

The Depository Trust & Clearing Corporation

Consolidated Financial Statements as of and for the Years
Ended December 31, 2017 and 2016, and Independent
Auditors' Report

THE DEPOSITORY TRUST & CLEARING CORPORATION

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Deloitte & Touche LLP
30 Rockefeller Plaza
New York, NY 10112-0015
USA
Tel: (212) 492-4000
Fax: (212) 489-1687
www.deloitte.com

INDEPENDENT AUDITORS' REPORT

To the Board of Directors and Shareholders of
The Depository Trust & Clearing Corporation

We have audited the accompanying consolidated financial statements of The Depository Trust & Clearing Corporation and its subsidiaries (the "Company"), which comprise the consolidated statements of financial condition as of December 31, 2017 and 2016, and the related consolidated statements of income, comprehensive income, changes in shareholders' equity, and cash flows for the years then ended, and the related notes to the consolidated financial statements.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Company's preparation and fair presentation of the consolidated financial statements in order to design audit procedures appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of The Depository Trust & Clearing Corporation and its subsidiaries as of December 31, 2017 and 2016, and the results of their operations and their cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Deloitte & Touche LLP

March 23, 2018

THE DEPOSITORY TRUST & CLEARING CORPORATION
CONSOLIDATED STATEMENTS OF FINANCIAL CONDITION

	As of December 31,	
	2017	2016
(In thousands, except share data)		
ASSETS:		
CURRENT ASSETS:		
Cash and cash equivalents	\$ 5,075,318	\$ 4,075,548
Reverse repurchase agreements	—	100,000
Participants' segregated cash	20,120	15,886
Accounts receivable - net of allowance for doubtful accounts of \$205 and \$865 as of December 31, 2017 and 2016, respectively	174,456	208,042
Participants' and Clearing Funds	27,015,465	29,486,244
Other Participants' assets	868,036	960,753
Other current assets	101,654	67,476
Total current assets	<u>33,255,049</u>	<u>34,913,949</u>
NON-CURRENT ASSETS:		
Premises and equipment - net of accumulated depreciation of \$394,039 and \$410,788 as of December 31, 2017 and 2016, respectively	233,835	250,791
Goodwill	57,699	65,535
Intangible assets - net of accumulated amortization of \$740,942 and \$919,308 as of December 31, 2017 and 2016, respectively	338,359	398,695
Equity method investments	10,394	17,176
Other non-current assets	353,836	367,882
Total non-current assets	<u>994,123</u>	<u>1,100,079</u>
TOTAL ASSETS (1)	<u><u>\$ 34,249,172</u></u>	<u><u>\$ 36,014,028</u></u>
LIABILITIES AND SHAREHOLDERS' EQUITY:		
CURRENT LIABILITIES:		
Commercial paper - net of unamortized discount of \$3,371 and \$1,669 as of December 31, 2017 and 2016, respectively	\$ 3,222,571	\$ 2,554,020
Current portion of long-term debt	7,877	20,468
Current portion of pension and postretirement benefits	21,337	20,205
Accounts payable and accrued expenses	118,345	100,088
Participants' and Clearing Funds	27,015,465	29,486,244
Payable to Participants	888,156	976,639
Other current liabilities	249,929	276,054
Total current liabilities	<u>31,523,680</u>	<u>33,433,718</u>
NON-CURRENT LIABILITIES:		
Non-current portion of long-term debt	36,375	44,252
Non-current portion of pension and postretirement benefits	291,208	284,672
Other non-current liabilities	370,242	344,778
Total non-current liabilities	<u>697,825</u>	<u>673,702</u>
Total liabilities (2)	<u>32,221,505</u>	<u>34,107,420</u>
COMMITMENTS AND CONTINGENCIES (Note 21)		
SHAREHOLDERS' EQUITY:		
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
Paid-in capital	411,065	411,065
Retained earnings	1,261,309	1,115,917
Accumulated other comprehensive loss, net of tax	(189,354)	(161,329)
Non-controlling interests	148,440	144,748
Total shareholders' equity	<u>2,027,667</u>	<u>1,906,608</u>
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	<u><u>\$ 34,249,172</u></u>	<u><u>\$ 36,014,028</u></u>

- (1) The consolidated assets as of December 31, 2017 and 2016, include the following assets of certain variable interest entities (VIEs) that can only be used to settle the liabilities of those VIEs (in thousands): Cash and cash equivalents, \$0 and \$10,399; Accounts receivable - net, \$0 and \$2,208; Other current assets, \$0 and \$1,149; Intangible assets, \$0 and \$6,826; Other non-current assets, \$0 and \$544; and Total assets, \$0 and \$21,126, respectively.
- (2) The consolidated liabilities as of December 31, 2017 and 2016, include the following VIE liabilities for which the VIE creditors do not have recourse to DTCC (in thousands): Accounts payable, \$0 and \$2,477; Other current liabilities, \$0 and \$37,433; and Total liabilities, \$0 and \$39,910, respectively.

THE DEPOSITORY TRUST & CLEARING CORPORATION
CONSOLIDATED STATEMENTS OF INCOME

(In thousands)	For the years ended, December 31,	
	2017	2016
REVENUES:		
Settlement and asset services	\$ 449,039	\$ 431,436
Clearing services	532,953	497,720
Matching and data services	269,168	318,984
Repository services	276,107	298,193
Wealth management services	108,925	105,201
Other services	50,747	59,467
Investment income	14,804	932
Total revenues	<u>1,701,743</u>	<u>1,711,933</u>
EXPENSES:		
Employee compensation and related benefits	653,731	678,733
Information technology	160,348	171,285
Professional and other services	335,865	343,260
Occupancy	45,692	48,962
Depreciation and amortization	179,208	233,744
General and administrative	36,923	42,834
Impairment of Intangible assets	19,797	15,524
Total expenses	<u>1,431,564</u>	<u>1,534,342</u>
Total operating income	<u>270,179</u>	<u>177,591</u>
NON-OPERATING INCOME (EXPENSE):		
Interest income	139,303	56,144
Refunds to Participants	(89,220)	(39,743)
Interest expense	(36,438)	(18,381)
Net loss from Equity method investments	(13,240)	(4,784)
Impairment of Equity method investments	(9,881)	—
Other non-operating income (expense)	45,261	(10,294)
Total non-operating income (expense)	<u>35,785</u>	<u>(17,058)</u>
Income before taxes	305,964	160,533
Provision for income taxes	<u>127,730</u>	<u>47,844</u>
Net income	178,234	112,689
Net income (loss) attributable to non-controlling interests	13,342	(14,206)
Net income attributable to DTCC	<u>\$ 164,892</u>	<u>\$ 126,895</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,	
	2017	2016
Net income	\$ 178,234	\$ 112,689
OTHER COMPREHENSIVE (LOSS) INCOME - Net of tax:		
Defined benefit pension and other plans ⁽¹⁾	(29,279)	1,285
Foreign currency translation	1,254	(266)
Other comprehensive (loss) income	(28,025)	1,019
Comprehensive income	150,209	113,708
Comprehensive income (loss) attributable to non-controlling interests	13,342	(14,206)
Comprehensive income attributable to DTCC	<u>\$ 136,867</u>	<u>\$ 127,914</u>

(1) Amounts are net of benefit for income taxes of \$11,330 and provision for income taxes of \$889 for 2017 and 2016, respectively.

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

<u>(In thousands)</u>	Preferred Stock			Common Stock	Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss), Net of Tax			Non- controlling Interests	Total Shareholders' Equity	
	Series A	Series B	Series C				Defined Benefit Pension and Other Plans	Foreign Currency Translation				
BALANCE - January 1, 2016	\$ 300	\$ 300	\$ 390,516	\$ 5,091	\$ 411,065	\$ 1,008,522	\$ (160,931)	\$ (1,417)	\$ 145,734	\$ 1,799,180		
Net income (loss)	—	—	—	—	—	126,895	—	—	(14,206)	112,689		
Other comprehensive income (loss)	—	—	—	—	—	—	1,285	(266)	—	1,019		
Contributions from non-controlling interests	—	—	—	—	—	—	—	—	13,700	13,700		
Dividend to non-controlling interest	—	—	—	—	—	—	—	—	(480)	(480)		
Dividends on preferred stock	—	—	—	—	—	(19,500)	—	—	—	(19,500)		
BALANCE - December 31, 2016	300	300	390,516	5,091	411,065	1,115,917	(159,646)	(1,683)	144,748	1,906,608		
Net income	—	—	—	—	—	164,892	—	—	13,342	178,234		
Other comprehensive (loss) income	—	—	—	—	—	—	(29,279)	1,254	—	(28,025)		
Business disposition	—	—	—	—	—	—	—	—	(8,570)	(8,570)		
Dividend to non-controlling interest	—	—	—	—	—	—	—	—	(1,080)	(1,080)		
Dividends on preferred stock	—	—	—	—	—	(19,500)	—	—	—	(19,500)		
BALANCE - December 31, 2017	\$ 300	\$ 300	\$ 390,516	\$ 5,091	\$ 411,065	\$ 1,261,309	\$ (188,925)	\$ (429)	\$ 148,440	\$ 2,027,667		

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,	
	2017	2016
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net income	\$ 178,234	\$ 112,689
Adjustments to reconcile net income to net cash provided by/(used in) operating activities:		
Discount on investments in marketable securities	(21)	(30)
Depreciation and amortization	179,208	233,744
Impairment of Intangible assets	19,797	15,524
Loss on disposal of Premises and equipment and Intangible assets	1,494	2,293
Allowance for doubtful accounts	(140)	67
Impairment of Equity method investments	9,881	—
Net loss from Equity method investments	13,240	4,784
Deferred income taxes	22,598	(21,388)
Gain on business dispositions	(47,001)	—
Net change (excluding the effects of business dispositions) in:		
Accounts receivable	27,801	(16,641)
Participants' and Clearing Funds Cash deposits	—	(75,000)
Other Participants' assets	92,717	(520,915)
Other assets	(40,900)	42,658
Accounts payable and accrued expenses	17,836	(41,557)
Payable to Participants	(88,483)	510,220
Pension and postretirement benefits	(21,611)	(2,525)
Other liabilities	32,095	36,389
Net cash provided by/(used in) operating activities	<u>396,745</u>	<u>280,312</u>
CASH FLOWS FROM INVESTING ACTIVITIES:		
Sale/(Purchase) of securities under Reverse repurchase agreements	100,000	(100,000)
Change in Participants' segregated cash	(4,234)	10,695
Maturities of Investments in marketable securities	75,000	107,400
Purchases of Investments in marketable securities	(75,000)	(25,000)
Purchases of Premises and equipment	(47,718)	(43,635)
Purchases of Intangible assets	(86,310)	(103,797)
Investment in Equity method investments	(15,000)	(11,300)
Proceeds from sale of Equity method investments	—	3,499
Distributions received from Equity method investments	—	823
Proceeds from disposition of businesses, net of Cash and cash equivalents sold	22,768	—
Net cash provided by/(used in) investing activities	<u>(30,494)</u>	<u>(161,315)</u>
CASH FLOWS FROM FINANCING ACTIVITIES:		
Change in Commercial paper, net	668,551	1,546,896
Repayments on long-term debt and other borrowings	(20,468)	(100,861)
Preferred stock dividend payments	(19,500)	(19,500)
Proceeds from Non-controlling interests	—	13,700
Payment to Non-controlling interests	(480)	(480)
Net cash provided by/(used in) financing activities	<u>628,103</u>	<u>1,439,755</u>
Effect of foreign exchange rate changes on Cash and cash equivalents	<u>5,416</u>	<u>(4,762)</u>
Net increase/(decrease) in Cash and cash equivalents	999,770	1,553,990
Cash and cash equivalents - Beginning of year	<u>4,075,548</u>	<u>2,521,558</u>
Cash and cash equivalents - End of year	<u>\$ 5,075,318</u>	<u>\$ 4,075,548</u>
SUPPLEMENTAL DISCLOSURES:		
Non-cash financing activity - capital lease	<u>\$ —</u>	<u>\$ 6,746</u>
Cash interest paid	<u>\$ 32,551</u>	<u>\$ 12,700</u>
Cash income taxes paid - net of refunds	<u>\$ 69,068</u>	<u>\$ 42,260</u>

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

THE DEPOSITORY TRUST & CLEARING CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2017 AND 2016

1. BUSINESS AND OWNERSHIP

The Depository Trust & Clearing Corporation (DTCC) is a holding company that 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. (GMEI); 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 financial services 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, clearance, settlement, trade confirmation, 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, which subjects the Company to the SEC's standards for covered clearing agencies.

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

DTCC ITP LLC, 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 for the derivatives market. Its trade repository system supports a multitude of data submissions, including real-time price reporting, transaction details, confirmation records and valuation data. Its wholly-owned subsidiary, The Warehouse Trust Company (WTC), provided life cycle event processing for credit derivatives, including credit event processing and payment reconciliation/netting services (TIW Services). Deriv/SERV approved a plan of liquidation for WTC on January 4, 2017 and WTC commenced winding-up shortly thereafter. In connection with its winding-up, WTC transferred the TIW Services to Deriv/SERV during the second quarter of 2017 and Deriv/SERV has been providing the TIW Services since the assignment. Following entry of a dissolution order by the court, WTC was liquidated on December 7, 2017.

Solutions provides information-based and business processing solutions to financial intermediaries globally.

GMEI utility is DTCC's Legal Entity Identifier (LEI) solution offered in collaboration with Society for Worldwide Interbank Financial Telecommunication (SWIFT) and a consortium of 14 global financial services organizations, led by the Global Financial Markets Association (GFMA), to meet the requirements across all asset classes. GMEI is designed to create and apply a single, universal standard identifier to any organization or firm involved in a financial transaction globally.

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, its wholly owned subsidiaries and consolidated Variable Interest Entities (VIEs). Intercompany accounts and transactions have been eliminated in consolidation. The Company reclassified prior period amounts related to Participants' and Clearing Funds balances and pension and postretirement benefits to conform to the current year presentation.

The Company consolidates entities in which it retained a controlling financial interest. The Company applies accounting guidance to determine if a controlling financial interest exists by evaluating whether the entity is a VIE. The Company also determines whether or not assets, liabilities, non-controlling interests and results of operations of a VIE need to be included in the accompanying Consolidated Financial Statements. Where the Company holds current or potential rights that provide DTCC with sufficient control to direct the activities of a VIE that most significantly impacts the VIE's economic performance, combined with a variable interest that gives DTCC the right to receive potentially significant benefits or the obligation to absorb potentially significant losses, the Company is deemed to have a controlling financial interest in that VIE. Rights held by others to remove the party with control over the VIE are not considered unless one party can exercise those rights unilaterally. When changes occur to the design of the entity, the Company reconsiders whether it is subject to the VIE model.

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.

Equity method investments. All equity investments that represent less than a majority, but at least a 20% ownership interest, and where 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. The Company's share of investees' earnings are recorded in the accompanying Consolidated Statement of Income in the period earned. Dividends are recorded as a reduction to the investment account.

Non-controlling interests. Shareholders' equity was adjusted for the income or (loss) attributable to the non-controlling interest shareholders and any distributions to those shareholders.

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.

Reverse repurchase agreements. Reverse repurchase agreements provide for delivery of cash in exchange for securities having a fair 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. The Company receives collateral in connection with reverse repurchase agreement transactions. Reverse repurchase agreements are recorded at the contract amounts. Interest earned on these investments is included in Interest income in the accompanying Consolidated Statements of Income.

Investments in marketable securities. All of the marketable securities in the Participants' and Clearing Funds are classified as held-to-maturity and are recorded at amortized cost. The Company intends and has the ability to hold all held-to-maturity securities to maturity. The Company does not intend to reclassify any amount of held-to-maturity investments to available-for-sale or trading investments.

All of the marketable securities in the Company's deferred compensation plan (structured as a Rabbi Trust) are classified as trading securities and are recorded at fair value. Changes in the fair values of the investment assets are recorded in Investment income (loss) in the accompanying Consolidated Statements of Income.

The Company performs a periodic review of its investment portfolio for impairment. A debt security is considered impaired if its fair value is less than its carrying value. Any unrealized loss deemed other-than-temporary is included in current period earnings. The decline in fair value is determined to be an other-than-temporary impairment if (a) the Company has the intent to sell the impaired debt security, or (b) it is more likely than not that the Company will be required to sell the security before recovery of the amortized cost, or (c) the Company does not expect to recover the entire amortized cost basis. The Company does not intend to sell those securities and it is not more likely than not that the Company will have to sell.

Participants' segregated cash. DTCC receives cash 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.

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 secure 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.

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 and 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 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, 2017 and 2016. The FRB stock 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

THE DEPOSITORY TRUST & CLEARING CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2017 AND 2016

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, and 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:

Premises and equipment	Amortization Period	Amortization Method
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.

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 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, capitalized software and acquired tradenames.

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.

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

Intangible Asset	Life/ Amortization Period	Amortization Method	Impairment Testing Frequency
Customer relationships	Finite/ 12 Years	Straight-line	If a triggering event occurs
Capitalized software	Finite/ 3 to 5 Years	Straight-line	If a triggering event occurs
Tradenames	Indefinite/ N/A	N/A	Annually or if a triggering event occurs

Commercial paper. NSCC issues unsecured short-term promissory notes (Commercial paper) pursuant to a \$5 billion Commercial paper program, with maturities generally less than nine months. In February 2018, the SEC approved NSCC's proposal to increase the program to \$10 billion. 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.

Revenue recognition. The Company derives its revenue from transaction fees, subscription and support services, professional services and other services. Revenue from transaction fees is recognized as services are rendered while subscription and support revenue is recognized ratably over the contract term.

Professional services and other revenues, when sold with subscription and support offerings, are accounted for separately when these services have value to the customer on a standalone basis. The Company considers the following factors when determining whether professional services should be accounted for separately from subscription and support services: (i) availability of similar services from other vendors, (ii) objective and reliable evidence that fair value exists for the undelivered elements, (iii) the nature of the services, (iv) the timing related to when the services contract was executed relative to the license/subscription service start date and (v) the contractual dependence of the license/subscription service on the customer's satisfaction of the services.

If a service contract does not qualify for separate accounting, DTCC recognizes professional services ratably over the remaining term of the subscription. If a service contract qualifies for separate accounting, professional services revenue is recognized as the services are rendered. The Company allocates the total amount the customer will pay to the separate units of accounting based on their relative fair values, as determined by the price of the undelivered items when sold separately.

Deferred revenue. Deferred revenue consists of billings or payments received in advance for the Company's subscription and support services, as well as professional service fees, which are recognized as and to the extent that the revenue recognition criteria are not met. The deferred revenue balance represents the remaining portion of the contracts invoiced to customers for subscription and support services, as well as certain deferred professional service fees, which are recognized as revenue ratably over the subscription contract term. The Company defers the professional service fees in situations where the professional services and subscription contracts are accounted for as a single unit of accounting and recorded in Other current liabilities on the accompanying Consolidated Statements of Financial Condition.

Other services. Other services represents fees generated from providing various support services and office facilities to related parties and is recognized when services are provided based on contractual terms.

Investment income. Investment income represents changes in the fair values of investment assets related to the Rabbi Trust. The investment assets of the Rabbi Trust are classified as trading securities.

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. 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 Employee Retirement Income Security Act of 1974 (ERISA).

Pension and postretirement 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 is closed to new participants, but existing participants continue to accrue benefits. 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 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. DTCC maintains a 401(h) account to fund the retiree medical plans. 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 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.

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.

Income taxes. The Provision for income taxes is computed using the asset and liability method. The Company records a deferred income tax (benefit) provision when there are differences between assets and liabilities measured for financial reporting and for income tax return purposes. These temporary differences result in taxable or deductible 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 in non-current assets or liabilities on the accompanying Consolidated Statements of Financial Condition.

The Company records unrecognized tax benefits as liabilities for uncertain tax positions in all tax years that are still subject to assessment or challenge under relevant tax statutes. The unrecognized tax benefits are adjusted upon evaluation of additional or new information. The ultimate resolution may differ from the current estimate of the unrecognized tax benefits due to the complexity of the uncertainties. Changes to the estimated unrecognized tax benefits are reflected as increases or decreases to Provision for income taxes in the period in which new information is available.

On December 22, 2017, the Tax Cuts and Jobs Act of 2017 (Tax Reform Act) was signed into law making significant changes to the Internal Revenue Code. Changes include a Federal corporate tax rate decrease from 35% to 21% for tax years beginning after December 31, 2017, imposing a mandatory one-time transition tax on accumulated earnings of foreign subsidiaries and enactment of a tax on global intangible low-taxed income.

Concurrently, the SEC staff issued guidance on accounting for the tax effects of the Tax Reform Act, which provides a measurement period that should not extend beyond one year from the Tax Reform Act enactment date for companies to complete the accounting under U.S. GAAP tax accounting guidance. The SEC guidance requires companies to reflect the income tax effects of those aspects of the Tax Reform Act for which the accounting under U.S. GAAP tax accounting guidance is complete. To the extent that a company's accounting for certain income tax effects of the Tax Reform Act is incomplete, but it is able to determine a reasonable estimate, it must record and provisionally estimate the impact in its financial statements.

The Company re-measured certain deferred tax assets and liabilities and recorded the impact of the mandatory one-time tax on accumulated earnings of foreign subsidiaries based on management's best estimates using information available at the financial statements date. The impact of the Tax Reform Act may differ from these provisional estimates due to, among other items, the issuance of additional regulatory guidance, further interpretations of the provisions of the Tax Reform Act, the state tax effect of adjustments made to federal temporary differences, and the filing of tax returns.

For certain of its non-U.S. subsidiaries, the Company has deemed the undistributed earnings relating to these subsidiaries to be indefinitely reinvested in its foreign operations. The Company has not provided for the amount of unrecognized deferred tax liabilities relating to additional taxes that may arise if these earnings are distributed. The Company expects the unrecognized deferred tax liability attributable to indefinitely reinvested earnings to be immaterial and will continue to evaluate its indefinite reinvestment assertion as further information and interpretations become available.

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.

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.

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3. ACCOUNTING AND REPORTING DEVELOPMENTS

Standard	Summary of guidance	Effects on financial statements
<i>Financial Accounting Standards Board Standard Issued, but not yet Adopted</i>		
Compensation - Retirement Benefits <i>Issued March 2017</i>	<ul style="list-style-type: none"> • Requires an employer to report the service cost component of net periodic pension cost and net periodic postretirement benefit cost in the same line item or items as other compensation costs arising from services rendered by employees during the period. • The other components of net periodic pension cost and net periodic postretirement benefit cost are required to be presented in the Consolidated Statements of Income separately from the service cost component and outside the subtotal of operating income. • Additionally, only the service cost component is eligible for capitalization. 	<ul style="list-style-type: none"> • The required effective date is January 1, 2018. • The Company is evaluating the impact on its Consolidated Financial Statements and related disclosures.
Intangibles - Goodwill and Other <i>Issued January 2017</i>	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • The required effective date is January 1, 2020. • The Company is evaluating the impact on its Consolidated Financial Statements and related disclosures.
Financial Instruments - Credit Losses <i>Issued June 2016</i>	<ul style="list-style-type: none"> • Replaces the current incurred loss approach for credit losses with an "expected loss" model for instruments measured at amortized cost. • 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. • Requires entities to record allowances for available-for-sale debt securities. 	<ul style="list-style-type: none"> • The required effective date is January 1, 2020. • The Company is evaluating the effect on its Consolidated Financial Statements and related disclosures.
Leases <i>Issued February 2016</i>	<ul style="list-style-type: none"> • Requires a lessee to recognize leases with terms of longer than 12 months within balance sheet assets and liabilities. • 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. • Lessor accounting will remain largely unchanged from current GAAP. Leases of fewer than 12 months are exempt from the updated standard. 	<ul style="list-style-type: none"> • The required effective date is January 1, 2019. • The Company is evaluating the impact on its Consolidated Financial Statements and related disclosures.

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Standard	Description	Impact on the financial statements or other significant matters
<i>Financial Accounting Standards Board Standard Issued, but not yet Adopted (Continued)</i>		
Revenue Recognition - Revenue from Contracts with Customers <i>Issued May 2014</i>	<ul style="list-style-type: none"> • Requires revenue from contracts with customers to be recognized upon transfer of control of a good or service in the amount of consideration expected to be received. • Changes the accounting for certain contract costs, including whether they may be offset against revenue in the accompanying Consolidated Statements of Income, and requires additional disclosures about revenue and contract costs. • May be adopted using a full retrospective approach or a modified, cumulative effect approach wherein the guidance is applied only to existing contracts as of the day of initial application, and to new contracts transacted after that date. 	<ul style="list-style-type: none"> • The required effective date is January 1, 2018. • The Company plans to adopt the revenue recognition guidance under the full retrospective transition approach in 2018. The Company's implementation efforts include the identification of revenue within the scope of the guidance and the evaluation of revenue contracts and related accounting policies. The Company does not anticipate material changes to the recognition and timing of its revenues. The Company also assessed the indicators of control for principal versus agent relationship, which will result in a change in the accompanying Income Statement presentation of Interest Income and Refunds to Participants from a net basis to a gross basis.

Standard	Description	Impact on the financial statements or other significant matters
<i>Recently Adopted Accounting Standards</i>		
Consolidation <i>Issued October 2016</i>	<ul style="list-style-type: none"> • Changes how a decision maker needs to consider the indirect interests in a VIE held through an entity under common control. If a decision maker is required to evaluate whether it is the primary beneficiary of a VIE, it will need to consider only its proportionate indirect interest in the VIE held through a common control party. 	<ul style="list-style-type: none"> • The Company adopted effective January 1, 2017. • The adoption of this guidance did not have a material impact on its accompanying Consolidated Statements of Financial Condition, Statements of Income, Cash Flows or related disclosures.

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4. BUSINESS DISPOSITIONS

On February 6, 2017, the Company, along with Clariant Global LLC's (Clariant) minority interest owners, signed a definitive agreement to sell their interests in Clariant to the Thomson Reuters Corporation (Thomson Reuters). On the same day, the Company also signed a definitive agreement to sell Avox Ltd (Avox) to Thomson Reuters. Both sales closed on March 14, 2017. As a result of these transactions, the Company disposed of Clariant and Avox, effective March 14, 2017. The Company's gain on the sales, net of the gain attributable to non-controlling interests related to Clariant, totaled \$31,136,000 and was included in Other non-operating income in the Company's accompanying Consolidated Statements of Income. The agreements are subject to indemnity clauses for which there is an indemnification escrow that will be released in September 2018, if no adjustments are required.

Details of the gain on sales follow (in thousands):

	<u>Clariant</u>	<u>Avox</u>	<u>Total</u>
Gain on sale included in Other non-operating income	\$ 39,082	\$ 7,919	\$ 47,001
Less: Gain on sale attributable to non-controlling interest	(15,865)	—	(15,865)
Net gain on business dispositions	<u>\$ 23,217</u>	<u>\$ 7,919</u>	<u>\$ 31,136</u>

Details of the balances related to the business dispositions follow (in thousands):

	<u>Clariant</u>	<u>Avox</u>	<u>Total</u>
Consolidated assets:			
Cash and cash equivalents	\$ 708	\$ 3,122	\$ 3,830
Accounts receivable - net	531	3,488	4,019
Other current assets	848	51	899
Premises and equipment	—	1,215	1,215
Goodwill	—	7,836	7,836
Intangible assets	6,932	2,674	9,606
Other non-current assets	476	—	476
Total assets	<u>\$ 9,495</u>	<u>\$ 18,386</u>	<u>\$ 27,881</u>
Consolidated liabilities:			
Accounts payable	\$ 257	\$ 252	\$ 509
Other current liabilities	28,239	6,043	34,282
Total liabilities	<u>\$ 28,496</u>	<u>\$ 6,295</u>	<u>\$ 34,791</u>

5. VARIABLE INTEREST ENTITIES

Consolidated VIEs

A VIE is an entity in which the equity investors lack the characteristics of a controlling financial interest or do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support from other parties. The entity that consolidates a VIE is known as the primary beneficiary and is the entity that: (i) has the control to direct the activities of the VIE that most significantly impact the VIE’s economic performance, and (ii) has an obligation to absorb losses or the right to receive benefits that in either case could potentially be significant to the VIE. The Company consolidates VIEs when it is the primary beneficiary. The Company performs ongoing qualitative, and in certain cases, quantitative analyses to determine whether the Company is the primary beneficiary of a VIE based on the facts and circumstances and the Company’s interest(s) in the VIE.

Clariant was a joint venture with Credit Suisse Finance (GUERNSEY) Ltd., The Goldman Sachs Group, Inc., LabMorgan Investment Corporation, SSB Investments, Inc., Barclays Bank PLC and BNY Capital Corporation that was incorporated on July 25, 2014. Clariant was a comprehensive reference data solution providing control, standardization and transparency of client reference data during the client onboarding process and through ongoing client lifecycle events. The Company held a variable interest in Clariant, which it consolidated based on the aforementioned VIE accounting guidance.

Details for the impact of the consolidation of Clariant on the Company’s accompanying Consolidated Statements of Financial Condition as of December 31, 2016 follow (in thousands):

	<u>2016</u>
Consolidated assets:	
Cash and cash equivalents	\$ 10,399
Accounts receivable - net	2,208
Other current assets	1,149
Intangible assets	6,826
Other non-current assets	544
Total assets	<u>\$ 21,126</u>
Consolidated liabilities:	
Accounts payable	\$ 2,477
Other current liabilities	37,433
Total liabilities	<u>\$ 39,910</u>

The creditors or other beneficial interest holders of Clariant have no recourse to the general credit of DTCC, formerly the primary beneficiary. Furthermore, liabilities of Clariant have no recourse to DTCC.

Prior to the disposition of Clariant (see Note 4), operating losses incurred by the consolidated VIE were \$5,215,000 for the three months ended March 31, 2017. The losses of the consolidated VIE for the year ended December 31, 2016 was \$26,590,000. These losses are included within Income before taxes in the Company’s accompanying Consolidated Statements of Income.

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6. 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, 2017 and 2016 follow (in thousands):

	<u>2017</u>	<u>2016</u>
Assets:		
Participants' segregated cash	\$ 20,120	\$ 15,886
Other Participants' assets	868,036	960,753
Total	<u>\$ 888,156</u>	<u>\$ 976,639</u>
Liabilities:		
Payable to Participants	<u>\$ 888,156</u>	<u>\$ 976,639</u>

Participants' segregated cash represents cash received from Participants to facilitate their compliance with SEC customer protection rules. Unclaimed balances are remitted to the appropriate authority when required by abandoned property laws.

Payable to Participants included \$435,000 and \$153,000 of cash collateral received from Participants, representing 130% of short positions as of December 31, 2017 and 2016, respectively. Unclaimed balances are remitted to the appropriate authority when required, pursuant to abandoned property laws.

7. ACCOUNTS RECEIVABLE

Details for Accounts receivable as of December 31, 2017 and 2016 follow (in thousands):

	<u>2017</u>	<u>2016</u>
Due from Participants and customers for services	\$ 161,935	\$ 190,795
Allowance for doubtful accounts	(205)	(865)
Due from Participants and customers for services, net	<u>161,730</u>	<u>189,930</u>
Other receivables	12,726	18,112
Total	<u>\$ 174,456</u>	<u>\$ 208,042</u>

Total write-offs in the allowance for doubtful accounts were \$520,000 and \$1,212,000 for the years ended December 31, 2017 and 2016, respectively.

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All deposits of cash and securities by Participants are recorded on the accompanying Consolidated Statements of Financial Condition under Participants' and Clearing Funds.

Details for the Participants' and Clearing Funds as of December 31, 2017 and 2016 follow (in thousands):

	2017			
	DTC	NSCC	FICC	Total
Required deposits	\$ 1,150,000	\$ 3,360,160	\$ 14,970,573	\$ 19,480,733
Excess deposits	621,078	631,610	6,282,044	7,534,732
Total	<u>\$ 1,771,078</u>	<u>\$ 3,991,770</u>	<u>\$ 21,252,617</u>	<u>\$ 27,015,465</u>

	2016			
	DTC	NSCC	FICC	Total
Required deposits	\$ 1,150,000	\$ 3,580,823	\$ 18,288,528	\$ 23,019,351
Excess deposits	602,431	819,133	5,045,329	6,466,893
Total	<u>\$ 1,752,431</u>	<u>\$ 4,399,956</u>	<u>\$ 23,333,857</u>	<u>\$ 29,486,244</u>

Cash deposits, Investments in marketable securities and Securities on deposit. Cash deposits, investments in marketable securities and Securities on deposit of the Participants' and Clearing Funds, which may be applied to satisfy obligations of the depositing Participants as provided in the respective clearing agency rules, as of December 31, 2017 and 2016 follow (in thousands):

	2017			
	DTC	NSCC	FICC	Total
Cash deposits	\$ 1,771,078	\$ 3,725,574	\$ 8,815,868	\$ 14,312,520
Investments in marketable securities	—	—	25,000	25,000
Securities on deposit - at fair value	—	266,196	12,411,749	12,677,945
Total	<u>\$ 1,771,078</u>	<u>\$ 3,991,770</u>	<u>\$ 21,252,617</u>	<u>\$ 27,015,465</u>

	2016			
	DTC	NSCC	FICC	Total
Cash deposits	\$ 1,752,431	\$ 4,157,717	\$ 9,660,414	\$ 15,570,562
Investments in marketable securities	—	—	25,000	25,000
Securities on deposit - at fair value	—	242,239	13,648,443	13,890,682
Total	<u>\$ 1,752,431</u>	<u>\$ 4,399,956</u>	<u>\$ 23,333,857</u>	<u>\$ 29,486,244</u>

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Details for the Participants' and Clearing Funds Cash deposits and Investments in marketable securities as of December 31, 2017 and 2016 follow (in thousands):

	2017			
	DTC	NSCC	FICC	Total
Bank deposits	\$ 1,771,078	\$ 2,820,574	\$ 6,116,868	\$ 10,708,520
Money market fund investments	—	595,000	2,139,000	2,734,000
Reverse repurchase agreements	—	310,000	560,000	870,000
U.S. Treasury bills	—	—	25,000	25,000
Total	\$ 1,771,078	\$ 3,725,574	\$ 8,840,868	\$ 14,337,520

	2016			
	DTC	NSCC	FICC	Total
Bank deposits	\$ 1,752,431	\$ 3,170,717	\$ 6,441,414	\$ 11,364,562
Money market fund investments	—	737,000	2,669,000	3,406,000
Reverse repurchase agreements	—	250,000	550,000	800,000
U.S. Treasury bills	—	—	25,000	25,000
Total	\$ 1,752,431	\$ 4,157,717	\$ 9,685,414	\$ 15,595,562

Refunds to Participants. Refunds to Participants by the clearing agencies totaled \$89,220,000 and \$39,743,000 for the years ended December 31, 2017 and 2016, respectively. These amounts refunded are included in Refunds to Participants in the accompanying Consolidated Statements of Income.

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9. PREMISES AND EQUIPMENT

The cost, accumulated depreciation and net book value of Premises and equipment for the years ended December 31, 2017 and 2016 follow (in thousands):

	<u>Furniture and Equipment</u>	<u>Leasehold Improvements</u>	<u>Capital Leases</u>	<u>Buildings and Improvements</u>	<u>Land</u>	<u>Total</u>
Cost:						
January 1, 2016	\$ 369,555	\$ 201,308	\$ 65,144	\$ 32,413	\$ 4,221	\$ 672,641
Additions	29,292	13,596	6,746	747	—	50,381
Disposals	(7,023)	(27,285)	(27,135)	—	—	(61,443)
As of December 31, 2016	<u>391,824</u>	<u>187,619</u>	<u>44,755</u>	<u>33,160</u>	<u>4,221</u>	<u>661,579</u>
Additions	37,220	8,998	160	1,340	—	47,718
Disposals	(73,549)	(3,284)	(877)	(3,713)	—	(81,423)
As of December 31, 2017	<u>\$ 355,495</u>	<u>\$ 193,333</u>	<u>\$ 44,038</u>	<u>\$ 30,787</u>	<u>\$ 4,221</u>	<u>\$ 627,874</u>
Accumulated Depreciation:						
January 1, 2016	\$ 246,222	\$ 91,315	\$ 49,734	\$ 9,871	\$ —	\$ 397,142
Depreciation expense	41,823	23,276	8,850	720	—	74,669
Disposals	(6,603)	(27,285)	(27,135)	—	—	(61,023)
As of December 31, 2016	<u>281,442</u>	<u>87,306</u>	<u>31,449</u>	<u>10,591</u>	<u>—</u>	<u>410,788</u>
Depreciation expense	43,833	9,839	7,975	914	—	62,561
Disposals	(72,170)	(2,710)	(717)	(3,713)	—	(79,310)
As of December 31, 2017	<u>\$ 253,105</u>	<u>\$ 94,435</u>	<u>\$ 38,707</u>	<u>\$ 7,792</u>	<u>\$ —</u>	<u>\$ 394,039</u>
Net Book Value:						
January 1, 2016	\$ 123,333	\$ 109,993	\$ 15,410	\$ 22,542	\$ 4,221	\$ 275,499
As of December 31, 2016	<u>\$ 110,382</u>	<u>\$ 100,313</u>	<u>\$ 13,306</u>	<u>\$ 22,569</u>	<u>\$ 4,221</u>	<u>\$ 250,791</u>
As of December 31, 2017	<u>\$ 102,390</u>	<u>\$ 98,898</u>	<u>\$ 5,331</u>	<u>\$ 22,995</u>	<u>\$ 4,221</u>	<u>\$ 233,835</u>

During 2017 and 2016, disposals of premises and equipment resulted in losses of \$898,000 and \$420,000, respectively, and are included in General and administrative in the accompanying Consolidated Statements of Income.

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10. GOODWILL AND INTANGIBLE ASSETS

The gross carrying value, accumulated amortization and net carrying values of Goodwill and Intangible assets for the years ended December 31, 2017 and 2016 follow (in thousands):

	<u>Goodwill</u>	<u>Customer Relationships</u>	<u>Capitalized Software</u>	<u>Tradenames</u>	<u>Total</u>
Gross carrying value:					
January 1, 2016	\$ 65,535	\$ 239,774	\$ 985,402	\$ 15,524	\$ 1,306,235
Additions	—	—	103,797	—	103,797
Disposals	—	—	(10,970)	—	(10,970)
Impairment	—	—	—	(15,524)	(15,524)
As of December 31, 2016	65,535	239,774	1,078,229	—	1,383,538
Additions	—	—	86,310	—	86,310
Disposals	(7,836)	(8,074)	(297,141)	—	(313,051)
Impairment	—	—	(19,797)	—	(19,797)
As of December 31, 2017	<u>\$ 57,699</u>	<u>\$ 231,700</u>	<u>\$ 847,601</u>	<u>\$ —</u>	<u>\$ 1,137,000</u>
Accumulated amortization:					
January 1, 2016	\$ —	\$ 48,309	\$ 721,021	\$ —	\$ 769,330
Amortization expense	—	19,767	139,308	—	159,075
Disposals	—	—	(9,097)	—	(9,097)
As of December 31, 2016	—	68,076	851,232	—	919,308
Amortization expense	—	19,385	97,262	—	116,647
Disposals	—	(5,400)	(289,613)	—	(295,013)
As of December 31, 2017	<u>\$ —</u>	<u>\$ 82,061</u>	<u>\$ 658,881</u>	<u>\$ —</u>	<u>\$ 740,942</u>
Net carrying value:					
January 1, 2016	<u>\$ 65,535</u>	<u>\$ 191,465</u>	<u>\$ 264,381</u>	<u>\$ 15,524</u>	<u>\$ 536,905</u>
As of December 31, 2016	<u>\$ 65,535</u>	<u>\$ 171,698</u>	<u>\$ 226,997</u>	<u>\$ —</u>	<u>\$ 464,230</u>
As of December 31, 2017	<u>\$ 57,699</u>	<u>\$ 149,639</u>	<u>\$ 188,720</u>	<u>\$ —</u>	<u>\$ 396,058</u>

During 2017 and 2016, disposals of software resulted in losses of \$596,000 and \$1,873,000, respectively, and are included in General and administrative in the accompanying Consolidated Statements of Income. In addition, during 2017, disposals of customer relationships and software related to the dispositions of Clarient and Avox (see Note 4) resulted in charges of \$2,674,000 and \$6,932,000, respectively, and are included in Other non-operating income in the accompanying Consolidated Statements of Income.

Goodwill impairment testing. DTCC completed its annual goodwill impairment test in the fourth quarter of 2017 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 \$19,797,000 and \$0 related to capitalized software for the years ended December 31, 2017 and 2016, 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.

During 2017, the re-platforming of the Company's Global Trade Repository (GTR) system triggered the evaluation of its internally developed software for impairment. The evaluation concluded that the \$5,009,000 carrying value of certain GTR business internally developed software was not recoverable and exceeded its fair value. As a result, the Company recognized an impairment charge of \$5,009,000 for the year ended December 31, 2017.

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In addition, during 2017, the delayed revenue generation and losses sustained for DTCC-Euroclear GlobalCollateral LTD (DEGCL), triggered the evaluation of the Company's internally developed software for DEGCL for impairment. The evaluation concluded that the \$14,788,000 carrying value of the Company's internally developed software for DEGCL was not recoverable and exceeded its fair value. As a result, the Company recognized an impairment charge of \$14,788,000, for the year ended December 31, 2017, which reduced the carrying value of the of the Company's internally developed software for DEGCL to zero.

During 2016, increased competition in post-trade processing, coupled with further refinement of the Company's brand migration strategy, culminating in its decision to eliminate the Omgeo and Avox tradenames, triggered the evaluation of the Company's Omgeo and Avox tradenames for impairment. The evaluations concluded that the \$15,524,000 carrying values of for the aforementioned acquired tradenames were not recoverable and exceeded their fair values. As a result, the Company recognized an impairment charge of \$15,524,000, for the year ended December 31, 2016, which reduced the carrying values of the tradenames to zero.

These 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):

2018	\$ 101,605
2019	80,845
2020	54,768
2021	28,735
2022	19,308
Thereafter	53,098
Total future estimated amortization	<u>\$ 338,359</u>

11. EQUITY METHOD INVESTMENTS

Details for DTCC's Equity method investments as of December 31, 2017 and 2016 follow (in thousands, except ownership percentage):

	<u>2017</u>	<u>2016</u>
European Central Counterparty N.V.		
Percentage ownership	20%	20%
Carrying value	\$ 10,394	\$ 8,291
DTCC-Euroclear GlobalCollateral, LTD		
Percentage ownership	50%	50%
Carrying value	\$ —	\$ 8,885

European Central Counterparty N.V. (ECCP N.V.), a joint venture with ABN AMRO Clearing Investments B.V., NASDAQ AB, BATS Trading 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.

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.

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On April 6, 2017 and November 10, 2017, the Company contributed \$10,000,000 and \$5,000,000 to DEGCL, respectively. The Company maintained the same ownership percentage as the joint venture partner, Euroclear plc, who also contributed a total of \$15,000,000.

Based on the delayed revenue generation and losses sustained by DEGCL services, a triggering event resulted during the year that required DTCC to assess its investment in DEGCL for other-than-temporary impairment. DTCC utilized a discounted cash flow methodology based on the forecasted cash flows for DEGCL to determine fair value for both its investment and internally developed software related to DEGCL. DTCC applied a discount rate of 25%, which reflected the weighted-average cost of capital adjusted for the risks inherent in the future cash flows. As a result, DTCC determined the fair value of its investment in DEGCL was less than its carrying value and concluded that this loss was other-than-temporary. DTCC recognized an impairment charge of \$9,881,000, which is included in Impairment of Equity method investments in the accompanying Consolidated Statements of Income. DTCC continues to maintain its relationship with the DEGCL joint venture.

12. OTHER ASSETS

Details for Other assets as of December 31, 2017 and 2016 follow (in thousands):

	2017	2016
Prepays	\$ 63,203	\$ 54,413
Prepaid taxes	22,130	7,574
Other current assets	16,321	5,489
Total current assets	<u>101,654</u>	<u>67,476</u>
Long-term incentive plan assets	171,995	170,501
Deferred tax assets, net ⁽¹⁾	86,242	108,840
Cash surrender value on insurance policies	59,618	58,845
Prepays	24,036	17,794
Other non-current assets	11,945	11,902
Total non-current assets	<u>353,836</u>	<u>367,882</u>
Total	<u>\$ 455,490</u>	<u>\$ 435,358</u>

(1) The enactment of the Tax Reform Act in December 2017 resulted in a charge to deferred tax assets of \$30,522,000. See Notes 2 and 18 for additional information.

Prepays primarily represent the interest and up-front fees paid for lines of credit maintained to support potential default liquidity resources for DTC and NSCC and maintenance contracts for various hardware and software services.

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 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. In 2017 and 2016, the investment assets of the Rabbi Trust were classified as trading securities, and accordingly, changes in their fair values are recorded in Investment income (loss) in the accompanying Consolidated Statements of Income. In addition, changes in the fair value of the plan’s investments were recorded in Employee compensation and related benefits in the accompanying Consolidated Statements of Income. The Investment income and (loss) on the change in fair value of these investments was \$14,804,000 and \$932,000 for the years ended December 31, 2017 and 2016, respectively.

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The Company purchased life insurance policies for employees who participated in DTCC's long-term incentive plans. Cash surrender value on insurance policies represents the amounts receivable from various insurance companies upon cancellation of the life insurance policies purchased for employees and is classified in Other non-current assets on the accompanying Consolidated Statements of Financial Condition. The associated liability for these deferred compensation plans and the loans drawn against these policies are classified in Other current liabilities and Other non-current liabilities on the accompanying Consolidated Statements of Financial Condition.

13. OTHER LIABILITIES

Details for Other liabilities as of December 31, 2017 and 2016 follow (in thousands):

	2017	2016
Compensation payable	\$ 137,446	\$ 141,451
Long-term incentive plan liabilities	44,072	25,577
Deferred rent	5,053	9,080
Other current liabilities	63,358	99,946
Total current liabilities	<u>249,929</u>	<u>276,054</u>
Long-term incentive plan liabilities	224,791	240,446
Unrecognized tax benefits ⁽¹⁾	81,601	64,099
Deferred rent	36,117	33,209
Other payables ⁽²⁾	27,733	7,024
Total non-current liabilities	<u>370,242</u>	<u>344,778</u>
Total	<u>\$ 620,171</u>	<u>\$ 620,832</u>

(1) See Note 18 for additional information.

(2) The enactment of the Tax Reform Act in December 2017 resulted in a one-time repatriation tax payable of \$22,213,000. See Notes 2 and 18 for additional information.

Long-term incentive plans. 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 this plan. The associated liabilities for these plans are classified in Other current liabilities and Other non-current liabilities on the accompanying Consolidated Statements of Financial Condition.

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14. COMMERCIAL PAPER

Details for Commercial paper as of December 31, 2017 and 2016 follow (in thousands):

	<u>2017</u>	<u>2016</u>
Commercial paper - net of unamortized discount of \$3,371 and \$1,669 as of December 31, 2017 and 2016, respectively	\$ 3,222,571	\$ 2,554,020
Weighted-average interest rate	1.43%	0.75%

Interest expense on Commercial paper included in the accompanying Consolidated Statements of Income was \$32,171,000 and \$11,433,000 for the years ended December 31, 2017 and 2016, respectively.

Details for the cash flows associated with the issuance and maturities of Commercial paper for the years ended December 31, 2017 and 2016 follow (in thousands):

	<u>2017</u>	<u>2016</u>
Maturities less than 90 days:		
Proceeds from/(Repayments of) Commercial paper less than 90 days, net	\$ 880,352	\$ 830,061
Maturities greater than 90 days:		
Proceeds from Commercial paper	2,217,232	1,681,596
Repayments of Commercial paper	(2,429,033)	(964,761)
Proceeds from/(Repayments of) Commercial paper greater than 90 days, net	<u>(211,801)</u>	<u>716,835</u>
Change in Commercial paper, net	<u>\$ 668,551</u>	<u>\$ 1,546,896</u>

15. LONG-TERM DEBT

Details for Long-term debt as of December 31, 2017 and 2016 follow (in thousands):

	<u>2017</u>	<u>2016</u>
Notes payable	\$ 39,025	\$ 52,675
Capital lease obligations	5,227	12,045
Total long-term debt	<u>44,252</u>	<u>64,720</u>
Less: Current portion of long-term debt	(7,877)	(20,468)
Non-current portion of long-term debt	<u>\$ 36,375</u>	<u>\$ 44,252</u>

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

	<u>Notes Payable</u>	<u>Capital Lease Obligations</u>	<u>Total</u>
2018	\$ 2,650	\$ 5,227	\$ 7,877
2019	2,650	—	2,650
2020	2,650	—	2,650
2021	2,650	—	2,650
2022	2,650	—	2,650
Thereafter	25,775	—	25,775
Total	<u>\$ 39,025</u>	<u>\$ 5,227</u>	<u>\$ 44,252</u>

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Notes payable. Details for notes payable as of December 31, 2017 and 2016 follow (in thousands):

Issue Date	Maturity	Rate	Outstanding Balance	
			2017	2016
April 26, 2012	April 26, 2017	2.64%	\$ —	\$ 11,000
April 26, 2012	April 26, 2032	3.83%	21,025	22,475
September 28, 2012	September 28, 2032	3.93%	18,000	19,200
Total			\$ 39,025	\$ 52,675

The weighted-average interest rate was 3.88% and 3.62% as of December 31, 2017 and 2016, respectively. Total Interest expense on notes payable included in the accompanying Consolidated Statements of Income was \$1,663,000 and \$2,798,000 for the years ended December 31, 2017 and 2016, respectively.

Capital lease obligations. Leased property meeting certain criteria is capitalized and the present value of the related lease payments is recorded as a liability. The weighted-average interest rate as of December 31, 2017 and 2016 was 1.80%. Total Interest expense on Capital lease obligations included in the accompanying Consolidated Statements of Income was \$339,000 and \$1,165,000 for the years ended December 31, 2017 and 2016, respectively.

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, 2017 and 2016 follow:

	2017	2016
DTCC		
Committed Amount	\$500 million	\$500 million
Denomination	USD	USD
No. of Participants/Lenders	10/10	10/10
DTC		
Committed Amount	\$1.9 billion	\$1.9 billion
Denomination	USD	USD
No. of Participants/Lenders	32/41	31/37
Uncommitted Amount	C\$150 million ⁽¹⁾	C\$150 million ⁽¹⁾
Denomination	CAD	CAD
No. of Participants/Lenders	1/1	1/1
NSCC		
Committed Amount	\$12.2 billion	\$10.9 billion
Denomination	USD	USD
No. of Participants/Lenders	32/41	31/37

(1) Used to support Canadian settlement.

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Details for debt covenants related to the notes payable and lines of credit as of December 31, 2017 and 2016 follow:

	2017	2016
Notes Payable		
<u><i>DTCC</i></u>		
Minimum Net Worth	\$400 million	\$400 million
Maximum Priority Debt	20% of Net Worth	20% of Net Worth
Lines of Credit		
<u><i>DTCC</i></u>		
Minimum Net Worth	\$1.1 billion	\$1.1 billion
Maximum Priority Debt	\$200 million	\$200 million
<u><i>DTC</i></u>		
Minimum Net Worth	\$150 million	\$150 million
Minimum Participants' Fund deposits	\$750 million	\$750 million
<u><i>NSCC</i></u>		
Minimum Net Worth	\$125 million	\$125 million
Minimum Clearing Fund deposits	\$1 billion	\$1 billion

As of December 31, 2017 and 2016, 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 senior debt ratings and ratings outlooks for DTCC and its three clearing agency subsidiaries as of December 31, 2017 follow:

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

16. 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.

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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
<u>Assets - Participants' and Clearing Funds - Securities on deposit</u>		
U.S. Treasury Securities	Obtained from pricing services engaged by the Company, and the Company receives one price for each security.	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		
<u>Non-Current Assets - Other non-current assets</u>		
Rabbi Trust	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
<u>Liabilities - Participants' and Clearing Funds - Securities on deposit</u>		
U.S. Treasury Securities	Obtained from pricing services engaged by the Company, and the Company receives one price for each security.	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		

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Fair value measurements of those items measured on a recurring basis are summarized below as of December 31, 2017 and 2016 (in thousands):

	2017			Total
	Level 1	Level 2	Level 3	
Assets - Participants' and Clearing Funds				
Securities on deposit	\$ 10,900,451	\$ 1,777,494	\$ —	\$ 12,677,945
Non-current assets	135,087	36,908	—	171,995
Total	\$ 11,035,538	\$ 1,814,402	\$ —	\$ 12,849,940
Liabilities - Participants' and Clearing Funds				
Securities on deposit	\$ 10,900,451	\$ 1,777,494	\$ —	\$ 12,677,945
Total	\$ 10,900,451	\$ 1,777,494	\$ —	\$ 12,677,945
2016				
	Level 1	Level 2	Level 3	Total
Assets - Participants' and Clearing Funds				
Securities on deposit	\$ 12,241,168	\$ 1,649,514	\$ —	\$ 13,890,682
Non-current assets	132,471	38,030	—	170,501
Total	\$ 12,373,639	\$ 1,687,544	\$ —	\$ 14,061,183
Liabilities - Participants' and Clearing Funds				
Securities on deposit	\$ 12,241,168	\$ 1,649,514	\$ —	\$ 13,890,682
Total	\$ 12,241,168	\$ 1,649,514	\$ —	\$ 13,890,682

There were no transfers between levels in the fair value hierarchy, nor were any financial assets and liabilities measured at fair value on a recurring basis classified as Level 3 as of December 31, 2017 and 2016.

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Financial Assets and Liabilities measured at other than fair value. For financial assets and liabilities that are not required to be carried 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
<u>Assets - Current Assets - Clearing Fund Investments in marketable securities</u>		
U.S. Treasury bills	Obtained from pricing services engaged by the Company, and the Company receives one price for each security.	Level 1
<u>Liabilities - Current Liabilities</u>		
Long-term debt	Discounted cash flows using current market rates for similar instruments of the same remaining maturity or quoted prices for the same of similar issues.	Level 2

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, Reverse repurchase agreements, Participants' segregated cash, Accounts receivable, Participants' and Clearing Funds - Cash deposits, Other Participants' assets, Commercial paper, Accounts payable and accrued expenses and Payable to Participants.

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The tables below present 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, 2017 and 2016 follow (in thousands):

	2017				
	Carrying Amount	Total Fair Value	Level 1	Level 2	Level 3
Assets:					
Cash and cash equivalents	\$ 5,075,318	\$ 5,075,318	\$ 5,075,318	\$ —	\$ —
Participants' segregated cash	20,120	20,120	20,120	—	—
Accounts receivable	174,456	174,456	—	174,456	—
Participants' and Clearing Funds:					
Cash deposits	14,312,520	14,312,520	13,442,520	870,000	—
Investments in marketable securities	25,000	24,920	24,920	—	—
Other Participants' assets	868,036	868,036	862,802	5,234	—
Total	\$ 20,475,450	\$ 20,475,370	\$ 19,425,680	\$ 1,049,690	\$ —
Liabilities:					
Commercial paper	\$ 3,222,571	\$ 3,222,571	\$ —	\$ 3,222,571	\$ —
Accounts payable and accrued expenses	118,345	118,345	—	118,345	—
Participants' and Clearing Funds:					
Cash deposits	14,337,520	14,337,520	14,337,520	—	—
Payable to Participants	888,156	888,156	888,156	—	—
Long-term debt	44,252	45,822	—	45,822	—
Total	\$ 18,610,844	\$ 18,612,414	\$ 15,225,676	\$ 3,386,738	\$ —
2016					
	Carrying Amount	Total Fair Value	Level 1	Level 2	Level 3
Assets:					
Cash and cash equivalents	\$ 4,075,548	\$ 4,075,548	\$ 4,075,548	\$ —	\$ —
Reverse repurchase agreements ⁽¹⁾	100,000	100,000	—	100,000	—
Participants' segregated cash	15,886	15,886	15,886	—	—
Accounts receivable	208,042	208,042	—	208,042	—
Participants' and Clearing Funds:					
Cash deposits	15,570,562	15,570,562	14,770,562	800,000	—
Investments in marketable securities	25,000	24,829	24,829	—	—
Other Participants' assets	960,753	960,753	955,566	5,187	—
Total	\$ 20,955,791	\$ 20,955,620	\$ 19,842,391	\$ 1,113,229	\$ —
Liabilities:					
Commercial paper	\$ 2,554,020	\$ 2,554,020	\$ —	\$ 2,554,020	\$ —
Accounts payable and accrued expenses	100,088	100,088	—	100,088	—
Participants' and Clearing Funds:					
Cash deposits	15,595,562	15,595,562	15,595,562	—	—
Payable to Participants	976,639	976,639	976,639	—	—
Long-term debt	64,720	62,381	—	62,381	—
Total	\$ 19,291,029	\$ 19,288,690	\$ 16,572,201	\$ 2,716,489	\$ —

(1) The fair value of securities received as collateral under reverse repurchase agreements was \$102 million as of December 31, 2016.

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. Fair value is based on discounted cash flow analyses or comparing values of similar instruments. Discounted cash flow analyses are dependent upon various factors, including estimated future cash flows, interest rate yield curves and volatility of inputs.

Fair values on the aforementioned impairments disclosed in Note 10 and Note 11 were based on discounted cash flows using Level 3 inputs under the fair value guidance. The cash flows are those expected to be generated by the market participants, discounted at a rate commensurate with the risk of the cash flows.

17. PENSION AND POSTRETIREMENT BENEFITS

Defined contribution retirement plans. The Company matches 50% of the first 6% of the employee's contributions up to the Internal Revenue Service compensation limits. Company matching contributions and employee contributions vest immediately. In addition, the Company also makes a service contribution of 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, and 5% for 10 or more years). Company service contributions vest at the rate of 20% for each year of service or at age 55. Total expense for the defined contribution retirement plans included in Employee compensation and related benefits in the accompanying Consolidated Statements of Income was \$38,953,000 and \$40,216,000 for the years ended December 31, 2017 and 2016, respectively.

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	
	2017	2016	2017	2016
Benefit obligations, beginning of year:	\$ 1,056,165	\$ 1,019,080	\$ 63,064	\$ 94,149
Service cost	7,089	7,621	668	1,331
Interest cost	38,278	39,322	2,122	3,008
Plan amendments	—	—	2,357	(33,480)
Gross benefits paid	(55,690)	(55,157)	(3,800)	(3,443)
Expenses paid	(3,222)	(3,276)	—	—
Actuarial loss	93,290	48,575	7,651	1,499
Total benefit obligations at end of year	<u>\$ 1,135,910</u>	<u>\$ 1,056,165</u>	<u>\$ 72,062</u>	<u>\$ 63,064</u>
Total accumulated benefit obligations at end of year	<u>\$ 1,128,916</u>	<u>\$ 1,049,888</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, 2017 and 2016, respectively, and based on employee service and compensation prior to the applicable date.

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Funded status. The funded status of the plans, as of December 31, 2017 and 2016, follow (in thousands):

	Pension Benefits		Other Benefits	
	2017	2016	2017	2016
Benefit obligations at end of year:				
Qualified plan	\$ 1,010,203	\$ 936,866	\$ —	\$ —
Other plans	125,707	119,299	72,062	63,064
Total benefit obligations at end of year	1,135,910	1,056,165	72,062	63,064
Fair value of plan assets at end of year	896,442	814,352	—	—
Unfunded status	<u>\$ (239,468)</u>	<u>\$ (241,813)</u>	<u>\$ (72,062)</u>	<u>\$ (63,064)</u>

Amounts recognized in the balance sheet consist of:

Current liability	\$ (16,723)	\$ (16,442)	\$ (4,614)	\$ (3,763)
Non-current liability	(222,745)	(225,371)	(67,448)	(59,301)
Amount recognized, end of year	<u>\$ (239,468)</u>	<u>\$ (241,813)</u>	<u>\$ (72,062)</u>	<u>\$ (63,064)</u>

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

	Pension Benefits		Other Benefits	
	2017	2016	2017	2016
Change in plan assets:				
Fair value of plan assets, beginning of year	\$ 814,352	\$ 802,192	\$ —	\$ 3,635
Actual return on plan assets	97,025	56,281	—	105
Employer contribution	43,977	14,312	3,800	(297)
Gross benefits paid	(55,690)	(55,157)	(3,800)	(3,443)
Expenses paid	(3,222)	(3,276)	—	—
Fair value of plan assets, end of year	<u>\$ 896,442</u>	<u>\$ 814,352</u>	<u>\$ —</u>	<u>\$ —</u>

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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, 2017 and 2016, follow (in thousands, except percentages):

	Target Allocation 2017	Percentage of Plan Assets, December 31, 2017	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)
Pension assets as of December 31, 2017:				
Short-term investment fund ⁽¹⁾	—%	1.76%	\$ 15,776	\$ —
Equity Portfolio:				
Domestic large cap growth			44,455	—
Domestic large cap value ⁽¹⁾			43,675	—
Domestic large cap core ⁽¹⁾			88,898	—
Domestic small core			16,684	16,684
International core			26,210	26,210
International emerging markets			9,058	9,058
Total equity securities	25.00%	25.55%	228,980	51,952
Fixed income portfolio:				
Domestic liability driven investment ⁽¹⁾	73.00%	71.91%	644,670	—
Guaranteed insurance contracts:				
Annuity fund ⁽¹⁾	2.00%	0.78%	7,016	—
Total pension assets as of December 31, 2017			<u>\$ 896,442</u>	<u>\$ 51,952</u>

	Target Allocation 2016	Percentage of Plan Assets, December 31, 2016	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)
Pension assets as of December 31, 2016:				
Short-term investment fund ⁽¹⁾	—%	0.62%	\$ 5,020	\$ —
Equity Portfolio:				
Domestic large cap growth			40,126	19,158
Domestic large cap value ⁽¹⁾			44,230	—
Domestic large cap core ⁽¹⁾			78,180	—
Domestic small core			17,424	17,424
International core			23,809	23,809
International emerging markets			8,510	8,510
Total equity securities	25.00%	26.07%	212,279	68,901
Fixed income portfolio:				
Domestic liability driven investment ⁽¹⁾	73.00%	72.93%	593,925	—
Guaranteed insurance contracts:				
Annuity fund ⁽¹⁾	2.00%	0.38%	3,128	—
Total pension assets as of December 31, 2016			<u>\$ 814,352</u>	<u>\$ 68,901</u>

(1) Certain investments that were measured at net asset value per share (or its equivalent) 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

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Note 16 for further information. The Company did not hold defined benefit plan assets designated as Level 2 or Level 3 as of December 31, 2017 and 2016.

Net periodic benefit expense (income). Details of the components of net periodic benefit expense (income) and amortization recognized in OCI, excluding taxes, follow (in thousands):

	Pension Benefits		Other Benefits	
	2017	2016	2017	2016
Components of net periodic benefit expense (income):				
Expected return on plan assets	\$ (37,449)	\$ (36,885)	\$ —	\$ (92)
Interest cost	38,278	39,322	2,123	3,008
Service cost	7,089	7,621	668	1,331
Amortizations:				
Prior service cost (credit)	933	959	(5,926)	(7,872)
Actuarial loss	6,692	5,402	1,112	603
Settlement loss	198	228	—	—
Net periodic benefit expense (income)	<u>\$ 15,741</u>	<u>\$ 16,647</u>	<u>\$ (2,023)</u>	<u>\$ (3,022)</u>

Changes in OCI. Details of the changes in plan assets and benefit obligations recognized in OCI (excluding taxes) follow (in thousands):

	Pension Benefits		Other Benefits	
	2017	2016	2017	2016
Other changes recognized in OCI:				
Prior service cost arising during the period	\$ —	\$ —	\$ 2,356	\$ (33,480)
Net loss arising during the period	33,713	29,179	7,651	1,447
Amortizations:				
Prior service (cost) credit	(933)	(959)	5,926	7,872
Actuarial and settlement loss	(6,890)	(5,631)	(1,112)	(603)
Net other changes in OCI	<u>\$ 25,890</u>	<u>\$ 22,589</u>	<u>\$ 14,821</u>	<u>\$ (24,764)</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):

	Pension Benefits		Other Benefits	
	2017	2016	2017	2016
Amount not yet reflected in net periodic benefit (cost) and included in Accumulated other comprehensive loss:				
Prior service (cost) credit	\$ (4,434)	\$ (5,367)	\$ 23,606	\$ 31,888
Accumulated loss	(283,821)	(256,997)	(24,426)	(17,887)
Accumulated other comprehensive (loss) income	<u>(288,255)</u>	<u>(262,364)</u>	<u>(820)</u>	<u>14,001</u>
Cumulative net periodic benefit (cost) in excess of employer contributions	48,787	20,551	(71,242)	(77,065)
Net amount recognized at year-end	<u>\$ (239,468)</u>	<u>\$ (241,813)</u>	<u>\$ (72,062)</u>	<u>\$ (63,064)</u>

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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):

	Pension Benefits		Other Benefits	
	2017	2016	2017	2016
Prior service credit (cost)	\$ (933)	\$ (933)	\$ 5,926	\$ 6,366
Net loss	(9,131)	(6,303)	(2,528)	(1,318)
Total	<u>\$ (10,064)</u>	<u>\$ (7,236)</u>	<u>\$ 3,398</u>	<u>\$ 5,048</u>

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, 2017 and 2016 follow:

	Pension Benefits		Other Benefits	
	2017	2016	2017	2016
Weighted-average assumptions used to determine net periodic benefit expense (income) for the years ended December 31:				
Discount rate	4.39%	4.63%	4.19%	4.58%
Expected long-term rate of return on plan assets	4.75%	4.75%	4.75%	4.75%
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			7.31%	6.92% / 7.71%
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)			4.46%	4.47% / 4.46%
Year that the rate reaches the ultimate trend rate			2040	2040

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 4.75% long-term rate of return assumptions as of December 31, 2017 and 2016.

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.

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Details for the defined benefit plans assumptions used by actuaries to determine benefit obligations as of December 31, 2017 and 2016 follow:

	Pension Benefits		Other Benefits	
	2017	2016	2017	2016
Weighted-average assumptions used to determine benefit obligations as of December 31:				
Discount rate	3.73%	4.39%	3.62%	4.20%
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			6.89%	6.64% / 7.31%
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)			4.46%	4.47% / 4.46%
Year that the rate reaches the ultimate trend rate			2040	2040

Assumptions for defined benefit obligations. Mortality is a key assumption used to determine the benefit obligations for our defined benefit plans. The mortality projection scale was changed from scale MMP-2007 to scale MMP-2016 for all plans. The mortality tables were changed to 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 Retiree Medical and Life Insurance Plans. The Pension Plan continues to use no collar adjustment. On a lump sum basis, mortality is measured using RP-2014 combined mortality table projected using scale MP-2016, with segmented interest rate adjustments.

Expected cash flows. The Company contributed \$40,000,000 to the Pension Plan in 2017 and expects to contribute approximately \$40,000,000 during 2018. Settlement losses relate to early retirement of executives who elected lump-sum and periodic payments. There were no settlement losses in 2017 and 2016. There were no participant contributions to the plans in 2017 and 2016.

Details for the benefit payments for the pension plan and other plans for 2017 and 2016 follow (in thousands):

	2017	2016
Pension plan	\$ 55,690	\$ 55,157
Other plans	3,800	3,443
Total	\$ 59,490	\$ 58,600

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

	Pension	Employer Benefits Payments	Medicare Subsidy Receipts
2018	\$ 73,537	\$ 4,614	\$ 16
2019	60,897	4,843	16
2020	83,471	4,998	15
2021	68,335	5,101	14
2022	67,491	5,125	13
Thereafter	331,731	24,106	50
Total	\$ 685,462	\$ 48,787	\$ 124

18. 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, 2017 and 2016 follow (in thousands):

	<u>2017</u>	<u>2016</u>
Current income tax:		
Federal	\$ 53,857	\$ 36,720
State and local	5,174	4,819
Foreign	17,480	22,448
Total current income tax	<u>76,511</u>	<u>63,987</u>
Deferred income tax/(benefit):		
Federal	21,919	(16,674)
State and local	21,074	(393)
Foreign	8,226	924
Total deferred income tax/(benefit)	<u>51,219</u>	<u>(16,143)</u>
Provision for income taxes	<u>\$ 127,730</u>	<u>\$ 47,844</u>

The Company re-measured certain deferred tax assets and liabilities and recorded the impact of the mandatory one-time tax on the accumulated earnings on its foreign subsidiaries in accordance with the Tax Reform Act based on management's best estimates using information available at the financial statements date. The Company recorded a tax charge of \$30,522,000 relating to the re-measurement of certain deferred tax assets and liabilities based on the reduced corporate tax rate per the Tax Reform Act, and a tax charge of \$22,213,000 relating to the mandatory one-time transition tax on the accumulated earnings of its foreign subsidiaries. These amounts are subject to adjustment in 2018, based on further interpretations of the provisions of the Tax Reform Act.

The 2017 and 2016 effective tax rates differ from the 35% Federal statutory tax rate mainly due to state and local taxes, income from foreign operations, change in unrecognized tax benefits, non-controlling interest, valuation allowance, and the enactment of the Tax Reform Act. 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, 2017 and 2016 follow:

	<u>2017</u>	<u>2016</u>
U.S. statutory tax rate	35.0%	35.0%
State and local income taxes, net of Federal income tax benefit	2.4	2.2
Income from foreign operations	(6.9)	(9.1)
Change in unrecognized tax benefits	1.9	2.8
Non-controlling interest	(1.5)	3.1
Disposition of Clariant and Avox	(6.2)	—
Enactment of the Tax Reform Act	17.3	—
Other	(0.2)	(4.2)
Effective tax rate	<u>41.8%</u>	<u>29.8%</u>

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Details for the components of deferred tax assets and liabilities as of December 31, 2017 and 2016 follow (in thousands):

	<u>2017</u>	<u>2016</u>
<u>Deferred tax assets:</u>		
Accrued compensation and benefits	\$ 138,768	\$ 211,281
Deferred rent	10,488	16,278
Other	44,300	63,458
Total deferred tax assets	<u>193,556</u>	<u>291,017</u>
<u>Deferred tax liabilities:</u>		
Capitalized software	(46,699)	(67,669)
Investment tax basis difference	(38,875)	(66,933)
Depreciation	(21,740)	(37,663)
Total deferred tax liabilities	<u>(107,314)</u>	<u>(172,265)</u>
Net deferred tax assets before valuation allowance	86,242	118,752
Valuation allowance	—	(9,912)
Net deferred tax assets	<u>\$ 86,242</u>	<u>\$ 108,840</u>

Valuation allowances of \$0 and \$9,912,000 were recorded against the deferred tax asset balance as of December 31, 2017 and 2016, respectively, relating to Clariant net operating losses.

The Company has not provided additional U.S. income taxes and foreign withholding taxes on the undistributed earnings of certain foreign subsidiaries as of December 31, 2017. As a result of the Tax Reform Act's one-time mandatory transition tax on the accumulated earnings of foreign subsidiaries, the Company expects the unrecognized deferred tax liability attributable to indefinitely reinvested earnings to be immaterial. The Company will continue to evaluate its indefinite reinvestment assertion as further information and interpretations become available.

Details for unrecognized tax benefits, included in Non-current liabilities, for the years ended December 31, 2017 and 2016 follow (in thousands):

	<u>2017</u>	<u>2016</u>
Beginning balance	\$ 45,410	\$ 44,007
Increases based on prior period tax positions	17,592	548
Decreases based on prior period tax positions	(2,201)	—
Increases based on current period tax positions	400	855
Decreases related to lapses in statute	(8,076)	—
Decreases related to settlements with taxing authorities	(117)	—
Unrecognized tax benefit	<u>53,008</u>	<u>45,410</u>
Accrued interest	28,593	18,689
Ending balance	<u>\$ 81,601</u>	<u>\$ 64,099</u>

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 and penalties of \$9,904,000 for the year ended December 31, 2017.

The Company is subject to U.S. Federal income tax as well as income tax in various state and local jurisdictions.

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Details for the periods currently under examination and remaining subject to examination by jurisdiction as of December 31, 2017 follow:

Jurisdiction	Tax Years	
	Under Examination	Subject to Examination
U.S. Federal - Internal Revenue Service	—	2014 - 2016
New York State	2007 - 2014	2015 - 2016
New York City	2010 - 2014	2015 - 2016
State of Illinois	2012 - 2013	2014 - 2016

For the current ongoing audits related to open tax years, the Company estimates it is possible that the balance of unrecognized tax benefits could decrease in the next 12 months as a result of the effective settlement of these audits, which might involve the payment of additional taxes, the adjustment of certain deferred taxes and/or the recognition of tax benefits. It is also possible new issues might be raised by tax authorities that might necessitate increases to the balance of unrecognized tax benefits. As the Company is unable to predict the timing of conclusion of these audits, the Company is unable to estimate the amount of changes to the balance of unrecognized tax benefits at this time. However, the Company believes it has adequately provided for its financial exposure for all open tax years by tax jurisdiction.

19. 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 day's 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 18, 2017 and October 18, 2017, 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, 2017 and December 15, 2017, to the holders of the Series C Preferred Stock as of record date May 31, 2017 and November 30, 2017, respectively.

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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. Details for the Preferred stock as of December 31, 2017 follow (in thousands, except dividends paid per share):

	Total shares issued and outstanding	Carrying value	Annual dividend	Dividends paid per share
Series A - Noncumulative Perpetual	1,500	\$ 150,000	\$ 1,080	\$ 0.72

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.

Certain DTCC subsidiaries are subject to capital guidelines issued by United States federal and state banking regulators. During the year DTCC engaged in banking activities under DTC.

DTC capital ratios filed with the FRBNY and the NYSDFS, and included in DTC's Financial Statements submitted to the SEC as of December 31, 2017, follow:

	DTC	Minimum Capital Ratio ⁽¹⁾	Well Capitalized Ratio ⁽¹⁾
Tier 1 capital ratio	81.64%	6.00%	8.00%
Total capital ratio	81.64%	8.00%	10.00%
Tier 1 leverage ratio	17.42%	4.00%	4.00%

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

20. TRANSACTIONS WITH RELATED PARTIES

DTCC has agreements with DEGCL and had agreements with Soltra, which was sold during 2016, to provide various support services and office facilities. Expense reimbursements under these agreements follow (in thousands):

Related parties	Other Services ⁽¹⁾		Other Receivables ⁽²⁾	
	2017	2016	2017	2016
DEGCL	\$ 21,792	\$ 18,720	\$ 3,065	\$ 19,606
Soltra	—	4,816	—	2,529
Total	<u>\$ 21,792</u>	<u>\$ 23,536</u>	<u>\$ 3,065</u>	<u>\$ 22,135</u>

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

(2) Included in Accounts receivable on the accompanying Consolidated Statement of Financial Condition. See Note 7 for additional information.

21. COMMITMENTS AND CONTINGENCIES

Litigation. 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.

Lease commitments. The Company leases office space, data processing and other equipment. Rent expense under these leases for office space was \$25,870,000 and \$29,383,000 for the years ended December 31, 2017 and 2016, respectively. These amounts are included in Occupancy in the accompanying Consolidated Statements of Income.

The Company sublet office space in some of its leased offices. Rental income under these subleases was \$659,000 and \$0 for the years ended December 31, 2017 and 2016, respectively. These amounts are included in Other non-operating income (expense) in the accompanying Consolidated Statements of Income.

Details for estimated future minimum rental payments under all noncancelable leases follow (in thousands):

2018	\$ 34,222
2019	29,246
2020	29,156
2021	29,394
2022	29,344
Thereafter	261,414
Total minimum rental payments ⁽¹⁾	<u>\$ 412,776</u>

(1) Future minimum rental payments were not reduced by minimum sublease rentals of \$52,876,000 due in the future under noncancelable subleases.

22. GUARANTEES

Certain DTCC subsidiaries (NSCC and FICC) provide 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 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.

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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) a portion of the CCP's retained earnings.

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 up to 25% of their respective retained earnings (or such higher amount as approved by their Board of Directors); and (iii) by accessing and replenishing the Clearing Fund (i.e., Participant loss allocation).

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

DTC, NSCC, FICC and OCC have also entered into a multilateral netting contract and limited cross-guaranty agreement. In accordance with these agreements, 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.

For example, if DTC suffers a loss or liability due to a Participant default, DTC would first apply any remaining resources of the defaulting Participant (additional collateral, Participants' Fund deposit), and any amounts available to it under cross-guaranty agreements to which it is a party (listed above). If any losses remain, DTC may apply the Participants' Fund deposit of non-defaulting Participants (i.e., Participants loss allocation) and DTC may charge its existing retained earnings and undivided profits to satisfy the loss or liability if and as approved by its Board of Directors.

Details for open CCP positions for which a trade guarantee applied as of December 31, 2017 and 2016 follow (in billions):

	<u>2017</u>	<u>2016</u>
FICC		
GSD	\$ 1,039	\$ 890
MBSD	312	304
NSCC ⁽¹⁾	135	168

(1) During 2017, the standard settlement cycle was reduced from three business days after the trade date (T+3) to two business days after the trade date (T+2) due to the industry-wide move to a shorter standard settlement.

There were no defaults by Participants to these obligations.

23. 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 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.

Cash and cash equivalents. The Company maintains cash and cash equivalents with various financial institutions including the FED. 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. Per the Company's investment policy, 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.

Investments in marketable securities. In addition to making investments in reverse repurchase agreements, money market funds and bank deposits, the Company also makes direct investments in U.S. Treasury securities. Credit risk related to marketable securities involves the risk of nonperformance by the counterparty, which could result in a financial loss. To mitigate the risk of credit loss, the Company only makes investments in debt obligations of the U.S. government or those U.S. government agencies guaranteed by the U.S. government.

Accounts receivable. Credit risk related to accounts receivable involves the risk of nonpayment 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 condition of its customers and evaluates the delinquency status of the receivables.

Participants' Fund and Clearing Funds. Following the same risk management and investment 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 repurchase agreements 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. Since the Company invests in highly-rated money market mutual funds and cash is returned daily, DTCC has minimal credit risk related to these investments.

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.

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 to the Participants' Fund or apply a portion of its retained earnings to cover the loss.

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24. 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, 2017 and 2016 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 Parent Company Condensed Financial Statements include investments in subsidiaries, accounted for under the equity method.

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

	As of December 31,	
	2017	2016
ASSETS:		
Cash and cash equivalents	\$ 454,341	\$ 449,001
Investments in subsidiaries	1,434,850	1,362,324
Due from subsidiaries	381,160	203,609
Premises, equipment and intangible assets	197,037	228,259
Other assets	384,327	470,119
TOTAL ASSETS	\$ 2,851,715	\$ 2,713,312
LIABILITIES AND SHAREHOLDERS' EQUITY:		
LIABILITIES:		
Long-term debt and other borrowings	\$ 44,252	\$ 64,720
Pension and postretirement benefits	311,698	297,899
Other liabilities	616,538	588,833
Total liabilities	972,488	951,452
SHAREHOLDERS' EQUITY:		
Preferred stock	391,116	391,116
Common stock	5,091	5,091
Paid-in capital	411,065	411,065
Retained earnings	1,261,309	1,115,917
Accumulated other comprehensive loss, net of tax	(189,354)	(161,329)
Total shareholders' equity	1,879,227	1,761,860
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	\$ 2,851,715	\$ 2,713,312

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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 2017 and 2016, 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):

	For the years ended, December 31,	
	2017	2016
REVENUES:		
Equity in earnings of subsidiaries	\$ 177,588	\$ 125,961
Interest and other income	133,275	116,482
Total revenues	<u>310,863</u>	<u>242,443</u>
OPERATING EXPENSES:		
Professional services	20,941	28,592
Other	88,257	67,144
Impairment of Intangible assets	14,729	1,335
Total operating expenses	<u>123,927</u>	<u>97,071</u>
Income before taxes	186,936	145,372
Provision for income taxes	22,044	18,477
Net income attributable to DTCC	<u>\$ 164,892</u>	<u>\$ 126,895</u>

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

	For the years ended, December 31,	
	2017	2016
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net income	\$ 164,892	\$ 126,895
Adjustments to reconcile net income to net cash provided by operating activities:		
Equity in earnings of subsidiaries	(177,588)	(125,961)
Depreciation and amortization	59,931	86,606
Impairment of Intangible assets	14,729	1,335
Deferred income taxes	(14,665)	(6,081)
Business dispositions	10,509	—
Net change in:		
Due from subsidiaries	(177,551)	180,786
Other operating assets and liabilities	113,507	(65,506)
Net cash provided by operating activities	<u>(6,236)</u>	<u>198,074</u>
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchases of equity method investments	105,063	(19,990)
Purchases of Intangible assets and Premises and equipment	(54,339)	(66,783)
Net cash used in investing activities	<u>50,724</u>	<u>(86,773)</u>
CASH FLOWS FROM FINANCING ACTIVITIES:		
Preferred stock dividend payments	(19,500)	(19,500)
Repayments on debt and capital lease obligations	(20,468)	(43,264)
Net cash (used in) provided by financing activities	<u>(39,968)</u>	<u>(62,764)</u>
Effect of foreign exchange rate changes on Cash and cash equivalents	820	(5,252)
Net increase in Cash and cash equivalents	5,340	43,285
Cash and cash equivalents - Beginning of year	449,001	405,716
Cash and cash equivalents - End of year	<u>\$ 454,341</u>	<u>\$ 449,001</u>
SUPPLEMENTAL DISCLOSURES:		
Non-cash financing activity - capitalized lease	<u>\$ —</u>	<u>\$ 6,746</u>
Cash income taxes paid (refunds) - net	<u>\$ (17,306)</u>	<u>\$ 2,430</u>

25. SUBSEQUENT EVENTS

The Company evaluated events and transactions occurring after December 31, 2017 through March 23, 2018, for potential recognition or disclosure in these accompanying Consolidated Financial Statements. Other than previously disclosed in Note 2, Commercial paper, no other events or transactions occurred during such period that would require recognition or disclosure in these accompanying Consolidated Financial Statements.