

(a) “Cause” means:

(1) any act or omission which constitutes a material breach of your obligations to the Company or your failure or refusal to perform satisfactorily any duties reasonably required of you, which breach, failure or refusal (if susceptible to cure) is not corrected (other than failure to correct by reason of your incapacity due to Disability) within ten (10) business days after written notification thereof to you by the Company;

(2) any act or omission by you that constitutes (i) fraud or intentional misrepresentation, (ii) embezzlement, misappropriation or conversion of assets of, or business opportunities considered by, the Company or (iii) any other act which has caused or may reasonably be expected to cause material injury to the interest or business reputation of the Company; or

(3) your violation of any securities, commodities or banking laws, any rules or regulations issued pursuant to such laws, or rules or regulations of any securities or commodities exchange or association of which the Company is a member or of any policy of the Company relating to compliance with any of the foregoing.

(b) “Change in Control” means, except as provided otherwise below, the first to occur of any of the following events:

(1) except as otherwise provided in clause (3) below, any person (as defined in Section 3(a)(9) of the Securities Exchange Act of 1934 (the “Exchange Act”), as such term is modified in Sections 13(d) and 14(d) of the Exchange Act), other than (i) any employee plan established by the Company or any of its Subsidiaries, (ii) any group of employees holding shares subject to agreements relating to the voting of such shares, (iii) the Company or any of its affiliates (as defined in Rule 12b-2 promulgated under the Exchange Act), (iv) an underwriter temporarily holding securities pursuant to an offering of such securities, or (v) a corporation owned, directly or indirectly, by shareholders of the Company in substantially the same proportions as their ownership of the Company, either (x) acquires ownership of stock of the Company that, together with stock held by such person (not including the stock owned by such person any stock acquired directly from the Company other than in connection with the acquisition by the Company of a business), constitutes more than fifty percent (50%) of the total fair market value of the stock of the Company (but only if such person did not own more than fifty percent (50%) of the total fair market value of the stock of the Company prior to the acquisition of additional stock), or (y) acquires (or has acquired during the twelve-month period ending on the date of the most recent acquisition by such person) ownership of the stock of the Company possessing thirty percent (30%) or more of the total voting power of the stock of the Company (but only if such person did not own thirty percent (30%) or more of the total voting power of the stock of the Company prior to the acquisition of additional stock and not including the stock owned by such person any stock acquired directly from the Company other than in connection with the acquisition by the Company of a business);

(2) a change in the composition of the Board during any twelve-month period, such that individuals who, as of the Date of the Award, constitute the Board (the “Incumbent Board”) cease for any reason to constitute at least a majority of the Board; provided, however, that any individual becoming a member of the Board subsequent to the date of Date of the Award whose election, or nomination for election by the Company’s shareholders, was approved by a vote of at least a majority of the directors then comprising the Incumbent Board shall be considered as though such individual were a member of the Incumbent Board;

(3) the consummation of a merger or consolidation of the Company with any other corporation or other entity, or the issuance of voting securities in connection with a merger or consolidation of the Company (or any direct or indirect subsidiary of the Company) pursuant to applicable stock exchange requirements, other than (i) a merger or consolidation which results in the securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into securities of the surviving entity or any parent thereof), in combination with the ownership of any trustee or other fiduciary holding securities under an employee benefit plan of the Company or any of its subsidiaries, at least fifty percent (50%) of the combined voting power of the voting securities of the Company or such surviving entity or any parent thereof outstanding immediately after such merger or consolidation, or (ii) a merger or consolidation effected to implement a recapitalization of the Company (or similar transaction) in which no person (determined pursuant to clause (1) above) is or becomes the beneficial owner, directly or indirectly, of securities of the Company (not including in the securities beneficially owned by such person any securities acquired directly from the Company or its affiliates other than in connection with the acquisition by the Company or its affiliates of a business) representing thirty percent (30%) or more of the total voting power of the stock of the Company (but only if such person did not own thirty percent (30%) or more of the total voting power of the stock of the Company prior to the acquisition of additional securities);

(4) the complete liquidation of the Company or the sale or disposition by the Company of all or substantially all of the Company’s assets, other than a sale or disposition by the Company of all or substantially all of the Company’s assets to (i) a shareholder of the Company (immediately before the asset transfer) in exchange for or with respect to the Company’s stock, (ii) an entity, at least fifty percent (50%) of the total value or voting power of which is owned, directly or indirectly, either by the Company or by a person or more than one person acting as a group, that owns fifty percent (50%) or more of the total value or voting power of all the outstanding stock of the Company, or (iii) a person, or more than one person acting as a group, that owns, directly or indirectly, fifty percent (50%) or more of the total value or voting power of all the outstanding stock of the Company; provided, however, that a Change in Control pursuant to this clause (4) shall not be deemed to have occurred unless a person (determined pursuant to clause (1) above) or persons acting as a group acquires (or has acquired during the twelve-month period ending on the date of the most recent acquisition by such person or persons) assets from the Company that have a total gross fair market value equal to or more than forty percent (40%) of the total gross fair market value of all of the assets of the Company immediately before such acquisition or acquisitions.

Notwithstanding the foregoing, with respect to a Change in Control of Discover, no Change in Control shall be deemed to have occurred if there is consummated any transaction or series of integrated transactions immediately following which the beneficial holders of the Company’s common stock immediately prior to such transaction or series of transactions continue to have substantially the same proportionate ownership in an entity which owns

substantially all of the assets of the Company immediately prior to such transaction or series of transactions.

(c) **“Chief Human Resources & Administrative Officer”** means the chief human resources & administrative officer of Discover, any successor chief human resources & administrative officer, or any other individual or committee appointed by the chief executive officer of Discover with the power and authority of the chief human resources & administrative officer.

(d) **“Chief Risk Officer”** means the chief risk officer of Discover, any successor chief risk officer, or any other individual or committee appointed by the chief executive officer of Discover with the power and authority of the chief risk officer.

(e) **“Competitive Activity”** means:

(1) becoming, or entering into any arrangement as, an employee, officer, partner, member, proprietor, director, independent contractor, consultant, advisor, representative or agent of, or serving in any similar position or capacity with, a Competitor, where you will be responsible for providing, or managing or supervising others who are providing, services (i) that are similar or substantially related to the services that you provided to the Company, or (ii) that you had direct or indirect managerial or supervisory responsibility for at the Company, or (iii) that call for the application of the same or similar specialized knowledge or skills as those utilized by you in your services for the Company, in each such case, at any time during the year preceding the termination of your employment with the Company; or

(2) either alone or in concert with others, forming, or acquiring a five percent (5%) or greater equity ownership, voting interest or profit participation in, a Competitor.

(f) **“Competitor”** means any corporation, partnership or other entity that engages in (or that owns a significant interest in any corporation, partnership or other entity that engages in) (1) the business of consumer lending, including, without limitation, credit card issuance or electronic payment services, or (2) any other business in which you have been involved in or had significant knowledge of, which has been conducted by the Company at any time during your employment with the Company. For the avoidance of doubt, a competitor of any entity which results from a corporate transaction involving the Company that constitutes a Change in Control shall be considered a Competitor for purposes of this Award Certificate.

(g) **“Covered Employee”** means an employee who, as of the Date of the Award, has been identified as a covered employee by Human Resources.

(h) **“Date of the Award”** means the date set forth in this Award Certificate.

(i) **“Disability”** means a “permanent and total disability,” as defined in Section 22(e)(3) of the Internal Revenue Code.

(j) **“Employed”** and **“Employment”** refer to employment with the Company and/or Related Employment.

(k) **“Good Reason”** means the occurrence of any of the following upon, or within six (6) months prior to or twenty-four (24) months after the occurrence of a Change in Control of Discover without your prior written consent:

(1) Any material diminution in your assigned duties, responsibilities and/or authority, including the assignment to you of any duties, responsibilities or authority inconsistent with the duties, responsibilities and authority assigned to you, immediately prior to such assignment;

(2) A material diminution in the authority, duties, or responsibilities of the supervisor to whom you are required to report;

(3) Any material reduction in your base compensation; provided, however, that Company-initiated across-the-board reductions in compensation affecting substantially all eligible Company employees shall alone not be considered "Good Reason," unless the compensation reductions exceed twenty percent (20%) of your base compensation;

(4) A material diminution of the budget over which you have authority;

(5) The Company's requiring you to be based at a location that (i) is in excess of thirty-five (35) miles from the location of your principal job location or office immediately prior to the Change in Control, or (ii) results in an increase in your normal daily commuting time by more than ninety (90) minutes, except for required travel on Company's business to an extent substantially consistent with your then present business travel obligations; or

(6) Any other action or inaction that constitutes a material breach by the Company of any agreement pursuant to which you provide services to the Company.

For purposes of paragraphs (1) through (6) above, the duties, responsibilities and/or authority assigned to you shall be deemed to be the greatest of those in effect prior to or after the Change in Control. Unless you become Disabled, your right to terminate your Employment for Good Reason shall not be affected by your incapacity due to physical or mental illness. Your continued Employment shall not constitute consent to, or a waiver of rights with respect to, any circumstance constituting Good Reason. Notwithstanding the foregoing, Good Reason shall not exist unless you give the Company written notice thereof within thirty (30) days after its occurrence and the Company shall not have remedied the action within thirty (30) days after such written notice.

(l) "**Internal Revenue Code**" means the United States Internal Revenue Code of 1986, as amended, and the rules, regulations and guidance thereunder.

(m) "**Legal Requirement**" means any law, regulation, ruling, judicial decision, accounting standard, regulatory guidance or other legal requirement (including any foreign legal requirements).

(n) "**Pro Ration Fraction**" means a fraction, not to exceed 1.0, the numerator of which is the number of completed months commencing on the first day of the calendar year, or the first day of the month in which your employment commences, if later, of the Date of the Award and ending on the effective date of your termination of Employment, and the denominator of which is 12.

(o) "**Related Employment**" means your employment with an employer other than the Company (such employer, herein referred to as a "**Related Employer**"), provided: (1) you undertake such employment at the written request or with the written consent of the Chief Human Resources & Administrative Officer; (2) immediately prior to undertaking such

employment you were an employee of the Company or were engaged in Related Employment (as defined herein); and (3) such employment is recognized by the Company in its discretion as Related Employment; and, *provided further* that the Company may (i) determine at any time in its sole discretion that employment that was recognized by the Company as Related Employment no longer qualifies as Related Employment, and (ii) condition the designation and benefits of Related Employment on such terms and conditions as the Company may determine in its sole discretion. The designation of employment as Related Employment does not give rise to an employment relationship between you and the Company, or otherwise modify your and the Company's respective rights and obligations.

(p) "**Scheduled Vesting Date**" means the Scheduled Vesting Dates set forth in Award Certificate as the context requires.

(q) "**Wrongful Solicitation**" occurs upon either of the following events:

(1) while Employed, including during any notice period applicable to you in connection with the termination of your Employment, or within one year after the termination of your Employment, directly or indirectly in any capacity (including through any person, corporation, partnership or other business entity of any kind), you hire or solicit, recruit, induce, entice, influence or encourage any Company employee to leave the Company or become hired or engaged by another firm; *provided, however*, that this clause shall apply only to employees with whom you worked or had professional or business contact, or who worked in or with your business unit, during any notice period applicable to you in connection with the termination of your Employment or during the one year preceding notice of the termination of your Employment; or

(2) while Employed, including during any notice period applicable to you in connection with the termination of your Employment, or within one year after the termination of your Employment, directly or indirectly in any capacity (including through any person, corporation, partnership or other business entity of any kind), you solicit or entice away or in any manner attempt to persuade any client or customer, or prospective client or customer, of the Company (i) to discontinue or diminish his, her or its relationship or prospective relationship with the Company or (ii) to otherwise provide his, her or its business to any person, corporation, partnership or other business entity which engages in any line of business in which the Company is engaged (other than the Company); *provided, however*, that this clause shall apply only to clients or customers, or prospective clients or customers, that you worked for on an actual or prospective project or assignment during any notice period applicable to you in connection with the termination of your Employment or during the one year preceding notice of the termination of your Employment.

IN WITNESS WHEREOF, Discover has duly executed and delivered this Award Certificate as of the Date of the Award.

DISCOVER FINANCIAL SERVICES

By:

R. Andy Eichfeld
EVP, Chief Human Resources & Administrative Officer

**Discover Financial Services
International Supplement**

This International Supplement to the Award Certificate ("International Supplement") contains supplemental terms and conditions for the RSU Award ("Equity Award") to employees of Discover Financial Services (or the relevant affiliated company) located in certain jurisdictions outside of the United States. The terms included in this International Supplement are intended to ensure compliance with the laws of the country in which you are Employed or, in certain instances, to make the awards more tax efficient in your country.

You have also received an Award Certificate applicable to your award. The Award Certificate, together with this International Supplement, collectively set forth the terms and conditions of your Equity Award. To the extent that this International Supplement amends, deletes or supplements any terms of the Award Certificate, this International Supplement shall control.

Capitalized terms that are used without definition in this International Supplement have the meanings assigned in the Plan or the Award Certificate.

All Employees Located Outside the United States.

If you are Employed outside of the United States, please note that your Equity Award is offered, issued and administered by Discover Financial Services, a Delaware corporation, and your local employer is not involved in the grant of awards under such equity incentive program. All documents related to your Equity Award, including the Award Certificate, this International Supplement and the link by which you access these documents, originate and are maintained in the United States.

Your Equity Award is made in virtue of your Employment with, and your services performed for, the appropriate entities within the Company. However, your award does not form part of your entitlement to remuneration or benefits, whether pursuant to any contract of Employment to which you may be a party or otherwise. Similarly, the existence of a contract of Employment between you and any entity within the Company shall not confer on you any right or entitlement to participate in the Equity Award or to receive awards thereunder, or any expectation that you might participate in such equity incentive program or receive additional equity awards in the future. Your Equity Award, the Award Certificate, and/or this International Supplement does not constitute an employment contract and does not create an employment relationship or a promise of continued Employment for any period of time.

In addition, your Equity Award is not part of your base salary or wages and will not be taken into account (except to the extent otherwise required by local law) in determining any other employment-related rights you may have, such as rights to pension or severance pay.

Whether or not you have a contract of Employment with any entity within the Company, your rights and obligations under the terms of your office or Employment shall not be affected by your receipt of the Equity Award. By accepting your receipt of the Equity Award, you waive any and all rights to compensation or damages for any loss of the Equity Award in the event of your termination of your office or Employment for any reason whatsoever. This waiver applies whether or not such termination amounts to a wrongful or unfair dismissal.

You may be subject to applicable exchange control, currency control or similar financial laws that may affect your transactions with respect to your equity award, including without limitation, your ability to bring shares of Discover Financial Services common stock into your jurisdiction or to receive the proceeds of a sale of Discover Financial Services common stock in your jurisdiction. Moreover, you may be subject to certain notification, approval and/or repatriation obligations with respect to securities and funds you receive in connection with your awards. In addition the Company is not responsible for any foreign exchange fluctuations that change the value of your RSU Award. ***You are encouraged to consult your advisors to ascertain whether any restrictions or obligations apply to you.***

Your Equity Award has not been authorized or approved by any applicable securities authorities and may have been offered pursuant to an exemption from registration in your local jurisdiction. Similarly, no prospectus or similar offering or registration document has been prepared, authorized or approved by any applicable securities authorities in your jurisdiction. The grant of awards is being made only to employees of the Company and does not constitute and is not intended to be an offering to the public. For this reason, you must keep all award documents you receive, including but not limited to this International Supplement and the Award Certificate, confidential and you may not distribute or otherwise make public any award documents without the prior written consent of the Company. Moreover, you may not reproduce (in whole or in part) any award documents you receive. In addition, the shares of Company common stock you acquire upon vesting and conversion of your Equity Award may be subject to applicable restrictions on resale in your local jurisdiction. ***You are encouraged to consult your advisors to ascertain whether any restrictions or obligations apply to you.***

Employees in China.

If you are employed in China or are a Chinese national on international assignment outside of China for the Company, but your Equity Award was made in China and/or you will be taxed there, your Equity Award will be settled in cash. Rather than convert awards to shares pursuant to Section 1 of the Award Certificate and Sections 4 through 6 of the Award Certificate, the Company will convert your Equity Award to cash and the Company or your local employer will deliver the cash payment to you. You consent to this cash conversion in exchange for the Equity Award. All other terms and conditions of the Plan and the Award Certificate will otherwise apply to your Equity Award.

Employees in the United Kingdom or European Union.

If you are employed in the United Kingdom (or the European Union), the Company will act in accordance with the Data Protection Act of 2018 as amended from time to time and the General Data Protection Regulation as amended from time to time as applicable regarding any personal information which you provide to it in connection with your Equity Award (including the amount of the award) and you acknowledge the need for the processing of such personal information in order to facilitate your participation in such equity incentive program, for any purposes required by law or regulation, or for any other legitimate business purpose. By accepting your Equity Award, you acknowledge that from time to time, for the purposes described above, your personal information may be stored and processed by and disclosed and transferred to other offices and companies within the Company and to third parties, some of which are situated outside of the European Union and may not offer as high a level of protection for personal information as countries within the European Union.

The following provisions apply in lieu of those contained in the Award Certificate for employees in the United Kingdom.

Section 8(a)

The forfeiture, cancellation and/or clawback circumstances and events set forth in this Section 8 are designed, among other things, to incentivize compliance with the Company's policies (including, without limitation, the Company's risk policies and Code of Conduct), to protect the Company's interests in non-public, confidential and/or proprietary information, products, trade secrets, customer relationships, workforce stability, and other legitimate business interests, and to ensure an orderly transition of responsibilities. This Section 8 shall apply notwithstanding any other terms of this Award Certificate (except where sections in this Award Certificate specifically provide that the circumstances set forth in this Section 8 no longer apply).

(a) Conditions. Notwithstanding your satisfaction of the vesting conditions of this Award Certificate, RSUs are not earned: (1) until the applicable Scheduled Vesting Date; and (2) unless the conditions set forth in this section 8(a) below are met. Although you will become the beneficial owner of Shares following conversion of your RSUs, the Company may, upon notice, issue a transfer restriction with respect to your Shares following conversion of your RSUs pending any investigation or other review that impacts the determination as to whether the RSUs meet the conditions set forth below. The Shares underlying such RSUs shall not legally vest in you and shall be forfeited and recoverable in the event the Company determines that the conditions set forth in this section 8(a) below are not met. Notwithstanding any provision of this Award Certificate to the contrary, in order for legal ownership of the Shares to fully vest in you it is a strict condition that you must not at any time prior to one year after the termination of your Employment or service with the Company (i) engage, in Wrongful Solicitation, (ii) misuse the Company's confidential, proprietary information and/or intellectual property, as defined in your employment contract, the Company Code of Conduct, and/or any other relevant agreements or policies issued to you, or (iii) for those Participants classified by the Company as an officer of Discover Financial Services or one of its Subsidiaries on the date of grant, engage in Competitive Activity. If the conditions above are not met, you will:

(1) pay to the Company an amount in cash equal to the value of the Shares that vested and converted on or after, or within one year prior to, your termination of Employment, which value shall be determined by the Company, in its sole discretion, and shall include an amount for tax adjustments appropriate to reflect your obligation to repay such amounts due to you not meeting the conditions above; or

(2) transfer to the Company the number of Shares that vested and converted on or after, or within one year prior to, your termination of Employment, plus an amount calculated by the Company, in its sole discretion, for tax adjustments appropriate to reflect your obligation to transfer such common stock due to you not meeting the conditions above.

Section 24(e), (f) and (r)

(e) "Competitive Activity" means:

(1) becoming, or entering into any arrangement as, an employee, officer, partner, member, proprietor, director, independent contractor, consultant, advisor, representative or agent of, a Competitor, where you will be responsible for providing, or managing or supervising others who are providing, services (i) that are similar or substantially related to the services that you provided to the Company, or (ii) that you had direct or indirect managerial or supervisory responsibility for at the Company, or (iii) that call for the application of the same or similar specialized knowledge or skills as those utilized by you in your services for the Company, in each such case, at any time during the year preceding the earlier of the start of your notice period and the Employment; or

(2) either alone or in concert with others, forming, or acquiring a five percent (5%) or greater equity ownership, voting interest or profit participation in, a Competitor.

(f) **“Competitor”** means any corporation, partnership or other entity that engages in (or that owns a significant interest in any corporation, partnership or other entity that engages in) (1) the business of consumer lending, including, without limitation, credit card issuance or electronic payment services, or (2) any other business which you have been materially involved in or had significant knowledge of, which has been conducted by the Company at any time during the two years preceding the termination of your Employment. For the avoidance of doubt, a competitor of any entity which results from a corporate transaction involving the Company that constitutes a Change in Control shall be considered a Competitor for purposes of this Award Certificate.

(r) **“Wrongful Solicitation”** occurs upon either of the following events:

(1) while Employed, including during any notice period applicable to you in connection with the termination of your Employment, and within one year after the termination of your Employment, directly or indirectly in any capacity (including through any person, corporation, partnership or other business entity of any kind), you hire or solicit, recruit, induce, entice, influence or encourage any Company employee to leave the Company or become hired or engaged by another firm; *provided, however*, that this clause shall apply only to employees of the Company who had access to confidential information of the Company and (i) were employed at the level of officer or above, or (ii) who worked in or with your business unit or (iii) for whom you had direct or indirect responsibility, and in each case with whom you had material contact in the course of your Employment, at any time during the year preceding the earlier of the start of your notice period and the termination of your Employment; or

(2) while Employed, including during any notice period applicable to you in connection with the termination of your Employment, or within one year after the termination of your Employment, directly or indirectly in any capacity (including through any person, corporation, partnership or other business entity of any kind), you solicit or entice away or in any manner attempt to persuade any client or customer, or prospective client or customer, of the Company (i) to discontinue or diminish his, her or its relationship or prospective relationship with the Company or (ii) to otherwise provide his, her or its business to any person, corporation, partnership or other business entity which engages in any line of business in which the Company is engaged (other than the Company); *provided, however*, that this clause shall apply only to clients or customers, or prospective clients or customers, that you worked for on an actual or prospective project or assignment during any notice period applicable to you in connection with the termination of your Employment or during the one year preceding notice of the termination of your Employment.

* * *

The Company recommends that you seek advice of your tax advisors regarding the tax treatment of your awards.

CERTIFICATION

I, Roger C. Hochschild, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Discover Financial Services (the "registrant");
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: April 24, 2023

/s/ ROGER C. HOCHSCHILD

Roger C. Hochschild

Chief Executive Officer and President

CERTIFICATION

I, John T. Greene, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Discover Financial Services (the "registrant");
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: April 24, 2023

/s/ JOHN T. GREENE

John T. Greene

Executive Vice President, Chief Financial Officer

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Quarterly Report of Discover Financial Services (the "Company") on Form 10-Q for the period ended March 31, 2023, as filed with the Securities and Exchange Commission (the "Report"), each of Roger C. Hochschild, Chief Executive Officer and President of the Company, and John T. Greene, Executive Vice President and Chief Financial Officer of the Company, certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: April 24, 2023

/s/ ROGER C. HOCHSCHILD

Roger C. Hochschild
Chief Executive Officer and President

Date: April 24, 2023

/s/ JOHN T. GREENE

John T. Greene
Executive Vice President, Chief Financial Officer