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, 2020

☐ **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

Title of each class	Trading symbol(s)	Name of each exchange on which registered
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	☒	Accelerated Filer	☐
Non-accelerated Filer	☐	Smaller Reporting Company	☐
		Emerging Growth Company	☐

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 24, 2020, there were 306,300,776 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, 2020

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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

	March 31, 2020	December 31, 2019
	(unaudited) (dollars in millions, except share amounts)	
Assets		
Cash and cash equivalents	$ 10,028	$ 6,924
Restricted cash	1,183	40
Investment securities (includes available-for-sale securities of $10,503 and $10,323 reported at fair value with associated amortized cost of $10,016 and $10,173 at March 31, 2020 and December 31, 2019, respectively)	10,782	10,595
Loan receivables		
Loan receivables	92,963	95,894
Allowance for credit losses(1)	(6,913)	(3,383)
Net loan receivables	86,050	92,511
Premises and equipment, net	1,070	1,057
Goodwill	255	255
Intangible assets, net	155	155
Other assets	3,134	2,459
Total assets	$ 112,657	$ 113,996
Liabilities and Stockholders' Equity		
Liabilities		
Deposits		
Interest-bearing deposit accounts	$ 72,592	$ 71,955
Non-interest bearing deposit accounts	826	791
Total deposits	73,418	72,746
Long-term borrowings	26,098	25,701
Accrued expenses and other liabilities	3,476	3,690
Total liabilities	102,992	102,137
Commitments, contingencies and guarantees (Notes 8, 11 and 12)		
Stockholders' Equity		
Common stock, par value $0.01 per share; 2,000,000,000 shares authorized; 567,529,990 and 566,653,650 shares issued at March 31, 2020 and December 31, 2019, respectively	6	6
Preferred stock, par value $0.01 per share; 200,000,000 shares authorized; 5,700 shares issued and outstanding and aggregate liquidation preference of $570 at March 31, 2020 and December 31, 2019	563	563
Additional paid-in capital	4,217	4,206
Retained earnings	19,175	21,290
Accumulated other comprehensive income (loss)	134	(119)
Treasury stock, at cost; 261,227,835 and 256,496,492 shares at March 31, 2020 and December 31, 2019, respectively	(14,430)	(14,087)
Total stockholders' equity	9,665	11,859
Total liabilities and stockholders' equity	$ 112,657	$ 113,996

(1) Prior to adoption of Accounting Standards Update ("ASU") No. 2016-13 on January 1, 2020, credit losses were estimated using the incurred loss approach.

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, 2020	December 31, 2019
	(unaudited) (dollars in millions)	
Assets		
Restricted cash	$ 1,183	$ 40
Loan receivables	$ 29,436	$ 31,840
Allowance for credit losses allocated to securitized loan receivables(1)	$ (1,620)	$ (1,179)
Other assets	$ 6	$ 5
Liabilities		

Long-term borrowings	$	13,939	$	14,284
Accrued expenses and other liabilities	$	12	$	15

(1) Prior to adoption of ASU No. 2016-13 on January 1, 2020, credit losses were estimated using the incurred loss approach.

See Notes to the Condensed Consolidated Financial Statements.

DISCOVER FINANCIAL SERVICES
Condensed Consolidated Statements of Income

	For the Three Months Ended March 31,	
	2020	2019
	(unaudited) (dollars in millions, except per share amounts)	
Interest income		
Credit card loans	$ 2,416	$ 2,362
Other loans	484	457
Investment securities	58	28
Other interest income	24	90
Total interest income	2,982	2,937
Interest expense		
Deposits	373	386
Long-term borrowings	211	246
Total interest expense	584	632
Net interest income	2,398	2,305
Provision for credit losses(1)	1,807	809
Net interest income after provision for credit losses	591	1,496
Other income		
Discount and interchange revenue, net	216	231
Protection products revenue	47	49
Loan fee income	119	104
Transaction processing revenue	44	46
Gains on equity investments	36	—
Other income	28	28
Total other income	490	458
Other expense		
Employee compensation and benefits	467	425
Marketing and business development	231	195
Information processing and communications	114	99
Professional fees	193	167
Premises and equipment	30	28
Other expense	124	110
Total other expense	1,159	1,024
(Loss) income before income taxes	(78)	930
Income tax (benefit) expense	(17)	204
Net (loss) income	$ (61)	$ 726
Net (loss) income allocated to common stockholders	$ (78)	$ 705
Basic (loss) earnings per common share	$ (0.25)	$ 2.15
Diluted (loss) earnings per common share	$ (0.25)	$ 2.15

(1) Prior to adoption of ASU No. 2016-13 on January 1, 2020, credit losses were estimated using the incurred loss approach.

See Notes to the Condensed Consolidated Financial Statements.

DISCOVER FINANCIAL SERVICES
Condensed Consolidated Statements of Comprehensive Income

	For the Three Months Ended March 31,	
	2020	2019
	(unaudited) (dollars in millions)	
Net (loss) income	$ (61)	$ 726
Other comprehensive income, net of tax		
Unrealized gains on available-for-sale investment securities, net of tax	256	31
Unrealized losses on cash flow hedges, net of tax	(3)	(12)
Unrealized pension and post-retirement plan gains, net of tax	—	1
Other comprehensive income	253	20
Comprehensive income	$ 192	$ 746

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 Shares	Preferred Stock Amount	Common Stock Shares	Common Stock Amount	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive (Loss) Income	Treasury Stock	Total Stockholders' Equity
For the Three Months Ended March 31, 2019									
Balance at December 31, 2018	6	$ 563	564,852	$ 6	$ 4,130	$ 18,906	$ (156)	$ (12,319)	$ 11,130
Net income	—	—	—	—	—	726	—	—	726
Other comprehensive income	—	—	—	—	—	—	20	—	20
Purchases of treasury stock	—	—	—	—	—	—	—	(487)	(487)
Common stock issued under employee benefit plans	—	—	27	—	2	—	—	—	2
Common stock issued and stock-based compensation expense	—	—	1,094	—	16	—	—	—	16
Dividends — common stock ($0.40 per share)	—	—	—	—	—	(132)	—	—	(132)
Dividends — preferred stock ($2,750 per share)	—	—	—	—	—	(16)	—	—	(16)
Balance at March 31, 2019	6	$ 563	565,973	$ 6	$ 4,148	$ 19,484	$ (136)	$ (12,806)	$ 11,259
For the Three Months Ended March 31, 2020									
Balance at December 31, 2019	6	$ 563	566,654	$ 6	$ 4,206	$ 21,290	$ (119)	$ (14,087)	$ 11,859
Cumulative effect of ASU No. 2016-13 adoption	—	—	—	—	—	(1,902)	—	—	(1,902)
Net loss	—	—	—	—	—	(61)	—	—	(61)
Other comprehensive income	—	—	—	—	—	—	253	—	253
Purchases of treasury stock	—	—	—	—	—	—	—	(343)	(343)
Common stock issued under employee benefit plans	—	—	64	—	2	—	—	—	2
Common stock issued and stock-based compensation expense	—	—	812	—	9	—	—	—	9
Dividends — common stock ($0.44 per share)	—	—	—	—	—	(136)	—	—	(136)
Dividends — preferred stock ($2,750 per share)	—	—	—	—	—	(16)	—	—	(16)
Balance at March 31, 2020	6	$ 563	567,530	$ 6	$ 4,217	$ 19,175	$ 134	$ (14,430)	$ 9,665

See Notes to the Condensed Consolidated Financial Statements.

DISCOVER FINANCIAL SERVICES
Condensed Consolidated Statements of Cash Flows

	For the Three Months Ended March 31,	
	2020	2019
	(unaudited) (dollars in millions)	
Cash flows from operating activities		
Net (loss) income	$ (61)	$ 726
Adjustments to reconcile net income to net cash provided by operating activities		
Provision for credit losses(1)	1,807	809
Deferred income taxes	(240)	(19)
Depreciation and amortization	123	99
Amortization of deferred revenues and accretion of accretable yield on acquired loans	(86)	(101)
Net (gain) loss on investments and other assets	(23)	10
Other, net	10	18
Changes in assets and liabilities		
Decrease (increase) in other assets	429	(29)
(Decrease) increase in accrued expenses and other liabilities	(279)	822
Net cash provided by operating activities	1,680	2,335
Cash flows from investing activities		
Purchases of other short-term investments	—	(1,000)
Maturities of available-for-sale investment securities	157	34
Purchases of available-for-sale investment securities	—	(1,856)
Maturities of held-to-maturity investment securities	7	6
Purchases of held-to-maturity investment securities	(14)	(12)
Net principal repaid on loans originated for investment	2,268	1,148
Proceeds from sale of other investments	52	—
Purchases of other investments	(14)	(6)
Purchases of premises and equipment	(59)	(82)
Net cash provided by (used for) investing activities	2,397	(1,768)
Cash flows from financing activities		
Proceeds from issuance of securitized debt	—	1,241
Maturities and repayment of securitized debt	(509)	(2,860)
Proceeds from issuance of other long-term borrowings	496	596
Maturities and repayment of other long-term borrowings	(1)	(3)
Proceeds from issuance of common stock	2	2
Purchases of treasury stock	(343)	(487)
Net increase in deposits	663	1,146
Dividends paid on common and preferred stock	(138)	(134)
Net cash provided by (used for) financing activities	170	(499)
Net increase in cash, cash equivalents and restricted cash	4,247	68
Cash, cash equivalents and restricted cash, at beginning of period	6,964	15,145
Cash, cash equivalents and restricted cash, at end of period	$ 11,211	$ 15,213
Reconciliation of cash, cash equivalents and restricted cash		
Cash and cash equivalents	$ 10,028	$ 15,169
Restricted cash	1,183	44
Cash, cash equivalents and restricted cash, at end of period	$ 11,211	$ 15,213

(1) Prior to adoption of ASU No. 2016-13 on January 1, 2020, credit losses were estimated using the incurred loss approach.

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 direct banking and payment services company. The Company is a bank holding company under the Bank Holding Company Act of 1956 as well as a financial holding company under the Gramm-Leach-Bliley Act and therefore is subject to oversight, regulation and examination by the Board of Governors of the Federal Reserve System (the "Federal Reserve"). The Company provides direct banking products and services and payment services through its subsidiaries. The Company offers its customers credit card loans, private student loans, personal loans, home equity loans and deposit products. The Company also operates the Discover Network, the PULSE network ("PULSE") and Diners Club International ("Diners Club"). 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 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 charge cards and/or provide card acceptance services.

The Company's business activities are managed in two segments, Direct 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 business segment reporting, see Note 15: Segment Disclosures.

Basis of Presentation

The accompanying condensed consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States ("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 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 2019 audited consolidated financial statements filed with the Company's annual report on Form 10-K for the year ended December 31, 2019.

Recently Issued Accounting Pronouncements (Not Yet Adopted)

In March 2020, the Financial Accounting Standards Board ("FASB") issued ASU No. 2020-04, Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting. The ASU addresses operational challenges resulting from the discontinuation of the London Interbank Offered Rate (“LIBOR”) and other reference rates at the end of 2021. By providing optional practical expedients and exceptions to applying certain GAAP requirements, ASU No. 2020-04 provides temporary relief designed to ease the operational cost and burden of accounting for contract modifications, hedging relationships and other transactions that reference LIBOR or another reference rate expected to be discontinued as a result of reference rate reform. In general, the optional expedients and exceptions allow eligible contracts that are modified due to reference rate reform to be accounted for prospectively as a continuation of those contracts, permit companies to preserve hedge accounting for hedging relationships affected by reference rate reform and enable companies to make a one-time election to transfer or sell certain held-to-maturity debt securities indexed to LIBOR or another reference rate that is expected to be discontinued. The temporary expedients and exceptions are elective and do not apply to contract modifications made and hedging relationships entered into or evaluated after December 31, 2022, with the exception of hedging relationships existing as of that date for which certain optional expedients have been elected and are expected to be retained through the end of the hedging relationships. The ASU is effective upon issuance and management is evaluating the impact the ASU will have on the Company’s financial statements as part of its overall evaluation of reference rate reform.

Recently Adopted Accounting Pronouncements

In June 2016, the FASB issued ASU No. 2016-13, Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments. The FASB subsequently issued several additional ASUs that clarify the scope and application of the new credit loss guidance. Topic 326 replaced the incurred loss model with the current expected credit loss ("CECL") approach. For loans carried at amortized cost, the allowance for credit losses is now based on management's current estimate of all anticipated credit losses over the remaining expected life of the loans. Upon the origination of a loan, the Company records its estimate of all expected credit losses on that loan through an immediate charge to earnings. Updates to that estimate each period are recorded through provision expense. The CECL estimate is based on historical experience, current conditions and reasonable and supportable forecasts.

As compared to prior GAAP, the CECL approach increases the Company's allowance for credit losses on loan receivables as a result of: (1) recording reserves for expected losses, not simply those deemed to be already incurred, (2) extending the loss estimate period over the entire life of the loan and (3) presenting the credit loss component of the purchased credit-impaired ("PCI") loan portfolio in the allowance for credit losses rather than embedding it within the loan carrying value. The allowance for credit losses on all loans carried at amortized cost, including loans previously referred to as PCI loans and loans modified in a troubled debt restructuring ("TDR") are measured under the CECL approach. Previous specialized measurement guidance for PCI loans, which are now referred to as purchased credit-deteriorated ("PCD"), and TDRs was eliminated, although certain separate disclosure guidance was retained.

Measurement of credit impairment of available-for-sale debt securities generally remains unchanged under the new rules, but any credit impairment is recorded through an allowance, rather than a direct write-down of the security. The Company invests in U.S. Treasury and residential mortgage-backed securities issued by government agencies, which have long histories with no credit losses and are explicitly or implicitly guaranteed by the U.S. 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.

The ASU became effective for the Company on January 1, 2020 and required modified-retrospective application, meaning a cumulative-effect adjustment was recorded as of the effective date without adjusting comparative prior periods. This cumulative-effect adjustment does not reflect the economic disruption resulting from the coronavirus disease 2019 ("COVID-19") since the global disruption occurred subsequent to January 1, 2020. As a result of adoption, the Company recorded:

- A $2.5 billion increase to the allowance for credit losses on loan receivables primarily representing the adjustment for recording reserves for expected losses, not simply those deemed to be already incurred, and extending the loss estimate period over the entire life of the loan;
- A $0.6 billion increase to other assets related to deferred tax assets on the larger allowance for credit losses;
- An offsetting $1.9 billion decrease, net of tax, to the opening balance of retained earnings; and
- Immaterial adjustments to the following:
    - The carrying value of PCD loans and related accrued interest reflected in other assets; and
    - Accrued expenses and other liabilities to record reserves for unfunded commitments.

As required by the ASU, financial statement results and balances prior to January 1, 2020 have not been retrospectively adjusted to reflect the amendments in ASU No. 2016-13. Therefore, current period results and balances are not comparable to prior period amounts, particularly with regard to the provision and allowance for credit losses (and their related subtotals).

2. Investments

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

	March 31, 2020	December 31, 2019
U.S. Treasury securities[1]	$ 10,110	$ 9,906
Residential mortgage-backed securities - Agency[2]	672	689
Total investment securities	$ 10,782	$ 10,595

(1) Includes $206 million and $121 million of U.S. Treasury securities pledged as swap collateral as of March 31, 2020 and December 31, 2019, respectively.
(2) Consists of residential mortgage-backed securities issued by Fannie Mae, Freddie Mac and 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, 2020				
Available-for-Sale Investment Securities[1]				
U.S. Treasury securities	$ 9,634	$ 476	$ —	$ 10,110
Residential mortgage-backed securities - Agency	382	11	—	393
Total available-for-sale investment securities	$ 10,016	$ 487	$ —	$ 10,503
Held-to-Maturity Investment Securities[2]				
Residential mortgage-backed securities - Agency[3]	$ 279	$ 9	$ —	$ 288
Total held-to-maturity investment securities	$ 279	$ 9	$ —	$ 288
At December 31, 2019				
Available-for-Sale Investment Securities[1]				
U.S. Treasury securities	$ 9,759	$ 155	$ (8)	$ 9,906
Residential mortgage-backed securities - Agency	414	3	—	417
Total available-for-sale investment securities	$ 10,173	$ 158	$ (8)	$ 10,323
Held-to-Maturity Investment Securities[2]				
Residential mortgage-backed securities - Agency[3]	$ 272	$ 3	$ (1)	$ 274
Total held-to-maturity investment securities	$ 272	$ 3	$ (1)	$ 274

(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 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 and residential mortgage-backed securities issued by government agencies, which have long histories with no credit losses and are explicitly or implicitly guaranteed by the U.S. 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.

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	Less than 12 months	More than 12 months

	Securities in a Loss Position	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
At December 31, 2019					
Available-for-Sale Investment Securities					
U.S. Treasury securities	11	$ 1,402	$ (8)	$ —	$ —

There were no proceeds from sales or recognized gains and losses on available-for-sale securities during the three months ended March 31, 2020 and 2019. See Note 7: Accumulated Other Comprehensive Income for unrealized gains and losses on available-for-sale securities during the three months ended March 31, 2020 and 2019.

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

At March 31, 2020	One Year or Less	After One Year Through Five Years	After Five Years Through Ten Years	After Ten Years	Total
Available-for-Sale Investment Securities—Amortized Cost					
U.S. Treasury securities	$ 1,122	$ 8,386	$ 126	$ —	$ 9,634
Residential mortgage-backed securities - Agency[1]	—	74	308	—	382
Total available-for-sale investment securities	$ 1,122	$ 8,460	$ 434	$ —	$ 10,016
Held-to-Maturity Investment Securities—Amortized Cost					
Residential mortgage-backed securities - Agency[1]	$ —	$ —	$ —	$ 279	$ 279
Total held-to-maturity investment securities	$ —	$ —	$ —	$ 279	$ 279
Available-for-Sale Investment Securities—Fair Values					
U.S. Treasury securities	$ 1,137	$ 8,837	$ 136	$ —	$ 10,110
Residential mortgage-backed securities - Agency[1]	—	77	316	—	393
Total available-for-sale investment securities	$ 1,137	$ 8,914	$ 452	$ —	$ 10,503
Held-to-Maturity Investment Securities—Fair Values					
Residential mortgage-backed securities - Agency[1]	$ —	$ —	$ —	$ 288	$ 288
Total held-to-maturity investment securities	$ —	$ —	$ —	$ 288	$ 288

(1) Maturities of residential mortgage-backed securities 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, as well as 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 the receipt of tax credits allocated to the affordable housing projects and the community revitalization projects. These investments are not consolidated as the Company does not have a controlling financial interest in the entities. As of March 31, 2020 and December 31, 2019, the Company had outstanding investments in these entities of $348 million and $336 million, respectively, and related contingent liabilities of $86 million and $74 million, respectively. Of the above outstanding equity investments, the Company had $310 million and $298 million of investments related to affordable housing projects as of March 31, 2020 and December 31, 2019, respectively, which had $71 million and $59 million related contingent liabilities, respectively.

The Company holds non-controlling equity positions in several payments 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 hold 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, 2020 and December 31, 2019, the carrying value of these investments, which is recorded within other assets, was $26 million and $42 million, respectively.

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, 2020	December 31, 2019
Credit card loans[(1)(2)]	$ 73,811	$ 77,181
Other loans[(3)]		
Private student loans[(4)]	9,957	9,653
Personal loans	7,651	7,687
Other	1,544	1,373
Total other loans	19,152	18,713
Total loan receivables	92,963	95,894
Allowance for credit losses[(5)]	(6,913)	(3,383)
Net loan receivables	$ 86,050	$ 92,511

(1) Amounts include carrying values of $18.4 billion and $18.9 billion underlying investors' interest in trust debt at March 31, 2020 and December 31, 2019, respectively, and $10.8 billion and $12.7 billion in seller's interest at March 31, 2020 and December 31, 2019, respectively. See Note 4: Credit Card and 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 $425 million and $471 million at March 31, 2020 and December 31, 2019, 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 $495 million, $53 million and $5 million, respectively, at March 31, 2020 and $461 million, $53 million and $4 million, respectively, at December 31, 2019.

(4) Amounts include carrying values of $287 million and $292 million in loans pledged as collateral against the note issued from a student loan securitization trust at March 31, 2020 and December 31, 2019, respectively. See Note 4: Credit Card and Student Loan Securitization Activities for additional information.

(5) Prior to adoption of ASU No. 2016-13 on January 1, 2020, credit losses were estimated using the incurred loss approach.

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 as well as information from credit bureaus, such as FICO or other credit scores, relating to the customer's broader credit performance. Key credit quality indicators that are actively monitored for credit card, private student and personal loans include FICO scores and delinquency status. 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 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 most recent FICO scores available for the Company's customers by the amortized cost basis (excluding accrued interest receivable presented in other assets) for credit card, private student and personal loan receivables (dollars in millions):

	Credit Risk Profile by FICO Score							
	March 31, 2020				December 31, 2019			
	660 and Above		Less than 660 or No Score		660 and Above		Less than 660 or No Score	
	$	%	$	%	$	%	$	%
Credit card loans[1]	$ 58,598	79%	$ 15,213	21%	$ 61,997	80%	$ 15,184	20%
Private student loans by origination year[2][3]								
2020	$ 207	97%	$ 6	3%				
2019	1,690	94%	112	6%	$ 1,176	93%	$ 92	7%
2018	1,465	95%	81	5%	1,518	95%	79	5%
2017	1,144	94%	70	6%	1,198	95%	69	5%
2016	883	94%	58	6%	934	94%	58	6%
Prior	3,955	93%	286	7%	4,229	93%	300	7%
Total private student loans	$ 9,344	94%	$ 613	6%	$ 9,055	94%	$ 598	6%
Personal loans by origination year								
2020	$ 923	100%	$ 4	—%				
2019	3,171	97%	90	3%	$ 3,529	98%	$ 62	2%
2018	1,666	92%	141	8%	1,941	93%	140	7%
2017	974	89%	120	11%	1,167	90%	136	10%
2016	380	87%	55	13%	475	88%	65	12%
Prior	105	83%	22	17%	145	84%	27	16%
Total personal loans	$ 7,219	94%	$ 432	6%	$ 7,257	94%	$ 430	6%

(1) Amounts include $1.0 billion and $956 million of revolving line-of-credit arrangements that were converted to term loans as a result of a TDR program as of March 31, 2020 and December 31, 2019, respectively.
(2) A majority of student loans originations occur in the third quarter and disbursements can span across multiple calendar years.
(3) 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, 2020			December 31, 2019		
	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	$ 919	$ 1,016	$ 1,935	$ 999	$ 1,020	$ 2,019
Private student loans by origination year[(1)(2)]						
2020	$ —	$ —	$ —			
2019	1	—	1	$ 1	$ —	$ 1
2018	8	4	12	4	1	5
2017	11	6	17	11	2	13
2016	13	7	20	14	5	19
Prior	93	31	124	106	37	143
Total private student loans	$ 126	$ 48	$ 174	$ 136	$ 45	$ 181
Personal loans by origination year						
2020	$ —	$ —	$ —			
2019	18	5	23	$ 11	$ 3	$ 14
2018	26	11	37	27	11	38
2017	18	8	26	22	10	32
2016	7	3	10	10	5	15
Prior	2	2	4	4	2	6
Total personal loans	$ 71	$ 29	$ 100	$ 74	$ 31	$ 105

(1) Student loans may include a deferment period, during which customers are not required to make payments while enrolled in school at least half time as determined by the school.
(2) Includes PCD loans for all periods presented.

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Allowance for Credit Losses

A detailed description of the Company's allowance for credit losses policy can be found under the sub-heading "— Significant Loan Receivables Accounting Policies — Allowance for Credit Losses" below.

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

	For the Three Months Ended March 31, 2020				
	Credit Card	Student Loans	Personal Loans	Other	Total
Balance at December 31, 2019[(1)]	$ 2,883	$ 148	$ 348	$ 4	$ 3,383
Cumulative effect of ASU No. 2016-13 adoption[(2)]	1,667	505	265	24	2,461
Balance at January 1, 2020	4,550	653	613	28	5,844
Additions					
Provision for credit losses[(3)]	1,439	129	263	7	1,838
Deductions					
Charge-offs	(869)	(22)	(84)	—	(975)
Recoveries	186	5	15	—	206
Net charge-offs	(683)	(17)	(69)	—	(769)
Balance at March 31, 2020	$ 5,306	$ 765	$ 807	$ 35	$ 6,913

	For the Three Months Ended March 31, 2019				
	Credit Card	Student Loans	Personal Loans	Other	Total
Balance at December 31, 2018[(1)]	$ 2,528	$ 169	$ 338	$ 6	$ 3,041
Additions					
Provision for credit losses[(1)]	710	15	84	—	809
Deductions					
Charge-offs	(774)	(19)	(94)	—	(887)
Recoveries	158	4	10	—	172
Net charge-offs[(4)]	(616)	(15)	(84)	—	(715)
Other[(5)]	—	(1)	—	—	(1)
Balance at March 31, 2019[(1)]	$ 2,622	$ 168	$ 338	$ 6	$ 3,134

(1) Prior to adoption of ASU No. 2016-13 on January 1, 2020, credit losses were estimated using the incurred loss approach.
(2) Represents the adjustment to allowance for credit losses as a result of adoption of ASU No. 2016-13 on January 1, 2020.
(3) Excludes a $31 million release of the liability for expected credit losses on unfunded commitments for the three months ended March 31, 2020 as the liability is recorded in accrued expenses and other liabilities in the Company's condensed consolidated statements of financial condition.
(4) Prior to adoption of ASU No. 2016-13 on January 1, 2020, net charge-offs on PCD loans generally did not result in a charge to earnings.
(5) Net change in reserves on PCD pools having no remaining non-accretable difference (prior to adoption of ASU No. 2016-13 on January 1, 2020).

The allowance for credit losses was $6.9 billion at March 31, 2020, which reflects a $3.5 billion build over the amount of the allowance for credit losses at December 31, 2019. The allowance build across all loan products was due to (1) a $2.5 billion cumulative-effect adjustment for the adoption of CECL on January 1, 2020 and (2) a $1.1 billion build during the quarter that, in addition to the impact of life of loan reserving under CECL, primarily reflects an economic outlook that included the COVID-19 pandemic. In estimating the allowance at March 31, 2020, the Company used a macroeconomic forecast that assumes the unemployment rate rising to more than 9%, recovering through 2022 and Gross Domestic Product falling 18% at an annualized rate in the first half of the year. The estimate also contemplated the impact of government stimulus programs on borrower payment behavior.

At adoption of CECL, the forecast period management deemed to be reasonable and supportable was 18 months. This period decreased to 12 months at March 31, 2020 due to the uncertainty caused by the rapidly changing economic environment due to the COVID-19 pandemic. For both periods, the reversion period was 12 months and a straight-line method was used to revert to appropriate historical information.

The increase in net charge-offs on credit card loans for the three months ended March 31, 2020 when compared to the same period in 2019 was due to seasoning of continued loan growth.

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, 2020	2019
Interest and fees accrued subsequently charged off, net of recoveries (recorded as a reduction of interest income)	$ 143	$ 127
Fees accrued subsequently charged off, net of recoveries (recorded as a reduction to other income)	$ 35	$ 31

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 by each class of loan receivables (dollars in millions):

	30-89 Days Delinquent	90 or More Days Delinquent	Total Past Due	90 or More Days Delinquent and Accruing	Total Non-accruing[(1)]
At March 31, 2020					
Credit card loans	$ 919	$ 1,016	$ 1,935	$ 940	$ 238
Other loans					
Private student loans[(2)]	126	48	174	46	15
Personal loans	71	29	100	27	12
Other	7	2	9	—	8
Total other loans	204	79	283	73	35
Total loan receivables	$ 1,123	$ 1,095	$ 2,218	$ 1,013	$ 273
At December 31, 2019					
Credit card loans	$ 999	$ 1,020	$ 2,019	$ 940	$ 237
Other loans					
Private student loans[(2)]	136	45	181	45	11
Personal loans	74	31	105	29	12
Other	5	2	7	—	6
Total other loans	215	78	293	74	29
Total loan receivables	$ 1,214	$ 1,098	$ 2,312	$ 1,014	$ 266

(1) The Company estimates that the gross interest income that would have been recorded in accordance with the original terms of non-accruing credit card loans was $10 million and $12 million for the three months ended March 31, 2020 and 2019, respectively. The Company does not separately track the amount of gross interest income that would have been recorded in accordance with the original terms of loans. This amount was estimated based on customers' current balances and most recent interest rates.

(2) Includes PCD loans for all periods presented.

Troubled Debt Restructurings

The Company has internal loan modification programs that provide relief to credit card, student and personal loan borrowers who may be experiencing financial hardship. The Company considers a modified loan in which a concession has been granted to the borrower to be a TDR based on the cumulative length of the concession period and credit quality of the borrower. New programs are continually evaluated to determine which of them meet the definition of a TDR, including programs provided to customers for temporary relief due to the economic impacts of the COVID-19 outbreak that may be subject to regulatory exclusion from TDR status. The internal loan modification programs include both temporary and permanent programs, which vary by product. External loan modification programs are also available for credit card and personal loans. With the exception of certain COVID-19 relief programs subject to regulatory exclusion from TDR status, temporary and permanent modifications on credit card and personal loans, as well as temporary modifications on student loans and certain grants of student loan forbearance, result in the loans being classified as TDRs. In addition, loans that defaulted (see table on loans that defaulted from a TDR program that follows) or graduated from modification programs or forbearance continue to be classified as TDRs, except as noted below.

For credit card customers, the Company offers both temporary and permanent hardship programs. The temporary hardship programs consist of an interest rate reduction and in some cases a reduced minimum payment, both lasting for a period no longer than 12 months. Charging privileges on these loans are generally suspended while in the program and if certain criteria are met, may be reinstated following completion of the program. Beginning in 2020, credit card accounts of borrowers that have previously participated in a temporary interest rate reduction program and that have both demonstrated financial stability and had their charging privileges reinstated at a market-based interest rate, are excluded from the balance of TDRs.

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 60 months and reducing the interest rate on the loan. The permanent modification program does not normally 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 but continue to be subject to the original minimum payment terms and do not normally include waiver of unpaid principal, interest or fees. These loans remain in the population of TDRs until they are paid off or charged off.

At March 31, 2020 and December 31, 2019, there were $5.5 billion and $5.6 billion, respectively, of private student loans in repayment and $61 million and $46 million, respectively, in forbearance. To assist student loan borrowers who are experiencing temporary financial difficulties but are willing to resume making payments, the Company may offer hardship forbearance or programs that include payment deferral, temporary payment reduction, temporary interest rate reduction or extended terms. A modified loan typically meets the definition of a TDR based on the cumulative length of the concession period and a determination of financial distress based on an evaluation of the credit quality of the borrower using FICO scores.

For personal loan customers, in certain situations the Company offers various payment programs, including temporary and permanent programs. The temporary programs normally consist of a reduction of the minimum payment for a period of no longer than 12 months with the option of a final balloon payment required at the end of the loan term or an extension of the maturity date with the total term not exceeding nine years. Further, in certain circumstances the interest rate on the loan is reduced. The permanent programs involve changing the terms of the loan in order to pay off the outstanding balance over a longer term and in certain circumstances reducing the interest rate on the loan. Similar to the temporary programs, the total term 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. Personal loans included in temporary and permanent programs are classified as TDRs.

Borrower performance after using payment programs or forbearance is monitored and 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 and forbearance as a means to provide relief to customers experiencing temporary financial difficulties and, as a result, expects to have additional loans classified as TDRs in the future.

In order to evaluate the primary financial effects that resulted from credit card loans entering into a TDR program during the three months ended March 31, 2020 and 2019, the Company quantified the amount by which interest and fees were reduced during the periods. During the three months ended March 31, 2020 and 2019, the Company forgave approximately $21 million and $17 million, respectively, of interest and fees as a result of accounts entering into a credit card loan TDR program. For all loan products, interest income on modified loans is recognized based on the modified contractual terms.

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,			
	2020		2019	
	Number of Accounts	Balances	Number of Accounts	Balances
Accounts that entered a TDR program during the period				
Credit card loans[1]	92,736	$ 609	92,356	$ 592
Private student loans	1,718	$ 32	1,576	$ 31
Personal loans	2,548	$ 34	2,600	$ 35

(1) Accounts that entered a credit card TDR program include $210 million and $163 million that were converted from revolving line-of-credit arrangements to term loans during the three months ended March 31, 2020 and 2019, respectively.

The following table presents the carrying value of loans that experienced a payment 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,			
	2020		2019	
	Number of Accounts	Aggregated Outstanding Balances Upon Default	Number of Accounts	Aggregated Outstanding Balances Upon Default
TDRs that subsequently defaulted				
Credit card loans[1][2]	20,485	$ 117	15,652	$ 90
Private student loans[3]	358	$ 7	280	$ 5
Personal loans[2]	1,200	$ 18	848	$ 13

(1) Terms revert back to the pre-modification terms for customers who default from a temporary program and charging privileges remain suspended in most cases.
(2) For credit card loans and personal loans, a customer defaults from a TDR program after two consecutive missed payments. The outstanding balance upon default is generally the loan balance at the end of the month prior to default.
(3) For student loans, defaults have been defined as loans that 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, 2020 and 2019, approximately 40% and 39%, respectively, of the total balances were charged off at the end of the month in which they defaulted from a TDR program.

Significant Loan Receivables Accounting Policies

With the adoption of ASU No. 2016-13 on January 1, 2020, certain significant accounting policies have changed since disclosed in Note 2: Summary of Significant Accounting Policies to the consolidated financial statements of the Company's annual report on Form 10-K for the year ended December 31, 2019. Refer to Note 1: Background and Basis of Presentation for details on adoption of the standard. Impacts on all significant loan receivables accounting policies are summarized as follows:

- The loan receivables policy was updated to reflect the removal of PCI loans as a separate loan portfolio segment.
- The relevance of the PCI loan policy was eliminated by CECL and therefore it was removed as a significant accounting policy.
- The delinquent loans and charge-offs policy did not change.
- The allowance for credit losses policy was updated to reflect the CECL approach for estimating credit losses.

- The loan interest and fee income policy, which includes certain accounting policy elections related to accrued interest, did not materially change.

The policies below represent those with significant updates resulting from adoption of ASU 2016-13 and are reflective of those updates. Policies that did not materially change can be found at Note 2: Summary of Significant Accounting Policies to the consolidated financial statements of the Company's annual report on Form 10-K for the year ended December 31, 2019.

Loan Receivables

Loan receivables consist of credit card receivables and other loans. Loan receivables also include unamortized net deferred loan origination fees and costs. Credit card loan receivables are reported at their principal amounts outstanding and include uncollected billed interest and fees and are reduced for unearned revenue related to balance transfer fees. Other loans consist of student loans, personal loans and other loans and are reported at their principal amounts outstanding. For student loans, principal amounts outstanding also include accrued interest that has been capitalized. The Company's loan receivables are deemed to be held for investment at origination or acquisition because management has the intent and ability to hold them for the foreseeable future. Cash flows associated with loans originated or acquired for investment are classified as cash flows from investing activities, regardless of a subsequent change in intent.

Allowance for Credit Losses

The Company maintains an allowance for credit losses at a level that is appropriate to absorb credit losses anticipated over the remaining expected life of loan receivables as of the balance sheet date. The estimate of expected credit losses considers uncollectible principal, interest and fees associated with the Company's loan receivables existing as of the balance sheet date. Additionally, the estimate includes expected recoveries of amounts that were either previously charged off or are expected to be charged off. The allowance is evaluated quarterly for appropriateness and is maintained through an adjustment to the provision for credit losses. Charge-offs of principal amounts of loans outstanding are deducted from the allowance and subsequent recoveries of such amounts increase the allowance. Charge-offs of loan balances representing unpaid interest and fees result in a reversal of interest and fee income, respectively, which is effectively a reclassification of the provision for credit losses.

The Company calculates its allowance for credit losses by estimating expected credit losses separately for classes of the loan portfolio with similar risk characteristics, which results in segmenting the portfolio by loan product type. The allowance for credit losses for each loan product type is based on: 1) a reasonable and supportable forecast period, 2) a reversion period and 3) a post-reversion period based on historical information covering the remaining life of the loan, all of which is netted with expected recoveries. The lengths of the reasonable and supportable forecast and reversion periods can vary and are subject to a quarterly assessment that considers the economic outlook and level of variability among macroeconomic forecasts. Generally, a straight-line method is used to revert from the reasonable and supportable forecast period to the post-reversion period.

Several analyses are used to help estimate credit losses anticipated over the remaining expected life of loan receivables as of the balance sheet date. The Company's estimation process includes models that predict customer losses based on risk characteristics and portfolio attributes, macroeconomic variables, and historical data and analysis. There is a significant amount of judgment applied in selecting inputs and analyzing the results produced by the models to determine the allowance.

For credit card loans, the Company uses a modeling framework that includes the following components for estimating expected credit losses:

- Probability of default: this model estimates the probability of charge-off at different points in time over the life of each loan.
- Exposure at default: this model estimates the portion of the balance sheet date balance remaining at any given time of charge-off for each loan. Given that there is no stated life of a receivable balance on a revolving credit card account, the Company applies a percentage of expected payments to estimate the portion of the balance that would remain at the time of charge-off.
- Loss given default: this model estimates the percentage of exposure (i.e. net loss) at time of charge-off that cannot be recovered, with the offsetting forecast recoveries being the driver of this estimate.

- Recoveries from previously charged-off accounts are estimated separately and are netted as part of the aggregation of all of the components of the card loss modeling framework.

For student loans and personal loans, the Company uses vintage-based models that estimate expected credit losses over the life of the loan, net of recovery estimates, impacted mainly by time elapsed since origination, credit quality of origination vintages and macroeconomic forecasts.

The models described above for credit card, student and personal loans are developed utilizing historical data and applicable macroeconomic variable inputs based on statistical analysis and behavioral relationships with credit performance. Expected recoveries from loans charged off as of the balance sheet date are modeled separately and included in the allowance estimate. The Company leverages these models and recent macroeconomic forecasts for the portion of the estimate associated with the reasonable and supportable forecast period. To estimate expected credit losses for the remainder of the life of the credit card loans, the Company reverts to historical experience of credit card loans with characteristics similar to those as of the balance sheet date and observed over various phases of a credit cycle. To estimate expected credit losses for the remainder of the life of student and personal loans, the Company reverts to use of average macroeconomic variables over an appropriate historical period.

The considerations in these models include past and current loan performance, loan growth and seasoning, risk management practices, account collection strategies, economic conditions, bankruptcy filings, policy changes and forecasting uncertainties. Consideration of past and current loan performance includes the post-modification performance of loans modified in a TDR. For the credit card loan portfolio, the Company estimates its credit losses on a loan-level basis, which includes loans that are delinquent and/or no longer accruing interest and/or loans that have been modified under a TDR. For the remainder of its portfolio, including student, personal and other loans, the Company estimates its credit losses on a pooled basis. For all loan types, recoveries are estimated at a pooled level based on estimates of future cash flows derived using historical experience.

Interest on credit card loans is included in the estimate of expected credit losses once billed to the customer (i.e., once the interest becomes part of the loan balance). An allowance for credit losses is measured for accrued interest on all other loans and is presented as part of allowance for credit losses in the consolidated statements of financial condition.

The Company records a liability for expected credit losses for unfunded commitments on all other loans, which is presented as part of accrued expenses and other liabilities in the consolidated statements of financial condition. This liability is evaluated quarterly for appropriateness and is maintained through an adjustment to the provision for credit losses. No liability for expected credit losses is required for unused lines of credit on the Company’s credit card loans because they are unconditionally cancellable.

4. Credit Card and 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 of the Company's annual report on Form 10-K for the year ended December 31, 2019.

Credit Card Securitization Activities

The Company accesses the term asset securitization market through the Discover Card Master Trust I ("DCMT") and the 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 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. In order 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. The subordinated classes are held by wholly-owned subsidiaries of Discover Bank. The Company is exposed to credit-related risk of loss associated with trust assets as of the balance sheet date through the retention of these subordinated interests. The estimated loss is included in the allowance for credit losses estimate.

The Company's retained interests in the assets of the trusts, consisting of investments in DCENT notes held by subsidiaries of Discover Bank, constitute intercompany positions, which 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 trusts' creditors. Further, the transferred credit card loan receivables are owned by the trust and are not available to third-party creditors of the Company. The trusts have ownership of cash balances, the amounts of which are reported in restricted cash. With the exception of the seller's interest in trust receivables, the Company's interests in trust assets are generally subordinate to the interests of third-party investors and, as such, may not be realized by the Company if needed to absorb deficiencies in cash flows that are allocated to the investors in the trusts' debt. 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, 2020	December 31, 2019
Restricted cash	$ 1,172	$ 28
Investors' interests held by third-party investors	13,600	14,100
Investors' interests held by wholly-owned subsidiaries of Discover Bank	4,750	4,796
Seller's interest	10,799	12,652
Loan receivables[1]	29,149	31,548
Allowance for credit losses allocated to securitized loan receivables[1][2]	(1,620)	(1,179)
Net loan receivables	27,529	30,369
Other	6	5
Carrying value of assets of consolidated variable interest entities	$ 28,707	$ 30,402

(1) The Company maintains its allowance for credit losses at an amount sufficient to absorb expected losses inherent in all loan receivables, which includes all loan receivables in the trusts. Therefore, credit risk associated with the transferred receivables is fully reflected on the Company's balance sheet in accordance with GAAP.
(2) Prior to adoption of ASU No. 2016-13 on January 1, 2020, credit losses were estimated using the incurred loss approach.

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 could 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, 2020, 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.

Student Loan Securitization Activities

Student loan trust receivables are recorded in private student loans and the related debt issued by the trusts is reported in long-term borrowings. The assets of the trusts are restricted from being sold or pledged as collateral for other borrowings and the cash flows from these restricted assets may be used only to pay obligations of the trusts. With the exception of the trusts' restricted assets, the trusts and investors have no recourse to the Company's other assets or the Company's general credit for a shortage in cash flows.

Securities issued to investors are outstanding from only one of the two remaining student loan securitization trusts. Principal payments on the long-term secured borrowings are made as cash is collected on the underlying loans that are used as collateral on the secured borrowings. The Company does not have access to cash collected by the securitization trust until cash is released in accordance with the trust indenture agreement. Similar to the credit card securitizations, the Company continues to own and service the accounts that generate the student loan receivables held by the trust and receives servicing fees from the trust based on a percentage of the principal balance outstanding. Although the servicing fee income offsets the fee expense related to the trust 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.

Under terms of the trust arrangement, the Company has the option, but not the obligation, to provide financial support to the trust, but has never provided such support. A substantial portion of the credit risk associated with the securitized loans has been transferred to a third party under an indemnification arrangement.

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, 2020	December 31, 2019
Restricted cash	$ 11	$ 12
Student loan receivables	287	292
Carrying value of assets of consolidated variable interest entities	$ 298	$ 304

5. Deposits

The Company offers its deposit products to customers through two channels: (i) through direct marketing, internet origination and affinity relationships ("direct-to-consumer deposits"); and (ii) indirectly through contractual arrangements with securities brokerage firms ("brokered deposits"). Direct-to-consumer deposits include online savings accounts, certificates of deposit, money market accounts, IRA certificates of deposit and checking accounts, while brokered deposits include certificates of deposit and sweep accounts.

The following table provides a summary of interest-bearing deposit accounts (dollars in millions):

	March 31, 2020	December 31, 2019
Certificates of deposit in amounts less than $100,000	$ 23,681	$ 25,113
Certificates of deposit in amounts $100,000 or greater[1]	10,181	9,268
Savings deposits, including money market deposit accounts	38,730	37,574
Total interest-bearing deposits	$ 72,592	$ 71,955

(1) Includes $2.9 billion and $2.6 billion in certificates of deposit equal to or greater than $250,000, the Federal Deposit Insurance Corporation ("FDIC") insurance limit, as of March 31, 2020 and December 31, 2019, respectively.

The following table summarizes certificates of deposit in amounts of $100,000 or greater by contractual maturity (dollars in millions):

	March 31, 2020
Three months or less	$ 1,594
Over three months through six months	1,863
Over six months through twelve months	3,920
Over twelve months	2,804
Total	$ 10,181

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

	March 31, 2020
2020	$ 13,848
2021	10,874
2022	3,755
2023	2,013
2024	1,328
Thereafter	2,044
Total	$ 33,862

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, 2020				December 31, 2019
	Maturity	Interest Rate	Weighted-Average Interest Rate	Outstanding Amount	Outstanding Amount
Securitized Debt					
Fixed-rate asset-backed securities[1]	2020-2024	1.85%-3.32%	2.50%	$ 8,771	$ 8,609
Floating-rate asset-backed securities[2]	2020-2024	0.93%-1.30%	1.09%	5,016	5,515
Total Discover Card Master Trust I and Discover Card Execution Note Trust				13,787	14,124
Floating-rate asset-backed security[3][4]	2031	4.25%	4.25%	152	160
Total student loan securitization trust				152	160
Total long-term borrowings - owed to securitization investors				13,939	14,284
Discover Financial Services (Parent Company)					
Fixed-rate senior notes	2022-2027	3.75%-5.20%	4.16%	3,306	3,296
Fixed-rate retail notes	2020-2031	2.85%-4.60%	3.73%	338	340
Discover Bank					
Fixed-rate senior bank notes[1]	2020-2030	2.45%-4.65%	3.75%	7,496	6,785
Fixed-rate subordinated bank notes	2020-2028	4.68%-7.00%	5.84%	1,019	996
Total long-term borrowings				$ 26,098	$ 25,701

(1) The Company uses interest rate swaps to hedge portions of these long-term borrowings against changes in fair value attributable to changes in LIBOR or Overnight Index Swap ("OIS") Rate. Use of these interest rate swaps impacts carrying value of the debt. See Note 14: Derivatives and Hedging Activities.
(2) Discover Card Execution Note Trust floating-rate asset-backed securities include issuances with the following interest rate terms: 1-month LIBOR + 23 to 60 basis points as of March 31, 2020.
(3) The 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, 2020.
(4) Repayment of this debt is dependent upon the timing of principal and interest payments on the underlying student loans. The date shown represents final maturity date.

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, 2020
2020	$ 4,759
2021	4,255
2022	5,204
2023	3,418
2024	2,630
Thereafter	5,832
Total	$ 26,098

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, 2020, the total commitment of secured credit facilities through private providers was $6.0 billion, none of which was drawn as of March 31, 2020. Access to the unused portions of the secured credit facilities is subject to the terms of the agreements with each of the providers, which have various expirations in calendar years 2021 through 2022. Borrowings outstanding under each facility bear interest at a margin above LIBOR or the asset-backed commercial paper costs of each individual conduit 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. Accumulated Other Comprehensive Income

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

	Unrealized Gains on Available-for-Sale Investment Securities, Net of Tax	(Losses) Gains on Cash Flow Hedges, Net of Tax	Losses on Pension Plan, Net of Tax	AOCI
For the Three Months Ended March 31, 2020				
Balance at December 31, 2019	$ 112	$ (17)	$ (214)	$ (119)
Net change	256	(3)	—	253
Balance at March 31, 2020	$ 368	$ (20)	$ (214)	$ 134
For the Three Months Ended March 31, 2019				
Balance at December 31, 2018	$ 10	$ 22	$ (188)	$ (156)
Net change	31	(12)	1	20
Balance at March 31, 2019	$ 41	$ 10	$ (187)	$ (136)

The following table presents each component of other comprehensive income (loss) ("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, 2020			
Available-for-Sale Investment Securities			
Net unrealized holding gains arising during the period	$ 337	$ (81)	$ 256
Net change	$ 337	$ (81)	$ 256
Cash Flow Hedges			
Net unrealized losses arising during the period	$ (7)	$ 2	$ (5)
Amounts reclassified from AOCI	2	—	2
Net change	$ (5)	$ 2	$ (3)
For the Three Months Ended March 31, 2019			
Available-for-Sale Investment Securities			
Net unrealized holding gains arising during the period	$ 40	$ (9)	$ 31
Net change	$ 40	$ (9)	$ 31
Cash Flow Hedges			
Net unrealized losses arising during the period	$ (13)	$ 3	$ (10)
Amounts reclassified from AOCI	(3)	1	(2)
Net change	$ (16)	$ 4	$ (12)
Pension Plan			
Unrealized gains arising during the period	$ 1	$ —	$ 1
Net change	$ 1	$ —	$ 1

8. Income Taxes

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

	For the Three Months Ended March 31,	
	2020	2019
(Loss) income before income taxes	$ (78)	$ 930
Income tax (benefit) expense	$ (17)	$ 204
Effective income tax rate	22.0%	21.9%

The income tax expense decreased $221 million for the three months ended March 31, 2020 as compared to the same period in 2019 due to a pretax loss for the current period. The effective tax rate was relatively flat for the three months ended March 31, 2020 as compared to the same period in 2019. The effective rate for three months ended March 31, 2019 was favorably impacted by the resolution of certain tax matters.

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 regularly assesses the likelihood of additional assessments or settlements in each of the taxing jurisdictions resulting from these and subsequent years' examinations. The years 2011-2015 are currently under review by the IRS Office of Appeals. 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.

9. Earnings Per Share

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

	For the Three Months Ended March 31,	
	2020	2019
Numerator		
Net (loss) income	$ (61)	$ 726
Preferred stock dividends	(16)	(16)
Net (loss) income available to common stockholders	(77)	710
Income allocated to participating securities	(1)	(5)
Net (loss) income allocated to common stockholders	$ (78)	$ 705
Denominator		
Weighted-average shares of common stock outstanding	308	328
Weighted-average shares of common stock outstanding and common stock equivalents	308	328
Basic (loss) earnings per common share	$ (0.25)	$ 2.15
Diluted (loss) earnings per common share	$ (0.25)	$ 2.15

Anti-dilutive securities were not material and had no impact on the computation of diluted EPS for the three months ended March 31, 2020 and 2019.

10. Capital Adequacy

The Company is subject to the capital adequacy guidelines of the Federal Reserve, and Discover Bank, the Company's main 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 have a direct material effect on the financial position and results of the Company and Discover Bank. Under capital adequacy guidelines and the regulatory framework for prompt corrective action, the Company and Discover Bank must meet specific capital guidelines 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.

The Company 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"). The Basel III rules, which became effective for the Company January 2015, were subject to phase-in periods through the end of 2018, based on the Company being classified as a "Standardized Approach" entity. As of January 1, 2019, the Basel III rules subject to transition have all been fully phased in with the exception of certain transition provisions that were frozen pursuant to regulation issued in November 2017. Pursuant to a final rule issued in July 2019, the transition provisions that were previously frozen have been replaced with new permanent rules effective in April 2020. Additionally, on March 27, 2020, federal bank regulatory agencies announced an interim final rule that allows banks that have implemented CECL the option to delay for two years the estimated impact of CECL on regulatory capital, followed by a three-year transition period. For purposes of calculating regulatory capital, the Company has elected to defer recognition of the estimated impact of CECL on regulatory capital for two years in accordance with the interim final rule adopted by federal bank regulatory agencies on March 27, 2020. Pursuant to the interim final rule, the estimated impact of CECL on regulatory capital will be phased in over a three-year period beginning in 2022.

As of March 31, 2020, the Company and Discover Bank met all Basel III minimum capital ratio requirements to which they were subject. The Company and Discover Bank also met the requirements to be considered "well-capitalized" under Regulation Y and prompt corrective action regulations, respectively, and there have been no conditions or events that management believes have changed the Company's or Discover Bank's category. To be categorized as "well-capitalized," the Company and Discover Bank must maintain minimum capital ratios as set forth in the table below.

The following table shows the actual capital amounts and ratios of the Company 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, 2020						
Total capital (to risk-weighted assets)						
Discover Financial Services	$ 12,947	13.7%	$ 7,586	≥8.0%	$ 9,482	≥10.0%
Discover Bank	$ 13,095	14.0%	$ 7,508	≥8.0%	$ 9,385	≥10.0%
Tier 1 capital (to risk-weighted assets)						
Discover Financial Services	$ 11,309	11.9%	$ 5,689	≥6.0%	$ 5,689	≥6.0%
Discover Bank	$ 10,966	11.7%	$ 5,631	≥6.0%	$ 7,508	≥8.0%
Tier 1 capital (to average assets)						
Discover Financial Services	$ 11,309	9.9%	$ 4,578	≥4.0%	N/A	N/A
Discover Bank	$ 10,966	9.7%	$ 4,529	≥4.0%	$ 5,661	≥5.0%
Common Equity Tier 1 (to risk-weighted assets)						
Discover Financial Services	$ 10,746	11.3%	$ 4,267	≥4.5%	N/A	N/A
Discover Bank	$ 10,966	11.7%	$ 4,223	≥4.5%	$ 6,100	≥6.5%
December 31, 2019						
Total capital (to risk-weighted assets)						
Discover Financial Services	$ 13,250	13.5%	$ 7,860	≥8.0%	$ 9,825	≥10.0%
Discover Bank	$ 13,441	13.8%	$ 7,776	≥8.0%	$ 9,720	≥10.0%
Tier 1 capital (to risk-weighted assets)						
Discover Financial Services	$ 11,595	11.8%	$ 5,895	≥6.0%	$ 5,895	≥6.0%
Discover Bank	$ 11,203	11.5%	$ 5,832	≥6.0%	$ 7,776	≥8.0%
Tier 1 capital (to average assets)						
Discover Financial Services	$ 11,595	10.3%	$ 4,482	≥4.0%	N/A	N/A
Discover Bank	$ 11,203	10.1%	$ 4,435	≥4.0%	$ 5,544	≥5.0%
Common Equity Tier 1 (to risk-weighted assets)						
Discover Financial Services	$ 11,032	11.2%	$ 4,421	≥4.5%	N/A	N/A
Discover Bank	$ 11,203	11.5%	$ 4,374	≥4.5%	$ 6,318	≥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.

11. 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, 2020, the Company had unused credit arrangements for loans of approximately $210.9 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.

Contingencies

See Note 12: 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 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.
- *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 that 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 $90 million as of March 31, 2020.

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, 2020, the Company had not recorded any material 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, 2020 and 2019.

The maximum potential amount of obligations of the Discover Network arising as a result of 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 (in millions):

	For the Three Months Ended March 31,	
	2020	2019
Aggregate sales transaction volume[1]	$ 40,963	$ 38,759

(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 material contingent liability in the condensed consolidated financial statements for merchant chargeback guarantees as of March 31, 2020 or December 31, 2019. 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 higher risk due to various factors such as time delays in the delivery of products or services. As of March 31, 2020 and December 31, 2019, the Company had escrow deposits and settlement withholdings of $18 million and $8 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.

12. 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, some of which may result in significant adverse judgments, settlements, fines, penalties, injunctions, decreases in regulatory ratings, customer restitution or other relief, which could materially impact the Company's condensed consolidated financial statements, increase its cost of operations, or limit its 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 student loan servicing practices, as described below. 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 expense was not material for the three months ended March 31, 2020 and 2019.

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 those losses the likelihood of which 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 $125 million. This estimated range of reasonably possible losses is based upon currently available information for those proceedings in which the Company is involved, takes into account the Company's best estimate of such losses for those matters for which an estimate can be made, and 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 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 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, and could adversely affect the Company's reputation.

On July 22, 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 resolving the agency's investigation with respect to certain student loan servicing practices. The order required the Discover Subsidiaries to provide redress of approximately $16 million to consumers who may have been affected by the activities described in the order related to certain collection calls, overstatements of minimum payment due amounts in billing statements and provision of interest paid information to consumers, and provide regulatory disclosures with respect to loans acquired in default. In addition, the Discover Subsidiaries were required to pay a $2.5 million civil money penalty to the CFPB. As required by the consent order, on October 19, 2015, the Discover Subsidiaries submitted to the CFPB a redress plan and a compliance plan designed to ensure that the Discover Subsidiaries provide redress and otherwise comply with the terms of the order. The CFPB is currently investigating Discover Bank's compliance with the order and certain student loan servicing practices. Discover Bank is cooperating with the CFPB in connection with the investigation. Discover Bank is enhancing the compliance plan submitted to the CFPB in 2015. The investigation could lead to a supervisory action, which may result in legal fees, penalties, fines and remediation expenses, and could require Discover Bank to change certain business practices.

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. 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. On March 11, 2018, the Court entered an order denying the plaintiffs' motion for class certification without prejudice to filing a renewed motion. Plaintiffs filed a renewed motion for class certification on July 16, 2018. Defendants filed their Opposition to Class Certification on March 15, 2019; a hearing date is yet to be scheduled. 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, but will seek to vigorously defend against all claims asserted by the plaintiffs.

13. 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 financial instruments, which is based on whether the inputs to the valuation techniques used to measure the fair value of each financial instrument 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 in which the inputs used to measure fair value may fall into different levels of the fair value hierarchy, the level in the fair value hierarchy within which the fair value measurement in its entirety is classified is based on the lowest level input that is significant to the fair value measurement in its entirety. The Company may utilize both observable and unobservable inputs in determining the fair values of financial instruments classified within the Level 3 category.

The determination of classification of its financial instruments within the fair value hierarchy is performed at least quarterly by the Company. For transfers in and out of the levels of the fair value hierarchy, the Company discloses the fair value measurement based on the value immediately preceding the transfer.

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, 2020				
Assets				
Fair value - OCI				
U.S. Treasury securities	$ 10,110	$ —	$ —	$ 10,110
Residential mortgage-backed securities - Agency	—	393	—	393
Available-for-sale investment securities	$ 10,110	$ 393	$ —	$ 10,503
Fair value - Net income				
Derivative financial instruments - fair value hedges[(1)]	$ —	$ 1	$ —	$ 1
Liabilities				
Fair value - OCI				
Derivative financial instruments - cash flow hedges[(1)]	$ —	$ 9	$ —	$ 9
Fair value - Net income				
Derivative financial instruments - fair value hedges[(1)]	$ —	$ 1	$ —	$ 1
Balance at December 31, 2019				
Assets				
Fair value - OCI				
U.S. Treasury securities	$ 9,906	$ —	$ —	$ 9,906
Residential mortgage-backed securities - Agency	—	417	—	417
Available-for-sale investment securities	$ 9,906	$ 417	$ —	$ 10,323
Liabilities				
Fair value - OCI				
Derivative financial instruments - cash flow hedges[(1)]	$ —	$ 2	$ —	$ 2
Fair value - Net income				
Derivative financial instruments - fair value hedges[(1)]	$ —	$ 4	$ —	$ 4
Derivative financial instruments - foreign exchange forward contracts[(1)]	$ —	$ 1	$ —	$ 1

(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 securities and residential mortgage-backed securities. 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 Company classifies residential mortgage-backed securities as Level 2, the fair value estimates of which are based on the best information available. This data may consist of observed market prices, broker quotes or discounted cash flow models that incorporate assumptions such as benchmark yields, issuer spreads, prepayment speeds, credit ratings and losses, the priority of which may vary based on availability of information.

The Company validates the fair value estimates provided by pricing services primarily by comparison to valuations obtained through other pricing sources. The Company evaluates pricing variances amongst 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, 2020, amounts reported in residential mortgage-backed securities reflect government-rated obligations issued by Fannie Mae, Freddie Mac and Ginnie Mae with a par value of $377 million, a weighted-average coupon of 2.81% and a weighted-average remaining maturity of three years.

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 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 amongst 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 to any changes to the valuation techniques performed by proprietary pricing models prior to implementation, working closely with the third-party valuation service and reviews the control objectives of the service 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 and other intangible assets. For these assets, measurement at fair value in periods subsequent to the initial recognition of the assets is applicable if one or more of the assets is determined to be impaired. The Company had no impairments related to these assets during the three months ended March 31, 2020 and 2019.

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):

Balance at March 31, 2020	**Quoted Prices in Active Markets for Identical Assets (Level 1)**	**Significant Other Observable Inputs (Level 2)**	**Significant Unobservable Inputs (Level 3)**	**Total**	**Carrying Value**
Assets					
Amortized cost					
Residential mortgage-backed securities - Agency	$ —	$ 288	$ —	$ 288	$ 279
Held-to-maturity investment securities	$ —	$ 288	$ —	$ 288	$ 279
Net loan receivables	$ —	$ —	$ 93,574	$ 93,574	$ 86,050
Carrying value approximates fair value[(1)]					
Cash and cash equivalents	$ 10,028	$ —	$ —	$ 10,028	$ 10,028
Restricted cash	$ 1,183	$ —	$ —	$ 1,183	$ 1,183
Accrued interest receivables[(2)]	$ —	$ 1,027	$ —	$ 1,027	$ 1,027
Liabilities					
Amortized cost					
Time deposits[(3)]	$ —	$ 34,460	$ —	$ 34,460	$ 33,862
Long-term borrowings - owed to securitization investors	$ —	$ 13,647	$ 151	$ 13,798	$ 13,939
Other long-term borrowings	—	12,042	—	12,042	12,159
Long-term borrowings	$ —	$ 25,689	$ 151	$ 25,840	$ 26,098
Carrying value approximates fair value[(1)]					
Accrued interest payables[(2)]	$ —	$ 220	$ —	$ 220	$ 220

(1) The carrying values of these assets and liabilities approximate fair value due to the nature of their liquidity (i.e., due or payable in less than one year).

(2) Accrued interest receivable and payable carrying values are presented as part of other assets or 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.

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):

Balance at December 31, 2019	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total	Carrying Value
Assets					
Amortized cost					
Residential mortgage-backed securities - Agency	$ —	$ 274	$ —	$ 274	$ 272
Held-to-maturity investment securities	$ —	$ 274	$ —	$ 274	$ 272
Net loan receivables	$ —	$ —	$ 96,094	$ 96,094	$ 92,511
Carrying value approximates fair value(1)					
Cash and cash equivalents	$ 6,924	$ —	$ —	$ 6,924	$ 6,924
Restricted cash	$ 40	$ —	$ —	$ 40	$ 40
Accrued interest receivables(2)	$ —	$ 1,044	$ —	$ 1,044	$ 1,044
Liabilities					
Amortized cost					
Time deposits(3)	$ —	$ 34,910	$ —	$ 34,910	$ 34,381
Long-term borrowings - owed to securitization investors	$ —	$ 14,211	$ 172	$ 14,383	$ 14,284
Other long-term borrowings	—	12,189	—	12,189	11,417
Long-term borrowings	$ —	$ 26,400	$ 172	$ 26,572	$ 25,701
Carrying value approximates fair value(1)					
Accrued interest payables(2)	$ —	$ 283	$ —	$ 283	$ 283

(1) The carrying values of these assets and liabilities approximate fair value due to the nature of their liquidity (i.e., due or payable in less than one year).
(2) Accrued interest receivable and payable carrying values are presented as part of other assets or 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.

14. 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 addressed 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 prior to engaging in any transaction with the Company. Counterparties are monitored on a regular basis by the Company 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, 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 13: Fair Value Measurements for a description of the valuation methodologies of 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 changes in interest rates related to future cash flows resulting from interest payments on credit card securitized debt and deposits. The Company's outstanding cash flow hedges are for an initial maximum period of seven years for deposits. The derivatives are designated as hedges of the risk of changes in cash flows on the Company's Federal Funds rate-based interest payments, and qualify for hedge accounting in accordance with ASC Topic 815, *Derivatives and Hedging* ("ASC 815").

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, 2020 will be reclassified to interest expense as interest payments are accrued on certain of the Company's floating-rate securitized debt and deposits. During the next 12 months, the Company estimates it will reclassify $11 million of pretax expense to interest expense related to its derivatives designated as cash flow hedges.

Fair Value Hedges

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

Derivatives Cleared Through an Exchange

The legal characterization of 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 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, 2020				December 31, 2019		
	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	$ 900	3	$ —	$ 9	$ 900	$ —	$ 2
Interest rate swaps—fair value hedge	$ 14,275	18	1	1	$ 14,275	—	4
Derivatives not designated as hedges							
Foreign exchange forward contracts[1]	$ 23	6	—	—	$ 38	—	1
Total gross derivative assets/liabilities[2]			1	10		—	7
Less: collateral held/posted[3]			—	(10)		—	(7)
Total net derivative assets/liabilities			$ 1	$ —		$ —	$ —

(1) The foreign exchange forward contracts have notional amounts of EUR 6 million, GBP 6 million, SGD 1 million and INR 596 million as of March 31, 2020 and notional amounts of EUR 9 million, GBP 14 million, SGD 1 million and INR 596 million as of December 31, 2019.

(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, 2020, the Company had two outstanding contracts with a total notional amount of $28 million and immaterial fair value. At December 31, 2019, the Company had two outstanding contracts with a total notional amount of $42 million and immaterial fair value.

(3) Collateral amounts, which consist of both 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 adjustment for fair value hedges (dollars in millions):

	March 31, 2020		December 31, 2019	
	Carrying Amount of Hedged Assets/Liabilities	Cumulative Amount of Fair Value Hedging Adjustment Increasing (Decreasing) the Carrying Amount of Hedged Assets/Liabilities	Carrying Amount of Hedged Assets/Liabilities	Cumulative Amount of Fair Value Hedging Adjustment Increasing (Decreasing) the Carrying Amount of Hedged Assets/Liabilities
Long-term borrowings	$ 14,644	$ 409	$ 14,244	$ 13

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 in Income		
	Interest Expense		
	Deposits	Long-Term Borrowings	Other Income
For the Three Months Ended March 31, 2020			
Total amounts of income and expense line items presented in the statements of income in which the effects of fair value or cash flow hedges are recorded	$ (373)	$ (211)	$ 28
The effects of cash flow and fair value hedging			
Losses on cash flow hedging relationship			
Amounts reclassified from OCI into earnings	$ (1)	$ (1)	$ —
(Losses) gains on fair value hedging relationship			
Losses on hedged items	$ —	$ (396)	$ —
Gains on interest rate swaps	—	405	—
Total gains on fair value hedges	$ —	$ 9	$ —
The effects of derivatives not designated in hedging relationships			
Gains on derivatives not designated as hedges	$ —	$ —	$ 1
For the Three Months Ended March 31, 2019			
Total amounts of income and expense line items presented in the statements of income in which the effects of fair value or cash flow hedges are recorded	$ (386)	$ (246)	$ 28
The effects of cash flow and fair value hedging			
Gains on cash flow hedging relationship			
Amounts reclassified from OCI into earnings	$ 1	$ 2	$ —
(Losses) gains on fair value hedging relationship			
Losses on hedged items	$ —	$ (55)	$ —
Gains on interest rate swaps	—	42	—
Total losses on fair value hedges	$ —	$ (13)	$ —

For the impact of the derivative instruments on OCI, see Note 7: 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 these derivatives held with that counterparty. The Company may also be required to post collateral with a counterparty for its fair value and cash flow hedge interest rate swaps depending on the credit rating it or Discover Bank receives from specified major credit rating agencies. 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.

At March 31, 2020, Discover Bank's credit rating met specified thresholds set by its counterparties. However, if its credit rating is reduced below investment grade, Discover Bank would be required to post additional collateral. The amount of additional collateral as of March 31, 2020 would have been $20 million. DFS (Parent Company) had no outstanding derivatives as of March 31, 2020, and therefore, no collateral was required.

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

15. Segment Disclosures

The Company's business activities are managed in two segments: Direct Banking and Payment Services.

- *Direct Banking:* The Direct 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 equity loans, and other consumer lending and deposit products. The majority of Direct 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 Direct Banking segment.
- Through its operation of the Discover Network, the Direct Banking segment incurs fixed marketing, servicing and infrastructure costs that are not specifically allocated among the segments, with the exception of an allocation of direct and incremental costs driven by the Company's Payment Services segment.
- The assets of the Company 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):

	Direct Banking	Payment Services	Total
For the Three Months Ended March 31, 2020			
Interest income			
Credit card loans	$ 2,416	$ —	$ 2,416
Private student loans	205	—	205
Personal loans	254	—	254
Other	107	—	107
Total interest income	2,982	—	2,982
Interest expense	584	—	584
Net interest income	2,398	—	2,398
Provision for credit losses	1,807	—	1,807
Other income	366	124	490
Other expense	1,118	41	1,159
(Loss) income before income taxes	$ (161)	$ 83	$ (78)
For the Three Months Ended March 31, 2019			
Interest income			
Credit card loans	$ 2,362	$ —	$ 2,362
Private student loans	205	—	205
Personal loans	237	—	237
Other	133	—	133
Total interest income	2,937	—	2,937
Interest expense	632	—	632
Net interest income	2,305	—	2,305
Provision for credit losses[1]	809	—	809
Other income	372	86	458
Other expense	989	35	1,024
Income before income taxes	$ 879	$ 51	$ 930

(1) Prior to adoption of ASU No. 2016-13 on January 1, 2020, credit losses were estimated using the incurred loss approach.

16. 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 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):

	Direct Banking	Payment Services	Total
For the Three Months Ended March 31, 2020			
Other income subject to ASC 606			
Discount and interchange revenue, net[1]	$ 197	$ 19	$ 216
Protection products revenue	47	—	47
Transaction processing revenue	—	44	44
Other income	3	25	28
Total other income subject to ASC 606[2]	247	88	335
Other income not subject to ASC 606			
Loan fee income	119	—	119
Gains on equity investments	—	36	36
Total other income not subject to ASC 606	119	36	155
Total other income by operating segment	$ 366	$ 124	$ 490
For the Three Months Ended March 31, 2019			
Other income subject to ASC 606			
Discount and interchange revenue, net[1]	$ 217	$ 14	$ 231
Protection products revenue	49	—	49
Transaction processing revenue	—	46	46
Other income	2	26	28
Total other income subject to ASC 606[2]	268	86	354
Other income not subject to ASC 606			
Loan fee income	104	—	104
Total other income not subject to ASC 606	104	—	104
Total other income by operating segment	$ 372	$ 86	$ 458

(1) Net of rewards, including Cashback Bonus rewards, of $478 million and $446 million for the three months ended March 31, 2020 and 2019, respectively.
(2) Excludes $1 million of deposit product fees that are reported within net interest income for the three months ended March 31, 2020 and 2019.

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 of the Company's annual report on Form 10-K for the year ended December 31, 2019.

17. Subsequent Events

The Company has evaluated events and transactions that have occurred subsequent to March 31, 2020 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," and similar expressions. Such statements are based upon 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: the effect of the coronavirus disease 2019 ("COVID-19") pandemic and measures taken to mitigate the pandemic, including their impact on our credit quality and business operations as well as their impact on general economic and financial markets, 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 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; our ability to sustain and grow our private student loan, personal loan and home equity loan products; difficulty obtaining regulatory approval for, financing, 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 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 and unforeseen or catastrophic events; our ability to introduce new products and services; our ability to manage our relationships with third-party vendors; our ability to maintain current technology and integrate new and acquired systems; 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; 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 in this quarterly report and in "Risk Factors," "Business — Competition," "Business — Supervision and Regulation" 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, 2019, which is filed with the SEC and available at the SEC's internet site (https://www.sec.gov).

Introduction and Overview

Discover Financial Services ("DFS") is a direct banking and payment services company. We provide direct banking products and services and payment services through our subsidiaries. We offer our customers credit card loans, private student loans, personal loans, home equity loans and deposit products. We also operate the Discover Network, the PULSE network ("PULSE") and Diners Club International ("Diners Club"). 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 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 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.

Change in Accounting Principle

Financial Accounting Standards Board ("FASB") Accounting Standards Update ("ASU") No. 2016-13, Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments became effective for us on January 1, 2020. The standard significantly amended accounting principles generally accepted in the United States by replacing the incurred loss model with the current expected credit loss ("CECL") approach. The CECL approach requires our allowance for credit losses to be based on an estimate of all anticipated credit losses over the remaining expected life of all of the loans, as opposed to an estimate of incurred losses as of the balance sheet date. For additional information on CECL, see Note 1: Background and Basis of Presentation to our condensed consolidated financial statements.

The ASU required modified-retrospective application, meaning a cumulative-effect adjustment was recorded on January 1, 2020 without adjusting comparative prior periods. This cumulative-effect adjustment does not reflect the economic disruption resulting from COVID-19 since the global disruption occurred subsequent to January 1, 2020. As a result of adoption, we recorded:

- A $2.5 billion increase to the allowance for credit losses on loan receivables primarily representing the adjustment for recording reserves for expected losses, not simply those deemed to be already incurred, and extending the loss estimate period over the entire life of the loan;
- A $0.6 billion increase to other assets related to deferred tax assets on the larger allowance for credit losses;
- An offsetting $1.9 billion decrease, net of tax, to the opening balance of retained earnings; and
- Immaterial adjustments to the following:
  - The carrying value of PCD loans and related accrued interest reflected in other assets; and
  - Accrued expenses and other liabilities to record reserves for unfunded commitments.

As required by the ASU, financial statement results and balances prior to January 1, 2020 have not been retrospectively adjusted to reflect the amendments in ASU No. 2016-13. Therefore, current period results and balances are not comparable to prior period amounts, particularly with regard to the provision and allowance for credit losses (and their related subtotals).

Additional Information for Comparability

In order to help investors understand our year-over-year performance, we are providing adjusted prior year allowance for credit losses and related allowance build figures using the CECL approach for comparative purposes. These adjusted prior year figures are non-GAAP financial measures and should be viewed in addition to, not as a substitute for, our reported results. We believe that these adjusted figures are useful to investors since credit losses were estimated using the incurred loss approach prior to adoption of ASU No. 2016-13 on January 1, 2020. The adjusted allowance and related build figures provide investors with comparable amounts to understand our results.

The following table provides a reconciliation of prior year allowance for credit losses figures as reported (using the incurred loss approach) to adjusted allowance for credit losses using the CECL approach, as well as related allowance build figures (dollars in millions):

	As of and for the Quarter Ended,				As of
	Dec 31, 2019	Sep 30, 2019	Jun 30, 2019	Mar 31, 2019	Dec 31, 2018
Allowance for credit losses - as reported (incurred)	$ 3,383	$ 3,299	$ 3,202	$ 3,134	$ 3,041
CECL adjustment[1]	2,461	2,440	2,400	2,408	2,376
Allowance for credit losses - as adjusted (CECL)	$ 5,844	$ 5,739	$ 5,602	$ 5,542	$ 5,417
Allowance build - as reported (incurred)[2]	$ 84	$ 97	$ 68	$ 93	
Allowance build - as adjusted (CECL)[3]	$ 105	$ 137	$ 60	$ 125	

(1) Represents adjustment for recording reserves for expected losses, not simply those deemed to be already incurred, and extending the loss estimate period over the entire life of the loan.
(2) Calculated as the change in the allowance for credit losses as reported using the incurred loss approach.
(3) Calculated as the change in the allowance for credit losses as adjusted using the CECL approach.

Refer to "— Critical Accounting Estimates — Allowance for Credit Losses on Loan Receivables" for more details on our estimation process and key assumptions requiring significant judgment and to "— Loan Quality — Provision and Allowance for Credit Losses" for discussion of drivers of current period changes in the allowance for credit losses.

COVID-19 Pandemic Response and Impact

The COVID-19 pandemic has had widespread and unprecedented impact on a global scale. The health crisis has had a rapid and severe effect on financial markets and the economy. The impact of COVID-19 is rapidly evolving, its future effects are uncertain, and it may be difficult to assess or predict the extent of the impacts of the pandemic on us as many factors are beyond our control and knowledge. For a discussion of the risks we face with respect to the COVID-19 pandemic, the steps taken to mitigate the pandemic and the economic contraction resulting therefrom, see "Item 1A — Risk Factors" in Part II of this quarterly report on Form 10-Q, which should be read in conjunction with the risk factors disclosed in our annual report on Form 10-K for the year ended December 31, 2019. This section includes a discussion of significant areas of potential impact on us of the COVID-19 pandemic and certain actions we are taking or expect to take in this time of uncertainty caused by the COVID-19 pandemic.

Outlook and Financial Results

In light of the unknown and unpredictable impact COVID-19 will have on the economy, we have withdrawn our previously provided guidance. We saw some of the early impacts of the pandemic in our first quarter results, specifically in the decrease of sales volume and credit card loan growth as well as the increase in our estimate of life of loan expected credit losses. Due to the current economic environment and the expected pressure on earnings for the remainder of the year, we currently anticipate to implement approximately $400 million of cost reductions over the remaining three quarters of 2020, targeting areas such as account acquisition costs and marketing expenses. COVID-19 has resulted in authorities implementing measures to try to contain the virus such as travel bans and restrictions, shutdowns and quarantines. We anticipate these measures will negatively impact consumer and business spending habits and the consumer credit environment, including the ability of consumers to repay their loans. These measures may remain in place for a significant period of time and they are likely to continue to adversely affect our business, results of operations and financial condition.

Regulatory

Federal and state governance bodies, including the U.S. Congress and the Executive Branch, have taken extraordinary steps to support the U.S. economy and mitigate the effects of the COVID-19 pandemic and the impact of measures taken to slow its spread. The government has provided, among other things, regulatory relief to financial institutions, liquidity to capital markets and direct support to businesses and consumers. Additional actions are also being considered at the federal and state levels. It is too early to determine the overall effectiveness of actions that have been taken and their ultimate impact on our results of operations and financial condition. For more information, see "— Regulatory Environment and Developments" below.

Loan Receivables

In our loan portfolio, we continue to lend to customers, but have tightened standards for new accounts and for growing existing accounts. Currently, we are providing support to our customers impacted by COVID-19 across all of our loan products, expanding payment plans notably through skip-a-pay programs, to help our customers during this period of economic difficulty. We will continue to work with these customers and evaluate changing or introducing new payment plans to support customers. Through the first half of April, we have enrolled over 450 thousand customers and $3.8 billion in receivables in skip-a-pay programs. We have materially increased our loan loss reserves in anticipation of higher credit losses caused by an outlook for a weaker economy with expectations for a sharp rise in unemployment. The reserve build takes into account our best estimate for the impact of programs put in place by federal and state governments and agencies to mitigate the economic impact of the pandemic. These programs are in their early stages and it is too early to tell how successful these measures will be. It is also unclear whether the measures employed to date are complete or whether federal and state governments and agencies may take additional action that could impact our business. Refer to "— Loan Quality — Provision and Allowance for Credit Losses" for more details on the current period allowance for credit losses.

Capital and Liquidity

We entered the COVID-19 pandemic with strong capital and liquidity positions, which we believe allows us to maintain normal operations during periods of financial market stress and disruptions to wholesale and retail funding sources. We believe we have a sufficient reserve of high-quality liquid assets and have been able to maintain access to diverse funding channels. We continued to see strong demand for our direct-to-consumer and sweep deposit balances in March as investors sought safer assets. We remain well-capitalized with capital ratios in excess of regulatory minimums and have taken actions to preserve capital such as suspending our share repurchase program. In response to the COVID-19 pandemic, federal banking agencies announced on March 27, 2020 an interim final rule that allows banks that have implemented CECL the option to delay for two years the estimated impact of CECL on regulatory capital, followed by a three-year transition period. For purposes of calculating regulatory capital, we have elected to defer recognition of the estimated impact of CECL on regulatory capital for two years in accordance with the interim final rule. Pursuant to the interim final rule, the estimated impact of CECL on regulatory capital will be phased in over a three-year period beginning in 2022.

For more information on the impact of COVID-19 on liquidity and capital, see "— Liquidity and Capital Resources — Impact of COVID-19 on Liquidity and Capital."

Payment Services

As governments across the U.S. and the world have taken steps to minimize the transmission of COVID-19, the number of transactions processed on the Discover Global Network has declined overall despite increases in certain categories. Certain negatively impacted categories such as travel make up a small portion of the transactions processed but may have an outsized impact on some of our Diners Club franchisees. The current crisis may result in lasting changes in consumer payment behaviors, such as a shift from credit to debit, a decline in the use of cash, increasing online sales and rapid adoption of contactless payment. These shifts may result in changes to the Payment Services segment's results of operations.

Fair Value and Impairments

We assessed the impact of COVID-19 with respect to our goodwill and intangible assets, investment securities and other long-term assets and determined there were no material impairments necessary during the quarter. With the uncertain nature of the pandemic's overall impact to the economy, we will continue to assess and monitor our assets for potential impairment.

Business Continuity and Operations

The COVID-19 pandemic has had a dramatic effect on our workforce: we have shifted virtually all of our employees to work-from-home. Notwithstanding this shift, our operations continue largely unaffected due to the successful implementation of certain of our business continuity plans. Operational changes necessitated by the rapid shift in employee location have not thus far had a material adverse effect on us or our financial condition; however, the shift has caused us to grow increasingly dependent on third-party service providers, including those with which we have no relationship such as our employees' internet service providers. For more information on the risks associated with reliance on third-party service providers and the shift to work from home, see our risk factors disclosed in our annual report on Form 10-K for the year ended December 31, 2019 as well as "Item 1A — Risk Factors" in Part II of this quarterly report on Form 10-Q.

Regulatory Environment and Developments

The COVID-19 pandemic has dramatically impacted the U.S. and global economies. We are working with our customers to address their unique financial situations, while balancing safety and soundness requirements. We are in contact with our regulators, who have proactively encouraged banks to work with borrowers during this time of stress. Among other things, the federal banking agencies have taken the following actions to proactively address the economic disruptions caused by the COVID-19 outbreak and provide flexibility for banking organizations to work with impacted businesses and consumers:

- Market Stabilization: The Federal Reserve reduced short-term interest rates to near zero and launched numerous programs and facilities, including the Term Asset-Backed Securities Loan Facility, to increase market liquidity and promote stability;
- Capital & Liquidity Flexibility: Regulatory agencies issued statements urging banks to use their capital and liquidity buffers to continue lending during the crisis;
- CECL: A joint agency interim final rule provided banks, such as Discover, with the option to delay CECL's impact on regulatory capital for two years, followed by three year phase-in of those impacts;
- Flexibility to Work with Consumers: Joint agency guidance encouraged banks to work with borrowers and provided guidelines for prudent relief programs, and agencies worked with FASB to provide accounting-classification flexibility for certain short-term loan modifications;
- Pandemic Planning: The Federal Financial Institutions Examination Council released updated guidance to remind banks of actions they should be taking to minimize potential adverse effects of a pandemic on business continuity; and
- Supervisory Flexibility: Regulatory agencies have indicated willingness to work with institutions to provide flexibility and minimize burdens of supervisory activities, including extending deadlines for data collections.

In addition to the above actions, the Coronavirus Aid, Relief, and Economic Security Act ("CARES Act") was signed into law on March 27, 2020 to provide relief to U.S. businesses and consumers impacted by the COVID-19 outbreak. The CARES Act includes approximately $2 trillion of financial assistance, principally through federal loan programs intended to stem job losses and aid businesses that have experienced disruption as a result of the pandemic. Among other things, the CARES Act also provides expanded unemployment benefits and direct payments to impacted consumers and provides relief for consumer borrowers through changes to credit reporting requirements and mandated forbearance on certain federally backed mortgages and student loans. Specific to financial institutions, the CARES Act provides the option for financial institutions, including Discover, to temporarily suspend certain accounting requirements related to troubled debt restructurings ("TDRs") and delay the effectiveness of CECL for the duration of the national emergency. See "— Banking — Capital Standards and Stress Testing" below for more information. It also authorizes the Federal Deposit Insurance Corporation ("FDIC") to establish an emergency guarantee program, which could be used to temporarily increase deposit insurance limits. Additional legislative and regulatory action is likely to be proposed and may include requirements that could significantly impact our business practices, such as requirements around payment plans for consumers impacted by COVID-19 and limits on our ability to repurchase our stock and pay dividends. See the risk factor entitled "*We may be limited in our ability to pay dividends on and repurchase our stock*" in our annual report on Form 10-K for the year ended December 31, 2019 for more information on how our ability to pay dividends may be limited. The impact of these legislative and regulatory initiatives on us, the economy and the U.S. consumer will depend upon a wide variety of factors some of which are yet to be identified.

Banking

Capital Standards and Stress Testing

The regulations resulting from the Economic Growth, Regulatory Relief, and Consumer Protection Act were largely finalized in fall 2019. Under the final rules, Discover is categorized as a Category IV institution and therefore subject to the least stringent requirements for bank holding companies with at least $100 billion in assets. Among other things, Discover is subject to supervisory stress tests every other year rather than annually, is no longer subject to regulations requiring submission of company-run capital stress tests and is no longer subject to the liquidity coverage ratio. However, Discover is still required to submit annual capital plans to the Federal Reserve and remains subject to other core components of the enhanced prudential standards rules, such as risk management and risk committee requirements and liquidity risk management regulations. Additionally, on March 4, 2020, the Federal Reserve issued a final rule implementing a new Stress

Capital Buffer ("SCB") requirement for bank holding companies that are subject to supervisory stress tests, including Discover. The new SCB requirement will be set by the Federal Reserve individually for each bank holding company based on their supervisory stress test results and the SCB will become effective for each company beginning on October 1, 2020. Refer to "— Liquidity and Capital Resources — Capital" for more information. We have been notified that we are subject to the Comprehensive Capital Analysis and Review ("CCAR") quantitative process and the new SCB requirement in 2020 and we submitted our capital plan on April 6, 2020. Consistent with regulatory expectations, our management has also conducted forward-looking sensitivity testing to assess the potential impact of economic changes resulting from the COVID-19 pandemic on capital planning and provided this information to its Board of Directors.

Capital Standards and Stress Testing — CECL

In December 2018, federal banking agencies adopted a joint final rule that, among other things, gives bank holding companies and banks, including Discover and its bank subsidiaries, the option to phase in the regulatory capital impacts of implementing CECL over a three-year transition period. In response to the COVID-19 pandemic, the federal banking agencies adopted an interim final rule that provides an alternative phase-in option whereby a banking institution would defer recognition of the estimated impact of CECL on regulatory capital for two full years post-implementation followed by a phase in over a three-year transition period. This latter option is intended to provide relief to banking institutions so they may "better focus on supporting lending to creditworthy households and businesses in light of recent strains on the U.S. economy as a result of COVID-19, while also maintaining the quality of regulatory capital." We have elected to implement the five-year transition for recognizing the potentially adverse effect of the new CECL methodology. For more information, see Note 10: Capital Adequacy to our condensed consolidated financial statements. In addition to the regulatory actions to mitigate the impact of CECL, the CARES Act enacted on March 27, 2020 includes an option for financial institutions to temporarily suspend CECL accounting until the end of the COVID-19 national emergency or through December 31, 2020, whichever is earlier.

For purposes of capital stress testing, notwithstanding the January 1, 2020 effective date for CECL, the Federal Reserve announced that it will not incorporate CECL into its supervisory stress tests until at least 2022 to reduce uncertainty, allow for better capital planning at affected firms and allow the Federal Reserve to gather additional information on the impact of CECL. However, banking institutions subject to Dodd-Frank Wall Street Reform and Consumer Protection Act ("Dodd-Frank Act") company-run stress test requirements are required to incorporate CECL into their internal stress testing processes beginning in 2020. DFS and Discover Bank continue to meet requirements to be "well-capitalized" post-adoption of CECL. For more information on CECL, see Note 1: Background and Basis of Presentation to our condensed consolidated financial statements.

LIBOR

On July 27, 2017, the UK Financial Conduct Authority 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. LIBOR is commonly used as a benchmark to determine interest rates for financial instruments, such as floating-rate asset-backed securities issued by Discover Card Execution Note Trust, and certain financial products, including some of our floating-rate student loans. A cross-functional team is overseeing and managing our transition away from the use of LIBOR. This team monitors developments associated with LIBOR alternatives and evolving industry and marketplace norms and conventions for LIBOR indexed instruments, evaluates the impact that the inability to determine LIBOR after 2021 will have on us, and facilitates the operational changes associated with the use of alternative benchmark rates.

Consumer Financial Services

The Consumer Financial Protection Bureau ("CFPB") regulates consumer financial products and services, and examines certain providers of consumer financial products and services, including Discover. The CFPB's authority includes preventing "unfair, deceptive or abusive acts or practices" and ensuring that consumer have access to fair, transparent and competitive financial products and services. The CFPB has rulemaking, supervision and enforcement powers with respect to federal consumer protection laws. Historically, the CFPB's policy priorities focused on several financial products of the type we offer (e.g. credit cards and student loans). In addition, the CFPB is required by statute to undertake certain actions including its bi-annual review of the consumer credit card market. In response to the COVID-19 pandemic, federal banking regulators as well as the CFPB have encouraged banks to work with their borrowers and provided regulatory flexibility to encourage banks to do so, given exam flexibility, delayed the Home Mortgage Disclosure Act and other data collections, and promoted other areas for relief.

Data Security and Privacy

Policymakers at the federal and state levels remain focused on measures to enhance data security and data breach incident response requirements. Furthermore, regulations and legislation at various levels of government have been proposed and enacted to augment data privacy standards. For example, the California Consumer Privacy Act ("CCPA") creates a broad set of privacy rights and remedies modeled in part on the European Union's General Data Protection Regulation. The CCPA went into effect on January 1, 2020, and proposed regulations have yet to be finalized. Enforcement for CCPA is set to begin on or before July 1, 2020. The original proponent of the CCPA recently launched a 2020 California ballot initiative with the goal of expanding the rights and remedies created by the CCPA, while protecting the new law from future legislative amendments. While it is too early to determine the full impact of these developments, they may result in the imposition of requirements on Discover and other providers of consumer financial services or networks that could adversely affect our businesses.

Payment Networks

The Dodd-Frank Act contains several provisions impacting the debit card market, including network participation requirements and interchange fee limitations. The changing debit card environment, including competitor actions related to merchant and acquirer pricing and transaction routing strategies, has adversely affected, and is expected to continue to adversely affect, our PULSE network's business practices, network transaction volume, revenue and prospects for future growth. We continue to closely monitor competitor pricing and technology development strategies in order to assess their impact on our business and on competition in the marketplace. Following an inquiry by the U.S. Department of Justice into some of these competitor pricing strategies, PULSE filed a lawsuit against Visa in late 2014 with respect to these competitive concerns. The Court granted summary judgment in favor of Visa in August 2018. PULSE filed an appeal on January 17, 2019 and Visa filed their response to the appeal on April 5, 2019. The Fifth Circuit Court of Appeals held a hearing on the appeal October 9, 2019. Visa also faces ongoing merchant litigation as it relates to the underlying anticompetitive behavior that is the subject of PULSE's case against Visa. In addition, the Dodd-Frank Act's network participation requirements impact PULSE's ability to enter into exclusivity arrangements, which affects PULSE's current business practices and may materially adversely affect its network transaction volume and revenue.

For more information on how the regulatory and supervisory environment, ongoing enforcement actions and findings, and changes to laws and regulations could impact our strategies, the value of our assets, or otherwise adversely affect our business see "Risk Factors — Current Economic and Regulatory Environment" in our annual report on Form 10-K year ended December 31, 2019. For more information on recent matters affecting us, see Note 12: Litigation and Regulatory Matters to our condensed consolidated financial statements.

Segments

We manage our business activities in two segments, Direct 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 15: Segment Disclosures to our condensed consolidated financial statements.

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

	For the Three Months Ended March 31,	
	2020	2019
Direct Banking		
Interest income		
Credit card	$ 2,416	$ 2,362
Private student loans	205	205
Personal loans	254	237
Other	107	133
Total interest income	2,982	2,937
Interest expense	584	632
Net interest income	2,398	2,305
Provision for credit losses(1)	1,807	809
Other income	366	372
Other expense	1,118	989
(Loss) income before income taxes	(161)	879
Payment Services		
Other income	124	86
Other expense	41	35
Income before income taxes	83	51
Total (loss) income before income taxes	$ (78)	$ 930

(1) Prior to adoption of ASU No. 2016-13 on January 1, 2020, credit losses were estimated using the incurred loss approach.

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

	For the Three Months Ended March 31,	
	2020	2019
Network Transaction Volume		
PULSE Network	$ 49,174	$ 47,106
Network Partners	6,980	5,663
Diners Club(1)	7,737	8,278
Total Payment Services	63,891	61,047
Discover Network—Proprietary(2)	35,180	34,051
Total Volume	$ 99,071	$ 95,098
Transactions Processed on Networks		
Discover Network	645	605
PULSE Network	1,189	1,132
Total	1,834	1,737
Credit Card Volume		
Discover Card Volume(3)	$ 37,474	$ 36,386
Discover Card Sales Volume(4)	$ 33,988	$ 32,899

(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.

Direct Banking

Our Direct Banking segment reported pretax loss of $161 million for the three months ended March 31, 2020 as compared to pretax income of $879 million for the three months ended March 31, 2019.

Net interest income increased for the three months ended March 31, 2020 as compared to the same period in 2019 primarily driven by loan growth and lower funding costs, partially offset by lower yields on credit card loans. Interest income increased during the three months ended March 31, 2020 as compared to the same period in 2019 as a result of continued loan growth offset by lower yields resulting from lower average market rates. Interest expense decreased during the three months ended March 31, 2020 as compared to the same period in 2019 due to lower average market rates offset by a larger funding base.

For the three months ended March 31, 2020, the provision for credit losses increased as compared to the same period in 2019, which, in addition to the impact of life of loan reserving under CECL, primarily reflects a significant change in economic outlook due to the COVID-19 pandemic. For a detailed discussion on provision for credit losses, see "— Loan Quality — Provision and Allowance for Credit Losses."

Total other income for the Direct Banking segment was relatively flat for the three months ended March 31, 2020 as compared to the same period in 2019.

Total other expense increased for the three months ended March 31, 2020 as compared to the same period in 2019. The increase was primarily driven by higher employee compensation and benefits, marketing and business development and professional fees. Employee compensation and benefits increased as a result of higher average salaries. The increase in marketing and business development was driven by higher brand advertising targeting card growth. Professional fees was higher primarily driven by an increase in collection fees.

Discover card sales volume was $34.0 billion for the three months ended March 31, 2020, which was an increase of 3.3% as compared to the same period in 2019. This volume growth was primarily driven by higher consumer spending.

Payment Services

Our Payment Services segment reported pretax income of $83 million for the three months ended March 31, 2020 as compared to pretax income of $51 million for the same period in 2019. The increase in segment pretax income was primarily due to higher other income driven by a gain from the sale of equity investments.

Critical Accounting Estimates

In preparing our condensed consolidated financial statements in conformity with accounting principles generally accepted in the United States ("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 condensed consolidated financial statements are appropriate. However, if actual experience differs from the assumptions and other considerations used in estimating amounts in our condensed 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 on loan receivables, the evaluation of goodwill for potential impairment and the accrual of income taxes as critical accounting estimates. Discussion of critical accounting estimates related to the evaluation of goodwill for potential impairment and the accrual of income taxes are discussed in greater detail in our annual report on Form 10-K for the year ended December 31, 2019. That discussion can be found within "Management's Discussion and Analysis of Financial Condition and Results of Operations — Critical Accounting Estimates." There have not been any material changes in the methods used to formulate these critical accounting estimates related to the evaluation of goodwill for potential impairment and the accrual of income taxes from those discussed in our annual report on Form 10-K for the year ended December 31, 2019. Discussion of our critical accounting estimate related to our allowance for credit losses on loan receivables, which has been updated for adoption of the CECL approach for estimating losses on January 1, 2020, is discussed below. For more information on CECL adoption, see Note 1: Background and Basis of Presentation to our condensed consolidated financial statements.

Allowance for Credit Losses on Loan Receivables

We base our allowance for credit losses on several analyses that help us estimate credit losses anticipated over the remaining expected life of loan receivables as of the balance sheet date. In deriving this estimate, we consider the collectibility 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. Our estimation process includes models that predict customer losses based on risk characteristics and portfolio attributes, macroeconomic variables, and historical data and analysis. There is a significant amount of judgment applied in selecting inputs and analyzing the results produced to determine the allowance. The allowance for credit losses for each loan product type is based on: 1) a reasonable and supportable forecast period, 2) a reversion period and 3) a post-reversion period based on historical information covering the remaining life of the loan. For credit card loans, we use a modeling framework that includes the following components: 1) probability of default, 2) exposure at default and 3) loss given default, as well as estimated recoveries for estimating expected credit losses. For student loans and personal loans, we use vintage-based models that estimate expected credit losses net of recoveries over the life of the loans. The considerations in these models include past and current loan performance, loan growth and seasoning, risk management practices, account collection strategies, economic conditions, bankruptcy filings, policy changes and forecasting uncertainties. Given the same information, others may reach different reasonable estimates.

The key assumptions requiring significant judgment in the allowance for credit losses estimate on a quarterly basis include determination of the lengths of the reasonable and supportable forecast and reversion periods, as well as the macroeconomic variables selected for use in loss forecast models. The lengths of the reasonable and supportable forecast and reversion periods can vary and are subject to a quarterly assessment that considers the economic outlook and level of variability among macroeconomic forecasts. Generally, a straight-line method is used to revert from the reasonable and supportable forecast period to the post-reversion period. The specific macroeconomic variables most significant to the loss forecast models may change over time, but generally include measures of consumer indebtedness, unemployment, personal income and housing-related metrics.

The overall economic environment directly impacts both the reasonable and supportable forecast and reversion periods, as well as 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 a rapidly changing economic environment, as experienced recently under the COVID-19 pandemic, 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. Although the estimation process is broader than any single macroeconomic variable, some variables have a more significant impact on the allowance for credit losses estimate. One example is that a 25 basis point change in the Consumer Installment Credit: Total Outstanding macroeconomic variable, holding all other variables constant, could move the card allowance for credit losses estimate by approximately $48 million. See "— Loan Quality" and Note 3: Loan Receivables to our condensed consolidated financial statements for further details about our allowance for credit losses.

Earnings Summary

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

	For the Three Months Ended March 31,		2020 vs. 2019 Increase (Decrease)	
	2020	**2019**	**$**	**%**
Interest income	$ 2,982	$ 2,937	$ 45	2 %
Interest expense	584	632	(48)	(8)%
Net interest income	2,398	2,305	93	4 %
Provision for credit losses(1)	1,807	809	998	123 %
Net interest income after provision for credit losses	591	1,496	(905)	(60)%
Other income	490	458	32	7 %
Other expense	1,159	1,024	135	13 %
(Loss) income before income taxes	(78)	930	(1,008)	(108)%
Income tax (benefit) expense	(17)	204	(221)	(108)%
Net (loss) income	$ (61)	$ 726	$ (787)	(108)%

(1) Prior to adoption of ASU No. 2016-13 on January 1, 2020, credit losses were estimated using the incurred loss approach.

Net Interest Income

The table that follows this section has been provided to supplement the discussion below and provide further analysis of net interest income and net interest margin. 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. Net interest income is influenced by the following:

- 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, interest rate on excess reserves and LIBOR; 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, 2020 as compared to the same period in 2019 primarily driven by loan growth and lower funding costs, partially offset by lower yields on credit card loans. Interest income increased during the three months ended March 31, 2020 as compared to the same period in 2019 as a result of continued loan growth offset by lower yields resulting from lower average market rates. Interest expense decreased during the three months ended March 31, 2020 as compared to the same period in 2019 due to lower average market rates offset by a larger funding base.

Average Balance Sheet Analysis
(dollars in millions)

	For the Three Months Ended March 31,					
	2020			2019		
	Average Balance	Yield/Rate	Interest	Average Balance	Yield/Rate	Interest
Assets						
Interest-earning assets						
Cash and cash equivalents	$ 7,349	1.25%	$ 23	$ 14,059	2.46%	$ 85
Restricted cash	627	1.06%	1	804	2.35%	4
Other short-term investments	—	—%	—	111	2.66%	1
Investment securities	10,628	2.18%	58	4,247	2.66%	28
Loan receivables[(1)]						
Credit card[(2)]	75,337	12.90%	2,416	71,363	13.42%	2,362
Private student loans	9,992	8.24%	205	9,654	8.63%	205
Personal loans	7,704	13.27%	254	7,468	12.86%	237
Other	1,468	6.73%	25	868	6.85%	15
Total loan receivables	94,501	12.34%	2,900	89,353	12.79%	2,819
Total interest-earning assets	113,105	10.60%	2,982	108,574	10.97%	2,937
Allowance for credit losses[(3)]	(5,851)			(3,040)		
Other assets	5,661			4,455		
Total assets	$ 112,915			$ 109,989		
Liabilities and Stockholders' Equity						
Interest-bearing liabilities						
Interest-bearing deposits						
Time deposits	$ 33,563	2.57%	215	$ 34,230	2.49%	210
Money market deposits[(5)]	7,077	1.72%	30	7,069	2.21%	38
Other interest-bearing savings deposits	31,338	1.65%	128	26,341	2.12%	138
Total interest-bearing deposits	71,978	2.09%	373	67,640	2.32%	386
Borrowings						
Short-term borrowings	1	1.71%	—	1	2.59%	—
Securitized borrowings[(4)(5)]	14,087	2.28%	80	15,865	3.05%	119
Other long-term borrowings[(4)]	11,790	4.45%	131	10,711	4.81%	127
Total borrowings	25,878	3.27%	211	26,577	3.76%	246
Total interest-bearing liabilities	97,856	2.40%	584	94,217	2.72%	632
Other liabilities and stockholders' equity	15,059			15,772		
Total liabilities and stockholders' equity	$ 112,915			$ 109,989		
Net interest income			$ 2,398			$ 2,305
Net interest margin[(6)]		10.21%			10.46%	
Net yield on interest-earning assets[(7)]		8.53%			8.61%	
Interest rate spread[(8)]		8.20%			8.25%	

(1) Average balances of loan receivables include non-accruing loans, which are included in the yield calculations. 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 $81 million and $65 million of amortization of balance transfer fees for the three months ended March 31, 2020 and 2019, respectively.
(3) Prior to adoption of ASU No. 2016-13 on January 1, 2020, credit losses were estimated using the incurred loss approach.
(4) Includes the impact of interest rate swap agreements used to change a portion of fixed-rate funding to floating-rate funding.
(5) Includes the impact of interest rate swap agreements used to change a portion of floating-rate funding to fixed-rate funding.
(6) Net interest margin represents net interest income as a percentage of average total loan receivables.
(7) Net yield on interest-earning assets represents net interest income as a percentage of average total interest-earning assets.
(8) 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, 2020	December 31, 2019
Credit card loans	$ 73,811	$ 77,181
Other loans		
Private student loans	9,957	9,653
Personal loans	7,651	7,687
Other	1,544	1,373
Total other loans	19,152	18,713
Total loan receivables	92,963	95,894
Allowance for credit losses(1)	(6,913)	(3,383)
Net loan receivables	$ 86,050	$ 92,511

(1) Prior to adoption of ASU No. 2016-13 on January 1, 2020, credit losses were estimated using the incurred loss approach.

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 collectibility 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 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 originations and maturities; and
  - Changes in the overall mix of accounts and products within the portfolio;
- The credit quality of the loan portfolio, which reflects, among other factors, our credit granting practices and the effectiveness of collection efforts;
- 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.

For more details on how we estimate the allowance for credit losses, refer to "— Critical Accounting Estimates — Allowance for Credit Losses on Loan Receivables" and Note 3: Loan Receivables to our condensed consolidated financial statements.

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

	For the Three Months Ended March 31, 2020				
	Credit Card	Student Loans	Personal Loans	Other	Total
Balance at December 31, 2019[(1)]	$ 2,883	$ 148	$ 348	$ 4	$ 3,383
Cumulative effect of ASU No. 2016-13 adoption[(2)]	1,667	505	265	24	2,461
Balance at January 1, 2020	4,550	653	613	28	5,844
Additions					
Provision for credit losses[(3)]	1,439	129	263	7	1,838
Deductions					
Charge-offs	(869)	(22)	(84)	—	(975)
Recoveries	186	5	15	—	206
Net charge-offs	(683)	(17)	(69)	—	(769)
Balance at March 31, 2020	$ 5,306	$ 765	$ 807	$ 35	$ 6,913

	For the Three Months Ended March 31, 2019				
	Credit Card	Student Loans	Personal Loans	Other	Total
Balance at December 31, 2018[(1)]	$ 2,528	$ 169	$ 338	$ 6	$ 3,041
Additions					
Provision for credit losses[(1)]	710	15	84	—	809
Deductions					
Charge-offs	(774)	(19)	(94)	—	(887)
Recoveries	158	4	10	—	172
Net charge-offs[(4)]	(616)	(15)	(84)	—	(715)
Other[(5)]	—	(1)	—	—	(1)
Balance at March 31, 2019[(1)]	$ 2,622	$ 168	$ 338	$ 6	$ 3,134

(1) Prior to adoption of ASU No. 2016-13 on January 1, 2020, credit losses were estimated using the incurred loss approach.
(2) Represents the adjustment to allowance for credit losses as a result of adoption of ASU No. 2016-13 on January 1, 2020.
(3) Excludes a $31 million release of the liability for expected credit losses on unfunded commitments for the three months ended March 31, 2020 as the liability is recorded in accrued expenses and other liabilities in our condensed consolidated statements of financial condition.
(4) Prior to adoption of ASU No. 2016-13 on January 1, 2020, net charge-offs on PCD loans generally did not result in a charge to earnings.
(5) Net change in reserves on PCD pools having no remaining non-accretable difference (prior to adoption of ASU No. 2016-13 on January 1, 2020).

The allowance for credit losses was $6.9 billion at March 31, 2020, which reflects a $3.5 billion build over the amount of the allowance for credit losses at December 31, 2019. The allowance build across all loan products was due to (1) a $2.5 billion cumulative-effect adjustment for the adoption of CECL on January 1, 2020 and (2) a $1.1 billion build during the quarter that, in addition to the impact of life of loan reserving under CECL, primarily reflects an economic outlook that included the COVID-19 pandemic. In estimating the allowance at March 31, 2020, we used a macroeconomic forecast that assumes the unemployment rate rising to more than 9%, recovering through 2022 and Gross Domestic Product falling 18% at an annualized rate in the first half of the year. The estimate also contemplated the impact of government stimulus programs on borrower payment behavior.

At adoption of CECL, the forecast period management deemed to be reasonable and supportable was 18 months. This period decreased to 12 months at March 31, 2020 due to the uncertainty caused by the rapidly changing economic environment due to the COVID-19 pandemic. For both periods, the reversion period was 12 months and a straight-line method was used to revert to appropriate historical information.

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, 2020, the provision for credit losses increased by $1.0 billion, or 127%, as compared to the same period in 2019. The allowance build was determined under separate methodologies for each period, based on the timing of the adoption of ASU No. 2016-13 on January 1, 2020; however, the largest driver of the increase in provision between the two periods was the significant change in economic outlook due to the COVID-19 pandemic.

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,			
	2020		2019	
	$	%	$	%
Credit card loans	$ 683	3.65%	$ 616	3.50%
Private student loans[(1)]	$ 17	0.68%	$ 15	0.66%
Personal loans	$ 69	3.59%	$ 84	4.53%

(1) Prior to adoption of ASU No. 2016-13 on January 1, 2020, net charge-offs on PCD loans generally did not result in a charge to earnings.

The net charge-off rate on our credit card loans increased for the three months ended March 31, 2020 when compared to the same period in 2019 due to seasoning of continued loan growth. The net charge-off rate on our private student loans remained relatively flat for the three months ended March 31, 2020 when compared to the same period in 2019. The net charge-off rate on our personal loans decreased for the three months ended March 31, 2020 when compared to the same period in 2019 due to improved underwriting.

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, loans that are not accruing interest regardless of delinquency, and loans restructured in TDR programs (dollars in millions):

	March 31, 2020		December 31, 2019	
	$	%	$	%
Loans 30 or more days delinquent				
Credit card loans	$ 1,935	2.62%	$ 2,019	2.62%
Private student loans[(1)]	$ 174	1.75%	$ 181	1.88%
Personal loans	$ 100	1.31%	$ 105	1.37%
Loans 90 or more days delinquent				
Credit card loans	$ 1,016	1.38%	$ 1,020	1.32%
Private student loans[(1)]	$ 48	0.48%	$ 45	0.47%
Personal loans	$ 29	0.39%	$ 31	0.40%
Loans not accruing interest	$ 273	0.29%	$ 266	0.28%
Loans restructured in TDR programs				
Credit card loans[(2)(3)(4)]				
Currently enrolled	$ 2,152	2.92%	$ 2,108	2.73%
No longer enrolled[(5)]	$ 565	0.77%	$ 1,254	1.62%
Total credit card loans	$ 2,717	3.69%	$ 3,362	4.35%
Private student loans[(6)]	$ 306	3.07%	$ 269	2.79%
Personal loans[(7)]	$ 215	2.81%	$ 208	2.71%

(1) Includes PCD loans for all periods presented.
(2) We estimate that interest income recognized on credit card loans restructured in TDR programs was $71 million and $70 million for the three months ended March 31, 2020 and 2019, respectively. We do not separately track interest income on loans in TDR programs. This amount was estimated by applying an average interest rate to the average loans in the various TDR programs.
(3) We estimate that the gross interest income that would have been recorded in accordance with the original terms of credit card loans restructured in TDR programs was $54 million and $45 million for the three months ended March 31, 2020 and 2019, respectively. We do not separately track the amount of additional gross interest income that would have been recorded if the loans in TDR programs had not been restructured and interest had instead been recorded in accordance with the original terms. This amount was estimated by applying the difference between the average interest rate earned on non-modified loans and the average interest rate earned on loans in the TDR programs to the average loans in the TDR programs.
(4) Credit card loans restructured in TDR programs include $199 million and $184 million at March 31, 2020 and December 31, 2019, respectively, which are also included in loans 90 or more days delinquent.
(5) Beginning in 2020, credit card accounts of borrowers that have previously participated in a temporary interest rate reduction program and that have both demonstrated financial stability and had their charging privileges reinstated at a market-based interest rate, are no longer included in the balance of TDRs.
(6) Private student loans restructured in TDR programs include $9 million and $10 million at March 31, 2020 and December 31, 2019, respectively, which are also included in loans 90 or more days delinquent.
(7) Personal loans restructured in TDR programs include $8 million and $7 million at March 31, 2020 and December 31, 2019, respectively, which are also included in loans 90 or more days delinquent.

The 30-day delinquency rate for credit card loans, as well as the 90-day delinquency rates for private student and personal loans at March 31, 2020 remained relatively flat compared to December 31, 2019. The 90-day delinquency rate for credit card loans at March 31, 2020 increased compared to December 31, 2019 due to seasoning of continued loan growth. The 30-day delinquency rate for private student loans at March 31, 2020 decreased compared to December 31, 2019 primarily due to seasonality of the loan portfolio. The 30-day delinquency rate for personal loans at March 31, 2020 decreased compared to December 31, 2019 as a result of improved underwriting.

The balance of credit card loans reported as TDRs decreased at March 31, 2020 as compared to December 31, 2019 primarily because of a change starting in 2020 related to loans no longer enrolled. Credit card accounts of borrowers that have previously participated in a temporary interest rate reduction program and that have both demonstrated financial stability and had their charging privileges reinstated at a market-based interest rate, are no longer included in the balance of TDRs. The balance of private student and personal loans reported as TDRs increased at March 31, 2020 as compared to

December 31, 2019 due to seasoning of continued loan growth and improved awareness of programs available to assist borrowers having difficulties meeting payment obligations. We plan to continue to use TDR programs as we believe they are useful in assisting customers experiencing financial difficulties and allowing them to make timely payments. See Note 3: Loan Receivables to our condensed consolidated financial statements for further description of our use of TDR programs to provide relief to customers experiencing financial hardship.

Modified and Restructured Loans

For information regarding modified and restructured loans, see "— Delinquencies" and 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,		2020 vs 2019 (Decrease) Increase	
	2020	**2019**	**$**	**%**
Discount and interchange revenue, net[1]	$ 216	$ 231	$ (15)	(6)%
Protection products revenue	47	49	(2)	(4)%
Loan fee income	119	104	15	14 %
Transaction processing revenue	44	46	(2)	(4)%
Gains on equity investments	36	—	36	— %
Other income	28	28	—	— %
Total other income	$ 490	$ 458	$ 32	7 %

(1) Net of rewards, including *Cashback Bonus* rewards, of $478 million and $446 million for the three months ended March 31, 2020 and 2019, respectively.

Total other income increased for the three months ended March 31, 2020 as compared to the same period in 2019, which was primarily due to gains on equity investments and loan fee income partially offset by a decrease in net discount and interchange revenue. Gains on equity investments increased primarily from a sale during the quarter. Loan fee income was higher as a result of an increase in late fees. Net discount and interchange revenue decreased as a result of higher promotional rewards, which was partially offset by increased sales volume.

Other Expense

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

	For the Three Months Ended March 31,		2020 vs. 2019 Increase	
	2020	**2019**	**$**	**%**
Employee compensation and benefits	$ 467	$ 425	$ 42	10%
Marketing and business development	231	195	36	18%
Information processing and communications	114	99	15	15%
Professional fees	193	167	26	16%
Premises and equipment	30	28	2	7%
Other expense	124	110	14	13%
Total other expense	$ 1,159	$ 1,024	$ 135	13%

Total other expense increased for the three months ended March 31, 2020 as compared to the same period in 2019. The increase was primarily driven by higher employee compensation and benefits, marketing and business development and professional fees. Employee compensation and benefits increased as a result of higher average salaries. The increase in marketing and business development was driven by higher brand advertising targeting card growth. Professional fees was higher primarily driven by an increase in collection fees.

Income Tax Expense

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

	For the Three Months Ended March 31,	
	2020	2019
(Loss) income before income taxes	$ (78)	$ 930
Income tax (benefit) expense	$ (17)	$ 204
Effective income tax rate	22.0%	21.9%

The income tax expense decreased $221 million for the three months ended March 31, 2020 as compared to the same period in 2019 due to a pretax loss for the current period. The effective tax rate was relatively flat for the three months ended March 31, 2020 as compared to the same period in 2019. The effective rate for three months ended March 31, 2019 was favorably impacted by the resolution of certain tax matters.

Liquidity and Capital Resources

Impact of COVID-19 on Liquidity and Capital

Financial market volatility increased sharply during March as market participants came to anticipate a sudden and deep economic contraction caused by measures to arrest the spread of the COVID-19 virus. Financial markets experienced a flight to quality as yields on safe haven assets, such as U.S. Treasury notes, fell rapidly while corporate credit spreads widened materially. Wide credit spreads and high market volatility impaired access to and increased the indicative cost of some wholesale funding channels for a period of time, particularly before the Federal Reserve announced unconventional lending support programs, such as the Term Asset-Backed Securities Loan Facility.

We entered the COVID-19 pandemic with strong capital and liquidity positions sized to allow us to maintain normal operations during extended periods of financial market stress and disruptions to wholesale and retail funding sources. Our reserves of high-quality liquid assets and access to diverse funding channels allowed us to refrain from issuing debt in disrupted wholesale funding markets and avoid higher funding costs. Moreover, our direct-to-consumer and sweep deposit balances increased during March as investors sought safe haven assets. Consequently, our store of liquid assets increased as the pandemic progressed. We plan to maintain a prudent liquid asset buffer, particularly so long as heightened uncertainty around the macroeconomic and financial operating environment persists.

We remain well-capitalized with capital ratios in excess of regulatory minimums and took prudent actions to preserve capital when the macroeconomic and operating environment turned uncertain. Of note, we suspended our plans to purchase shares of our common stock during the second quarter and took actions to reduce our exposures to higher-risk segments of our credit portfolio. We have completed numerous stress tests to assess the impact of a severe economic downturn on our capital and liquidity and maintain sufficient amounts of both to ensure we remain well-capitalized and funded while continuing to serve our customers and extend special accommodations to those who need it.

Funding and Liquidity

We seek to maintain stable, diversified and cost-effective funding sources and a strong liquidity profile in order to fund our business and repay or refinance our maturing obligations under both 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 liquidity portfolio comprised of highly liquid, unencumbered assets, including cash and cash equivalents and investment securities, and borrowing capacity through private term asset-backed securitizations. In addition, we have unused borrowing capacity with the Federal Reserve discount window, which provides another source of contingent liquidity.

Funding Sources

Deposits

We offer deposit products to customers through two channels: (i) through direct marketing, internet origination and affinity relationships ("direct-to-consumer deposits"); and (ii) indirectly through contractual arrangements with securities brokerage firms ("brokered deposits"). Direct-to-consumer deposits include online savings accounts, certificates of deposit, money market accounts, IRA certificates of deposit and checking accounts, while brokered deposits include certificates of deposit and sweep accounts. At March 31, 2020, we had $56.7 billion of direct-to-consumer deposits and $16.7 billion of brokered and other deposits.

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"), through which we issue DCENT DiscoverSeries notes in both public and private transactions. From time to time, we may add credit card receivables to these trusts to create sufficient funding capacity for future securitizations while managing seller's interest. We retain significant exposure to the performance of trust assets through holdings of the seller's interest and subordinated security classes of DCENT. At March 31, 2020, we had $13.6 billion of outstanding public asset-backed securities and $4.8 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 by a trust during a collection period, including interest collections, fees and interchange, exceeds the fees and expenses of the trust 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 the affected outstanding securitized borrowings using available collections received by the trust. For the three months ended March 31, 2020, the DiscoverSeries three-month rolling average excess spread was 12.65%. 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 a contractual minimum level of receivables in the trust in excess of the face value of outstanding investors' interests. This excess is referred to as the minimum seller's interest. The required minimum seller's interest in the pool of trust receivables, which is included in credit card loan receivables restricted for securitization investors, is set at 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 the trust 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 loan 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 is impacted by seasonality as higher 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. One strategy is that we could add additional receivables to the trust, which would reduce our available borrowing capacity through the Federal Reserve discount window. As of March 31, 2020, there were $29.1 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, 2020. Another strategy is that we could employ structured discounting, which was used effectively in 2009 to bolster excess spread and mitigate any risk of early amortization.

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, 2020	Total	Less Than One Year	One Year Through Three Years	Four Years Through Five Years	After Five Years
Scheduled maturities of long-term borrowings - owed to credit card securitization investors	$ 13,787	$ 3,008	$ 9,141	$ 1,638	$ —

The triple-A rating of DCENT Class A Notes issued to date has been based, in part, on an FDIC rule, which created a safe harbor that provides that the FDIC, as conservator or receiver, will not, using its power to disaffirm or repudiate contracts, seek to reclaim or recover assets transferred in connection with a securitization, or recharacterize them as assets of the insured depository institution, provided such transfer satisfies the conditions for sale accounting treatment under previous GAAP. Although the implementation of the Financial Accounting Standards Board 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. Other legislative and regulatory developments may, however, impact our ability and/or desire to issue asset-backed securities in the future.

Other Long-Term Borrowings—Student Loans

At March 31, 2020, $152 million of remaining principal balance was outstanding on securitized debt assumed as part of our acquisition of The Student Loan Corporation. Principal and interest payments on the underlying student loans will reduce the balance of these secured borrowings over time.

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, 2020	Principal Amount Outstanding
Discover Financial Services (Parent Company) fixed-rate senior notes, maturing 2022-2027	$ 3,422
Discover Financial Services (Parent Company) fixed-rate retail notes, maturing 2020-2031	$ 343
Discover Bank fixed-rate senior bank notes, maturing 2020-2030	$ 7,350
Discover Bank fixed-rate subordinated bank notes, maturing 2020-2028	$ 1,000

Certain Discover Financial Services 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 a corresponding ratings downgrade to 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 federal agency mortgage bonds or debentures. At March 31, 2020, there were no outstanding balances in the federal funds market or repurchase agreements.

Additional Funding Sources

Private Asset-Backed Securitizations

We have access to committed borrowing capacity through privately placed asset-backed securitizations. At March 31, 2020, we had total committed capacity of $6.0 billion, none of which was drawn. 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. We also seek to ensure the stability and reliability of these securitizations by staggering their maturity dates, renewing them approximately one year prior to their scheduled maturity dates and periodically drawing them for operational testing purposes and seasonal funding needs.

Federal Reserve

Discover Bank has access to the Federal Reserve Bank of Philadelphia's discount window. As of March 31, 2020, Discover Bank had $34.7 billion of available borrowing capacity through the discount window based on the amount and type of assets pledged, primarily consumer loans. 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, primarily through Discover Bank; the purchase of investment securities for our liquidity portfolio; working capital; and debt and capital service. 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. In order to anticipate funding needs under stress, we conduct liquidity stress tests to assess the impact of idiosyncratic, systemic and hybrid (idiosyncratic and systemic) scenarios with varying levels of liquidity risk reflecting a range of stress severity.

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 collateral enhancement requirements for both our public and private asset securitizations. In addition to increased funding costs, deterioration in credit ratings could reduce our borrowing capacity in the unsecured debt and asset securitization capital markets.

In light of the COVID-19 pandemic, rating agencies have cited their expectation that the banking industry will experience heightened loan delinquencies and charge-offs as the labor market weakens. For instance, on March 17, 2020, Moody's changed its outlook on the U.S. banking system from "stable" to "negative" and, on April 15, 2020, assigned a "negative" outlook to the credit card industry. For similar considerations, on April 29, 2020, Fitch affirmed our credit ratings (BBB+/BBB+ for senior unsecured debt), but changed the outlook on those ratings from "stable" to "negative." The outlook for securities issued by DCENT remained "stable." A rating outlook reflects an agency's opinion regarding the likely rating direction over the medium term—often a period of about a year—but also indicates the agency's belief that the issuer's credit profile is consistent with its current rating level at that point in time.

We also maintain agreements with certain of our derivative counterparties that contain provisions that require DFS and Discover Bank to maintain an investment grade credit rating from specified major credit rating agencies. At March 31, 2020, Discover Bank's credit rating met specified thresholds set by its counterparties. However, if its credit ratings were to fall below investment grade, Discover Bank would be required to post additional collateral, which, as of March 31, 2020, would have been $20 million. DFS (Parent Company) had no outstanding derivatives as of March 31, 2020, and therefore, no collateral was required.

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	Baa3	BBB-	BBB+
Outlook for Discover Financial Services senior unsecured debt	Stable	Stable	Negative
Discover Bank			
Senior unsecured debt	Baa2	BBB	BBB+
Outlook for Discover Bank senior unsecured debt	Stable	Stable	Negative
Subordinated debt	Baa3	BBB-	BBB
Discover Card Execution Note Trust			
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, may be subject to revision or withdrawal at any time by the assigning rating organization, and each rating should be evaluated independently of any other rating.

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 policy is approved by the Board of Directors with implementation responsibilities delegated to the Asset and Liability Management Committee (the "ALCO"). Additionally, we maintain a liquidity management framework document, which 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. Liquidity risk is centrally managed by the ALCO, which is chaired by our Treasurer and has cross-functional membership. 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 the initial phases of liquidity stress events and a reporting and escalation process that is designed to be consistent with regulatory guidance. The EWIs include both idiosyncratic and systemic measures, and are monitored on a daily basis 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 in accordance with 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 contingent liquidity sources include our liquidity portfolio and private securitizations with unused borrowing capacity. In addition, we have unused borrowing capacity with the Federal Reserve discount window, which provides an additional source of contingent liquidity. We seek to maintain sufficient liquidity to be able 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, 2020, our liquidity portfolio is comprised of highly liquid, unencumbered assets, including cash and cash equivalents and investment securities. Cash and cash equivalents were primarily in the form of deposits with the Federal Reserve. Investment securities primarily included debt obligations of the U.S. Treasury and residential mortgage-backed securities issued by U.S. government housing agencies or government-sponsored enterprises. These investments 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 upon the size of our balance sheet as well as operational requirements, market conditions and interest rate risk management strategies. For example, we may alter the composition of our liquidity portfolio to mitigate the potential volatility of earnings that may arise from changes in interest rates.

At March 31, 2020, our liquidity portfolio and undrawn credit facilities were $60.1 billion, which was $3.8 billion higher than the balance at December 31, 2019. During the three months ended March 31, 2020, the average balance of our liquidity portfolio was $18.3 billion.

	March 31, 2020	December 31, 2019
	(dollars in millions)	
Liquidity portfolio		
Cash and cash equivalents[1]	$ 9,133	$ 6,406
Investment securities[2]	10,297	10,202
Total liquidity portfolio	19,430	16,608
Private asset-backed securitizations[3]	6,000	5,500
Primary liquidity sources	25,430	22,108
Federal Reserve discount window[3]	34,712	34,220
Total liquidity portfolio and undrawn credit facilities	$ 60,142	$ 56,328

(1) Cash in the process of settlement and restricted cash are excluded from cash and cash equivalents for liquidity purposes.
(2) Excludes $206 million and $121 million of U.S. Treasury securities that have been pledged as swap collateral in lieu of cash as of March 31, 2020 and December 31, 2019, 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, which include 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, particularly 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 Discover Financial Services can meet upcoming funding obligations including common and preferred stock dividend payments and debt service obligations using existing cash resources.

Our Corporate Treasury department manages DFS's Number of Months of Pre-Funding subject to limits established by the ALCO and our Board of Directors. To maintain compliance with these limits, we structure our debt maturity schedule to minimize the amount of debt maturing within a short period of time. 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 the growth and risks of our businesses and to 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 levels of capital. 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 position and 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 the implementation of CECL, 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 requirements that became effective January 2015 under final rules issued by the Federal Reserve and the FDIC to implement the provisions under the Basel Committee's December 2010 framework ("Basel III rules"). 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. Under Basel III rules for regulatory capital, DFS and Discover Bank are classified as "Standardized Approach" entities, 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 exposures less than $10 billion. As of January 1, 2019, thresholds within the Basel III rules were fully phased in with the exception of certain transition provisions that were frozen pursuant to regulation issued in November 2017. Pursuant to a final rule issued in July 2019, the transition provisions that were previously frozen have been replaced with new permanent thresholds as discussed below. Additionally, on March 27, 2020, federal bank regulatory agencies announced an interim final rule that allows banks that have implemented CECL the option to delay for two years the estimated impact of CECL on regulatory capital, followed by a three-year transition period. For purposes of calculating regulatory capital, we have elected to defer recognition of the estimated impact of CECL on regulatory capital for two years in accordance with the interim final rule adopted by federal bank regulatory agencies on March 27, 2020. Pursuant to the interim final rule, the estimated impact of CECL on regulatory capital will be phased in over a three-year period beginning in 2022. We estimate that electing this option raises our Common Equity Tier 1 ("CET1") capital ratios in 2020. For additional information regarding the risk-based capital and leverage ratios, see Note 10: Capital Adequacy to our condensed consolidated financial statements.

On March 4, 2020, the Federal Reserve announced the SCB final rule, which will impose limitations on capital distributions if DFS does not maintain capital to meet a calculated level above stated minimal regulatory capital ratios that are based on the results of supervisory stress tests. The SCB is expected to become effective October 1, 2020. Under this rule, DFS will be required to assess if planned capital actions are consistent with the effective capital distributions limitations that will apply on a pro-forma basis throughout the planning horizon (i.e., the Stress Capital Buffer). See "— Regulatory Environment and Developments — Banking — Capital Standards and Stress Testing" for additional information.

The Basel III rules provide for certain threshold-based deductions from and adjustments to CET1, to the extent that any one such category exceeds 10% of CET1 or all such categories in the aggregate exceed 15%. In July 2019, federal banking regulators issued a final rule that, among other things, revises certain capital requirements for Standardized Approach banks by raising the 10% of CET1 deduction threshold for certain items to 25% and eliminates the 15% combined deduction threshold applying to these items. These changes are effective for all Standardized Approach banking institutions in April 2020.

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 transparency of capital requirements for banking organizations. We are required to make prescribed regulatory disclosures on a quarterly basis regarding our capital structure, capital adequacy, risk exposures and risk-weighted assets. The Pillar 3 disclosures are made publicly available on our website in a report called "Basel III Regulatory Capital Disclosures."

At March 31, 2020, DFS and Discover Bank met the requirements for "well-capitalized" status under Regulation Y and the prompt corrective action rules, respectively, exceeding the regulatory minimums to which they were subject under the applicable rules.

We disclose tangible common equity, which represents common equity less goodwill and intangibles. Management believes that common stockholders' equity excluding goodwill and intangibles is a meaningful measure to investors of our true net asset value. As of March 31, 2020, tangible common equity is not formally defined by U.S. GAAP or codified in the federal banking regulations and, as such, is considered to be a non-GAAP financial measure. Other financial services companies may also disclose this measure and definitions may vary, so we advise users of this information to exercise caution in comparing this measure for different companies.

The following table provides a reconciliation of total common stockholders' equity (a U.S. GAAP financial measure) to tangible common equity (dollars in millions):

	March 31, 2020	December 31, 2019
Total common stockholders' equity[(1)]	$ 9,102	$ 11,296
Less: goodwill	(255)	(255)
Less: intangible assets, net	(155)	(155)
Tangible common equity	$ 8,692	$ 10,886

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

Additionally, we are subject to regulatory requirements imposed by the Federal Reserve as part of its stress testing framework and CCAR program. Refer to "— Regulatory Environment and Developments" for more information.

For the period between July 1, 2019 and June 30, 2020, the Federal Reserve pre-approved capital distributions up to a maximum amount for each Category IV bank, including Discover. The Federal Reserve based these capital distribution limits on results from the 2018 supervisory stress test. Notwithstanding the pre-approval, we were still required to prepare a capital plan to be approved by our Board of Directors. This plan outlined our contemplated capital distributions for the period from July 1, 2019 to June 30, 2020, which were within the Federal Reserve's pre-approved amount. On April 6, 2020, we submitted our 2020 CCAR plan and are awaiting a response from the Federal Reserve on our plan.

We recently declared a quarterly cash dividend on our common stock of $0.44 per share, payable on June 4, 2020 to holders of record on May 21, 2020, which is consistent with last quarter. We also pay dividends on our preferred stock semi-annually.

On July 18, 2019, our Board of Directors approved a share repurchase program authorizing the repurchase of up to $2.2 billion of our outstanding shares of common stock. The program expires on September 30, 2020 and may be terminated at any time. This program replaced the prior $3.0 billion share repurchase program, which had $1.2 billion of remaining authorization. During the three months ended March 31, 2020, we repurchased approximately 4 million shares, or 1%, of our outstanding common stock for $320 million. As a result of the COVID-19 pandemic, we suspended our plans to purchase shares of our common stock during the second quarter of 2020. We may reinstate our share repurchase program as soon as circumstances warrant and may repurchase shares under our program from time to time based on market conditions and other factors, subject to legal and regulatory requirements and restrictions, including limitations from the Federal Reserve as described above. Share repurchases under the program may be made through a variety of methods, including open market purchases, privately negotiated transactions or other purchases, including block trades, accelerated share repurchase transactions, or any combination of such methods.

The amount and size of any future dividends and share repurchases will depend upon our results of operations, financial condition, capital levels, cash requirements, future prospects and other factors, such as the implementation of CECL. The declaration and payment of future dividends, as well as 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, and if full dividends have not been declared and paid on all outstanding shares of preferred stock in any dividend period, no dividend may be declared or paid or set aside for payment on our common stock. 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 to which our banking subsidiaries can provide funds to us through dividends, loans or otherwise. Further, current or future regulatory reforms may require us to hold more capital or adversely impact our capital level. There can be no assurance that we will declare and pay any dividends or repurchase any shares of our common stock in the future.

Certain Off-Balance Sheet Arrangements

Guarantees

Guarantees are contracts or indemnification agreements that contingently 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 contingently 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. See Note 11: Commitments, Contingencies and Guarantees to our condensed consolidated financial statements for further discussion regarding our guarantees.

Contractual Obligations and Contingent Liabilities and Commitments

In the normal course of business, we enter into various contractual obligations that may require future cash payments. Contractual obligations at March 31, 2020, which include deposits, long-term borrowings, operating lease obligations, interest payments on fixed-rate debt, purchase obligations and other liabilities were $103.8 billion. For a description of our contractual obligations, see our annual report on Form 10-K for the year ended December 31, 2019 under "Management's Discussion and Analysis of Financial Condition and Results of Operations — Contractual Obligations and Contingent Liabilities and Commitments."

We extend credit for consumer loans, primarily arising 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 established in the related agreement. At March 31, 2020, our unused credit arrangements were approximately $210.9 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 addition, 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 condensed consolidated financial statements.

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 a variety of depositors and institutions in order to provide loans to our customers, as well as invest in other assets and our business. These loans 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, which may decrease 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 financing portfolio that reflects our mix of variable- and fixed-rate assets. 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 14: 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-month period from our reporting date, we assume that all interest rate sensitive assets and liabilities will be impacted by a hypothetical, immediate 100 basis point change in interest rates relative to market consensus expectations as of the beginning of the period. The sensitivity is based upon 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 the assets that make up our liquidity portfolio. We have limitations on our ability to mitigate interest rate risk by adjusting rates on existing balances and competitive actions may limit our ability to increase the rates that we charge to customers for new loans. At March 31, 2020, the majority of our credit card and student loans charge variable rates. Assets with rates that are fixed at period end but which will mature, or otherwise contractually reset to a market-based indexed rate or other fixed rate prior to the end of the 12-month 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 that have a fixed interest rate but contractually will, or are 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, which for purposes of this analysis, 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-month period. Thus, liabilities that vary with changes in a market-based index, such as the federal funds rate or London Interbank Offered Rate ("LIBOR"), which will reset before the end of the 12-month period, or liabilities whose rates are fixed 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 12-month period, 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 requires assumptions to be made regarding market conditions, consumer behavior, and the overall growth and composition of the balance sheet. These assumptions 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 versus long-term rates, balance sheet composition, competitor actions affecting pricing decisions in our loans and deposits, and strategic actions undertaken by management.

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):

	At March 31, 2020		At December 31, 2019	
Basis point change	**$**	**%**	**$**	**%**
+100	$ 55	0.58%	$ 12	0.12 %
-100	N/A	N/A	$ (13)	(0.13)%

We have not provided an estimate of any impact on net interest income of a decrease in interest rates at March 31, 2020 as many of our interest rate sensitive assets and liabilities are tied to interest rates that are already at or near their historical minimum levels (i.e., Prime and LIBOR) and, therefore, could not materially decrease further assuming U.S. market interest rates continue to remain above zero percent. Sustained negative interest rates for an economy with the size and complexity of the United States would likely lead to broad macroeconomic impacts that are difficult to foresee. While there is a possibility that U.S market interest rates could fall below zero percent, this has not historically occurred in the United States.

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
- **ASC**: Accounting Standards Codification
- **ASU**: Accounting Standards Update
- **CARES Act**: Coronavirus Aid, Relief, and Economic Security Act
- **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
- **COVID-19**: Coronavirus Disease 2019
- **DCENT**: Discover Card Execution Note Trust
- **DCMT**: Discover Card Master Trust
- **DFS**: Discover Financial Services
- **EPS**: Earnings Per Share
- **EWI**: Early Warning Indicator
- **FASB**: Financial Accounting Standards Board
- **FDIC**: Federal Deposit Insurance Corporation
- **GAAP**: Generally Accepted Accounting Principles
- **IRS**: Internal Revenue Service
- **LIBOR**: London Interbank Offered Rate
- **OCI**: Other Comprehensive Income
- **OIS**: Overnight Index Swap
- **PCD**: Purchased Credit-Deteriorated
- **PCI**: Purchased Credit-Impaired
- **SCB**: Stress Capital Buffer
- **TDR**: Troubled Debt Restructuring
- **VIE**: Variable Interest Entity

Part II. OTHER INFORMATION

Item 1. Legal Proceedings

For a description of legal proceedings, see Note 12: Litigation and Regulatory Matters to our condensed consolidated financial statements.

Item 1A. Risk Factors

In light of recent developments relating to the coronavirus disease 2019 ("COVID-19") pandemic, we are supplementing our risk factors disclosed in our annual report on Form 10-K for the year ended December 31, 2019. The following risk factor should be read in conjunction with the risk factors described in our annual report on Form 10-K.

The COVID-19 pandemic has and is expected to continue to have a material adverse effect on our business, results of operations and financial condition.

The COVID-19 pandemic has had an unprecedented impact on a global scale. As a result of the COVID-19 pandemic and the measures implemented to contain the pandemic, economic activity has declined both on a national and global level and unemployment has risen at a record pace. The depth and duration of this economic contraction is unknown and currently unpredictable. Federal and state governments and agencies have put in place programs to mitigate and respond to the impact of the pandemic. These programs are in their early stages and it is too early to tell how successful these measures will be. It is also unclear whether the measures employed to date are exhaustive, or whether federal and state governments and agencies may take additional action that could impact our business.

The impact of the COVID-19 pandemic and the resulting economic contraction has impacted and is expected to continue to adversely impact our financial results. As consumers lose their jobs or are unable to find work due to the COVID-19 pandemic and the implementation of measures implemented to slow the spread of COVID-19, they may become increasingly unable to repay their loans on time. The length of the pandemic and the long-term negative economic impact in relation to increased unemployment could lead to increased customer delinquencies and charge-offs, which would cause an increase to our allowance for credit losses, which would adversely affect our profitability. We have put various programs in place to assist affected borrowers during the pandemic. The programs generally provide borrowers with flexibility to make monthly payments, including allowing customers to skip payments without penalty, or in certain cases, accrual of interest. The terms and conditions of the programs are subject to change and enrollment levels may fluctuate based on those changes as well as the depth and duration of the economic contraction. As the number of loans enrolled in these programs increases, our financial results will be adversely impacted in the short term due to forgone interest. The impact on the U.S. economy and the consumer credit environment may continue after the COVID-19 pandemic has subsided; the pace of recovery is uncertain and unpredictable. Additionally, in connection with the economic contraction due to COVID-19, we have decreased our marketing activities, which may adversely impact our ability to attract new customers and grow market share.

Given the nature of the crisis, our financial and economic models may be unable to accurately predict and respond to the impact of the economic contraction or lasting changes to consumer behaviors, which in turn may limit our ability to manage credit risk and avoid higher charge-off rates. Additionally, due to the nature and novelty of the crisis, our credit and economic models may not be able to adequately predict or forecast credit losses, sales, receivables or other financial metrics during and after the crisis, which could result in our reserves being too large or insufficient. For more information see the risk factor entitled "*Our risk management framework and models for managing risks may not be effective in mitigating our risk of loss*" in our annual report on Form 10-K year ended December 31, 2019.

As governments have put measures in place to contain the pandemic by requiring all non-essential businesses to close and/or their employees work from home and discouraging or prohibiting people generally from leaving their homes, our sales volume, credit card loan growth, interchange revenue and net-to-net volume have declined and may continue to do so. The economic contraction and associated slowdown in travel and transaction volume may have a material adverse impact on the financial condition of some of our Diners Club franchises. In the past, we have extended financial support to franchises experiencing financial stress.

Beginning March 13, 2020, we have transitioned nearly all of our employees to working from home. Previously, only a small portion of employees worked from a location other than one of our offices. As we adapt to this new way of working, it may become less effective and as a result our ability to design and implement new products, services or features may be adversely impacted. Additionally, in the event that a meaningful portion of our call center agents become ill due to

COVID-19 or otherwise are unable to work effectively, our ability to meet our internal measures for customer service may be adversely effected. The pandemic has required us and our third-party vendors to activate certain business continuity programs and make ongoing adjustments to operations. To the extent that these plans and back-up servicing and other strategies and adjustments are either not available, insufficient or cannot be implemented in whole or in part, we may be exposed to legal, regulatory, reputational, operational, information security or financial risk. Finally, as nearly all of our employees are working from home, we are increasingly reliant on a handful of vendors, including those we have no direct relationship with such as our employees' internet service providers, to maintain reliable high speed access to our internal network. Failure by such third-party providers would impact our operations. Efforts by us, our vendors and their vendors to continue to adapt operations to this new environment may introduce additional vulnerabilities to our operations and information security programs and systems in ways we have not previously contemplated or otherwise prepared for.

There are no comparable recent events that provide guidance as to the effect the spread of COVID-19 as a global pandemic may have, and, as a result, the ultimate impact of the outbreak and the economic recovery following the containment of the outbreak is highly uncertain and subject to change. We do not yet know the full extent of the impacts on our business, our operations or the global economy as a whole. However, the effects have had and are expected to continue to have a material impact on our results of operations and heighten many of our known risks described in the risk factors disclosed in our annual report on Form 10-K for the year ended December 31, 2019.

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 that were made by us or on our behalf during the most recent quarter.

Period	Total Number of Shares Purchased	Average Price Paid Per Share	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, 2020				
Repurchase program(1)	1,343,359	$ 82.43	1,343,359	$ 1,357,607,165
Employee transactions(2)	999	$ 81.16	N/A	N/A
February 1 - 29, 2020				
Repurchase program(1)	1,356,701	$ 75.15	1,356,701	$ 1,255,657,289
Employee transactions(2)	281,414	$ 75.08	N/A	N/A
March 1 - 31, 2020				
Repurchase program(1)	1,733,628	$ 61.90	1,733,628	$ 1,148,338,700
Employee transactions(2)	15,242	$ 75.54	N/A	N/A
Total				
Repurchase program(1)	4,433,688	$ 72.17	4,433,688	$ 1,148,338,700
Employee transactions(2)	297,655	$ 75.12	N/A	N/A

(1) On July 18, 2019, our Board of Directors approved a share repurchase program authorizing the purchase of up to $2.2 billion of our outstanding shares of common stock. This share repurchase program expires on September 30, 2020 and may be terminated at any time.

(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.

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 2020 Award Certificate for Restricted Stock Units under Discover Financial Services Amended and Restated Omnibus Incentive Plan
10.2	Form 2020 Award Certificate for Performance Stock Units under Discover Financial Services Amended and Restated 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 30, 2020

Exhibit 10.1

Discover Financial Services
Amended and Restated 2014 Omnibus Incentive Plan
2020 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 Scheduled Vesting Date: **1/3 of Shares** on the **First**; **Second**; and **Third** Anniversary of the Date of the Award **%%SHARES_PERIOD1,'999,999,999'%-%** on **%%VEST_DATE_PERIOD1,'Month DD, YYYY'%-%** **%%SHARES_PERIOD2,'999,999,999'%-%** on **%%VEST_DATE_PERIOD2,'Month DD, YYYY'%-%** **%%SHARES_PERIOD3,'999,999,999'%-%** on **%%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 Appendix A ***International Supplement***, 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 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 thereafter.

(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, 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 vest 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 convert to Shares and be delivered to you by sixtieth (60th) day following your termination of Employment, subject to Section 3 above, *provided* that you sign (and do not revoke) an agreement and release of claims satisfactory to the Company in accordance with the Discover Financial Services Severance Policy.

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 25(c)(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.

(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 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 5, 6, or 7 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 revocable designation of beneficiary or beneficiaries to receive all or part of the Shares 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 that 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

APPENDIX A

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.

<u>Section 8(a)</u>

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.

Exhibit 10.2

Discover Financial Services
Amended and Restated 2014 Omnibus Incentive Plan
2020 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, 2020 to December 31, 2023
Scheduled Vesting Date	**%%VEST_DATE_PERIOD1,'Month DD, YYYY'%-%**

<table>
<tr><td>Performance Measures</td><td>Your Target Award will be earned based on attainment of the following Performance Measures during the Performance Period.
<table>
<tr><th></th><th>Non-GAAP EPS</th><th>Multiplier*</th></tr>
<tr><td>Non-GAAP EPS Minimum or less</td><td>$16.93 USD</td><td>0</td></tr>
<tr><td>80% of Non-GAAP EPS Target</td><td>$27.09 USD</td><td>0.5</td></tr>
<tr><td>Non-GAAP EPS Target</td><td>$33.86 USD</td><td>1.0</td></tr>
<tr><td>Non-GAAP EPS Maximum or greater (110% of target)</td><td>$37.25 USD</td><td>1.5</td></tr>
</table>
* Multiplier will be interpolated on a straight-line basis for results between Non-GAAP EPS performance levels.</td></tr>
<tr><td>Settlement</td><td>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 <u>Appendix A</u> International Supplement, for additional information.</td></tr>
<tr><td>Restrictive Covenants & Clawbacks</td><td>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.</td></tr>
<tr><td>Non-U.S. Employees</td><td>If you are employed outside the United States, please reference the "International Supplement" included herein as <u>Appendix A</u>, which contains supplemental terms and conditions for your PSU Award.</td></tr>
</table>

You will earn Restricted Stock Units ("RSUs") 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. **<u>Performance Stock Units Generally</u>.**

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. **<u>Performance Measures</u>.**

The portion, if any, of your Target Award that you can earn will be based on Discover Non-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. **<u>Vesting Schedule; Conversion</u>.**

(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. **<u>Special Provisions for Certain "Specified Employees"</u>.**

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. **<u>Dividend Equivalent Payments</u>.**

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 Non-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. **<u>Termination of Employment</u>.**

(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. **<u>Forfeiture/Cancellation/Clawback of PSU Awards Under Certain Circumstances.</u>**

(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 bv 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.

(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 the Company 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 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); the Company 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 that 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 Non-GAAP EPS"*** means sum of Non-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. "***Non-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. your combined age and years of service is at least 65 years.

u. "***Scheduled Vesting Date***" means the Scheduled Vesting Date set forth in Appendix A.

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 Non-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

APPENDIX A

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.

<u>Section 10(a)</u>

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.

Exhibit 31.1

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 30, 2020

/s/ ROGER C. HOCHSCHILD

Roger C. Hochschild
Chief Executive Officer and President

Exhibit 31.2

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 30, 2020

/s/ JOHN T. GREENE

John T. Greene
Executive Vice President, Chief Financial Officer

Exhibit 32.1

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, 2020, 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 30, 2020

/s/ ROGER C. HOCHSCHILD

Roger C. Hochschild
Chief Executive Officer and President

Date: April 30, 2020

/s/ JOHN T. GREENE

John T. Greene
Executive Vice President, Chief Financial Officer