

# The Depository Trust & Clearing Corporation

Consolidated Financial Statements as of and for the Years  
Ended December 31, 2019 and 2018

# THE DEPOSITORY TRUST & CLEARING CORPORATION

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# THE DEPOSITORY TRUST & CLEARING CORPORATION

## CONSOLIDATED STATEMENTS OF FINANCIAL CONDITION

| (In thousands, except share data)                                                              | As of December 31,   |                      |
|------------------------------------------------------------------------------------------------|----------------------|----------------------|
|                                                                                                | 2019                 | 2018                 |
| <b>ASSETS</b>                                                                                  |                      |                      |
| <b>CURRENT ASSETS:</b>                                                                         |                      |                      |
| Cash and cash equivalents                                                                      | \$ 8,395,163         | \$ 8,641,036         |
| Participants' segregated cash                                                                  | 4,876                | 77,988               |
| Short-term investments                                                                         | 900,000              | 800,000              |
| Accounts receivable - net of allowance for doubtful accounts                                   | 177,219              | 177,880              |
| Participants' and Clearing Funds                                                               | 40,814,905           | 36,622,122           |
| Other Participants' assets                                                                     | 514,104              | 518,115              |
| Other current assets                                                                           | 177,940              | 133,960              |
| Total current assets                                                                           | 50,984,207           | 46,971,101           |
| <b>NON-CURRENT ASSETS:</b>                                                                     |                      |                      |
| Premises and equipment - net of accumulated depreciation                                       | 216,417              | 213,111              |
| Goodwill                                                                                       | 57,699               | 57,699               |
| Intangible assets - net of accumulated amortization                                            | 325,125              | 319,119              |
| Equity method investments                                                                      | 10,676               | 10,491               |
| Operating lease right-of-use-asset                                                             | 237,689              | —                    |
| Other non-current assets                                                                       | 304,719              | 319,579              |
| Total non-current assets                                                                       | 1,152,325            | 919,999              |
| <b>TOTAL ASSETS</b>                                                                            | <b>\$ 52,136,532</b> | <b>\$ 47,891,100</b> |
| <b>LIABILITIES AND SHAREHOLDERS' EQUITY</b>                                                    |                      |                      |
| <b>CURRENT LIABILITIES:</b>                                                                    |                      |                      |
| Commercial paper - net of unamortized discount                                                 | \$ 7,154,217         | \$ 7,436,141         |
| Current portion of long-term debt                                                              | 4,103                | 2,650                |
| Current portion of pension and postretirement benefits                                         | 34,270               | 16,608               |
| Current portion of operating lease liability                                                   | 25,906               | —                    |
| Accounts payable and accrued expenses                                                          | 102,179              | 104,013              |
| Participants' and Clearing Funds                                                               | 40,814,905           | 36,622,122           |
| Payable to Participants                                                                        | 518,980              | 596,103              |
| Other current liabilities                                                                      | 266,160              | 260,677              |
| Total current liabilities                                                                      | 48,920,720           | 45,038,314           |
| <b>NON-CURRENT LIABILITIES:</b>                                                                |                      |                      |
| Non-current portion of long-term debt                                                          | 3,921                | 33,725               |
| Non-current portion of pension and postretirement benefits                                     | 178,384              | 198,492              |
| Non-current operating lease liability                                                          | 264,848              | —                    |
| Other non-current liabilities                                                                  | 263,681              | 288,334              |
| Total non-current liabilities                                                                  | 710,834              | 520,551              |
| Total liabilities                                                                              | 49,631,554           | 45,558,865           |
| <b>COMMITMENTS AND CONTINGENCIES (Note 2)</b>                                                  |                      |                      |
| <b>SHAREHOLDERS' EQUITY</b>                                                                    |                      |                      |
| Preferred stock:                                                                               |                      |                      |
| Series A, \$0.50 par value - 10,000 shares authorized, issued (above par), and outstanding     | 300                  | 300                  |
| Series B, \$0.50 par value - 10,000 shares authorized, issued (above par), and outstanding     | 300                  | 300                  |
| Series C, \$0.50 par value - 1,600 shares authorized, issued (above par), and outstanding      | 390,516              | 390,516              |
| Common stock, \$100 par value - 80,000 shares authorized, 50,908 shares issued and outstanding | 5,091                | 5,091                |
| Additional paid-in capital                                                                     | 411,065              | 411,065              |
| Retained earnings                                                                              | 1,769,638            | 1,571,298            |
| Accumulated other comprehensive loss, net of tax                                               | (221,932)            | (196,335)            |
| Non-controlling interests                                                                      | 150,000              | 150,000              |
| Total shareholders' equity                                                                     | 2,504,978            | 2,332,235            |
| <b>TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY</b>                                              | <b>\$ 52,136,532</b> | <b>\$ 47,891,100</b> |

The Notes to Consolidated Financial Statements are an integral part of these statements.

# THE DEPOSITORY TRUST & CLEARING CORPORATION

## CONSOLIDATED STATEMENTS OF INCOME

| <u>(In thousands)</u>                                | For the years ended, December 31, |                   |
|------------------------------------------------------|-----------------------------------|-------------------|
|                                                      | 2019                              | 2018              |
| <b>REVENUES</b>                                      |                                   |                   |
| Settlement and asset services                        | \$ 448,796                        | \$ 458,973        |
| Clearing services                                    | 587,003                           | 604,628           |
| Matching and data services                           | 273,836                           | 275,979           |
| Repository and derivatives services                  | 290,161                           | 292,980           |
| Wealth management services                           | 103,721                           | 112,133           |
| Other services                                       | 40,384                            | 44,481            |
| Investment income (loss), net                        | 22,290                            | (4,806)           |
| Total revenues                                       | <u>1,766,191</u>                  | <u>1,784,368</u>  |
| <b>EXPENSES</b>                                      |                                   |                   |
| Employee compensation and related benefits           | 733,025                           | 664,068           |
| Information technology                               | 176,348                           | 161,863           |
| Professional and other services                      | 335,180                           | 369,477           |
| Occupancy                                            | 48,010                            | 48,180            |
| Depreciation and amortization                        | 143,338                           | 159,528           |
| General and administrative                           | 54,028                            | 43,723            |
| Impairment of Intangible assets                      | 21,468                            | 8,588             |
| Total expenses                                       | <u>1,511,397</u>                  | <u>1,455,427</u>  |
| Total operating income                               | <u>254,794</u>                    | <u>328,941</u>    |
| <b>NON-OPERATING INCOME (EXPENSE)</b>                |                                   |                   |
| Interest income                                      | 557,551                           | 460,017           |
| Refunds to Participants                              | (367,073)                         | (326,017)         |
| Interest expense                                     | (216,361)                         | (148,390)         |
| Net income (loss) from Equity method investments     | 404                               | (10,423)          |
| Other non-operating income, net                      | 39,012                            | 42,709            |
| Total non-operating income                           | <u>13,533</u>                     | <u>17,896</u>     |
| Income before taxes                                  | 268,327                           | 346,837           |
| Provision for income taxes                           | 47,847                            | 47,124            |
| Net income                                           | <u>220,480</u>                    | <u>299,713</u>    |
| Net income attributable to non-controlling interests | 2,640                             | 3,900             |
| Net income attributable to DTCC                      | <u>\$ 217,840</u>                 | <u>\$ 295,813</u> |

The Notes to Consolidated Financial Statements are an integral part of these statements.

# THE DEPOSITORY TRUST & CLEARING CORPORATION

## CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

| <u>(In thousands)</u>                                          | For the years ended December 31, |            |
|----------------------------------------------------------------|----------------------------------|------------|
|                                                                | 2019                             | 2018       |
| Net income                                                     | \$ 220,480                       | \$ 299,713 |
| OTHER COMPREHENSIVE INCOME (LOSS) - Net of tax:                |                                  |            |
| Defined benefit pension and other plans <sup>(1)</sup>         | (27,286)                         | 33,129     |
| Foreign currency translation                                   | 1,689                            | (6,434)    |
| Other comprehensive (loss) income                              | (25,597)                         | 26,695     |
| Comprehensive income                                           | 194,883                          | 326,408    |
| Comprehensive income attributable to non-controlling interests | 2,640                            | 3,900      |
| Comprehensive income attributable to DTCC                      | \$ 192,243                       | \$ 322,508 |

(1) Amounts are net of benefit for income taxes of \$10,508 and provision for income taxes of \$12,797 for 2019 and 2018, respectively.

The Notes to Consolidated Financial Statements are an integral part of these statements.

**THE DEPOSITORY TRUST & CLEARING CORPORATION**  
**CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY**

| (In thousands)                                  |                 |          |            |                 |                                  |                      | Accumulated Other<br>Comprehensive Income (Loss),<br>Net of Tax |                         |                                  |                                  |
|-------------------------------------------------|-----------------|----------|------------|-----------------|----------------------------------|----------------------|-----------------------------------------------------------------|-------------------------|----------------------------------|----------------------------------|
|                                                 | Preferred Stock |          |            | Common<br>Stock | Additional<br>Paid-In<br>Capital | Retained<br>Earnings | Defined Benefit                                                 | Foreign                 | Non-<br>controlling<br>Interests | Total<br>Shareholders'<br>Equity |
|                                                 | Series A        | Series B | Series C   |                 |                                  |                      | Pension and<br>Other Plans                                      | Currency<br>Translation |                                  |                                  |
|                                                 |                 |          |            |                 |                                  |                      |                                                                 |                         |                                  |                                  |
| BALANCE - January 1, 2018                       | \$ 300          | \$ 300   | \$ 390,516 | \$ 5,091        | \$ 411,065                       | \$ 1,261,309         | \$ (188,925)                                                    | \$ (429)                | \$ 148,440                       | \$ 2,027,667                     |
| Adjustment for accounting change <sup>(1)</sup> | —               | —        | —          | —               | —                                | 33,676               | (33,676)                                                        | —                       | —                                | —                                |
| Net income                                      | —               | —        | —          | —               | —                                | 295,813              | —                                                               | —                       | 3,900                            | 299,713                          |
| Other comprehensive income (loss)               | —               | —        | —          | —               | —                                | —                    | 33,129                                                          | (6,434)                 | —                                | 26,695                           |
| Dividend to non-controlling interest            | —               | —        | —          | —               | —                                | —                    | —                                                               | —                       | (2,340)                          | (2,340)                          |
| Dividends on preferred stock                    | —               | —        | —          | —               | —                                | (19,500)             | —                                                               | —                       | —                                | (19,500)                         |
| BALANCE - December 31, 2018                     | 300             | 300      | 390,516    | 5,091           | 411,065                          | 1,571,298            | (189,472)                                                       | (6,863)                 | 150,000                          | 2,332,235                        |
| Net income                                      | —               | —        | —          | —               | —                                | 217,840              | —                                                               | —                       | 2,640                            | 220,480                          |
| Other comprehensive (loss) income               | —               | —        | —          | —               | —                                | —                    | (27,286)                                                        | 1,689                   | —                                | (25,597)                         |
| Dividend to non-controlling interest            | —               | —        | —          | —               | —                                | —                    | —                                                               | —                       | (2,640)                          | (2,640)                          |
| Dividends on preferred stock                    | —               | —        | —          | —               | —                                | (19,500)             | —                                                               | —                       | —                                | (19,500)                         |
| BALANCE - December 31, 2019                     | \$ 300          | \$ 300   | \$ 390,516 | \$ 5,091        | \$ 411,065                       | \$ 1,769,638         | \$ (216,758)                                                    | \$ (5,174)              | \$ 150,000                       | \$ 2,504,978                     |

(1) The adjustment relates to the adoption of an accounting update during the prior year.

The Notes to Consolidated Financial Statements are an integral part of these statements.

# THE DEPOSITORY TRUST & CLEARING CORPORATION

## CONSOLIDATED STATEMENTS OF CASH FLOWS

| (In thousands)                                                                                                                                                          | For the years ended December 31, |               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|---------------|
|                                                                                                                                                                         | 2019                             | 2018          |
| <b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>                                                                                                                            |                                  |               |
| Net income                                                                                                                                                              | \$ 220,480                       | \$ 299,713    |
| Adjustments to reconcile net income to net cash provided by operating activities:                                                                                       |                                  |               |
| Depreciation and amortization                                                                                                                                           | 143,338                          | 159,528       |
| Loss on impairment of Intangible assets                                                                                                                                 | 21,468                           | 8,588         |
| Net (gain)/loss on disposal of Premises and equipment and Intangible assets                                                                                             | 2,798                            | (1,769)       |
| Net (income)/loss from Equity method investments                                                                                                                        | (404)                            | 10,423        |
| Deferred income taxes                                                                                                                                                   | 12,170                           | 42,260        |
| Discount on Commercial paper outstanding                                                                                                                                | 11,774                           | 24,854        |
| Other                                                                                                                                                                   | 25,459                           | (6,432)       |
| Net change in:                                                                                                                                                          |                                  |               |
| Accounts receivable                                                                                                                                                     | 220                              | (7,490)       |
| Other Participants' assets                                                                                                                                              | 450                              | 5,529         |
| Other assets                                                                                                                                                            | (40,957)                         | (31,367)      |
| Accounts payable and accrued expenses                                                                                                                                   | 12,664                           | (13,590)      |
| Pension and postretirement benefits                                                                                                                                     | (29,732)                         | (64,316)      |
| Operating lease liability                                                                                                                                               | (25,006)                         | —             |
| Other liabilities                                                                                                                                                       | 19,208                           | (74,658)      |
| Participants' and Clearing Funds liabilities                                                                                                                            | 1,098,814                        | 1,995,148     |
| Payable to Participants                                                                                                                                                 | (77,123)                         | (292,053)     |
| Net cash provided by operating activities                                                                                                                               | 1,395,621                        | 2,054,368     |
| <b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>                                                                                                                            |                                  |               |
| Purchases of Short-term investments                                                                                                                                     | (2,100,000)                      | (800,000)     |
| Maturities of Short-term investments                                                                                                                                    | 2,000,000                        | —             |
| Maturities of Investments in marketable securities                                                                                                                      | —                                | 83,600        |
| Purchases of Investments in marketable securities                                                                                                                       | —                                | (58,600)      |
| Purchases of Premises and equipment                                                                                                                                     | (53,859)                         | (36,706)      |
| Capitalized software development costs                                                                                                                                  | (108,588)                        | (93,215)      |
| Investment in Equity method investments                                                                                                                                 | —                                | (11,000)      |
| Purchase of equity investments                                                                                                                                          | (500)                            | (1,104)       |
| Net cash used in investing activities                                                                                                                                   | (262,947)                        | (917,025)     |
| <b>CASH FLOWS FROM FINANCING ACTIVITIES:</b>                                                                                                                            |                                  |               |
| Proceeds from Commercial paper                                                                                                                                          | 29,534,455                       | 41,659,738    |
| Repayments of Commercial paper                                                                                                                                          | (29,828,153)                     | (37,471,022)  |
| Repayments on long-term debt and other borrowings                                                                                                                       | (42,779)                         | (4,237)       |
| Preferred stock dividend payments                                                                                                                                       | (19,500)                         | (19,500)      |
| Payment to Non-controlling interests                                                                                                                                    | (2,340)                          | (1,080)       |
| Net cash provided by/(used in) financing activities                                                                                                                     | (358,317)                        | 4,163,899     |
| Effect of foreign exchange rate changes on Cash and cash equivalents                                                                                                    | 1,911                            | (1,900)       |
| Net increase/(decrease) in Cash and cash equivalents, Participants' segregated cash, Participants' and Clearing Funds cash deposits, Cash in Other Participants' assets | 776,268                          | 5,299,342     |
| Cash and cash equivalents, Participants' segregated cash, Participants' and Clearing Funds cash deposits, Cash in Other Participants' assets - Beginning of period      | 25,569,357                       | 20,270,015    |
| Cash and cash equivalents, Participants' segregated cash, Participants' and Clearing Funds cash deposits, Cash in Other Participants' assets - End of period            | \$ 26,345,625                    | \$ 25,569,357 |
| <b>SUPPLEMENTAL DISCLOSURES:</b>                                                                                                                                        |                                  |               |
| Interest paid                                                                                                                                                           | \$ 159,543                       | \$ 80,992     |
| Income taxes paid - net of refunds                                                                                                                                      | \$ 60,813                        | \$ 83,009     |
| Non-cash financing activity - capital lease obligation                                                                                                                  | \$ —                             | \$ 3,640      |

The Notes to Consolidated Financial Statements are an integral part of these statements.

## **1. BUSINESS AND OWNERSHIP**

**The Depository Trust & Clearing Corporation (DTCC)** is the parent company of various operating subsidiaries, including, but not limited to, The Depository Trust Company (DTC), National Securities Clearing Corporation (NSCC), Fixed Income Clearing Corporation (FICC), DTCC ITP LLC (ITP), DTCC Deriv/SERV LLC (Deriv/SERV), DTCC Solutions LLC (Solutions), Business Entity Data, B.V. (BED); collectively, the “Company” or “Companies.”

### **Subsidiaries**

*DTC* is a limited purpose trust company formed under the Banking Law of New York State and supervised by the New York State Department of Financial Services (NYSDFS); a State member bank of the Federal Reserve System (FRS), subject to examination by the Federal Reserve Bank of New York (FRBNY) under delegated authority from the Board of Governors (the FRB) of the FRS; and a clearing agency registered with and under the supervision of the U.S. Securities and Exchange Commission (SEC). DTC provides central securities depository, settlement and related services to members of the securities, banking and other financial industries.

*NSCC* is organized as a business corporation under New York law, and is a clearing agency registered with the SEC. NSCC provides clearing, settlement, risk management, and central counterparty (CCP) services to its members for broker-to-broker trades involving equities, corporate and municipal debt, exchange-traded funds, and unit investment trusts.

*FICC* is a clearing agency registered with the SEC that provides CCP services to members that participate in the U.S. government and mortgage-backed securities markets, consisting principally of automated real-time trade comparison, netting, settlement, trade confirmation, clearing, risk management and electronic pool notification. FICC has two divisions: the Government Securities Division (GSD) and the Mortgage-Backed Securities Division (MBSD).

*DTC, NSCC and FICC* are designated as Systemically Important Financial Market Utilities (SIFMUs) by the U.S. Financial Stability Oversight Council pursuant to Title VIII of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010. This designation subjects the clearing agencies to enhanced standards for operation and governance, as established by the SEC's Standards for Covered Clearing Agencies (CCAS).

The members of DTCC's clearing agencies are collectively referred to as Participants.

*ITP*, formerly known as Omgeo LLC, provides post-trade matching, processing and other related services, primarily to members of the financial community.

*Deriv/SERV*, through its subsidiaries and affiliates, enhances transparency and provides operational efficiency, advanced analytics and strategic consulting for derivatives and securities financing transactions. A system of trade repositories supports a multitude of data submissions covering real-time price reporting, transaction details and valuation data. Deriv/SERV offers the Trade Information Warehouse asset servicing for credit default swaps and Equity Cash Flow Matching for equity derivatives.

*Solutions* provides information-based and data processing solutions.

*BED* owns and operates the Global Market Entity Identifier (GMEI) Utility Legal Entity Identifier (LEI) solution in the federated Global LEI system. The GMEI Utility is designed to provide a single, universal standard identifier to any organization or firm involved in a financial transaction internationally across all asset classes.

## 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

**Basis of presentation.** The accompanying consolidated financial statements are prepared in accordance with generally accepted accounting principles in the United States of America (U.S. GAAP). The accompanying consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. Intercompany accounts and transactions have been eliminated in consolidation.

**Use of estimates.** The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements. Management makes estimates regarding, among other things, the collectability of receivables, the outcome of litigation, the realization of deferred taxes, unrecognized tax benefits, impairment of intangible assets, fair value measurements and other matters that affect the reported amounts. Estimates are based on judgment and available information; therefore, actual results could differ materially from those estimates.

**Cash and cash equivalents.** All highly liquid investments purchased with an original maturity of three months or less at the date of acquisition are classified as Cash and cash equivalents. Cash equivalents consist primarily of highly liquid investments in deposits held in banks.

**Participants' segregated cash.** Represents cash received from Participants for the exclusive benefit of the Participants' customers in compliance with SEC rule 15c3-3 (customer protection), which requires broker-dealers to segregate a certain amount of cash and securities in specially protected accounts on behalf of their clients.

**Short-term investments.** Consists of cash invested in bank deposits with original maturities greater than three months and less than one year with various yields carried at amortized cost, which approximates fair value due to their short-term maturities.

**Fair value measurements.** The Company may be required or permitted to measure and disclose certain assets and liabilities using 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. The Company uses a three-level classification hierarchy of fair value measurements that establishes the quality of inputs used to measure fair value. The fair value of financial instruments is determined using various techniques that involve some level of estimation and judgment, the degree of which is dependent on the price transparency and the complexity of the instruments.

**Accounts receivable.** Accounts receivable are stated at cost, net of an allowance for doubtful accounts. The Company establishes an allowance for estimated losses resulting from uncollectibility. The Company determines the need for an allowance based on a variety of factors, including the length of time receivables are past due, macroeconomic conditions, historical experience and the financial condition of customers and other debtors.

**Participants' and Clearing Funds.** The rules of DTC, NSCC and FICC require Participants to maintain deposits related to their respective activities based on calculated requirements. The deposits are available to collateralize Participants' obligations and certain liabilities of the Companies. Margin deposits and Participant contributions are maintained within the Participants' and Clearing Funds on the accompanying Consolidated Statements of Financial Condition due to the benefits and risks of ownership incurred by the Company. Deposits and contributions may be in the form of cash and cash equivalents and securities. These deposits and contributions may be applied to satisfy obligations of the depositing Participant, other Participants, or the Company as provided in the rules of the relevant subsidiaries of the Company.

*Cash deposits and Investments in marketable securities.* Deposits and contributions received in the form of cash may be invested in bank deposits, reverse repurchase agreements, money market funds and direct obligations of the U.S. Government. Reverse repurchase agreements provide for FICC's delivery of cash in exchange for securities having a market value that is at least 102% of the amount of the agreements. Securities purchased under reverse repurchase agreements are typically U.S. Treasury and agency securities. Reverse repurchase agreements are recorded at the contract amounts. All interest earned on investments is accrued and included within Interest income in the accompanying Consolidated Statements of Income. This interest is refunded to Participants, which is included in Refunds to Participants in the accompanying Consolidated Statements of Income.

## **2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

*Securities on deposit - at fair value.* Securities may include U.S. Treasury securities, U.S. agency debt securities and U.S. agency residential mortgage-backed securities. All interest earned on these investments is accrued and included within Interest income in the accompanying Consolidated Statements of Income. This interest is refunded to Participants, which is included in Refunds to Participants in the accompanying Consolidated Statements of Income.

*Securities held in custody.* Securities held in custody by DTC for Participants, which are predominantly in electronic book form, but also include physical certificates, are not reported in the accompanying consolidated financial statements. Cash dividends and interest received by DTC or due on such securities and in the process of distribution or awaiting claim, are included in Other Participants' assets with a corresponding liability recorded in Payable to Participants on the accompanying Consolidated Statements of Financial Condition. Short positions occasionally exist in securities balances and are credited to the account of the Participants; such short positions are valued and collateralized daily by 130% of the short position reflected in Other Participants' assets on the accompanying Consolidated Statements of Financial Condition. DTC's obligation to return such cash collateral to Participants is also reflected in Payable to Participants.

**Federal reserve stock.** DTC is a member of the FRBNY and, as a member, is required to maintain a minimum level of investment in FRB stock based on the Company's capital. The FRB stock is carried at cost, classified as a restricted security and periodically evaluated for impairment based on ultimate recovery of par value. Based on this evaluation, the Company determined there is not an other-than-temporary impairment as of December 31, 2019 and 2018. The FRB stock, amounting to \$6,402,000 at December 31, 2019 and 2018, is included in Other non-current assets on the accompanying Consolidated Statements of Financial Condition.

**Other Participants' assets and Payable to Participants.** The Company receives cash and stock dividends, interest, reorganization and redemption proceeds on securities registered in the name of its nominee, Cede and Co., and interest and redemption proceeds on bearer securities, which it distributes to Participants. These balances are included in Other Participants' assets with a corresponding liability recorded in Payable to Participants on the accompanying Consolidated Statements of Financial Condition.

**Premises and equipment.** Premises and equipment are stated at cost, net of accumulated depreciation. Routine maintenance, repairs and replacement costs are expensed as incurred, while improvements that extend the useful life of the assets are capitalized. When equipment is sold or otherwise disposed of, the cost and related accumulated depreciation are removed from the accounts and any resulting gain or loss is recognized in the accompanying Consolidated Statements of Income. Premises and equipment are reviewed for impairment whenever events or changes in circumstances indicate the related carrying amount may not be recoverable.

The following table summarizes how the Company depreciates Premises and equipment:

| <b>Premises and equipment</b> | <b>Amortization Period</b>                            | <b>Amortization Method</b> |
|-------------------------------|-------------------------------------------------------|----------------------------|
| Leasehold improvements        | Shorter of useful life or remaining term of the lease | Straight-line              |
| Furniture and equipment       | 5 to 7 years                                          | Straight-line              |
| Building and improvements     | 39 years                                              | Straight-line              |

Depreciation expense for leasehold improvements, furniture and equipment, and buildings and improvements is included in Depreciation and amortization in the accompanying Consolidated Statements of Income.

## 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

### Goodwill and Intangible assets

*Goodwill.* The Company records Goodwill upon the completion of a business combination as the difference between the purchase price and the fair value of the net assets acquired. Subsequent to initial recognition, Goodwill is not amortized but is tested for impairment annually or more frequently if events occur or circumstances change that indicate an impairment may exist. The Company has the option to first assess qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If after assessing the totality of events or circumstances, the Company determines it is more likely than not that the fair value of a reporting unit is greater than its carrying amount, then performing the two-step test is not required. However, if the Company concludes otherwise, then it is required to perform the first step of the two-step impairment test that compares the estimated fair value of the reporting unit with its carrying value, including goodwill. If the estimated fair value of the reporting unit exceeds its carrying value, it is not considered to be impaired; however, if the carrying value of the reporting unit were to exceed its estimated fair value, a second step would be performed that compares the implied fair value of the reporting unit's goodwill with the carrying value of its goodwill. An impairment loss would be recognized to the extent the carrying value of goodwill exceeds the implied fair value.

*Intangible assets.* The Company's intangible assets include customer relationships and capitalized software.

*Capitalized software.* The Company capitalizes eligible costs associated with the acquisition or development of internal-use software projects that provide new or significantly improved functionality. The Company capitalizes software costs expected to result in long-term operational benefits, such as replacement systems or new applications that result in significantly increased operational efficiencies or functionality. All other costs incurred in connection with internal-use software are expensed as incurred.

The following table summarizes how the Company amortizes and when it tests Intangible assets for impairment:

| Intangible Asset       | Life/<br>Amortization<br>Period | Amortization<br>Method | Impairment<br>Testing Frequency |
|------------------------|---------------------------------|------------------------|---------------------------------|
| Customer relationships | Finite/<br>12 Years             | Straight-line          | If a triggering event occurs    |
| Capitalized software   | Finite/<br>3 Years              | Straight-line          | If a triggering event occurs    |

**Equity method investments.** All investments that represent less than a majority, but at least a 20% ownership interest, and the Company can exert significant influence over the operations of the investment, are accounted for using the equity method. Investments are initially recognized at cost. Subsequently, the Company's proportionate share of investees' earnings are recorded in Net income (loss) from Equity method investments in the accompanying Consolidated Statements of Income in the period earned. Dividends are recorded as a reduction to the investment account.

**Equity investments.** All investments that represent less than a 20% ownership interest are initially recognized at cost and included in Other non-current assets on the accompanying Consolidated Statements of Financial Condition. Subsequently, these investments are measured at fair value, which represents cost less impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for the identical or similar security. Changes in the fair values of these investments are recorded in Other non-operating income, net in the accompanying Consolidated Statements of Income.

**Commercial paper.** NSCC issues unsecured short-term promissory notes (Commercial paper) with maturities generally less than one year. The proceeds from the issuance of the Commercial paper constitute liquid resources of NSCC that, together with other liquid resources of NSCC, will enable it to effect the settlement of its payment obligations in the event of the default of any of its Participants in accordance with NSCC's rules and procedures. Pending use by NSCC of the proceeds of the Commercial paper issuance for this purpose, the funds raised are invested in highly liquid short-term instruments in accordance with NSCC's investment policy.

## 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

**Commitments and contingencies.** The Company is involved in legal proceedings and litigation arising in the ordinary course of business. In the opinion of management, the outcome of such proceedings and litigation is not expected to have a material effect on the accompanying Consolidated Statements of Financial Condition, Income or Cash Flows.

**Non-controlling interests.** Shareholders' equity is adjusted for the income attributable to the non-controlling interest shareholders and any distributions to those shareholders.

**Revenue recognition.** The Company recognizes revenue to depict the transfer of promised services and related performance obligations to customers in an amount that reflects the consideration to which the Company expects to be entitled, upon satisfaction, in exchange for those services. Promised services and related performance obligations are recognized at the point in time when the control of the promised service is transferred to the customer.

To recognize revenue, the Company applies the following steps: identify the contract(s) with the customer, identify the performance obligations in the contract(s), determine the transaction price, allocate the transaction price to the performance obligations in the contract and recognize revenue when (or as) the entity satisfies a performance obligation.

Certain contracts with customers contain variable consideration, whereby the amount the Company receives is contingent on a future event occurring or not occurring, even though the amount itself may be fixed. The variable consideration primarily relates to volume based discounts or rebates for certain services, however, the volume targets or thresholds typically reset on a monthly basis therefore, the variable consideration does not have an impact on the revenue recognition.

The Company derives its revenue from transaction fees, subscription revenue and support services, and other services. Revenue from transaction fees is recognized at a point in time on the transaction date, as the customer obtains the control and benefit of the service at that point. Subscription and support revenues are recognized ratably over the performance period of the relevant contract using a time elapsed measure of progress as the customer receives the benefits of the services throughout the term of the contract. Other services, which represent fees generated from offering referential based data and business processing solutions to financial institutions globally, is recognized when services are provided based on contractual terms.

Details for each revenue stream presented in the Company's Consolidated Statements of Income follow:

*Settlement and asset services.* Revenue derived from this revenue stream is related to transaction fees and subscription revenue. The Company provides settlement services for equity, corporate and municipal debt trades and money market instruments in the United States of America. Asset Servicing, also offered through the Company, offers a broad range of services for underwriting, custody, corporate actions, dividend, proxy and reorganization services, as well as the electronic registration and transfer of securities processing.

*Clearing services.* Revenue derived from this revenue stream is related to transaction fees. Services include continuous net settlement, mortgage backed securities clearing, and government securities clearing.

*Matching and data services.* Revenue derived from this revenue stream is related to transaction fees, subscription revenue and support services. Services include trade enrichment, trade agreement, LEIs and data analytics.

*Repository and derivatives services.* Revenue derived from this revenue stream is related to transaction fees, subscription revenue and support services. The Company provides solutions for derivatives trade reporting and contract servicing. Services support data submissions covering real-time price reporting, transaction details, valuation data to meet members' reporting obligations in various jurisdictions globally, an asset servicing infrastructure for credit default swaps, matching service for equity derivatives payments and tools to member firms to address the quality of their derivatives trade submissions.

*Wealth management services.* Revenue derived from this revenue stream is related to transaction fees. Services include centralized, automated processing and information services for mutual fund, alternative investment, and insurance and retirement products.

## 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

*Other services.* Revenue derived from this revenue stream is related to other services. The Company offers referential and activity-based, announcement, security reference, and liquidity data through the DTCC Data Services product. These offerings are delivered in fixed or configurable formats, sourced from the Company's transaction, reference, position and asset servicing data.

### ***Rebates***

During 2019, the Board of Directors approved and the Company paid a one-time rebate in the amount of \$47 million to DTC, NSCC, and FICC customers. The rebate was based on a pro rata share of qualifying revenues at the legal entity level, using estimated 2019 profitability as the basis for the calculation. The rebate is netted in Settlement and asset services and Clearing services revenues in the accompanying Consolidated Statements of Income.

The rebate amount in the accompanying Consolidated Statements of Income for the year ended December 31, 2019 follows (in thousands):

|                               | <b>Amount</b>    |
|-------------------------------|------------------|
| Settlement and asset services | \$ 13,000        |
| Clearing services             | 34,000           |
| Total                         | <u>\$ 47,000</u> |

### ***Accounts receivable and deferred revenue***

The period in which the Company recognizes revenue may differ from the timing of payments received from customers. The Company typically bills its customers up to 30 days in arrears. The Company records a receivable when revenue is recognized prior to payment and there is an unconditional right to payment. See Note 5, Due from Participants and customers for services, net, for the Company's receivables related to revenues from contracts with customers.

Deferred revenue represents the Company's contract liabilities related to billings or payments received in advance for subscription and support services, as well as professional service fees, where the performance obligation has not yet been satisfied. Deferred revenue is included in Other current liabilities and Other non-current liabilities on the accompanying Consolidated Statements of Financial Condition, as disclosed in Note 12.

**Investment income (loss), net.** Investment income (loss), net represents changes in the fair values of investment assets related to the Company's deferred compensation plan (structured as a Rabbi Trust). All of the marketable securities of the Rabbi Trust are classified as trading securities and are recorded at fair value.

**Non-qualified deferred compensation plan.** DTCC maintains a self-directed, non-qualified deferred compensation plan structured as a "Rabbi Trust" for certain executives and other highly compensated employees. Under the plan, Participants may elect or be required to defer receipt of a portion of their annual compensation and invest it in various mutual, stable value and common collective trust funds. All such investments are held in the Rabbi Trust and the plan requires settlement in cash. The investment assets of the Rabbi Trust are recorded at fair value and included on the accompanying Consolidated Statements of Financial Condition in Other non-current assets as long-term incentive plan assets. The amount of compensation deferred under the plan is credited to each Participant's deferral account and a deferred compensation liability is recorded in Other non-current liabilities on the accompanying Consolidated Statements of Financial Condition. The investment assets of the Rabbi Trust are classified as trading securities, and accordingly, changes in their fair values are recorded in Investment income (loss), net in the accompanying Consolidated Statements of Income with a corresponding charge recorded in Employee compensation and related benefits in the accompanying Consolidated Statements of Income. The change in fair value of these investments was income of \$22,290,000 and loss of \$4,806,000 for the years ended December 31, 2019 and 2018, respectively.

## **2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

**Long-term incentive plan.** DTCC's long-term incentive plan is provided to certain designated employees of DTCC to establish retention incentives for certain key employees. The performance period is a three-year period commencing January 1 of each calendar year, unless modified, extended or terminated by the Board of Directors and the Compensation and Human Resources Committee. Only those employees specifically designated by the Compensation Committee are eligible to participate in the plan. The associated liabilities for the plan are classified in Other current liabilities and Other non-current liabilities on the accompanying Consolidated Statements of Financial Condition.

### **Pension and postretirement plans**

*Defined benefit plans.* DTCC has a qualified non-contributory defined benefit pension plan (the Pension Plan), under which employees hired or rehired before May 1, 2009 are eligible to participate upon attainment of age 21 and completion of six months of service. The Pension Plan was frozen effective December 31, 2013 and is closed to new participants, all plan participants no longer accrue any benefits under the plan. The Pension Plan is qualified under Section 401(a) of the Internal Revenue Code of 1986, as amended. It is subject to the provisions of ERISA. The Pension Plan provides benefits to retired or vested terminated employees or their beneficiaries. The Pension Benefit Guarantee Corporation, a United States governmental agency, guarantees most vested normal age retirement benefits subject to certain limitations. Pension benefits under the Pension Plan are determined based on an employee's length of service and earnings. DTCC's funding policy requires the Company to make contributions to the Pension Plan that meet or exceed the minimum funding standards under the Employee Retirement Income Security Act of 1974 (ERISA) and the Internal Revenue Code.

DTCC provides health care and life insurance benefits to DTCC eligible retired employees in Retiree Medical and Life Insurance Plans. The Retiree Medical Plan is available to certain eligible retired employees and their dependents. Life insurance coverage is available to certain retired employees who have completed twenty years of full time service and their dependents.

DTCC also sponsors a Supplemental Executive Retirement Plan (SERP) and a Restoration Plan that are non-qualified, non-funded defined benefit plans, which provide additional retirement benefits to certain employees. Benefits paid to retirees are based on age at retirement, years of credited service and average compensation. The cost of non-qualified defined benefits is determined using substantially the same actuarial methods and economic assumptions as those used for the qualified pension plan. The Company maintains certain assets in trust for non-qualified retirement benefit obligations.

The annual measurement date for DTCC's defined benefit plans is December 31. Plan assets are determined based on fair value generally representing observable market prices. The projected benefit obligations are determined based on the present value of projected benefit distributions at an assumed discount rate. The discount rate utilized is based on the yield curves of high-quality corporate bonds available in the marketplace. The net periodic pension expense or income includes service costs, interest costs based on an assumed discount rate, an expected return on plan assets based on an actuarially derived market-related value and amortization of prior years' actuarial gains and losses and prior service cost (credit). Service costs, interest costs, and all other costs are included in Employee compensation and related benefits, Interest expense, and Other non-operating income, respectively, in the accompanying Consolidated Statements of Income.

Actuarial gains and losses include the impact of plan amendments, gains or losses related to changes in the amount of the projected benefit obligations or plan assets resulting from experience different from the assumed rate of return, changes in the discount rate or other assumptions. To the extent an actuarial gain or loss exceeds 10% of the greater of the projected benefit obligation or the market-related value of plan assets, the excess is recognized over the future lifetime of the defined benefit plans.

The expected long-term rate of return on plan assets is based on anticipated returns for each applicable asset class. Anticipated returns are weighted for the expected allocation for each asset class and are based on forecasts for prospective returns in the equity and fixed income markets, which should track the long-term historical returns for these markets. The Company also considers the growth outlook for the U.S. and global economies, as well as current and prospective interest rates.

The market-related value utilized to determine the expected return on plan assets is based on the fair value of plan assets adjusted for the difference between expected returns and actual performance of plan assets. The difference between actual experience and expected returns on plan assets is included as an adjustment in the market-related value over a 4-year period.

## **2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

*Defined contribution retirement plans.* The Company sponsors two defined contribution plans for U.S. employees, The Depository Trust & Clearing Corporation Employee Savings Plan (Employee Savings Plan) and The Depository Trust & Clearing Corporation Operations Level Employee Savings Plan (Operations Level Savings Plan). The plans are administered by the Company's Employee Benefit Plans Committee, which is appointed by the Board of Directors of the Company and is composed of designated Company officers. The Employee Savings Plan is a single employer plan covering non-bargaining unit employees. The Operations Level Savings Plan is a single employer plan covering bargaining unit employees.

The Company matches 50% of the first 6% of the employee's contributions up to the Internal Revenue Service (IRS) compensation limits. Company matching contributions and employee contributions vest immediately.

In addition to the Company matching contributions, the Company offers a supplemental contribution on behalf of the employees in lieu of the contributions to the Pension Plan, which is now frozen. Employees are able to participate in this Pension Contribution Account (PCA) after six months of service. The Company makes contributions equal to a percentage of base and incentive pay based on years of service (3% for less than five years, 4% for five years but less than ten years, 5% for ten years or more). Company supplemental contributions vest over five years at the rate of 20% for each year of service or upon attaining age 55.

In addition to the Company matching and PCA contributions, the Company offers a supplemental contribution on behalf of the employees who were hired or rehired on or before May 1, 2001, also in lieu of the contributions to the Pension Plan. The Pension Transition Account (PTA) contribution ranges from 2% to 3% of eligible pay, for employees whose age plus service combination (in whole years) totaled 55 or higher, as of December 31, 2013. Vesting is over five years at a rate of 20% for each year of service or upon attaining age 55.

All investments, except loans receivable, are included in The Depository Trust & Clearing Corporation Master Savings Plan Trust and are administered by the plans' trustee, State Street Bank & Trust Company. Conduent Inc. serves as the recordkeeper for the plans. Both plans are subject to the provisions of the ERISA.

**Income taxes.** The Provision for income taxes is computed using the asset and liability method. The tax currently payable is based on taxable income for the year. Taxable income differs from Income before taxes as reported in the accompanying Statement of Income because it excludes items of income or expense that are taxable or deductible in other years and it further excludes items that are never taxable or deductible. The Company records a deferred income tax (benefit) provision when there are temporary differences between assets and liabilities measured for financial reporting and for income tax return purposes. These temporary differences result in taxable (deferred tax liability) or deductible (deferred tax asset) amounts in future years and are measured using the tax rates and laws that will be in effect when such differences are expected to reverse. Valuation allowances are recognized if, based on the weight of available evidence, it is more likely than not that some portion of the deferred tax asset will not be realized. Deferred tax assets and liabilities are reported net by jurisdiction in non-current assets or liabilities on the accompanying Statements of Financial Condition. It is the Company's policy to provide for uncertain tax positions and the related interest and penalties based upon management's assessment of whether a tax benefit is more likely than not to be sustained upon examination by the tax authorities.

**Foreign currency.** Assets and liabilities denominated in foreign currencies are translated at rates of exchange prevailing on the dates of the accompanying Consolidated Statements of Financial Condition. Revenues and expenses are translated at average rates of exchange during the year. Gains or losses on foreign currency transactions are included in the accompanying Consolidated Statements of Income. Gains or losses on translation of the financial statements of foreign subsidiaries, when the functional currency is other than the U.S. dollar, are included in the accompanying Consolidated Statements of Comprehensive Income.

## 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

**Derivatives and hedging.** The Company uses forward contracts to hedge net investments in certain foreign subsidiaries whose functional currencies are not the U.S. dollar. The Company formally documents all relationships between the hedging instruments and hedged items, as well as the Company's risk-management objectives and strategy for undertaking various hedging transactions. Hedge accounting is applied when a derivative is highly effective at reducing the risk associated with the hedged exposure and the risk management objective and strategy are documented. Hedge documentation identifies the derivative hedging instrument, the asset or liability and type of risk hedged, and how the effectiveness of the derivative is assessed prospectively and retrospectively. For hedging instruments that qualify for hedge accounting, changes in the fair value of the derivatives are recorded in Other comprehensive (loss) income. If it is determined that a derivative is not highly effective at hedging the designated exposure, the Company discontinues hedge accounting and changes in fair value of the hedging instrument are recorded in earnings.

**Reconciliation of Cash and cash equivalents and other limited use cash.** The Company includes all cash on the Consolidated Statements of Financial Condition, regardless of which line it is included, when reconciling the beginning and ending total amounts shown in the Consolidated Statements of Cash Flows, which includes Cash and cash equivalents and cash balances that are not available for general corporate purposes due to certain limitations, including - Participants' segregated cash, Participants' and Clearing Funds cash deposits and Cash in Other Participants' assets.

A reconciliation of Cash and cash equivalents, Participants' segregated cash, Clearing Fund cash deposits, Cash in Other Participants' assets, reported within the accompanying Consolidated Statements of Financial Condition that sum to the total of the same such amounts shown on the accompanying Consolidated Statements of Cash Flows as of December 31, 2019 and 2018 follows (in thousands):

|                                                                                                                                                                                                       | 2019                 | 2018                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|----------------------|
| Cash and cash equivalents                                                                                                                                                                             | \$ 8,395,163         | \$ 8,641,036         |
| Participants' segregated cash                                                                                                                                                                         | 4,876                | 77,988               |
| Participants' and Clearing Funds cash deposits                                                                                                                                                        | 17,431,482           | 16,332,668           |
| Cash in Other Participants' assets                                                                                                                                                                    | 514,104              | 517,665              |
| Total Cash and cash equivalents, Participants' segregated cash, Participants' and Clearing Funds cash deposits, Cash in Other Participants' assets shown on the Consolidated Statements of Cash Flows | <u>\$ 26,345,625</u> | <u>\$ 25,569,357</u> |

## 3. ACCOUNTING AND REPORTING DEVELOPMENTS

| Standard                                                                                                   | Description                                                                                                                                                                                                                                                                                                                                                                                   | Impact on the financial statements or other significant matters                                                                                                                                                                                                              |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Financial Accounting Standards Board Standard Issued, but not yet Adopted</i>                           |                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                              |
| ASU 2019-12 Income Taxes (Topic 740) - Simplifying the Accounting for Income Taxes<br>Issued December 2019 | <ul style="list-style-type: none"> <li>Clarifies and simplifies aspects of accounting for income taxes.</li> <li>Eliminates certain exceptions related to the approach for intraperiod tax allocation, the methodology for calculating income taxes in an interim period and the recognition of deferred tax liabilities for basis differences between book and tax.</li> </ul>               | <ul style="list-style-type: none"> <li>Effective January 1, 2022.</li> <li>The Company is evaluating the impact on its consolidated financial statements and related disclosures.</li> </ul>                                                                                 |
| ASU 2019-05 Financial Instruments - Credit Losses: Targeted Transition Relief<br>Issued May 2019           | <ul style="list-style-type: none"> <li>Provides entities with an option upon adoption of ASU 2016-13 Customer's Financial Instruments - Credit Losses to irrevocably elect the fair value option on an instrument-by-instrument basis for certain financial instruments that are both within the scope of the current expected credit loss and eligible for the fair value option.</li> </ul> | <ul style="list-style-type: none"> <li>Effective January 1, 2020.</li> <li>The Company will not elect the fair value option on any instrument within the scope and therefore there is no impact on its consolidated financial statements and related disclosures.</li> </ul> |

### 3. ACCOUNTING AND REPORTING DEVELOPMENTS (CONTINUED)

| Standard                                                                                                                                                               | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Impact on the financial statements or other significant matters                                                                                                                                                                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Financial Accounting Standards Board Standard Issued, but not yet Adopted (Continued)</i>                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                  |
| ASU 2018-18 Clarifying Interactions of the Revenue Recognition and Collaborative Arrangements Standards<br><br><i>Issued November 2018</i>                             | <ul style="list-style-type: none"> <li>Amends Collaborative Arrangement standard to clarify that certain transactions between participants in a collaborative arrangement should be accounted for under ASU 2014-09 <i>Revenue from contracts with customers</i> when the collaborative partner is considered the customer. Requires revenues from such collaborative contracts to be recognized upon transfer of control of a good or service in the amount of consideration expected to be received from the collaborative partner.</li> <li>Precludes an entity from presenting collaborative arrangement consideration as revenue from contracts with customers if the collaborative partner is not considered the customer.</li> </ul> | <ul style="list-style-type: none"> <li>Effective January 1, 2020 for public companies and early adopted by the Company.</li> <li>The adoption of the standard will not have a material impact to the recognition and timing of revenues for collaborative arrangements or on the Company's consolidated financial statements and related disclosures.</li> </ul> |
| ASU 2018-15 Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement (CCA) That Is a Service Contract<br><br><i>Issued August 2018</i> | <ul style="list-style-type: none"> <li>Implementation costs related to a CCA will be deferred or expensed as incurred in accordance with the existing internal-use software guidance for similar costs.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <ul style="list-style-type: none"> <li>Effective January 1, 2020 for public companies and early adopted by the Company.</li> <li>The early adoption of the standard will not have a material impact on the Company's consolidated financial statements and related disclosures.</li> </ul>                                                                       |
| ASU 2018-14 Changes to the Disclosure Requirements for Defined Benefit Plans<br><br><i>Issued August 2018</i>                                                          | <ul style="list-style-type: none"> <li>Eliminates requirements for certain disclosures that are no longer considered cost beneficial and requires new ones that the Financial Accounting Standards Board considers pertinent.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <ul style="list-style-type: none"> <li>Effective January 1, 2021.</li> <li>The Company is evaluating the impact on related disclosures in its consolidated financial statements.</li> </ul>                                                                                                                                                                      |
| ASU 2018-13 Changes to the Disclosure Requirements for Fair Value Measurement<br><br><i>Issued August 2018</i>                                                         | <ul style="list-style-type: none"> <li>Entities will no longer be required to disclose the amount of and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy (see Note 15).</li> <li>Public companies will be required to disclose the range and weighted average used to develop significant unobservable inputs for recurring Level 3 fair value measurements.</li> <li>Modifies certain disclosure requirements for nonpublic entities to make them less burdensome.</li> </ul>                                                                                                                                                                                                                                | <ul style="list-style-type: none"> <li>Effective January 1, 2020.</li> <li>The adoption of the standard will have no material impact on the related disclosures in the Company's consolidated financial statements.</li> </ul>                                                                                                                                   |
| ASU 2017-04 Intangibles - Goodwill and Other - Simplifying the Test for Goodwill Impairment<br><br><i>Issued January 2017</i>                                          | <ul style="list-style-type: none"> <li>Eliminates the second step from the goodwill impairment test. If a reporting unit's carrying amount exceeds its fair value, an entity will record an impairment charge based on that difference. The impairment charge will be limited to the amount of goodwill allocated to that reporting unit.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                        | <ul style="list-style-type: none"> <li>Effective January 1, 2020 for public companies and early adopted by the Company.</li> <li>The adoption of the standard will not have a material impact on the Company's consolidated financial statements and related disclosures.</li> </ul>                                                                             |

### 3. ACCOUNTING AND REPORTING DEVELOPMENTS (CONTINUED)

| Standard                                                                                                  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Impact on the financial statements or other significant matters                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Financial Accounting Standards Board Standard Issued, but not yet Adopted (Continued)</i>              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| ASU 2016-13<br>Measurement of Credit<br>Losses on Financial<br>Instruments<br><br><i>Issued June 2016</i> | <ul style="list-style-type: none"> <li>Replaces the current incurred loss approach for credit losses with an "expected loss" model for instruments measured at amortized cost.</li> <li>Requires all lifetime credit losses for financial assets held at the reporting date to be estimated based on factors such as historical experience, current conditions and forecasts.</li> <li>Requires entities to record allowances for available-for-sale debt securities.</li> </ul>                                                                 | <ul style="list-style-type: none"> <li>Effective January 1, 2020 for public companies and early adopted by the Company.</li> <li>The Company determined the largest instrument in scope of the standard is trade receivables. Trade receivables will require an adjustment to management's provision matrix for current and forward-looking projections however, adjustments are not expected to be material.</li> <li>The adoption of the standard will not have a material impact on its financial statements and related disclosures.</li> </ul>                                                                                                                                                                                                                                                                                                                                                      |
| <hr/>                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Standard                                                                                                  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Impact on the financial statements or other significant matters                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <i>Recently Adopted Accounting Standard</i>                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| ASU 2016-02 Leases<br><br><i>Issued February 2016</i>                                                     | <ul style="list-style-type: none"> <li>Requires a lessee to recognize leases with terms of longer than 12 months within balance sheet assets and liabilities.</li> <li>Changes the recognition, measurement and presentation of expenses and cash flows arising from a lease depending on its classification as a financing or operating lease as determined by the lessee.</li> <li>Lessor accounting will remain largely unchanged from current GAAP.</li> <li>Leases of fewer than 12 months are exempt from the updated standard.</li> </ul> | <ul style="list-style-type: none"> <li>Early adopted January 1, 2019.</li> <li>The Company adopted the standard through a cumulative-effect adjustment without revising the prior comparative period and elected the practical expedients permitted under the transition guidance within the standard, which permits the Company not to reassess the following for any expired or existing contracts: i) whether any contracts contain leases; ii) lease classification (i.e. operating lease or finance lease); and iii) initial direct cost.</li> <li>The adoption of the standard resulted in the recognition of right-of-use assets of \$251 million and lease liabilities of \$304 million on the Consolidated Statements of Financial Condition. The adoption did not have a material impact in the Consolidated Statements of Income.</li> <li>See Note 10 for additional information.</li> </ul> |

#### **4. PARTICIPANTS' SEGREGATED CASH, OTHER PARTICIPANTS' ASSETS AND PAYABLE TO PARTICIPANTS**

Details for Participants' segregated cash, Other Participants' assets and Payable to Participants as of December 31, 2019 and 2018 follow (in thousands):

|                               | <u><b>2019</b></u>       | <u><b>2018</b></u>       |
|-------------------------------|--------------------------|--------------------------|
| Assets:                       |                          |                          |
| Participants' segregated cash | \$ 4,876                 | \$ 77,988                |
| Other Participants' assets:   |                          |                          |
| Cash                          | 514,104                  | 517,665                  |
| Other                         | —                        | 450                      |
| Total                         | <u><u>\$ 518,980</u></u> | <u><u>\$ 596,103</u></u> |
| Liabilities:                  |                          |                          |
| Payable to Participants       | <u><u>\$ 518,980</u></u> | <u><u>\$ 596,103</u></u> |

Participants' segregated cash represents cash received from Participants to facilitate their compliance with SEC customer protection rules.

Payable to Participants included \$126,000 and \$127,000 of cash collateral received from Participants, representing 130% of short positions as of December 31, 2019 and 2018, respectively. Unclaimed balances are remitted to the appropriate authority when required, pursuant to abandoned property laws.

#### **5. ACCOUNTS RECEIVABLE**

Details for Accounts receivable as of December 31, 2019 and 2018 follow (in thousands):

|                                                       | <u><b>2019</b></u>       | <u><b>2018</b></u>       |
|-------------------------------------------------------|--------------------------|--------------------------|
| Due from Participants and customers for services      | \$ 163,432               | \$ 165,554               |
| Allowance for doubtful accounts                       | (614)                    | (1,650)                  |
| Due from Participants and customers for services, net | 162,818                  | 163,904                  |
| Other receivables                                     | 14,401                   | 13,976                   |
| Total                                                 | <u><u>\$ 177,219</u></u> | <u><u>\$ 177,880</u></u> |

Total write-offs in the allowance for doubtful accounts were \$1,433,000 and \$382,000 for the years ended December 31, 2019 and 2018, respectively.

## 6. PARTICIPANTS' AND CLEARING FUNDS

Details for the Participants' and Clearing Funds as of December 31, 2019 and 2018 follow (in thousands):

| <b>2019</b>       |                     |                     |                      |                      |
|-------------------|---------------------|---------------------|----------------------|----------------------|
|                   | <b>DTC</b>          | <b>NSCC</b>         | <b>FICC</b>          | <b>Total</b>         |
| Required deposits | \$ 1,150,000        | \$ 5,183,646        | \$ 24,221,483        | \$ 30,555,129        |
| Excess deposits   | 807,140             | 713,606             | 8,739,030            | 10,259,776           |
| Total             | <u>\$ 1,957,140</u> | <u>\$ 5,897,252</u> | <u>\$ 32,960,513</u> | <u>\$ 40,814,905</u> |

  

| <b>2018</b>       |                     |                     |                      |                      |
|-------------------|---------------------|---------------------|----------------------|----------------------|
|                   | <b>DTC</b>          | <b>NSCC</b>         | <b>FICC</b>          | <b>Total</b>         |
| Required deposits | \$ 1,150,000        | \$ 6,830,444        | \$ 18,053,674        | \$ 26,034,118        |
| Excess deposits   | 684,363             | 1,435,091           | 8,468,550            | 10,588,004           |
| Total             | <u>\$ 1,834,363</u> | <u>\$ 8,265,535</u> | <u>\$ 26,522,224</u> | <u>\$ 36,622,122</u> |

**Cash deposits and Securities on deposit.** Details for cash deposits and securities on deposit of the Participants' and Clearing Funds, which may be applied to satisfy obligations of the depositing Participant, other Participants, or the Company as provided in the rules of the relevant subsidiaries of the Company, as of December 31, 2019 and 2018 follow (in thousands):

| <b>2019</b>                           |                     |                     |                      |                      |
|---------------------------------------|---------------------|---------------------|----------------------|----------------------|
|                                       | <b>DTC</b>          | <b>NSCC</b>         | <b>FICC</b>          | <b>Total</b>         |
| Cash deposits                         | \$ 1,957,140        | \$ 5,554,586        | \$ 9,919,756         | \$ 17,431,482        |
| Securities on deposit - at fair value | —                   | 342,666             | 23,040,757           | 23,383,423           |
| Total                                 | <u>\$ 1,957,140</u> | <u>\$ 5,897,252</u> | <u>\$ 32,960,513</u> | <u>\$ 40,814,905</u> |

  

| <b>2018</b>                           |                     |                     |                      |                      |
|---------------------------------------|---------------------|---------------------|----------------------|----------------------|
|                                       | <b>DTC</b>          | <b>NSCC</b>         | <b>FICC</b>          | <b>Total</b>         |
| Cash deposits                         | \$ 1,834,363        | \$ 7,651,033        | \$ 6,847,272         | \$ 16,332,668        |
| Securities on deposit - at fair value | —                   | 614,502             | 19,674,952           | 20,289,454           |
| Total                                 | <u>\$ 1,834,363</u> | <u>\$ 8,265,535</u> | <u>\$ 26,522,224</u> | <u>\$ 36,622,122</u> |

Details for the Participants' and Clearing Funds cash deposits as of December 31, 2019 and 2018 follow (in thousands):

| <b>2019</b>                                   |                     |                     |                     |                      |
|-----------------------------------------------|---------------------|---------------------|---------------------|----------------------|
|                                               | <b>DTC</b>          | <b>NSCC</b>         | <b>FICC</b>         | <b>Total</b>         |
| Bank deposits                                 | \$ 1,957,140        | \$ 3,953,586        | \$ 7,851,756        | \$ 13,762,482        |
| Money market fund investments - at fair value | —                   | 1,226,000           | 1,618,000           | 2,844,000            |
| Reverse repurchase agreements                 | —                   | 375,000             | 450,000             | 825,000              |
| Total                                         | <u>\$ 1,957,140</u> | <u>\$ 5,554,586</u> | <u>\$ 9,919,756</u> | <u>\$ 17,431,482</u> |

  

| <b>2018</b>                                   |                     |                     |                     |                      |
|-----------------------------------------------|---------------------|---------------------|---------------------|----------------------|
|                                               | <b>DTC</b>          | <b>NSCC</b>         | <b>FICC</b>         | <b>Total</b>         |
| Bank deposits                                 | \$ 1,834,363        | \$ 5,720,033        | \$ 5,466,272        | \$ 13,020,668        |
| Money market fund investments - at fair value | —                   | 1,556,000           | 931,000             | 2,487,000            |
| Reverse repurchase agreements                 | —                   | 375,000             | 450,000             | 825,000              |
| Total                                         | <u>\$ 1,834,363</u> | <u>\$ 7,651,033</u> | <u>\$ 6,847,272</u> | <u>\$ 16,332,668</u> |

## 7. PREMISES AND EQUIPMENT

The cost, accumulated depreciation and net book value of Premises and equipment for the years ended December 31, 2019 and 2018 follow (in thousands):

|                                | <b>2019</b>       | <b>2018</b>       |
|--------------------------------|-------------------|-------------------|
| Furniture and equipment        | \$ 343,082        | \$ 362,376        |
| Leasehold improvements         | 164,636           | 201,183           |
| Buildings and improvements     | 22,341            | 22,005            |
| Finance leases                 | 4,611             | 23,172            |
| Land                           | 4,221             | 4,221             |
| Total Premises and equipment   | 538,891           | 612,957           |
| Less: Accumulated depreciation | (322,474)         | (399,846)         |
| Net book value                 | <u>\$ 216,417</u> | <u>\$ 213,111</u> |

Depreciation expense for premises and equipment for the years ended December 31, 2019 and 2018 was \$47,799,000 and \$55,661,000, respectively, and is included in Depreciation and amortization in the accompanying Consolidated Statements of Income.

During the years ended December 31, 2019 and 2018, disposals of fully depreciated premises and equipment resulted in the removal of cost and accumulated depreciation of \$123,544,000 and \$37,694,000, respectively. Disposals of other premises and equipment during the years ended December 31, 2019 and 2018 resulted in a loss of \$2,798,000 and a gain of \$1,769,000, respectively, and are included in General and administrative in the accompanying Consolidated Statements of Income.

## 8. GOODWILL AND INTANGIBLE ASSETS

The gross carrying value, accumulated amortization and net book value of Goodwill and Intangible assets for the years ended December 31, 2019 and 2018 follow (in thousands):

|                                                           | <b>2019</b>       | <b>2018</b>       |
|-----------------------------------------------------------|-------------------|-------------------|
| Goodwill:                                                 |                   |                   |
| Gross carrying value                                      | \$ 57,699         | \$ 57,699         |
| Intangible assets:                                        |                   |                   |
| Customer relationships:                                   |                   |                   |
| Gross carrying value                                      | 231,700           | 231,700           |
| Accumulated amortization                                  | (120,679)         | (101,371)         |
| Net book value                                            | 111,021           | 130,329           |
| Capitalized software:                                     |                   |                   |
| Gross carrying value                                      | 840,431           | 926,655           |
| Accumulated amortization                                  | (626,327)         | (737,865)         |
| Net book value                                            | 214,104           | 188,790           |
| Total Intangible assets - net of accumulated amortization | <u>\$ 325,125</u> | <u>\$ 319,119</u> |

Amortization expense for intangible assets for the years ended December 31, 2019 and 2018 was \$95,539,000 and \$103,867,000, respectively, and is included in Depreciation and amortization in the accompanying Consolidated Statements of Income.

## 8. GOODWILL AND INTANGIBLE ASSETS (CONTINUED)

During the years ended December 31, 2019 and 2018, disposals of fully amortized capitalized software resulted in the removal of cost and accumulated amortization of \$186,465,000 and \$0, respectively. There were no other disposals of capitalized software for the years ended December 31, 2019 and 2018.

*Goodwill impairment testing.* DTCC completed its annual goodwill impairment test in the fourth quarter of 2019 and concluded that goodwill was not impaired. DTCC performed a qualitative assessment to test the goodwill for impairment and determined it was more likely than not that the fair value of each reporting unit exceeded their carrying value and therefore goodwill was deemed not impaired.

*Intangible assets.* The Company recognized impairment charges of \$21,468,000 and \$8,588,000 related to capitalized software for the years ended December 31, 2019 and 2018, respectively, that were determined to have no realizable value. The impairment charges were included in Impairment of Intangible assets in the accompanying Consolidated Statements of Income.

Details for estimated amortization expense for each of the next five years and thereafter follow (in thousands):

|                                     |    |                |
|-------------------------------------|----|----------------|
| 2020                                | \$ | 97,193         |
| 2021                                |    | 90,116         |
| 2022                                |    | 65,498         |
| 2023                                |    | 38,529         |
| 2024                                |    | 19,308         |
| Thereafter                          |    | 14,481         |
| Total future estimated amortization | \$ | <u>325,125</u> |

## 9. EQUITY METHOD INVESTMENTS

Details for DTCC's Equity method investments as of December 31, 2019 and 2018 follow (in thousands, except ownership percentage):

|                                             | <u>2019</u> | <u>2018</u> |
|---------------------------------------------|-------------|-------------|
| <b>European Central Counterparty N.V.</b>   |             |             |
| Percentage ownership                        | 20%         | 20%         |
| Carrying value                              | \$ 10,676   | \$ 10,491   |
| <b>DTCC-Euroclear GlobalCollateral, LTD</b> |             |             |
| Percentage ownership                        | 50%         | 50%         |
| Carrying value                              | \$ —        | \$ —        |

**European Central Counterparty N.V. (ECCP N.V.),** a joint venture with ABN AMRO Clearing Investments B.V., NASDAQ AB, CBOE Worldwide Holdings Limited and Euronext N.V., provides a pan-European clearing solution offering economies of scale and risk management expertise to European market participants. ECCP N.V. uses the risk management framework and customer service organization of European Multilateral Clearing Facility N.V. (EMCF), and conducts its operations using the technology platform and infrastructure of EMCF.

On December 9, 2019, the Company entered into a binding agreement to sell its 20% minority stake in ECCP N.V., along with the other ECCP N.V. shareholders, to CBOE Worldwide Holdings Limited. The transaction is expected to close in the first half of 2020, pending the receipt of required regulatory approval.

## 9. EQUITY METHOD INVESTMENTS (CONTINUED)

**DTCC-Euroclear GlobalCollateral LTD (DEGCL)**, a joint venture with Euroclear plc, provides support to financial institutions in addressing significant regulatory, operational and industry challenges related to the management of margin calls and collateral impacting the over-the-counter (OTC) derivatives market.

Cash contributions made to DEGCL subsequent to December 2017 were for the funding of prior losses of DEGCL and are included in Net income (loss) from Equity method investments in the accompanying Consolidated Statements of Income until financial conditions improve.

There were no contributions to DEGCL during 2019. The Company's contributions to DEGCL for the year ended December 31, 2018 follow (in thousands):

|                      | <b>Amount</b>    |
|----------------------|------------------|
| June 19, 2018        | \$ 5,000         |
| December 5, 2018     | 6,000            |
| Total <sup>(1)</sup> | <u>\$ 11,000</u> |

(1) DTCC maintained the same ownership percentage as the joint venture partner, Euroclear plc, who also contributed a total of \$11,000,000

On March 10, 2020, Euroclear plc and the Company finalized a dissolution, business and share transfer agreement with respect to the DEGCL joint venture. See Note 24 for additional information.

## 10. LEASES

The Company leases corporate offices, data centers and certain equipment primarily through operating leases. The Company's leases have remaining lease terms of 1 to 14 years, some of which may include options to extend the lease up to 10 years, and some of which may include options to terminate the lease within 1 year.

On January 1, 2019, the Company adopted ASU 2016-02, *Leases* under the modified retrospective method. See Note 3 for additional information. The Company determines if an arrangement is or contains a lease at contract inception and accounts for lease components separately from non-lease components of an arrangement. Operating leases are included in Operating lease right-of-use (ROU) asset, Current portion of operating lease liability, and Non-current operating lease liability on the Company's Consolidated Statements of Financial Condition.

ROU assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent the Company's obligation to make lease payments arising from the lease. The ROU assets are measured at the amount equal to the lease liabilities, adjusted for balances of accrued or prepaid rent and unamortized lease incentives provided by lessors.

Operating lease liabilities are recognized based on the present value of the future lease payments over the remaining lease term. The Company uses its incremental borrowing rate, factoring in the lease term, to determine the lease liability. When determining lease term, the Company considers renewal options that the Company is reasonably certain to exercise and termination options that the Company is reasonably certain not to exercise. For operating leases, expense is generally recognized on a straight-line basis over the lease term.

Details for operating lease assets and lease liabilities as of December 31, 2019 follow (in thousands):

|                                              |                   |
|----------------------------------------------|-------------------|
| <b>Assets</b>                                |                   |
| Operating lease right-of-use-asset           | \$ 237,689        |
| Total leased assets                          | <u>\$ 237,689</u> |
| <b>Liabilities</b>                           |                   |
| Current portion of operating lease liability | \$ 25,906         |
| Non-current operating lease liability        | 264,848           |
| Total leased liabilities                     | <u>\$ 290,754</u> |

## 10. LEASES (CONTINUED)

Details for the maturity of lease liabilities as of December 31, 2019 for each of the next five years and thereafter follow (in thousands):

|                                  |                   |
|----------------------------------|-------------------|
| 2020                             | \$ 35,191         |
| 2021                             | 33,509            |
| 2022                             | 27,664            |
| 2023                             | 27,629            |
| 2024                             | 27,075            |
| Thereafter                       | 203,531           |
| Total lease payments             | <u>354,599</u>    |
| Less: Imputed interest           | (63,845)          |
| Present value of lease liability | <u>\$ 290,754</u> |

In addition to the table above, as of December 31, 2019, the Company had \$2,500,000 of minimum lease payments on operating leases that were signed but had not yet commenced. These operating leases will commence in the first quarter of 2020 with lease terms up to 5 years.

Details for estimated future minimum rental payments under all noncancelable leases as of December 31, 2018, based on U.S. GAAP guidance applicable during that period, follow (in thousands):

|                                              |                   |
|----------------------------------------------|-------------------|
| 2019                                         | \$ 33,981         |
| 2020                                         | 33,804            |
| 2021                                         | 33,879            |
| 2022                                         | 29,779            |
| 2023                                         | 29,716            |
| Thereafter                                   | 232,344           |
| Total minimum rental payments <sup>(1)</sup> | <u>\$ 393,503</u> |

(1) Future minimum rental payments were not reduced by minimum sublease rentals of \$53 million due in the future under noncancelable subleases.

Details for lease expense and lease payments for the year ended December 31, 2019 follow (in thousands):

|                                                                 |                  |
|-----------------------------------------------------------------|------------------|
| Lease expense                                                   |                  |
| Occupancy                                                       | \$ 28,144        |
| Information technology                                          | 8,818            |
| Total lease expense                                             | <u>36,962</u>    |
| Sublease income                                                 | (5,794)          |
| Net lease expense                                               | <u>\$ 31,168</u> |
| Lease payments included in the measurement of lease liabilities |                  |
| Operating cash flows <sup>(1)</sup>                             | \$ 35,030        |
| Total lease cash flows                                          | <u>\$ 35,030</u> |

(1) Included with net change in Operating lease liability in the Consolidated Statements of Cash Flows

Details for lease expense as of December 31, 2018 is based on U.S. GAAP guidance applicable during that period. Total rental expense under the leases was \$29,764,000 for the year ended December 31, 2018. These amounts are included in Occupancy and Information technology in the Consolidated Statements of Income. Rental income for subleases was \$1,843,000 for the year ended December 31, 2018. These amounts are included in Other non-operating income in the Consolidated Statements of Income.

## 10. LEASES (CONTINUED)

Details of the weighted average remaining lease term and weighted average discount rate used to determine the lease liability as of December 31, 2019 follow:

|                                               |       |
|-----------------------------------------------|-------|
| Weighted average remaining lease term (years) | 11.1  |
| Weighted average discount rate                | 3.37% |

Leased assets obtained in exchange for operating lease obligations for the year ended December 31, 2019 were \$12,967,000.

## 11. OTHER ASSETS

Details for Other assets as of December 31, 2019 and 2018 follow (in thousands):

|                                            | 2019       | 2018       |
|--------------------------------------------|------------|------------|
| Prepays                                    | \$ 93,661  | \$ 81,774  |
| Prepaid taxes                              | 64,069     | 24,645     |
| Interest receivable                        | 19,872     | 27,353     |
| Other current assets                       | 338        | 188        |
| Total other current assets                 | 177,940    | 133,960    |
| Long-term incentive plan assets            | 158,264    | 148,549    |
| Cash surrender value on insurance policies | 66,324     | 61,035     |
| Deferred tax assets                        | 32,472     | 44,952     |
| Prepays                                    | 26,082     | 44,978     |
| Equity investments                         | 12,393     | 11,750     |
| Investment in Federal reserve stock        | 6,402      | 6,402      |
| Other non-current assets                   | 2,782      | 1,913      |
| Total other non-current assets             | 304,719    | 319,579    |
| Total                                      | \$ 482,659 | \$ 453,539 |

## 12. OTHER LIABILITIES

Details for Other liabilities as of December 31, 2019 and 2018 follow (in thousands):

|                                      | 2019       | 2018       |
|--------------------------------------|------------|------------|
| Compensation payable                 | \$ 147,363 | \$ 143,837 |
| Long-term incentive plan liabilities | 52,450     | 51,979     |
| Deferred revenue                     | 8,627      | 12,311     |
| Deferred rent                        | —          | 829        |
| Other current liabilities            | 57,720     | 51,721     |
| Total other current liabilities      | 266,160    | 260,677    |
| Long-term incentive plan liabilities | 216,092    | 206,758    |
| Unrecognized tax benefits            | 43,474     | 40,153     |
| Deferred revenue                     | 1,264      | 1,431      |
| Deferred tax liabilities             | 660        | 970        |
| Deferred rent                        | —          | 35,136     |
| Other non-current liabilities        | 2,191      | 3,886      |
| Total other non-current liabilities  | 263,681    | 288,334    |
| Total                                | \$ 529,841 | \$ 549,011 |

### 13. COMMERCIAL PAPER

Details for Commercial paper as of December 31, 2019 and 2018 follow (in thousands):

|                                                                                                                        | <b>2019</b>  | <b>2018</b>  |
|------------------------------------------------------------------------------------------------------------------------|--------------|--------------|
| Commercial paper - net of unamortized discount of \$20,623 and \$43,856 as of December 31, 2019 and 2018, respectively | \$ 7,154,217 | \$ 7,436,141 |
| Weighted-average interest rate                                                                                         | 1.95%        | 2.59%        |

Interest expense on Commercial paper, included in Interest expense in the accompanying Consolidated Statements of Income, was \$166,453,000 and \$104,714,000 for the years ended December 31, 2019 and 2018, respectively.

### 14. LONG-TERM DEBT

Details for Long-term debt as of December 31, 2019 and 2018 follow (in thousands):

|                                         | <b>2019</b> | <b>2018</b> |
|-----------------------------------------|-------------|-------------|
| Notes payable                           | \$ —        | \$ 36,375   |
| Information technology financing        | 8,024       | —           |
| Total long-term debt                    | 8,024       | 36,375      |
| Less: Current portion of long-term debt | (4,103)     | (2,650)     |
| Non-current portion of long-term debt   | \$ 3,921    | \$ 33,725   |

Details for principal payments due on Long-term debt for each of the next five years and thereafter follow (in thousands):

|            | <b>Information<br/>Technology<br/>Financing</b> |
|------------|-------------------------------------------------|
| 2020       | \$ 4,103                                        |
| 2021       | 3,921                                           |
| 2022       | —                                               |
| 2023       | —                                               |
| 2024       | —                                               |
| Thereafter | —                                               |
| Total      | \$ 8,024                                        |

**Notes payable.** Details for notes payable as of December 31, 2019 and 2018 follow (in thousands):

| <b>Issue Date</b>  | <b>Maturity</b>    | <b>Rate</b> | <b>Outstanding Balance</b> |             |
|--------------------|--------------------|-------------|----------------------------|-------------|
|                    |                    |             | <b>2019</b>                | <b>2018</b> |
| April 26, 2012     | April 26, 2032     | 3.83%       | \$ —                       | \$ 19,575   |
| September 28, 2012 | September 28, 2032 | 3.93%       | —                          | 16,800      |
| Total              |                    |             | \$ —                       | \$ 36,375   |

During 2019, the Company executed an optional prepayment of the remaining balance of its notes payable. Total interest expense on notes payable included in the accompanying Consolidated Statements of Income was \$4,558,000 and \$1,465,000 for the years ended December 31, 2019 and 2018, respectively. The 2019 interest expense includes a one-time make-whole payment of \$3,276,000 related to the early extinguishment of debt. The weighted-average interest rate was 3.88% as of December 31, 2018.

#### 14. LONG-TERM DEBT (CONTINUED)

**Information Technology Financing.** On January 1, 2019, the Company obtained three year financing of \$14 million, fully drawn down, from IBM Credit LLC in connection to its software and services purchase agreement with IBM. The weighted-average interest rate of the loan was 3.90% as of December 31, 2019. Interest expense on the loan included in the accompanying Consolidated Statements of Income was \$407,000 for the year ended December 31, 2019.

**Lines of credit.** DTCC maintains a committed line of credit for general funding purposes while certain of its subsidiaries, DTC and NSCC, also maintain committed lines of credit to support settlement.

Details for the terms of the outstanding lines of credit as of December 31, 2019 and December 31, 2018 follow:

|                                       | 2019                                                                                                                             | 2018                                                      |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|
| <b>DTCC</b>                           |                                                                                                                                  |                                                           |
| <b>Committed Amount</b>               | \$500 million <sup>(1)</sup>                                                                                                     | \$500 million <sup>(1)</sup>                              |
| <b>Denomination</b>                   | USD                                                                                                                              | USD                                                       |
| <b>Number of Participants/Lenders</b> | 10/10                                                                                                                            | 10/10                                                     |
| <b>Borrowing Rate</b>                 | Either base rate plus 0.25% or<br>eurodollar plus 1.25%                                                                          | Either base rate plus 0.375% or<br>eurodollar plus 1.375% |
| <b>Maturity Date</b>                  | January 2022                                                                                                                     | January 2019                                              |
| <b>DTC</b>                            |                                                                                                                                  |                                                           |
| <b>Committed Amount</b>               | \$1.9 billion <sup>(2)</sup>                                                                                                     | \$1.9 billion <sup>(2)</sup>                              |
| <b>Denomination</b>                   | USD                                                                                                                              | USD                                                       |
| <b>Number of Participants/Lenders</b> | 32/41                                                                                                                            | 33/41                                                     |
| <b>Borrowing Rate</b>                 | The greater of the federal funds offered rate, adjusted LIBOR, or<br>lenders' cost of funds, on the day of borrowing, plus 1.40% |                                                           |
| <b>Maturity Date</b>                  | May 2020                                                                                                                         | May 2019                                                  |
| <b>Uncommitted Amount</b>             | C\$150 million <sup>(3)</sup>                                                                                                    | C\$150 million <sup>(3)</sup>                             |
| <b>Denomination</b>                   | CAD                                                                                                                              | CAD                                                       |
| <b>Number of Participants/Lenders</b> | 1/1                                                                                                                              | 1/1                                                       |
| <b>Borrowing Rate</b>                 | A rate per annum equal to the Canadian Prime Rate minus 0.50%                                                                    |                                                           |
| <b>Maturity Date</b>                  | On Demand                                                                                                                        | On Demand                                                 |
| <b>NSCC</b>                           |                                                                                                                                  |                                                           |
| <b>Committed Amount</b>               | \$12.1 billion <sup>(2)</sup>                                                                                                    | \$12.1 billion <sup>(2)</sup>                             |
| <b>Denomination</b>                   | USD                                                                                                                              | USD                                                       |
| <b>Number of Participants/Lenders</b> | 32/41                                                                                                                            | 33/41                                                     |
| <b>Borrowing Rate</b>                 | The greater of the federal funds offered rate, adjusted LIBOR, or<br>lenders' cost of funds, on the day of borrowing, plus 1.40% |                                                           |
| <b>Maturity Date</b>                  | May 2020                                                                                                                         | May 2019                                                  |

(1) The annual commitment fee associated with maintaining the line of credit was 15 basis points and 17.5 basis points of the unused amount of the total line of credit, for the years ended December 31, 2019 and 2018, respectively, and is included in Professional and other services in the accompanying Consolidated Statements of Income.

(2) The annual facility fee associated with maintaining the line of credit was 10 basis points of the total line of credit, for the years ended December 31, 2019 and 2018, and is included in Professional and other services in the accompanying Consolidated Statements of Income.

(3) Used to support Canadian settlement.

There were no borrowings under the lines of credit during 2019 and 2018.

#### 14. LONG-TERM DEBT (CONTINUED)

Details for debt covenants related to the notes payable and lines of credit as of December 31, 2019 and December 31, 2018 follow:

|                                            | 2019           | 2018             |
|--------------------------------------------|----------------|------------------|
| <b>Notes Payable</b>                       |                |                  |
| <u><b>DTCC</b></u>                         |                |                  |
| <b>Minimum Net Worth</b>                   | N/A            | \$400 million    |
| <b>Maximum Priority Debt</b>               | N/A            | 20% of Net Worth |
| <b>Lines of Credit</b>                     |                |                  |
| <u><b>DTCC</b></u>                         |                |                  |
| <b>Minimum Net Worth</b>                   | \$1.25 billion | \$1.1 billion    |
| <b>Maximum Priority Debt</b>               | \$200 million  | \$200 million    |
| <u><b>DTC</b></u>                          |                |                  |
| <b>Minimum Net Worth</b>                   | \$150 million  | \$150 million    |
| <b>Minimum Participants' Fund deposits</b> | \$750 million  | \$750 million    |
| <u><b>NSCC</b></u>                         |                |                  |
| <b>Minimum Net Worth</b>                   | \$125 million  | \$125 million    |
| <b>Minimum Clearing Fund deposits</b>      | \$1 billion    | \$1 billion      |

For the years ended December 31, 2019 and 2018, the Company was in compliance with its debt covenants.

**Credit Ratings.** DTCC, DTC, FICC and NSCC are rated by Moody's Investors Service, Inc. (Moody's) and S&P Global Inc. (S&P). Details for issuer credit ratings and ratings outlooks for DTCC and its three clearing agency subsidiaries as of December 31, 2019 follow:

|             | Moody's <sup>(1)</sup> |            |         | S&P       |            |         |
|-------------|------------------------|------------|---------|-----------|------------|---------|
|             | Long-term              | Short-term | Outlook | Long-term | Short-term | Outlook |
| <b>DTCC</b> | Aa3                    | N/A        | Stable  | AA-       | A-1+       | Stable  |
| <b>DTC</b>  | Aaa                    | P-1        | Stable  | AA+       | A-1+       | Stable  |
| <b>FICC</b> | Aaa                    | P-1        | Stable  | AA        | A-1+       | Stable  |
| <b>NSCC</b> | Aaa                    | P-1        | Stable  | AA+       | A-1+       | Stable  |

(1) Moody's categorizes the long-term issuer ratings of DTC, FICC and NSCC as clearing counterparty ratings (CCR) under the agency's Clearing Houses Rating Methodology.

## 15. FAIR VALUE MEASUREMENTS

### *Valuation hierarchy*

U.S. GAAP provides for a three-level valuation hierarchy based on the transparency of inputs to the valuation of an asset or liability as of the measurement date. Details for the description of the three levels follow:

- Level 1 — Inputs to the valuation methodology are unadjusted quoted market prices for identical assets or liabilities in active markets as of the valuation date.
- Level 2 — Inputs to the valuation methodology are quoted market prices for similar assets and liabilities in active markets; quoted market prices for identical or similar assets or liabilities in markets that are not active; inputs other than quoted prices that are observable for the asset or liability; and inputs that are derived principally from or corroborated by observable market data by correlation or other means.
- Level 3 — Inputs to the valuation methodology are unobservable and reflect the Company's own assumptions about the estimates market participants would use pricing the asset or liability based on the best information available in the circumstances (e.g., internally derived assumptions surrounding timing and amount of expected cash flows).

A financial asset or liability's categorization within the valuation hierarchy is based on the lowest level of input that is significant to the fair value measurement.

**Financial Assets and Liabilities measured at fair value on a recurring basis.** For financial assets and liabilities measured at fair value on a recurring basis, the Company applies the following valuation techniques to measure fair value:

| Product/ Instrument                                                             | Valuation Methodology                                                                                                                                                                                                                                                     | Classification in the valuation hierarchy |
|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| <b><u>Assets - Participants' and Clearing Funds - Securities on deposit</u></b> |                                                                                                                                                                                                                                                                           |                                           |
| U.S. Treasury Securities                                                        | Obtained from pricing services engaged by the Company, and the Company receives one price for each security. The fair values provided by the pricing services are estimated using pricing models, where the inputs to those models are based on observable market inputs. | Level 1                                   |
| U. S. Agency Issued Debt Securities (Non-Callable)                              |                                                                                                                                                                                                                                                                           |                                           |
| U. S. Agency Issued Debt Securities (Callable)                                  | Quoted market price of recent trades of similar securities obtained from pricing services engaged by the Company.                                                                                                                                                         | Level 2                                   |
| U.S. Agency Residential Mortgage-Backed Securities                              |                                                                                                                                                                                                                                                                           |                                           |
| <b><u>Assets - Participants' and Clearing Funds - Cash deposits</u></b>         |                                                                                                                                                                                                                                                                           |                                           |
| Money market fund investments                                                   | Quoted prices in active markets for identical assets                                                                                                                                                                                                                      | Level 1                                   |

# THE DEPOSITORY TRUST & CLEARING CORPORATION

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018

### 15. FAIR VALUE MEASUREMENTS (CONTINUED)

| Product/ Instrument                                                                                                                    | Valuation Methodology                                                                                             | Classification in the valuation hierarchy |
|----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| <b><u>Non-Current Assets - Other non-current assets</u></b>                                                                            |                                                                                                                   |                                           |
| Long-term incentive plan assets - Mutual fund and Stable value fund investments                                                        | Obtained from pricing services engaged by the Company, and the Company receives one price for each security.      | Level 1                                   |
|                                                                                                                                        | Quoted market price of recent trades of similar securities obtained from pricing services engaged by the Company. | Level 2                                   |
| <b><u>Liabilities - Participants' and Clearing Funds - Securities on deposit and Cash deposits - Money market fund investments</u></b> |                                                                                                                   |                                           |
| Participants' and Clearing Funds liabilities                                                                                           | Derived from the corresponding Participants' and Clearing Funds assets (see above).                               | Level 1 and Level 2                       |

Fair value measurements of those items measured on a recurring basis as of December 31, 2019 and 2018 follow (in thousands):

|                                                                                 | 2019                 |                     |             |                      |
|---------------------------------------------------------------------------------|----------------------|---------------------|-------------|----------------------|
|                                                                                 | Level 1              | Level 2             | Level 3     | Total                |
| Assets - Participants' and Clearing Funds                                       |                      |                     |             |                      |
| Securities on deposit                                                           | \$ 18,469,797        | \$ 4,913,626        | \$ —        | \$ 23,383,423        |
| Cash deposits - Money market fund investments                                   | 2,844,000            | —                   | —           | 2,844,000            |
| Non-current assets                                                              |                      |                     |             |                      |
| Long-term incentive plan assets - Mutual fund and Stable value fund investments | 100,706              | 33,813              | —           | 134,519              |
| Total assets, excluding investments at fair value based on NAV                  | <u>\$ 21,414,503</u> | <u>\$ 4,947,439</u> | <u>\$ —</u> | <u>\$ 26,361,942</u> |
| Participants' and Clearing Funds                                                |                      |                     |             |                      |
| Securities liabilities                                                          | \$ 18,469,797        | \$ 4,913,626        | \$ —        | \$ 23,383,423        |
| Money market fund investments liabilities                                       | \$ 2,844,000         | \$ —                | \$ —        | \$ 2,844,000         |
| Total                                                                           | <u>\$ 21,313,797</u> | <u>\$ 4,913,626</u> | <u>\$ —</u> | <u>\$ 26,227,423</u> |

The Company uses Net Asset Value (NAV) to estimate the fair value of certain investments related to the long-term incentive plan. Investments in common collective trust funds are valued at NAV based upon the redemption price of the units, which is based on the current fair value of the common collective trust funds' underlying assets. Unit values are determined by the financial institution sponsoring such funds by dividing the funds' net assets at fair value by its units outstanding at the valuation dates.

## 15. FAIR VALUE MEASUREMENTS (CONTINUED)

Details of investments measured at fair value using NAV as of December 31, 2019 follow (in thousands):

|                          | 2019      |                      |                               |                          |
|--------------------------|-----------|----------------------|-------------------------------|--------------------------|
|                          | NAV       | Redemption Frequency | Other Redemption Restrictions | Redemption Notice Period |
| Common collective trusts | \$ 23,745 | Daily                | None                          | None                     |

There were no unfunded commitments related to these investments as of December 31, 2019.

Fair value measurements of those items measured on a recurring basis as of December 31, 2018 are summarized below (in thousands):

|                                                                                 | 2018                 |                     |             |                      |
|---------------------------------------------------------------------------------|----------------------|---------------------|-------------|----------------------|
|                                                                                 | Level 1              | Level 2             | Level 3     | Total                |
| Assets - Participants' and Clearing Funds                                       |                      |                     |             |                      |
| Securities on deposit                                                           | \$ 16,659,680        | \$ 3,629,774        | \$ —        | \$ 20,289,454        |
| Cash deposits - Money market fund investments                                   | 2,487,000            | —                   | —           | 2,487,000            |
| Non-current assets                                                              |                      |                     |             |                      |
| Long-term incentive plan assets - Mutual fund and Stable value fund investments | 113,151              | 35,398              | —           | 148,549              |
| Total                                                                           | <u>\$ 19,259,831</u> | <u>\$ 3,665,172</u> | <u>\$ —</u> | <u>\$ 22,925,003</u> |
| Participants' and Clearing Funds                                                |                      |                     |             |                      |
| Securities liabilities                                                          | \$ 16,659,680        | \$ 3,629,774        | \$ —        | \$ 20,289,454        |
| Money market fund investments liabilities                                       | 2,487,000            | —                   | —           | 2,487,000            |
| Total                                                                           | <u>\$ 19,146,680</u> | <u>\$ 3,629,774</u> | <u>\$ —</u> | <u>\$ 22,776,454</u> |

Certain investments may transfer between the fair value hierarchy classifications during the year due to changes in valuation methodology and pricing sources. There were no financial assets and liabilities measured at fair value on a recurring basis classified as Level 3 for the periods ended December 31, 2019 and 2018.

### Financial Assets and Liabilities measured at other than fair value

*Financial assets and liabilities whose carrying value approximates fair value.* The carrying values of certain assets and liabilities approximate their fair values because they are short-term in duration, have no defined maturity or have market-based interest rates. These instruments include Cash and cash equivalents, Participants' segregated cash, Short-term investments, Participants' and Clearing Funds - Cash deposits bank deposits and Reverse repurchase agreements (and corresponding liabilities), Other Participants' assets, Commercial paper, Accounts payable and accrued expenses, and Payable to Participants.

**THE DEPOSITORY TRUST & CLEARING CORPORATION**
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**15. FAIR VALUE MEASUREMENTS (CONTINUED)**

The carrying values, fair values and fair value hierarchy levels of all financial instruments measured at other than fair value on the accompanying Consolidated Statements of Financial Condition as of December 31, 2019 and 2018 follow (in thousands):

|                                                                                                  | <b>2019</b>            |                         |                      |                     |                |
|--------------------------------------------------------------------------------------------------|------------------------|-------------------------|----------------------|---------------------|----------------|
|                                                                                                  | <b>Carrying Amount</b> | <b>Total Fair Value</b> | <b>Level 1</b>       | <b>Level 2</b>      | <b>Level 3</b> |
| <b>Assets:</b>                                                                                   |                        |                         |                      |                     |                |
| Cash and cash equivalents                                                                        | \$ 8,395,163           | \$ 8,395,163            | \$ 8,395,163         | \$ —                | \$ —           |
| Participants' segregated cash                                                                    | 4,876                  | 4,876                   | 4,876                | —                   | —              |
| Short-term investments                                                                           | 900,000                | 900,000                 | —                    | 900,000             | —              |
| Participants' and Clearing Funds:                                                                |                        |                         |                      |                     |                |
| Cash deposits - Bank deposits                                                                    | 13,762,482             | 13,762,482              | 13,762,482           | —                   | —              |
| Cash deposits - Reverse repurchase agreements                                                    | 825,000                | 825,000                 | —                    | 825,000             | —              |
| Other Participants' assets                                                                       | 514,104                | 514,104                 | 514,104              | —                   | —              |
| <b>Total</b>                                                                                     | <b>\$ 24,401,625</b>   | <b>\$ 24,401,625</b>    | <b>\$ 22,676,625</b> | <b>\$ 1,725,000</b> | <b>\$ —</b>    |
| <b>Liabilities:</b>                                                                              |                        |                         |                      |                     |                |
| Commercial paper                                                                                 | \$ 7,154,217           | \$ 7,154,217            | \$ —                 | \$ 7,154,217        | \$ —           |
| Accounts payable and accrued expenses                                                            | 102,179                | 102,179                 | —                    | 102,179             | —              |
| Participants' and Clearing Funds Cash deposits - Bank deposits and Reverse repurchase agreements | 14,587,482             | 14,587,482              | 14,587,482           | —                   | —              |
| Payable to Participants                                                                          | 518,980                | 518,980                 | 518,980              | —                   | —              |
| Long-term debt                                                                                   | 8,024                  | 8,565                   | —                    | 8,565               | —              |
| <b>Total</b>                                                                                     | <b>\$ 22,370,882</b>   | <b>\$ 22,371,423</b>    | <b>\$ 15,106,462</b> | <b>\$ 7,264,961</b> | <b>\$ —</b>    |
| <b>2018</b>                                                                                      |                        |                         |                      |                     |                |
|                                                                                                  | <b>Carrying Amount</b> | <b>Total Fair Value</b> | <b>Level 1</b>       | <b>Level 2</b>      | <b>Level 3</b> |
| <b>Assets:</b>                                                                                   |                        |                         |                      |                     |                |
| Cash and cash equivalents                                                                        | \$ 8,641,036           | \$ 8,641,036            | \$ 8,641,036         | \$ —                | \$ —           |
| Participants' segregated cash                                                                    | 77,988                 | 77,988                  | 77,988               | —                   | —              |
| Short-term investments                                                                           | 800,000                | 800,000                 | —                    | 800,000             | —              |
| Participants' and Clearing Funds:                                                                |                        |                         |                      |                     |                |
| Cash deposits - Bank deposits                                                                    | 13,020,668             | 13,020,668              | 13,020,668           | —                   | —              |
| Cash deposits - Reverse repurchase agreements                                                    | 825,000                | 825,000                 | —                    | 825,000             | —              |
| Other Participants' assets                                                                       | 518,115                | 518,115                 | 517,665              | 450                 | —              |
| <b>Total</b>                                                                                     | <b>\$ 23,882,807</b>   | <b>\$ 23,882,807</b>    | <b>\$ 22,257,357</b> | <b>\$ 1,625,450</b> | <b>\$ —</b>    |
| <b>Liabilities:</b>                                                                              |                        |                         |                      |                     |                |
| Commercial paper                                                                                 | \$ 7,436,141           | \$ 7,436,141            | \$ —                 | \$ 7,436,141        | \$ —           |
| Accounts payable and accrued expenses                                                            | 104,013                | 104,013                 | —                    | 104,013             | —              |
| Participants' and Clearing Funds Cash deposits - Bank deposits and Reverse repurchase agreements | 13,845,668             | 13,845,668              | 13,845,668           | —                   | —              |
| Payable to Participants                                                                          | 596,103                | 596,103                 | 596,103              | —                   | —              |
| Long-term debt                                                                                   | 36,375                 | 36,035                  | —                    | 36,035              | —              |
| <b>Total</b>                                                                                     | <b>\$ 22,018,300</b>   | <b>\$ 22,017,960</b>    | <b>\$ 14,441,771</b> | <b>\$ 7,576,189</b> | <b>\$ —</b>    |

## 15. FAIR VALUE MEASUREMENTS (CONTINUED)

**Financial assets measured at fair value on a non-recurring basis.** Certain assets are subject to measurement at fair value on a non-recurring basis. For these assets, measurement at fair value in periods subsequent to their initial recognition is applicable if they are determined to be impaired or when an observable event occurs.

The Company recognized impairment charges on certain Intangible assets as disclosed in Note 8. The fair values of the Intangible assets were determined based on a discounted cash flow method, which reflected estimated future cash flows associated with the identified assets at the measurement date, and is within Level 3 under the fair value hierarchy on a non-recurring basis.

The rollforward of Equity investments categorized within Level 3 in the fair value hierarchy for the year ended December 31, 2019 follows (in thousands):

|                    | <b>Fair Value at<br/>December 31, 2018</b> | <b>Purchases</b> | <b>Sales</b> | <b>Unrealized<br/>Gains (Losses)</b> | <b>Fair Value at<br/>December 31, 2019</b> |
|--------------------|--------------------------------------------|------------------|--------------|--------------------------------------|--------------------------------------------|
| Equity investments | \$ 11,750                                  | \$ 500           | \$ —         | \$ 143                               | \$ 12,393                                  |

On August 29, 2019, the Company made an additional cash investment of \$500,000 in Equity Investments, which increased the Company's total investment in Equity investments to \$12,393,000, including a \$143,000 mark-to-market investment gain included in Other non-operating income in the accompanying Consolidated Statements of Income. The fair value of the investments were determined based on the latest valuation of Equity investments from their most recent round of financing, using Level 3 inputs.

The rollforward of Equity investments categorized within Level 3 in the fair value hierarchy for the year ended December 31, 2018 follows (in thousands):

|                    | <b>Investment at<br/>December 31, 2017</b> | <b>Transfers<br/>Into<br/>Level 3 <sup>(1)</sup></b> | <b>Purchases <sup>(2)</sup></b> | <b>Unrealized<br/>Gain</b> | <b>Fair Value at<br/>December 31, 2018</b> |
|--------------------|--------------------------------------------|------------------------------------------------------|---------------------------------|----------------------------|--------------------------------------------|
| Equity investments | \$ —                                       | \$ 5,411                                             | \$ 1,104                        | \$ 5,235                   | \$ 11,750                                  |

(1) On January 1, 2018, the Company adopted the new standard related to fair value measurement of unconsolidated equity investments under the prospective transition method of adoption.

(2) On June 25, 2018, the Company made an additional cash investment of \$1,104,000 in Equity investments, which increased the Company's total investment in Equity investments, to \$11,750,000, including a \$5,235,000 mark-to-market investment gain included in Other non-operating income in the accompanying Consolidated Statements of Income.

The Company's primary level 3 financial asset, the valuation techniques used to measure the fair value of the financial asset and the significant unobservable inputs as of December 31, 2019 follow:

| <b>Financial<br/>Instruments<br/>Owned</b> | <b>Fair Value<br/>(in thousands)</b> | <b>Valuation<br/>Technique</b>                              | <b>Unobservable<br/>Inputs</b> | <b>Input<br/>Range</b>      | <b>Weighted<br/>Average</b> |
|--------------------------------------------|--------------------------------------|-------------------------------------------------------------|--------------------------------|-----------------------------|-----------------------------|
| Equity Investments                         | \$12,393                             | Cost less<br>impairment plus/<br>minus observable<br>inputs | Price per share <sup>(1)</sup> | \$18 - \$107 <sup>(2)</sup> | \$64 <sup>(2)</sup>         |

(1) Price is determined using the latest valuation from the most recent round of financing of equity investments.

(2) The unobservable input range and weighted-average are driven by the individual equity investments.

## 15. FAIR VALUE MEASUREMENTS (CONTINUED)

The Company's primary level 3 financial asset, the valuation techniques used to measure the fair value of the financial asset and the significant unobservable inputs as of December 31, 2018 follow:

| Financial Instruments Owned | Fair Value (in thousands) | Valuation Technique                               | Unobservable Inputs            | Input Range                 | Weighted Average    |
|-----------------------------|---------------------------|---------------------------------------------------|--------------------------------|-----------------------------|---------------------|
| Equity Investments          | \$11,750                  | Cost less impairment plus/minus observable inputs | Price per share <sup>(1)</sup> | \$15 - \$107 <sup>(2)</sup> | \$71 <sup>(2)</sup> |

(1) Price is determined using the latest valuation from the most recent round of financing of equity investments.

(2) The unobservable input range and weighted-average are driven by the individual equity investments.

## 16. PENSION AND POSTRETIREMENT BENEFITS

### Defined benefit pension and other postretirement benefit plans.

*Benefit obligations.* The reconciliation of the beginning and ending balances of the projected benefit obligations for defined benefit plans follow (in thousands):

|                                                      | Pension Benefits    |                     | Other Benefits   |                  |
|------------------------------------------------------|---------------------|---------------------|------------------|------------------|
|                                                      | 2019                | 2018                | 2019             | 2018             |
| Benefit obligations, beginning of year:              | \$ 1,014,046        | \$ 1,135,910        | \$ 64,202        | \$ 72,062        |
| Service cost                                         | 3,467               | 5,868               | 573              | 744              |
| Interest cost                                        | 40,201              | 37,289              | 2,348            | 2,188            |
| Gross benefits paid                                  | (66,158)            | (66,178)            | (2,690)          | (3,498)          |
| Expenses paid                                        | (1,706)             | (1,900)             | —                | —                |
| Actuarial (gain) loss                                | 150,268             | (96,943)            | 2,182            | (7,294)          |
| Total benefit obligations at end of year             | <u>\$ 1,140,118</u> | <u>\$ 1,014,046</u> | <u>\$ 66,615</u> | <u>\$ 64,202</u> |
| Total accumulated benefit obligations at end of year | <u>\$ 1,135,715</u> | <u>\$ 1,009,611</u> | <u>N/A</u>       | <u>N/A</u>       |

The Accumulated Benefit Obligations are defined as the actuarial present value of postretirement benefits attributed to employee services rendered before December 31, 2019 and 2018, respectively, and based on employee service and compensation prior to the applicable date.

**16. PENSION AND POSTRETIREMENT BENEFITS (CONTINUED)**

*Funded status.* The funded status of the plans, as of December 31, 2019 and 2018, follow (in thousands):

|                                                     | <b>Pension Benefits</b> |                     | <b>Other Benefits</b> |                    |
|-----------------------------------------------------|-------------------------|---------------------|-----------------------|--------------------|
|                                                     | <b>2019</b>             | <b>2018</b>         | <b>2019</b>           | <b>2018</b>        |
| Benefit obligations at end of year:                 |                         |                     |                       |                    |
| Qualified plan                                      | \$ 1,015,573            | \$ 894,461          | \$ —                  | \$ —               |
| Other plans                                         | 124,545                 | 119,585             | 66,615                | 64,202             |
| Total benefit obligations at end of year            | 1,140,118               | 1,014,046           | 66,615                | 64,202             |
| Fair value of qualified plan assets at end of year  | 998,442                 | 863,953             | —                     | —                  |
| Total fair value of plan assets at end of year      | 998,442                 | 863,953             | —                     | —                  |
| Unfunded status                                     | <u>\$ (141,676)</u>     | <u>\$ (150,093)</u> | <u>\$ (66,615)</u>    | <u>\$ (64,202)</u> |
| Amounts recognized in the balance sheet consist of: |                         |                     |                       |                    |
| Current liability                                   | \$ (26,566)             | \$ (11,996)         | \$ (4,275)            | \$ (4,613)         |
| Non-current liability                               | (115,110)               | (138,097)           | (62,340)              | (59,589)           |
| Amount recognized, end of year                      | <u>\$ (141,676)</u>     | <u>\$ (150,093)</u> | <u>\$ (66,615)</u>    | <u>\$ (64,202)</u> |

*Plan assets.* The summary and reconciliation of the beginning and ending balances of the fair value of the plans' assets follow (in thousands):

|                                              | <b>Pension Benefits</b> |                   | <b>Other Benefits</b> |             |
|----------------------------------------------|-------------------------|-------------------|-----------------------|-------------|
|                                              | <b>2019</b>             | <b>2018</b>       | <b>2019</b>           | <b>2018</b> |
| Change in plan assets:                       |                         |                   |                       |             |
| Fair value of plan assets, beginning of year | \$ 863,953              | \$ 896,442        | \$ —                  | \$ —        |
| Actual return on plan assets                 | 150,544                 | (25,275)          | —                     | —           |
| Employer contribution                        | 51,809                  | 60,864            | 2,690                 | 3,498       |
| Gross benefits paid                          | (66,158)                | (66,178)          | (2,690)               | (3,498)     |
| Expenses paid                                | (1,706)                 | (1,900)           | —                     | —           |
| Fair value of plan assets, end of year       | <u>\$ 998,442</u>       | <u>\$ 863,953</u> | <u>\$ —</u>           | <u>\$ —</u> |

**16. PENSION AND POSTRETIREMENT BENEFITS (CONTINUED)**

Investments are classified based on the lowest level of input that is significant to the fair value measurement. Details of the classification of plan assets in accordance with the three-tier fair valuation hierarchy and current asset allocations as of December 31, 2019 and 2018, follow (in thousands, except percentages):

|                                                     | <b>Target<br/>Allocation<br/>2019</b> | <b>Percentage of<br/>Plan Assets,<br/>December 31,<br/>2019</b> | <b>Total</b>      | <b>Quoted Prices<br/>in Active<br/>Markets for<br/>Identical<br/>Assets<br/>(Level 1)</b> |
|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------------------|-------------------|-------------------------------------------------------------------------------------------|
| Pension assets as of December 31, 2019:             |                                       |                                                                 |                   |                                                                                           |
| Short-term investment fund <sup>(1)</sup>           | 0.50%                                 | 0.54%                                                           | \$ 5,374          | \$ —                                                                                      |
| Equity Portfolio:                                   |                                       |                                                                 |                   |                                                                                           |
| Domestic large cap growth <sup>(1)</sup>            |                                       |                                                                 | 19,533            | —                                                                                         |
| Domestic large cap value <sup>(1)</sup>             |                                       |                                                                 | 19,444            | —                                                                                         |
| Domestic large cap core <sup>(1)</sup>              |                                       |                                                                 | 39,356            | —                                                                                         |
| Domestic small core* <sup>(1)</sup>                 |                                       |                                                                 | 7,455             | 3,704                                                                                     |
| International core                                  |                                       |                                                                 | 11,753            | 11,753                                                                                    |
| International emerging markets                      |                                       |                                                                 | 4,025             | 4,025                                                                                     |
| Total equity securities                             | 9.50%                                 | 10.17%                                                          | 101,566           | 19,482                                                                                    |
| Fixed income portfolio:                             |                                       |                                                                 |                   |                                                                                           |
| Domestic liability driven investment <sup>(1)</sup> | 88.00%                                | 88.85%                                                          | 887,157           | —                                                                                         |
| Guaranteed insurance contracts:                     |                                       |                                                                 |                   |                                                                                           |
| Annuity fund <sup>(2)</sup>                         | 2.00%                                 | 0.44%                                                           | 4,345             | —                                                                                         |
| Total pension assets as of December 31, 2019        |                                       |                                                                 | <u>\$ 998,442</u> | <u>\$ 19,482</u>                                                                          |

\* The domestic small core asset class includes an investment that is valued based on NAV per unit, as provided by the trustee of the fund, and have not been classified in the fair value hierarchy.

**16. PENSION AND POSTRETIREMENT BENEFITS (CONTINUED)**

|                                                     | <b>Target<br/>Allocation<br/>2018</b> | <b>Percentage of<br/>Plan Assets,<br/>December 31,<br/>2018</b> | <b>Total</b>      | <b>Quoted Prices<br/>in Active<br/>Markets for<br/>Identical<br/>Assets<br/>(Level 1)</b> |
|-----------------------------------------------------|---------------------------------------|-----------------------------------------------------------------|-------------------|-------------------------------------------------------------------------------------------|
| Pension assets as of December 31, 2018:             |                                       |                                                                 |                   |                                                                                           |
| Short-term investment fund <sup>(1)</sup>           | 0.50%                                 | 0.60%                                                           | \$ 5,154          | \$ —                                                                                      |
| Equity Portfolio:                                   |                                       |                                                                 |                   |                                                                                           |
| Domestic large cap growth <sup>(1)</sup>            |                                       |                                                                 | 26,979            | —                                                                                         |
| Domestic large cap value <sup>(1)</sup>             |                                       |                                                                 | 26,418            | —                                                                                         |
| Domestic large cap core <sup>(1)</sup>              |                                       |                                                                 | 53,836            | —                                                                                         |
| Domestic small core                                 |                                       |                                                                 | 10,065            | 10,065                                                                                    |
| International core                                  |                                       |                                                                 | 16,756            | 16,756                                                                                    |
| International emerging markets                      |                                       |                                                                 | 5,733             | 5,733                                                                                     |
| Total equity securities                             | 17.50%                                | 16.18%                                                          | 139,787           | 32,554                                                                                    |
| Fixed income portfolio:                             |                                       |                                                                 |                   |                                                                                           |
| Domestic liability driven investment <sup>(1)</sup> | 80.00%                                | 82.43%                                                          | 712,191           | —                                                                                         |
| Guaranteed insurance contracts:                     |                                       |                                                                 |                   |                                                                                           |
| Annuity fund <sup>(2)</sup>                         | 2.00%                                 | 0.79%                                                           | 6,821             | —                                                                                         |
| Total pension assets as of December 31, 2018        |                                       |                                                                 | <u>\$ 863,953</u> | <u>\$ 32,554</u>                                                                          |

(1) These investments are valued based on NAV per unit, as provided by the trustee of the fund, and have not been classified in the fair value hierarchy. The fair value amounts presented in the table are intended to permit the reconciliation of the fair value hierarchy to the amounts presented on the accompanying Consolidated Statement of Financial Condition. See Note 15 for further information about valuation techniques and inputs to measure fair value. The Company did not hold defined benefit plan assets designated as Level 2 or Level 3 as of December 31, 2019 and 2018.

(2) As permitted by U.S. GAAP, this annuity fund is accounted for at contract value, which approximates fair value. This investment is reported at contract value because it is the amount received by participants if they were to initiate permitted transactions under the terms of the pension plan. Contract value as reported represents contributions made under the contract, plus earnings, less participant withdrawals and administrative expenses. This investment is not classified in the fair value hierarchy. The fair value amounts presented in the table are intended to permit the reconciliation of the fair value hierarchy to the amounts presented on the accompanying Consolidated Statement of Financial Condition.

*Net periodic benefit expense (income).* Details of the components of net periodic benefit expense (income) and amortization recognized in OCI, excluding taxes, for the years ended December 31, 2019 and 2018, follow (in thousands):

|                                                      | <b>Pension Benefits</b> |                  | <b>Other Benefits</b> |                 |
|------------------------------------------------------|-------------------------|------------------|-----------------------|-----------------|
|                                                      | <b>2019</b>             | <b>2018</b>      | <b>2019</b>           | <b>2018</b>     |
| Components of net periodic benefit expense (income): |                         |                  |                       |                 |
| Expected return on plan assets                       | \$ (37,998)             | \$ (39,564)      | \$ —                  | \$ —            |
| Interest cost                                        | 40,201                  | 37,289           | 2,348                 | 2,188           |
| Service cost                                         | 3,467                   | 5,868            | 573                   | 744             |
| Amortizations:                                       |                         |                  |                       |                 |
| Prior service cost (credit)                          | 933                     | 933              | (5,926)               | (5,926)         |
| Actuarial loss                                       | 5,373                   | 8,731            | 804                   | 2,188           |
| Settlement loss                                      | 1,242                   | 444              | —                     | —               |
| Net periodic benefit expense (income)                | <u>\$ 13,218</u>        | <u>\$ 13,701</u> | <u>\$ (2,201)</u>     | <u>\$ (806)</u> |

**16. PENSION AND POSTRETIREMENT BENEFITS (CONTINUED)**

*Changes in OCI.* Details of the changes in plan assets and benefit obligations recognized in OCI, excluding taxes, for the years ended December 31, 2019 and 2018, follow (in thousands):

|                                           | <b>Pension Benefits</b> |                    | <b>Other Benefits</b> |                   |
|-------------------------------------------|-------------------------|--------------------|-----------------------|-------------------|
|                                           | <b>2019</b>             | <b>2018</b>        | <b>2019</b>           | <b>2018</b>       |
| Other changes recognized in OCI:          |                         |                    |                       |                   |
| Net loss (gain) arising during the period | \$ 37,723               | \$ (32,104)        | \$ 2,182              | \$ (7,294)        |
| Amortizations:                            |                         |                    |                       |                   |
| Prior service (cost) credit               | (933)                   | (933)              | 5,926                 | 5,926             |
| Actuarial and settlement loss             | (6,615)                 | (9,175)            | (803)                 | (2,188)           |
| Net other changes in OCI                  | <u>\$ 30,175</u>        | <u>\$ (42,212)</u> | <u>\$ 7,305</u>       | <u>\$ (3,556)</u> |

Details of the net amount recognized in Accumulated other comprehensive income on the accompanying Consolidated Statements of Financial Condition, excluding taxes, follow (in thousands):

|                                                                                                               | <b>Pension Benefits</b> |                     | <b>Other Benefits</b> |                    |
|---------------------------------------------------------------------------------------------------------------|-------------------------|---------------------|-----------------------|--------------------|
|                                                                                                               | <b>2019</b>             | <b>2018</b>         | <b>2019</b>           | <b>2018</b>        |
| Amount not yet reflected in net periodic benefit (cost) and included in Accumulated other comprehensive loss: |                         |                     |                       |                    |
| Prior service (cost) credit                                                                                   | \$ (2,569)              | \$ (3,502)          | \$ 11,754             | \$ 17,680          |
| Accumulated loss                                                                                              | (273,649)               | (242,541)           | (16,323)              | (14,944)           |
| Accumulated other comprehensive (loss) income                                                                 | <u>(276,218)</u>        | <u>(246,043)</u>    | <u>(4,569)</u>        | <u>2,736</u>       |
| Cumulative net periodic benefit (cost) in excess of employer contributions                                    | 134,542                 | 95,950              | (62,046)              | (66,938)           |
| Net amount recognized at year-end                                                                             | <u>\$ (141,676)</u>     | <u>\$ (150,093)</u> | <u>\$ (66,615)</u>    | <u>\$ (64,202)</u> |

The estimated actuarial loss (gain) and prior service (cost) credit that will be amortized from accumulated other comprehensive loss into the accompanying Consolidated Statement of Income through net periodic benefit (cost) or expense over the next fiscal year follow (in thousands):

|                             | <b>Pension Benefits</b> |                   | <b>Other Benefits</b> |                 |
|-----------------------------|-------------------------|-------------------|-----------------------|-----------------|
|                             | <b>2019</b>             | <b>2018</b>       | <b>2019</b>           | <b>2018</b>     |
| Prior service credit (cost) | \$ (829)                | \$ (933)          | \$ 5,568              | \$ 5,926        |
| Net loss                    | (10,208)                | (5,270)           | (1,523)               | (1,270)         |
| Total                       | <u>\$ (11,037)</u>      | <u>\$ (6,203)</u> | <u>\$ 4,045</u>       | <u>\$ 4,656</u> |

## 16. PENSION AND POSTRETIREMENT BENEFITS (CONTINUED)

*Assumptions for net periodic benefit expense (income).* Details for the defined benefit plans assumptions used by actuaries to determine net periodic benefit expense (income) as of December 31, 2019 and 2018 follow:

|                                                                                                                       | Pension Benefits |       | Other Benefits |       |
|-----------------------------------------------------------------------------------------------------------------------|------------------|-------|----------------|-------|
|                                                                                                                       | 2019             | 2018  | 2019           | 2018  |
| Weighted-average assumptions used to determine net periodic benefit expense (income) for the years ended December 31: |                  |       |                |       |
| Discount rate                                                                                                         | 4.41%            | 3.73% | 4.31%          | 3.62% |
| Expected long-term rate of return on plan assets                                                                      | 4.45%            | 4.75% | n/a            | n/a   |
| Rate of compensation increase                                                                                         | n/a              | n/a   | n/a            | n/a   |
| Assumed health care cost trend rates as of December 31:                                                               |                  |       |                |       |
| Health care cost trend rate assumed for next year                                                                     |                  |       | 6.46%          | 6.89% |
| Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)                                     |                  |       | 4.46%          | 4.46% |
| Year that the rate reaches the ultimate trend rate                                                                    |                  |       | 2038           | 2038  |

To develop the expected long-term rate of return on assets assumptions, DTCC considered the historical returns and the future expectations for returns for each asset class, as well as the target asset allocation of the pension portfolio. This resulted in the selection of the 4.45% and 4.75% long-term rate of return assumptions as of December 31, 2019 and 2018, respectively.

The discount rate reflects the rate at which defined benefit plan obligations could be effectively settled. The Company projects the benefits to be paid by each plan for each year in the future, the sum of which is the projected benefit obligations. The benefits are then discounted using the Above Mean Mercer Yield Curve spot rates for the corresponding maturity years.

The total of the present values for the benefit payment years is used to calculate the single rate that discounts the benefit cash flows to the same total present value. The single rate is the basis for the final effective discount rate.

Details for the defined benefit plans assumptions used by actuaries to determine benefit obligations as of December 31, 2019 and 2018 follow:

|                                                                                       | Pension Benefits |       | Other Benefits |       |
|---------------------------------------------------------------------------------------|------------------|-------|----------------|-------|
|                                                                                       | 2019             | 2018  | 2019           | 2018  |
| Weighted-average assumptions used to determine benefit obligations as of December 31: |                  |       |                |       |
| Discount rate                                                                         | 3.38%            | 4.41% | 3.26%          | 4.30% |
| Rate of compensation increase                                                         | n/a              | n/a   | n/a            | n/a   |
| Assumed health care cost trend rates as of December 31:                               |                  |       |                |       |
| Health care cost trend rate assumed for next year                                     |                  |       | 6.02%          | 6.46% |
| Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)     |                  |       | 4.46%          | 4.46% |
| Year that the rate reaches the ultimate trend rate                                    |                  |       | 2038           | 2038  |

*Assumptions for defined benefit obligations.* Mortality is a key assumption used to determine the benefit obligations for the Company's defined benefit plans. The mortality assumption for all plans uses the Pri-2012 mortality tables projected generationally with scale MMP-2019. The mortality tables use a white collar adjustment for the SERP, Restoration Plan and non-union Retiree Medical and Life Insurance Plans and a blue collar adjustment for the union Retire Medical and Life Insurance Plans. The Pension Plan continues to use no collar adjustment. On a lump sum basis, mortality is based on IRS prescribed tables projected using scale MP-2019, with segmented interest rate adjustments.

## 16. PENSION AND POSTRETIREMENT BENEFITS (CONTINUED)

*Expected cash flows.* The Company contributed \$40,250,000 to the Pension Plan in 2019 and does not expect to make any contributions during 2020. Settlement losses relate to early retirement of executives who elected lump-sum and periodic payments. Settlement losses totaled \$1,242,000 and \$444,000 for the years ended December 31, 2019 and 2018, respectively. There were no participant contributions to the plans in 2019 and 2018.

Details for the benefit payments for the pension plans and other plans for 2019 and 2018 follow (in thousands):

|               | 2019             | 2018             |
|---------------|------------------|------------------|
| Pension plans | \$ 66,158        | \$ 66,177        |
| Other plans   | 2,690            | 3,498            |
| Total         | <u>\$ 68,848</u> | <u>\$ 69,675</u> |

Details for estimated amounts to be paid in each of the next five years and the five year period thereafter follow (in thousands):

|            | Pension           | Employer<br>Benefits<br>Payments | Medicare<br>Subsidy<br>Receipts |
|------------|-------------------|----------------------------------|---------------------------------|
| 2020       | \$ 83,570         | \$ 4,275                         | \$ 11                           |
| 2021       | 70,854            | 4,421                            | 10                              |
| 2022       | 67,207            | 4,557                            | 10                              |
| 2023       | 62,408            | 4,609                            | 9                               |
| 2024       | 69,313            | 4,582                            | 8                               |
| Thereafter | 325,818           | 21,457                           | 32                              |
| Total      | <u>\$ 679,170</u> | <u>\$ 43,901</u>                 | <u>\$ 80</u>                    |

**Defined contribution retirement plans.** Total expense for the defined contribution retirement plans included in Employee compensation and related benefits in the accompanying Consolidated Statements of Income was \$43,284,000 and \$37,510,000 for the years ended December 31, 2019 and 2018, respectively.

## 17. INCOME TAXES

DTCC and its subsidiaries file a consolidated Federal income tax return and various state tax returns. DTCC and its subsidiaries also file other state and non-U.S. jurisdiction income tax returns on a separate company basis.

Details for the components of the Company's Provision for income taxes for the years ended December 31, 2019 and 2018 follow (in thousands):

|                                     | 2019             | 2018             |
|-------------------------------------|------------------|------------------|
| Current income tax:                 |                  |                  |
| Federal                             | \$ 3,310         | \$ 10,397        |
| State and local                     | 5,020            | 24,785           |
| Foreign                             | 16,847           | 23,539           |
| Total current income tax            | <u>25,177</u>    | <u>58,721</u>    |
| Deferred income tax/(benefit):      |                  |                  |
| Federal                             | 15,687           | 22,993           |
| State and local                     | 7,157            | (35,641)         |
| Foreign                             | (174)            | 1,051            |
| Total deferred income tax/(benefit) | <u>22,670</u>    | <u>(11,597)</u>  |
| Provision for income taxes          | <u>\$ 47,847</u> | <u>\$ 47,124</u> |

## 17. INCOME TAXES (CONTINUED)

The 2019 and 2018 effective tax rates differ from the 21% Federal statutory tax rate mainly due to state and local taxes, change in unrecognized tax benefits, the effects of the Tax Cuts and Jobs Act of 2017 (Tax Reform Act), settlements of tax audits, and effects from foreign tax credit (FTC) and deduction for global intangible low-taxed income (GILTI) and foreign-derived intangible income (FDII). Details for the reconciliation of the U.S. Federal statutory tax rate to the Company's effective tax rate on Income before taxes for the years ended December 31, 2019 and 2018 follow:

|                                                                 | <b>2019</b>  | <b>2018</b>  |
|-----------------------------------------------------------------|--------------|--------------|
| U.S. statutory tax rate                                         | 21.0%        | 21.0%        |
| State and local income taxes, net of Federal income tax benefit | 3.4          | 4.9          |
| Income from foreign operations                                  | (0.6)        | (0.6)        |
| Change in unrecognized tax benefits                             | 1.1          | (9.4)        |
| DEGCL joint venture                                             | (3.1)        | —            |
| U.S. charges (benefits) related to FTC, GILTI, and FDII         | (3.0)        | —            |
| Enactment of the Tax Reform Act                                 | —            | (3.2)        |
| Settlements of tax audits                                       | (0.3)        | 2.3          |
| Other                                                           | (0.7)        | (1.4)        |
| Effective tax rate                                              | <u>17.8%</u> | <u>13.6%</u> |

Details for the components of deferred tax assets and liabilities as of December 31, 2019 and 2018 follow (in thousands):

|                                               | <b>2019</b>      | <b>2018</b>      |
|-----------------------------------------------|------------------|------------------|
| <u>Deferred tax assets:</u>                   |                  |                  |
| Accrued compensation and benefits             | \$ 118,383       | \$ 117,299       |
| Operating lease liabilities and deferred rent | 69,830           | 9,011            |
| Other                                         | 27,063           | 29,443           |
| Total deferred tax assets                     | <u>215,276</u>   | <u>155,753</u>   |
| <u>Deferred tax liabilities:</u>              |                  |                  |
| Lease right-of-use asset                      | (56,120)         | —                |
| Depreciation                                  | (35,618)         | (27,260)         |
| Capitalized software                          | (52,281)         | (44,826)         |
| Investment tax basis difference               | (39,445)         | (39,685)         |
| Total deferred tax liabilities                | <u>(183,464)</u> | <u>(111,771)</u> |
| Net deferred tax assets                       | <u>\$ 31,812</u> | <u>\$ 43,982</u> |

The deferred tax assets are expected to be fully realized and, accordingly, no valuation allowance was established.

Details for unrecognized tax benefits, included in Non-current liabilities, for the years ended December 31, 2019 and 2018 follow (in thousands):

|                                  | <b>2019</b>      | <b>2018</b>      |
|----------------------------------|------------------|------------------|
| Beginning balance                | \$ 28,692        | \$ 53,008        |
| Increases:                       |                  |                  |
| Prior period tax positions       | 1,382            | 2,586            |
| Current period tax positions     | 822              | 1,444            |
| Decreases:                       |                  |                  |
| Prior period tax positions       | (1,002)          | (22,192)         |
| Statute of limitations           | (655)            | (734)            |
| Settlements with tax authorities | (42)             | (5,420)          |
| Unrecognized tax benefit         | 29,197           | 28,692           |
| Accrued interest                 | 14,277           | 11,461           |
| Ending balance                   | <u>\$ 43,474</u> | <u>\$ 40,153</u> |

## 17. INCOME TAXES (CONTINUED)

The Company classifies interest and penalties related to unrecognized tax benefits, if incurred, in Provision for income taxes in its accompanying Consolidated Statements of Income. The Company recognized accrued interest of \$2,816,000 for the year ended December 31, 2019. The Company recognized a decrease in accrued interest and penalties of \$17,132,000 for the year ended December 31, 2018 primarily related to the settlement of state tax audits.

Unrecognized tax benefits are estimated based on judgment, assessment of relevant risks, facts and circumstances. Actual results could differ materially from those estimates. The Company believes that the liability for unrecognized tax benefits is the best estimate in relation to the potential for additional assessments. Unexpected results from one or more such tax audits could significantly adversely affect the Company's income tax provision and results of operations.

Details for the periods currently under examination and remaining subject to examination by jurisdiction as of December 31, 2019 follow:

| <u>Jurisdiction</u>                     | <u>Tax Years</u>         |                               |
|-----------------------------------------|--------------------------|-------------------------------|
|                                         | <u>Under Examination</u> | <u>Subject to Examination</u> |
| U.S. Federal - Internal Revenue Service | 2014                     | 2016 - 2018                   |
| New York State                          | 2015 - 2016              | 2017 - 2018                   |
| New York City                           | 2010 - 2014              | 2015 - 2018                   |
| State of Florida                        | 2013 - 2017              | 2018                          |

## 18. SHAREHOLDERS' EQUITY

**DTCC Series A Preferred stock.** All 10,000 shares of DTCC Series A Preferred stock are issued and outstanding and held of record by Stock Clearing Corporation, a wholly owned subsidiary of the New York Stock Exchange LLC, the successor-in-interest to the New York Stock Exchange Inc. In the event of DTCC's voluntary or involuntary liquidation, dissolution or winding-up, the holders of Series A Non-Cumulative Perpetual Preferred stock are entitled to a liquidation preference of \$30.00 per share.

**DTCC Series B Preferred stock.** All 10,000 shares of DTCC Series B Preferred stock are issued and outstanding and held of record by National Clearing Corporation, a wholly owned subsidiary of the Financial Industry Regulatory Authority Inc. ("FINRA"). In the event of DTCC's voluntary or involuntary liquidation, dissolution or winding-up, the holders of Series B Preferred stock are entitled to a liquidation preference of \$30.00 per share.

**DTCC Series C Fixed-to-Floating Rate Non-Cumulative Perpetual Preferred stock.** DTCC issued 1,600 shares of Fixed-to-Floating Rate Non-Cumulative Perpetual Preferred stock, Series C, \$0.50 par value per share, with a liquidation preference of \$250,000 per share. When declared by DTCC's Board of Directors, dividends on the Series C Preferred stock are payable in arrears on June 15 and December 15 of each year through June 15, 2020 at a fixed rate of 4.875% per annum. From June 15, 2020 onward, dividends will accrue at a floating rate equal to three-month LIBOR plus 3.167% per annum.

DTCC may redeem the Series C Preferred Stock at its option, for cash, i) in whole or in part, from time to time, on any dividend payment date on or after June 15, 2020 at a redemption price equal to \$250,000 per share, plus any declared and unpaid dividends to, but excluding the redemption date, or ii) in whole but not in part, at any time within 90 days following a Regulatory Capital Treatment Event, as defined in the Series C Preferred Stock Offering Memorandum, at a redemption price equal to \$250,000 per share, plus any declared and unpaid dividends to, but excluding, the redemption date.

On April 16, 2019 and October 23, 2019, in accordance with the Amended Certificate of Incorporation of DTCC, the Board of Directors approved and declared dividends in the amount of \$6,093.75 per share on 1,600 shares outstanding of its Series C Preferred Stock. The semi-annual aggregate dividend of \$9,750,000 was paid on June 17, 2019 and December 16, 2019, to the holders of the Series C Preferred Stock as of record date May 31, 2019 and November 30, 2019, respectively.

On April 17, 2018 and October 17, 2018, in accordance with the Amended Certificate of Incorporation of DTCC, the Board of Directors approved and declared dividends in the amount of \$6,093.75 per share on 1,600 shares outstanding of its Series C Preferred Stock. The semi-annual aggregate dividend of \$9,750,000 was paid on June 15, 2018 and December 15, 2018, to the holders of the Series C Preferred Stock as of record date May 31, 2018 and November 30, 2018, respectively.

## 18. SHAREHOLDERS' EQUITY (CONTINUED)

**DTC Series A Non-Cumulative Perpetual Preferred stock.** Under a plan adopted by the Board of Directors, each Participant of DTC is required to own shares of DTC Series A preferred stock. The ownership of DTC preferred stock is reported as non-controlling interests in the consolidated financial statements. There was \$150,000,000 of DTC Series A preferred stock (1,500,000 shares at par value of \$100 per share) outstanding as of December 31, 2019 and 2018. Annual dividends are accrued based on the weighted-average rate of interest paid by the Company on required Participants' Fund deposits during the dividend period as disclosed in the DTC's rules. The 2019 annual dividend amount of \$2,640,000 will be paid in April 2020, to the holders of DTC Series A Preferred stock during 2019. The 2018 annual dividend amount of \$2,340,000 was paid in April 2019, to the holders of DTC Series A Preferred stock during 2018.

## 19. CAPITAL REQUIREMENTS

The capital requirement for each of the clearing agencies is equal to the sum of the general business risk capital requirement and corporate contribution, as described below. The clearing agencies must meet the capital requirements by holding liquid net assets funded by equity, as described in rule 17Ad-22(e)(15) of the CCAS and the Clearing Agency Policy on Capital Requirements.

**General Business Risk Capital Requirement.** The general business risk capital requirement is determined according to Rule 17Ad-22(e)(15) of the CCAS and the Clearing Agency Policy on Capital Requirements. The capital requirement is held to cover potential general business losses so that the clearing agencies can continue operations and provide services as a going concern if those losses materialize. It is determined based on the general business risk profile and estimated time to execute a recovery or orderly wind-down of critical operations for each of the clearing agencies and, at a minimum, is equal to six months of operating expenses.

**Corporate Contribution.** The clearing agencies maintain an amount referred to as the corporate contribution, to be applied to losses as provided in each of the respective clearing agencies rules. The amount of the corporate contribution is generally equal to 50% of each clearing agency's general business risk capital requirement.

Details of the general business risk capital requirement, corporate contribution and liquid net assets funded by equity for the clearing agencies as of December 31, 2019 and 2018 follow (in thousands):

|                                           | 2019       |            |            |
|-------------------------------------------|------------|------------|------------|
|                                           | DTC        | NSCC       | FICC       |
| General business risk capital requirement | \$ 169,398 | \$ 159,218 | \$ 113,137 |
| Corporate contribution                    | 84,699     | 79,609     | 56,568     |
| Total requirement                         | 254,097    | 238,827    | 169,705    |
| Liquid net assets funded by equity        | 606,572    | 524,817    | 277,811    |
| Excess                                    | \$ 352,475 | \$ 285,990 | \$ 108,106 |

  

|                                           | 2018       |            |            |
|-------------------------------------------|------------|------------|------------|
|                                           | DTC        | NSCC       | FICC       |
| General business risk capital requirement | \$ 169,119 | \$ 153,054 | \$ 107,845 |
| Corporate contribution                    | 84,559     | 76,527     | 53,922     |
| Total requirement                         | 253,678    | 229,581    | 161,767    |
| Liquid net assets funded by equity        | 529,478    | 445,732    | 265,724    |
| Excess                                    | \$ 275,800 | \$ 216,151 | \$ 103,957 |

## 19. CAPITAL REQUIREMENTS (CONTINUED)

**Regulatory capital.** DTCC's regulated subsidiaries maintain and report regulatory capital in accordance with all relevant laws, rules and guidelines. As a multinational enterprise, various DTCC subsidiaries are subject to regulatory capital regimes, as applicable. Certain DTCC subsidiaries submit regulatory capital reports to various regulators, including, but not limited to, FRBNY, the NYSDFS and the Commodity Futures Trading Commission in the United States; Ontario Securities Commission in Canada; and the Monetary Authority of Singapore in Singapore.

**Capital adequacy.** DTC is subject to capital guidelines issued by United States federal and state banking regulators.

DTC capital and leverage ratios filed with the FRBNY and the NYSDFS as of December 31, 2019 follow:

|                                      | <b>Ratio</b> | <b>Minimum<br/>Capital<br/>Ratio<sup>(a)</sup></b> | <b>Well<br/>Capitalized<br/>Ratio<sup>(a)</sup></b> |
|--------------------------------------|--------------|----------------------------------------------------|-----------------------------------------------------|
| Tier 1 capital ratio <sup>(1)</sup>  | 103.94%      | 6.00%                                              | 8.00%                                               |
| Total capital ratio <sup>(1)</sup>   | 103.94%      | 8.00%                                              | 10.00%                                              |
| Tier 1 leverage ratio <sup>(2)</sup> | 20.07%       | 4.00%                                              | 4.00%                                               |

(a) As defined by the regulations issued by the Federal Reserve, Office of the Comptroller of the Currency and the Federal Deposit Insurance Corporation.

(1) Total capital and Tier 1 capital includes common stock, retained earnings and preferred stock. DTC's tier 1 capital and total capital ratios are based on tier 1 capital and total risk-weighted assets.

(2) Tier 1 leverage ratio is based on tier 1 capital and quarterly average total assets.

## 20. TRANSACTIONS WITH RELATED PARTIES

DTCC has agreements with DEGCL to provide various support services and office facilities. Expense reimbursements under these agreements follow (in thousands):

|                 | <b>Other Services<sup>(1)</sup></b>         |             | <b>Other Receivables<sup>(2)</sup></b> |             |
|-----------------|---------------------------------------------|-------------|----------------------------------------|-------------|
|                 | <b>For the years ended<br/>December 31,</b> |             | <b>As of December 31,</b>              |             |
|                 | <b>2019</b>                                 | <b>2018</b> | <b>2019</b>                            | <b>2018</b> |
| Related parties |                                             |             |                                        |             |
| DEGCL           | \$ 9,407                                    | \$ 14,313   | \$ 664                                 | \$ 982      |

(1) Included in Other services revenue in the accompanying Consolidated Statements of Income.

(2) Included in Accounts receivable on the accompanying Consolidated Statements of Financial Condition.

## **21. GUARANTEES**

Certain DTCC subsidiaries (NSCC and FICC) provide central counterparty (CCP) services, including clearing, settlement and risk management services. Acting as a CCP, NSCC and FICC (through GSD and MBSD) guarantee the settlement of trades in the event one or more of their Participants' defaults. A Participant default is defined in the respective rules of NSCC, GSD and MBSD. In their guarantor role, each clearing subsidiary has equal claims to and from Participants, as applicable, on opposite sides of the netted transactions. To cover their guarantee risk, NSCC and FICC (through GSD and MBSD) use risk-based margining to collect cash and securities collateral through their Clearing Funds.

**NSCC** is the leading provider of clearance, netting, risk management and settlement for virtually all U.S. broker-to-broker trades involving equities, corporate and municipal debt, exchange traded funds and unit investment trusts. Through its Continuous Net Settlement (CNS) system, NSCC is interposed between Participants in securities clearance and settlement. CNS transactions are generally guaranteed at the point of trade comparison and validation for bilateral submissions or the point of trade validation for locked-in submissions. Since NSCC stands between the Participants delivering and receiving CNS trades, the failure of Participants to deliver securities to NSCC on settlement date, and the corresponding failure of NSCC to redeliver the securities, results in open positions. Open CNS positions are marked-to-market daily. Such marks are debited from or credited to the involved Participants through the settlement process.

**FICC**, through GSD, provides real-time trade matching, clearing, netting, risk management and settlement for trades in U.S. government debt including buy-sell transactions and repurchase agreement transactions. Securities processed by GSD include Treasury bills, bonds, notes, zero-coupon securities, government agency securities and inflation-indexed securities. The U.S. Government securities market is predominantly an over-the-counter market and most transactions are settled on trade date plus one day (T+1). Trades are guaranteed and novated upon comparison. The guarantee of GSD net settlement positions may result in a potential liability to FICC. Guaranteed positions that have not yet settled are margined and collateralized twice-daily through the Clearing Fund and marked-to-market twice-daily through the funds-only settlement process. In addition, a Participant may be subject to an additional amount referred to as the intra-day supplemental required fund deposit, which, if applicable, may be collected on an intra-day basis through the Clearing Fund.

**MBSD** provides real-time trade matching, clearing, netting, risk management and settlement for trades in the U.S. mortgage-backed securities market. Specifically, MBSD processes to-be-announced transactions, specified pool trades and stipulated trades. FICC's guarantee of MBSD transactions may result in potential liability to FICC. Guaranteed positions that have not yet settled are margined and collateralized daily through the Clearing Fund. The daily Clearing Fund includes a mark-to-market component that is calculated using guaranteed positions and prices as of prior end-of-day. In addition, a Participant may become subject to an intra-day mark-to-market charge which, if applicable, may be collected on an intra-day basis through the Clearing Fund.

If a Participant defaults in either NSCC or FICC, such Participant's deposits to the applicable Clearing Fund are the first source of funds and collateral that the NSCC and FICC would use to cover any losses that may result from the close-out and liquidation of the defaulting Participant's positions. To address potential tail losses, NSCC and FICC each separately maintain additional prefunded resources. These consist of (i) the CCP's Clearing Fund that, in the aggregate, currently serves as the CCP's default fund, and (ii) the CCP's corporate contribution, (see Note 19).

If, after closing out and liquidating a defaulting Participant's positions, the CCP were to suffer a loss, such loss would be satisfied as follows: (i) first, applying the defaulter's Clearing Fund deposit, including any amounts available under cross-guaranty agreements to which the CCPs are a party, described below; (ii) next, the CCPs may apply their corporate contribution (or such higher amount as approved by their Board of Directors), and (iii) by allocating any remaining loss to Participants.

For purposes of loss allocation, Participant defaults are grouped together chronologically into discrete event periods of 10 business days. If there is remaining loss or liability from one or more Participant default events that occurred within the same event period, they will be treated as follows:

NSCC will assess its non-defaulting Participants as provided for in its rules. The process, in general, allocates any remaining losses or liabilities among the Participants of NSCC who were Participants on the first day of the event period ratably in accordance with their respective average daily required deposits to the Clearing Fund over the prior 70 business days

## **21. GUARANTEES (CONTINUED)**

FICC Participants are grouped into three different tiers for purposes of loss allocation: Tier 1, Tier 2, and Sponsored Members. The division will divide such obligation between Tier 1 Participants and Tier 2 Participants. Tier 1 Participants will be assessed ratably in accordance with their respective average daily required deposits to the Clearing Fund over the prior 70 business days. Tier 2 Participants will only be subject to such loss or liability to the extent they traded with the defaulting Participant. Sponsored Members are not obligated for loss allocation. If the loss arises in connection with Sponsored Member trades, the loss shall be allocated to Tier 1 Participant Sponsor. GSD Participants who act as interdealer brokers are limited to a loss allocation of \$5 million per event period in respect of their inter-dealer broker activity.

Amounts that may be available under cross-guaranty agreements include, for NSCC, amounts available under the netting contract and limited cross-guaranty between DTC and NSCC relating to collateralization across the DTC-NSCC interface, or for FICC, amounts available under the cross-margining agreements between GSD and the Chicago Mercantile Exchange Inc., which may provide for additional funds if the defaulting member was a cross-margining Participant.

DTC, NSCC, FICC and The Options Clearing Corporation (OCC) have also entered into a multilateral netting contract and limited cross-guaranty agreement. In accordance with the cross-guaranty agreement, these clearing agencies have agreed to make payments to each other for any remaining unsatisfied obligations of a common defaulting Participant to the extent that these clearing agencies have excess resources belonging to the defaulting Participant. Under this agreement, no party ever needs to pay out of pocket and no party can receive more than its loss.

Details for open CCP positions for which a trade guarantee applied as of December 31, 2019 and 2018 follow (in billions):

|      | <u>2019</u> | <u>2018</u> |
|------|-------------|-------------|
| FICC |             |             |
| GSD  | \$ 1,172    | \$ 1,160    |
| MBSD | 419         | 333         |
| NSCC | 143         | 176         |

There were no defaults by Participants to these obligations.

## **22. OFF BALANCE SHEET AND CONCENTRATION OF CREDIT RISKS**

DTCC is exposed to significant credit risk to third-parties including its Participants, which extends to companies in the global financial services industry. Customers are based in the United States of America and overseas and include participating brokers, dealers, institutional investors, banks, trust issuers, mutual fund companies, insurance carriers, hedge funds and other financial intermediaries - either directly or through correspondent relationships. Credit risk represents the potential for loss due to the default or deterioration in credit quality of a Participant. The Company's exposure to credit risk is primarily derived from clearing and settlement service operations. Credit risk also comes from financial assets, which consist principally of cash and cash equivalents, investments, accounts receivable and Participants' and Clearing Funds.

Given that NSCC and FICC are CCPs, they are exposed to significant credit risk of third parties, including their customer base, which extends to companies within the global financial services industry.

Concentrations of credit risk may arise due to large connected individual exposures and significant exposures to groups of Participants whose likelihood of default is driven by common underlying factors, including economic conditions affecting financial markets, the securities industry and debt-issuing countries.

## 22. OFF BALANCE SHEET AND CONCENTRATION OF CREDIT RISKS (CONTINUED)

**Cash and cash equivalents.** The Company maintains cash and cash equivalents with various financial institutions including the FRBNY. These financial institutions are located in various geographical regions, and the Company's policy is designed to limit exposure with any one financial institution. As part of its credit and risk management processes, the Company performs periodic evaluations of the relative credit standing of the financial institutions with whom it places funds. The Company generally makes deposits with financial institutions with a credit rating of at least BBB+/Baa1 or better from recognized rating agencies and that are approved via its internal credit review process. The Company also monitors the condition of the financial institutions with whom it places funds on an ongoing basis to identify any significant change in a financial institution's condition. If such a change takes place, the amounts deposited with such financial institutions may be adjusted.

**Marketable securities.** In addition to investing in reverse repurchase agreements, money market funds and bank deposits, the Company also directly invests in U.S. Treasury securities and debt obligations of the U.S. government or those U.S. government agencies guaranteed by the U.S. government. Credit risk related to marketable securities involves the risk of nonperformance by the counterparty, which could result in a material loss.

**Accounts receivable.** Credit risk related to accounts receivable involves the risk of non-payment by the counterparty. Credit risk is diversified due to the large number of Participants comprising the Company's customer base. The Company also performs ongoing credit evaluations of the financial conditions of its customers and evaluates the delinquency status of the receivables.

**Participants' Fund and Clearing Funds.** In addition to risk management policies described above for cash and cash equivalents, when Participants provide cash deposits to the Participants' and Clearing Funds, the Company may invest the cash in bank deposits at the FRBNY or reverse repurchase agreements (reverse repos). Reverse repos are collateralized and the collateral must have a market value greater than or equal to 102% of the cash invested. The Company bears credit risk related to reverse repos only to the extent cash advanced to the counterparty exceeds the value of collateral received. Securities purchased under reverse repos are generally U.S. Treasury and Agency securities having minimal credit risk due to low probability of U.S. government default, coupled with the highly liquid nature of these securities. Reverse repos are typically placed with financial institutions with a credit rating of BBB+/Baa1 or better from recognized rating agencies and that are approved via the Company's credit review process. To avoid concentration of credit risk exposures, the Company sets credit limits for each counterparty.

Participants' and Clearing Funds cash deposits may also be invested in money market mutual funds under Rule 2a-7 of the Investment Company Act of 1940 with a credit rating of AAA/Aaa from recognized rating agencies. Credit risk is mitigated by investing in highly rated money market mutual funds and having cash returned daily.

Credit risk arises at DTCC should a Participant fail to fulfill its settlement obligation. The Company manages and mitigates this risk by identifying, measuring and responding to these risks in order to protect the safety and soundness of the DTCC clearing and settlement system.

Various tools are utilized to mitigate these risks including, but not limited to: setting capital adequacy standards; assessing new applicants; performing continuous monitoring of Participants financial condition; reviewing Participants daily trading activity and determining appropriate collateral requirements; maintaining the Participants' Fund and Clearing Fund; netting trades continuously; marking unsettled trades to market; and utilizing a variety of advanced quantitative analytical methodologies, such as back and stress testing.

To become a participating member at any of DTCC's clearing agency or registered clearing house subsidiaries, an applicant must meet minimum eligibility criteria that are specified in the subsidiaries' respective rules. All applicants must provide the Company with certain financial and operational information. This information is reviewed to ensure the applicant has sufficient financial resources to make anticipated contributions to the relevant subsidiary's Participants' Fund or Clearing Fund and to meet its obligations to the subsidiary. The credit quality of the Participant is evaluated at the time of application and monitored on an ongoing basis to determine if the Participant continues to be financially stable and able to meet the financial requirements of membership. As part of its review, the Company utilizes an internal credit risk rating matrix to risk-rate its Participants. The resulting rating determines the level of financial review to be performed on each Participant and may impact their Participants' Fund and Clearing Fund requirements.

## **22. OFF BALANCE SHEET AND CONCENTRATION OF CREDIT RISKS (CONTINUED)**

Collateralization controls and net debit caps are employed by DTC to protect Participants against the risk that one or more Participants may fail to pay for their settlement obligations. DTC's collateralization controls prevent the completion of transactions that would cause a Participant's net debit balance to exceed the value of collateral in its account. The controls are designed to provide DTC with sufficient collateral to obtain funding for settlement in the event a Participant fails to pay its settlement obligation. DTC's net debit cap controls limit the net settlement debit that each Participant can incur to an amount, based upon activity level, which would be covered by DTC's liquidity resources. The net debit cap requires DTC to maintain sufficient liquidity to complete settlement should any single Participant or Participant family fail to settle.

NSCC and FICC collect Clearing Fund deposits from their Participants using a risk-based margining methodology. The risk-based methodology enables them to identify the risks posed by a Participant's unsettled portfolio and to quickly adjust and collect additional deposits as needed to cover those risks. At multiple times during the day, Clearing Fund requirements are calculated for each Participant based on their then-current unsettled and pending transactions. Security pricing is updated on an intraday basis and additional charges may be collected to cover significant price movements from those Participants with a significant exposure in the identified security. The Company monitors Participants overall trading activities throughout the trading day to determine whether exposures exist that would require special actions to increase their Clearing Fund deposits.

The Company regularly performs back and stress testing of the quality and accuracy of its risk management systems to ensure the adequacy of Clearing Fund requirements and to respond to other risk factors the tests may reveal.

DTC and NSCC maintain committed, secured lines of credit to support potential liquidity needs in the event of a Participant default.

The Company also limits its exposure to potential losses from default by Participants through multilateral netting contracts and limited cross-guaranty agreements with other clearing agencies. These arrangements are designed to provide a mechanism for the sharing of excess net resources of a common defaulting Participant held at one clearing agency to cover losses incurred at another clearing agency. NSCC, FICC and DTC have a multilateral netting contract and limited cross-guaranty agreement with each other and with OCC under which these clearing agencies have agreed to make payment to each other for any remaining unsatisfied obligations of a common defaulting Participant to the extent they have excess resources of the defaulting Participant. NSCC and OCC also have an agreement providing for payments to each other relating to the settlement of certain option exercises and assignments in the event of a mutual Participant's failure. Further, DTC and NSCC have a netting contract and limited cross-guaranty agreement, which includes certain arrangements. Securities delivered by DTC to NSCC to cover CNS system allocations are fully collateralized.

If a DTC Participant defaults, such Participant's deposits to the Participants Fund would be liquidated to satisfy an outstanding obligation and/or loss incurred by DTC. If those funds are insufficient to cover the defaulting Participant's outstanding obligations, DTC may use other Participant deposits in the Participants' Fund or apply a portion of its retained earnings to cover the loss.

## **23. PARENT COMPANY CONDENSED FINANCIAL STATEMENTS**

Condensed financial statements for DTCC (the Parent Company Condensed Financial Statements) that follow should be read in conjunction with the accompanying consolidated financial statements of the Company and its subsidiaries and the notes thereto. The Parent Company Condensed Financial Statements as of December 31, 2019 and 2018 require management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses. Management believes that the estimates utilized in the preparation of the condensed financial statements are reasonable. Actual results could differ materially from these estimates.

The DTCC Parent Company Condensed Statements of Financial Condition follow (in thousands):

|                                                   | <b>As of December 31,</b> |                     |
|---------------------------------------------------|---------------------------|---------------------|
|                                                   | <b>2019</b>               | <b>2018</b>         |
| <b>ASSETS:</b>                                    |                           |                     |
| Cash and cash equivalents                         | \$ 438,544                | \$ 519,894          |
| Investments in subsidiaries                       | 1,863,686                 | 1,730,200           |
| Due from subsidiaries                             | 259,633                   | 190,060             |
| Premises, equipment and intangible assets         | 187,926                   | 174,353             |
| Operating lease right-of-use asset                | 206,769                   | —                   |
| Other assets                                      | 392,034                   | 379,305             |
| <b>TOTAL ASSETS</b>                               | <b>\$ 3,348,592</b>       | <b>\$ 2,993,812</b> |
| <b>LIABILITIES AND SHAREHOLDERS' EQUITY:</b>      |                           |                     |
| <b>LIABILITIES:</b>                               |                           |                     |
| Long-term debt and other borrowings               | \$ 8,024                  | \$ 36,375           |
| Pension and postretirement benefits               | 211,720                   | 214,445             |
| Operating lease liability                         | 256,993                   | —                   |
| Other liabilities                                 | 516,877                   | 560,757             |
| <b>Total liabilities</b>                          | <b>993,614</b>            | <b>811,577</b>      |
| <b>SHAREHOLDERS' EQUITY:</b>                      |                           |                     |
| Preferred stock                                   | 391,116                   | 391,116             |
| Common stock                                      | 5,091                     | 5,091               |
| Additional paid-in capital                        | 411,065                   | 411,065             |
| Retained earnings                                 | 1,769,638                 | 1,571,298           |
| Accumulated other comprehensive loss, net of tax  | (221,932)                 | (196,335)           |
| <b>Total shareholders' equity</b>                 | <b>2,354,978</b>          | <b>2,182,235</b>    |
| <b>TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY</b> | <b>\$ 3,348,592</b>       | <b>\$ 2,993,812</b> |

**23. PARENT COMPANY CONDENSED FINANCIAL STATEMENTS (CONTINUED)**

DTCC Parent Company has an agreement with its subsidiaries whereby the DTCC Parent Company pays for substantially all of the expenses for the operations of its subsidiaries. The related expenses are allocated to subsidiaries based upon their estimated use of such goods or services as determined by applicable allocation factors. Further, the agreement provides that the DTCC Parent Company performs credit and quantitative risk services, and certain other services for its subsidiaries, including among other things, administrative, internal audit, finance and legal services. The billing for these services as a percentage of total allocated expenses ranged from 104% to 108% in 2019 and 2018, excluding pass-through charges and the impact of capitalized software. The fee, representing the amount over actual cost, is included in Interest and other income in the Condensed Statements of Income below.

The DTCC Parent Company Condensed Statements of Income follow (in thousands):

|                                      | <b>For the years ended, December 31,</b> |                   |
|--------------------------------------|------------------------------------------|-------------------|
|                                      | <b>2019</b>                              | <b>2018</b>       |
| REVENUES:                            |                                          |                   |
| Equity in earnings of subsidiaries   | \$ 165,724                               | \$ 223,596        |
| Interest and other income            | 110,000                                  | 114,596           |
| Total revenues                       | <u>275,724</u>                           | <u>338,192</u>    |
| OPERATING EXPENSES:                  |                                          |                   |
| Professional services                | 8,842                                    | 19,874            |
| Other                                | 48,249                                   | 23,969            |
| Total operating expenses             | <u>57,091</u>                            | <u>43,843</u>     |
| Income before taxes                  | 218,633                                  | 294,349           |
| Provision (benefit) for income taxes | 793                                      | (1,464)           |
| Net income attributable to DTCC      | <u>\$ 217,840</u>                        | <u>\$ 295,813</u> |

**23. PARENT COMPANY CONDENSED FINANCIAL STATEMENTS (CONTINUED)**

The DTCC Parent Company Condensed Statements of Cash Flows follow (in thousands):

|                                                                                             | <b>For the years ended, December 31,</b> |                   |
|---------------------------------------------------------------------------------------------|------------------------------------------|-------------------|
|                                                                                             | <b>2019</b>                              | <b>2018</b>       |
| <b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>                                                |                                          |                   |
| Net income                                                                                  | \$ 217,840                               | \$ 295,813        |
| Adjustments to reconcile net income to net cash provided by/(used in) operating activities: |                                          |                   |
| Equity in earnings of subsidiaries                                                          | (165,724)                                | (223,596)         |
| Depreciation and amortization                                                               | 2,608                                    | 55,302            |
| Deferred income taxes                                                                       | (10,660)                                 | 20,856            |
| Other                                                                                       | 18,947                                   | —                 |
| Net change in:                                                                              |                                          |                   |
| Due from subsidiaries                                                                       | (69,573)                                 | 191,100           |
| Operating lease liability                                                                   | (18,518)                                 | —                 |
| Other operating assets and liabilities                                                      | 16,707                                   | (140,684)         |
| Net cash provided by/(used in) operating activities                                         | <u>(8,373)</u>                           | <u>198,791</u>    |
| <b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>                                                |                                          |                   |
| Investments in subsidiaries                                                                 | (30,799)                                 | (165,000)         |
| Distributions from subsidiaries                                                             | 69,000                                   | 93,246            |
| Capitalized software development costs and purchases of Premises and equipment              | (48,923)                                 | (34,174)          |
| Net cash used in investing activities                                                       | <u>(10,722)</u>                          | <u>(105,928)</u>  |
| <b>CASH FLOWS FROM FINANCING ACTIVITIES:</b>                                                |                                          |                   |
| Preferred stock dividend payments                                                           | (19,500)                                 | (19,500)          |
| Repayments on long-term debt and other borrowings                                           | (42,779)                                 | (7,877)           |
| Net cash used in financing activities                                                       | <u>(62,279)</u>                          | <u>(27,377)</u>   |
| Effect of foreign exchange rate changes on Cash and cash equivalents                        | 24                                       | 67                |
| Net increase/(decrease) in Cash and cash equivalents                                        | (81,350)                                 | 65,553            |
| Cash and cash equivalents - Beginning of year                                               | 519,894                                  | 454,341           |
| Cash and cash equivalents - End of year                                                     | <u>\$ 438,544</u>                        | <u>\$ 519,894</u> |
| <b>SUPPLEMENTAL DISCLOSURES:</b>                                                            |                                          |                   |
| Interest paid                                                                               | \$ 4,864                                 | \$ 1,133          |
| Income taxes paid - net of refunds                                                          | \$ 20,091                                | \$ 20,588         |
| Non-cash financing activity - capital lease obligation                                      | \$ —                                     | \$ 3,640          |

## **24. SUBSEQUENT EVENTS**

The Company evaluated events and transactions occurring after December 31, 2019 through March 27, 2020, the date these consolidated financial statements are available to be issued, for potential recognition or disclosure. No additional events or transactions other than the ones mentioned below occurred during such period that would require recognition or disclosure in these consolidated financial statements.

On March 10, 2020, Euroclear plc and the Company finalized a dissolution, business and share transfer agreement with respect to the DEGCL joint venture. As a result, the Company transferred its investment in DEGCL to Euroclear plc in exchange for cash totaling \$3,600,000 and the rights to certain products of the joint venture. In addition, all agreements between DEGCL and DTCC, which provided various support services and office facilities on a reimbursement basis, were terminated.

The recent outbreak of the novel coronavirus ("Covid-19") in many countries continues to adversely impact global commercial activity and has contributed to significant volatility in financial markets. The World Health Organization has declared COVID-19 a "Public Health Emergency of International Concern." The global impact of the outbreak has been rapidly evolving, and as cases of the virus have continued to be identified, many countries have reacted by instituting quarantines and restrictions on travel. Such actions are creating disruption in global supply chains, and adversely impacting a number of industries. The outbreak could have a continued adverse impact on economic and market conditions and trigger a period of global economic slowdown. The rapid development and fluidity of this situation precludes any prediction as to the ultimate adverse impact of Covid-19. Nevertheless, Covid-19 could have a material impact on the Company's financial condition. In addition to the factors described above, other factors either in the U.S or internationally that may affect market, economic and geopolitical conditions, and thereby adversely affect the Company's business include, without limitation, economic slowdown, changes in interest rates and/or a lack of availability of credit, changes in law and/or regulation, and uncertainty regarding government and regulatory policy.