The Depository Trust & Clearing Corporation

Consolidated Financial Statements as of and for the Years Ended December 31, 2023 and 2022, and Independent Auditor's Report

THE DEPOSITORY TRUST & CLEARING CORPORATION

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INDEPENDENT AUDITOR'S REPORT

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

Opinion

We have audited the consolidated financial statements of The Depository Trust and Clearing Corporation and its subsidiaries (the "Company"), which comprise the consolidated statements of financial condition as of December 31, 2023 and 2022, 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 (collectively referred to as the "financial statements").

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audits in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Company and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Financial Statements

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

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern for one year after the date that the financial statements are available to be issued.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Deloitte & Touche LLP

March 25, 2024

THE DEPOSITORY TRUST & CLEARING CORPORATION
CONSOLIDATED STATEMENTS OF FINANCIAL CONDITION

(In thousands, except share data)	As of December 31, 2023	As of December 31, 2022
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 15,774,381	$ 16,167,430
Participants' segregated cash	57	2,020
Short-term investments	250,000	750,000
Accounts receivable - net of allowance for credit losses	197,836	191,244
Participants' and Clearing Funds	83,216,701	61,735,088
Other Participants' assets	4,510,304	931,071
Other current assets	244,196	197,928
Total current assets	104,193,475	79,974,781
NON-CURRENT ASSETS:		
Premises and equipment - net of accumulated depreciation	245,288	195,203
Goodwill	68,746	57,699
Intangible assets - net of accumulated amortization	280,119	290,423
Operating lease right-of-use-asset	156,027	188,552
Other non-current assets	635,400	347,689
Total non-current assets	1,385,580	1,079,566
TOTAL ASSETS	$ 105,579,055	$ 81,054,347
LIABILITIES AND SHAREHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Commercial paper - net of unamortized discount	$ 9,076,862	$ 9,109,638
Long-term debt, current portion	398,813	1,997,307
Pension and postretirement benefits	27,736	21,456
Operating lease liability	25,148	30,512
Accounts payable and accrued expenses	309,560	216,013
Participants' and Clearing Funds	83,216,701	61,735,088
Payable to Participants	4,510,361	933,091
Other current liabilities	292,375	292,765
Total current liabilities	97,857,556	74,335,870
NON-CURRENT LIABILITIES:		
Long-term debt	3,332,961	2,736,286
Pension and postretirement benefits	94,085	111,331
Operating lease liability	181,388	209,910
Other non-current liabilities	252,488	242,999
Total non-current liabilities	3,860,922	3,300,526
Total liabilities	101,718,478	77,636,396
COMMITMENTS AND CONTINGENCIES (Note 2)		
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 D, $0.50 par value - 2,000 shares authorized, issued (above par), and outstanding	490,900	490,900
Common stock, $100 par value - 80,000 shares authorized, 50,908 shares issued and outstanding	5,091	5,091
Additional paid-in capital	411,065	411,065
Retained earnings	2,982,973	2,546,925
Accumulated other comprehensive loss, net of tax	(180,052)	(186,630)
Non-controlling interests	150,000	150,000
Total shareholders' equity	3,860,577	3,417,951
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	$ 105,579,055	$ 81,054,347

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

THE DEPOSITORY TRUST & CLEARING CORPORATION

CONSOLIDATED STATEMENTS OF INCOME

(In thousands)	For the years ended December 31, 2023	2022
REVENUES		
Settlement and asset services	$ 557,807	$ 518,514
Clearing services	880,746	857,632
Matching services	289,762	298,850
Repository and derivatives services	325,660	329,617
Wealth management services	124,319	121,706
Data and other services	52,897	55,994
Investment income (loss), net	14,711	(19,044)
Total revenues	2,245,902	2,163,269
EXPENSES		
Employee compensation and related benefits	939,096	842,230
Information technology	261,759	246,539
Professional and other services	422,842	425,738
Occupancy	64,963	69,382
Depreciation and amortization	164,935	174,539
General and administrative	54,050	54,811
Impairment of intangible assets	14,296	17,467
Total expenses	1,921,941	1,830,706
Total operating income	323,961	332,563
NON-OPERATING INCOME (EXPENSE)		
Interest income	2,581,308	823,056
Refunds to Participants	(1,713,054)	(540,178)
Interest expense	(661,223)	(239,711)
Other non-operating income, net	71,383	79,938
Total non-operating income	278,414	123,105
Income before taxes	602,375	455,668
Provision for income taxes	149,452	123,080
Net income	$ 452,923	$ 332,588

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

THE DEPOSITORY TRUST & CLEARING CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(In thousands)	For the years ended December 31, 2023	2022
Net income	$ 452,923	$ 332,588
OTHER COMPREHENSIVE INCOME (LOSS) - Net of tax:		
Defined benefit pension and other plans [1]	4,056	30,541
Foreign currency translation	2,522	(8,638)
Other comprehensive income	6,578	21,903
Comprehensive income	$ 459,501	$ 354,491

(1) Amounts are net of provision for income taxes of $1,770 and $11,660 for 2023 and 2022, respectively

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

THE DEPOSITORY TRUST & CLEARING CORPORATION

CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY

(In thousands)	Preferred Stock Series A	Preferred Stock Series B	Preferred Stock Series D	Common Stock	Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss), Net of Tax: Defined Benefit Pension and Other Plans	Accumulated Other Comprehensive Income (Loss), Net of Tax: Foreign Currency Translation	Non-controlling Interests	Total Shareholders' Equity
BALANCE - January 1, 2022	$ 300	$ 300	$ 490,900	$ 5,091	$ 411,065	$ 2,231,213	$ (201,239)	$ (7,294)	$ 150,000	$ 3,080,336
Net income	—	—	—	—	—	332,588	—	—	—	332,588
Other comprehensive income (loss)	—	—	—	—	—	—	30,541	(8,638)	—	21,903
Dividends on preferred stock	—	—	—	—	—	(16,876)	—	—	—	(16,876)
BALANCE - December 31, 2022	300	300	490,900	5,091	411,065	2,546,925	(170,698)	(15,932)	150,000	3,417,951
Net income	—	—	—	—	—	452,923	—	—	—	452,923
Other comprehensive income	—	—	—	—	—	—	4,056	2,522	—	6,578
Dividends on preferred stock	—	—	—	—	—	(16,875)	—	—	—	(16,875)
BALANCE - December 31, 2023	$ 300	$ 300	$ 490,900	$ 5,091	$ 411,065	$ 2,982,973	$ (166,642)	$ (13,410)	$ 150,000	$ 3,860,577

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, 2023	2022
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net income	$ 452,923	$ 332,588
Adjustments to reconcile net income to net cash provided by/(used in) operating activities:		
Depreciation and amortization	164,935	174,539
Impairment of intangible assets	14,296	17,467
Deferred income taxes	(48,298)	2,265
Accretion of discount on Commercial paper, net of associated interest paid	44,324	49,641
Realized/unrealized net gain from equity investments	(596)	(37,997)
Other	34,898	43,359
Net change in:		
Accounts receivable	(4,973)	47,090
Other assets	(73,154)	(9,877)
Accounts payable and accrued expenses	90,816	116,002
Pension and postretirement benefits	(6,900)	(18,351)
Operating lease liability	(29,365)	(30,300)
Other liabilities	10,979	(29,282)
Participants' and Clearing Funds liabilities	3,806,863	3,490,583
Payable to Participants	3,577,271	(399,862)
Net cash provided by operating activities	8,034,019	3,747,865
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchases of Short-term investments	(1,200,000)	(1,645,000)
Maturities of Short-term investments	1,700,000	1,340,000
Purchases of Premises and equipment	(91,316)	(58,657)
Capitalized software development costs	(86,383)	(103,986)
Net cash paid in acquisition	(48,647)	—
Proceeds from sale of equity investments	49,791	—
Purchase of equity investments	(6,084)	—
Proceeds from company owned life insurance policies	2,757	1,712
Net cash provided by/(used in) investing activities	320,118	(465,931)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from Commercial paper	51,467,160	64,675,937
Repayments of Commercial paper	(51,544,259)	(63,907,873)
Proceeds from issuance of Long-term debt, net of debt issuance costs	990,283	992,683
Repayments on Long-term debt	(2,000,000)	—
Preferred stock dividend payments	(16,875)	(16,876)
Payment to Non-controlling interests	—	(135)
Net cash (used in)/provided by financing activities	(1,103,691)	1,743,736
Effect of foreign exchange rate changes on Cash and cash equivalents	1,468	(4,340)
Net increase in Cash and cash equivalents, Participants' segregated cash, Participants' and Clearing Funds cash deposits, Cash in Other Participants' assets, Restricted cash	7,251,914	5,021,330
Cash and cash equivalents, Participants' segregated cash, Participants' and Clearing Funds cash deposits, Cash in Other Participants' assets, Restricted cash - Beginning of year	49,079,355	44,058,025
Cash and cash equivalents, Participants' segregated cash, Participants' and Clearing Funds cash deposits, Cash in Other Participants' assets, Restricted cash - End of year	$ 56,331,269	$ 49,079,355
SUPPLEMENTAL DISCLOSURES:		
Interest paid	$ 559,831	$ 148,534
Income taxes paid - net of refunds	$ 194,328	$ 112,418

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

1. BUSINESS AND OWNERSHIP

The Depository Trust & Clearing Corporation (DTCC) is the parent company of various operating subsidiaries, including 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 (US)), DTCC Solutions (UK) Limited (Solutions (UK)), Business Entity Data, B.V. (BED); collectively, the "Company" or "Companies."

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

NSCC is organized as a business corporation under New York law, and is a clearing agency registered with the SEC. NSCC provides central counterparty (CCP) services, including clearing, settlement and risk management services to its members for 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 for the U.S. government and mortgage-backed securities markets, consisting principally of automated real-time trade comparison, netting, settlement, trade confirmation, clearing, risk management and electronic pool notification. FICC has two divisions, the Government Securities Division (GSD) and the Mortgage-Backed Securities Division (MBSD).

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

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

ITP, through itself, its subsidiary and affiliates, provides post-trade matching, processing and other related services, primarily to members of the financial services community. ITP's subsidiary and applicable affiliates are authorized to provide certain post-trade matching services pursuant to certain orders issued by regulatory authorities and may be subject to the supervision and examination by these authorities in the jurisdiction in which they operate including the SEC, the Financial Conduct Authority (FCA) in the United Kingdom, and the Autorité des Marchés Financiers (AMF) and the Ontario Securities Commission (OSC) in Canada.

Deriv/SERV enhances transparency and provides operational efficiency for derivatives and securities financing transactions processing and reporting through various legal entities, including affiliated locally registered or recognized trade repositories. Deriv/SERV also offers the Trade Information Warehouse asset servicing for credit default swaps and oversees other pre and post derivative trade activities offered by other DTCC legal entities. The trade repositories are subject to supervision and examination by regulatory authorities in the jurisdictions they operate including the Commodity Futures Trading Commission (CFTC), SEC, FCA, thirteen Canadian provincial and territorial regulators, the European Securities and Markets Authority (ESMA), the Swiss Financial Market Supervisory Authority (FINMA), the Monetary Authority of Singapore (MAS), the Financial Services Agency of Japan (JFSA), and the Australian Securities and Investments Commission (ASIC).

Solutions (US) is a New York limited liability company, which provides data related solutions. Used primarily by financial firms, these solutions include referential and activity-based data, analytics and benchmarks across a variety of asset classes.

1. BUSINESS AND OWNERSHIP (CONTINUED)

Solutions (UK) offers software application, analytics solutions and consulting services. Its software and analytics solution, DTCC Report Hub®, centers on pre and post trade reporting to help firms manage the complexities of meeting multiple regulatory mandates across jurisdictions. The consulting services business offers specialized advisory services to firms primarily in the financial services industry.

BED owned and operated the GMEI® utility legal entity identifier (LEI) solution in the federated Global LEI System (GLEIS). The Global Markets Entity Identifier (GMEI) utility was designed to provide a single, universal standard identifier to any organization or firm involved in a financial transaction internationally across all asset classes. BED was accredited with the Global Legal Entity Identifier Foundation (GLEIF). BED and GLEIF agreed to terminate its relationship effective August 22, 2023. As such, BED is no longer an accredited Local Operating Unit (LOU) as of that date and has ceased LOU operations.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

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

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

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

Participants' segregated cash. Represents cash received from Participants for the exclusive benefit of the Participants' customers. Certain Participants are required by their regulators to segregate a portion of cash and securities in specifically protected accounts on behalf of their clients in a good control location.

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

Fair value measurements. The Company may be required or permitted to measure and disclose certain financial 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 credit losses and refunds to Participants. The Company establishes an allowance for estimated losses resulting from uncollectibility. Expected credit losses for newly recognized financial assets and changes to expected credit losses during the period are recognized in General and administrative expenses in the accompanying Consolidated Statements of Income. The Company determines the adequacy of the allowance by estimating the possibility of loss based on a variety of factors, including the length of time receivables are past due, forward looking macroeconomic projections, historical experience and the financial condition of customers and other debtors.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Participants' and Clearing Funds. The rules of DTC, NSCC and FICC require Participants to maintain deposits related to their respective activities based on calculated requirements. The deposits are available to collateralize Participants' obligations and certain liabilities of the Companies. Margin deposits and any additional 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 pursuant to the rules of the relevant subsidiaries of the Company.

Cash deposits. Deposits and contributions received in the form of cash may only be invested in bank deposit accounts, including FRBNY, that provide same day access to funds. All interest earned on investments is accrued and included within Interest income in the accompanying Consolidated Statements of Income. This interest is refunded to Participants and is included in Refunds to Participants in the accompanying Consolidated Statements of Income.

Securities - at fair value. Securities deposited to the Clearing Fund may include U.S. Treasury securities, U.S. agency debt securities and U.S. agency residential mortgage-backed securities, pursuant to the rules.

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 as the Company does not have the benefits or risks of ownership.

Other Participants' assets and Payable to Participants. The Company receives cash and stock dividends, interest, reorganization and redemption proceeds on securities registered in the name of its nominee, Cede and Co., and interest and redemption proceeds on bearer securities, which it distributes to Participants. Balances comprised of cash that represent cash dividends, interest, reorganization, redemptions, and cash collateral received are included in Other Participants' assets, with a corresponding liability recorded in Payable to Participants, on the accompanying 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 Participant 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. The Company determined there was no impairment as of December 31, 2023 and 2022. The FRB stock, amounting to $6,402,000 as of December 31, 2023 and 2022, is included in Other non-current assets on the accompanying Consolidated Statements of Financial Condition.

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

Premises and equipment	Depreciation Period	Depreciation Method
Leasehold improvements	Shorter of useful life or remaining term of the lease	Straight-line
Furniture and equipment	3 - 7 years	Straight-line
Building and improvements	7 - 39 years	Straight-line

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

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Goodwill and Intangible assets

Goodwill. The Company records Goodwill upon the completion of a business combination as the difference between the purchase price and the fair value of the net assets acquired. Subsequent to initial recognition, Goodwill is not amortized but is tested for impairment annually or more frequently if events occur or circumstances change that indicate an impairment may exist. The Company has the option to first assess qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If after assessing the totality of events or circumstances, the Company determines it is more likely than not that the fair value of a reporting unit is greater than its carrying amount, no further impairment testing is necessary. However, if the Company concludes otherwise, then it is required to perform the quantitative impairment test, whereby a goodwill impairment loss will be measured as the excess of a reporting unit's carrying value over its estimated fair value.

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

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

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

Intangible Asset	Amortization Period	Amortization Method	Impairment Testing Frequency
Customer relationships	12 Years	Straight-line	If a triggering event occurs
Capitalized software	Finite/ 3 - 10 Years	Straight-line	If a triggering event occurs

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

The Company determines if an arrangement is or contains a lease at contract inception and accounts for lease and non-lease components as a single lease component. Operating leases are included in Operating lease right-of-use (ROU) asset, Current portion of operating lease liability, and Non-current operating lease liability on the Company's Consolidated Statements of Financial Condition.

ROU assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent the Company's obligation to make lease payments arising from the lease. The ROU assets are initially measured at the amount equal to the lease liabilities, adjusted for balances of accrued or prepaid rent and unamortized lease incentives provided by lessors. For operating leases, expense is generally recognized on a straight-line basis over the lease term.

Operating lease liabilities are recognized based on the present value of the future lease payments over the remaining lease term. The Company uses its incremental borrowing rate, factoring in the lease term, to determine the lease liability.

When determining lease term, the Company considers renewal options that the Company is reasonably certain to exercise and termination options that the Company is reasonably certain not to exercise.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

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

On December 19, 2022, the London Stock Exchange Group, plc (LSEG) agreed to acquire 100% of the Acadisoft, Inc. (Acadia) outstanding stock. The transaction closed on March 31, 2023. DTCC owned 7% of Acadia at the time of the sale and received proceeds of $49,791,000. The Company recorded a gain of $39,041,000 on the sale, of which $38,445,000 was recognized during the year ended December 31, 2022. The gain is included in Other non-operating income, net in the accompanying Consolidated Statements of Income.

Commercial paper. NSCC issues commercial paper with maturities generally less than one year. The proceeds from the issuance of the commercial paper constitute liquid resources of NSCC that, together with other liquid resources of NSCC, are available to enable it to effect the settlement of its payment obligations in the event of the default of any of its Participants pursuant to NSCC’s rules. Pending such use by NSCC, the proceeds of the issuance of commercial paper are invested in highly liquid short-term instruments in accordance with NSCC's investment policy.

Debt issuance costs. Debt issuance costs consist of costs incurred in obtaining financing and are amortized over the term of the financing using the straight-line method. These costs are generally recorded as a direct deduction from the carrying amount of the related debt liability on the Consolidated Statements of Financial Condition.

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

Non-controlling interests. Non-controlling interests represent the ownership of DTC Series A 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. Shareholders' equity is adjusted for the income attributable to the non-controlling interest shareholders and any distributions to those shareholders.

Revenue recognition. The Company recognizes revenue to depict the transfer of promised services and related performance obligations to customers in an amount that reflects the consideration to which the Company expects to be entitled, upon satisfaction, in exchange for those services.

The Company derives its revenue from transaction fees, subscription revenue, support services, and usage fees. Revenue from transaction fees is billed monthly and calculated based on the value and volume of executed transactions and the established fee schedules, less any applicable volume discounts. The volume targets or thresholds for the discounts primarily reset monthly. Subscription and support revenues are recognized ratably over the performance period of the relevant contract using a time elapsed measure of progress as the customer receives the benefits of the services throughout the term of the contract. Usage fees are recognized when services are provided based on contractual terms.

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

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

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Clearing services. Revenue derived from this revenue stream is in the form of transaction fees that are based on either the volume or value of trading activity. Services include the clearing and settlement of equity, corporate and municipal bond and unit investment trust transactions, and the netting and settlement of mortgage-backed securities clearing and government securities clearing.

Matching services. Revenue derived from this revenue stream may be in the form of transaction fees, subscription revenue and support services. Services include trade enrichment, trade agreement, LEIs and data analytics.

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

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

Data and other services. Revenue derived from this revenue stream may be in the form of subscription revenue, support services, consulting projects and usage fees. Services include referential and activity-based announcement, security reference, and liquidity data through the DTCC Data Services product. These offerings are delivered in fixed or configurable formats, sourced from the Company's transaction, reference, position and asset servicing data. The Company provides a broad range of other services which include consulting services and bank fees charged back to Participants.

Investment income (loss), net. Revenue derived from this revenue stream is related to changes in the fair values of investment assets related to the Company's deferred compensation plan (structured as a Rabbi Trust). The investment income (loss) is recognized in the period the realized/unrealized gain or loss on investment assets held occurs. A corresponding offset to the investment income (loss) related to the deferred compensation liability is recorded in the same period and is included in the Employee compensation and related benefits in the accompanying Consolidated Statements of Income.

Accounts receivable and deferred revenue

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

Deferred revenue represents the Company's liability to perform services in the future related to payments received in advance of those services. Deferred revenue as of December 31, 2023 and 2022 was $6,541,000 and $14,532,000 respectively, and is included in Other current liabilities and Other non-current liabilities on the accompanying Consolidated Statements of Financial Condition, as disclosed in Note 12. Of the $14,532,000 as of December 31, 2022, $12,917,000 was recognized as revenue during the year ended December 31, 2023.

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

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Non-qualified deferred compensation plan. DTCC maintains a self-directed, non-qualified deferred compensation plan structured as a "Rabbi Trust" for certain executives and other highly compensated employees. Under the plan participants may elect 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. The investment assets of the Rabbi Trust are classified as trading securities, and accordingly, changes in their fair values are recorded in Investment income, net in the accompanying Consolidated Statements of Income with a corresponding charge recorded in Employee compensation and related benefits in the accompanying Consolidated Statements of Income. The change in fair value of these investments was a gain of $14,711,000 and loss of $19,044,000 for the years ended December 31, 2023 and 2022, respectively.

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

Retirement plans

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

DTCC provides health care and life insurance benefits to eligible DTCC retired employees and their beneficiaries in the Retiree Medical and Life Insurance Plans. The Retiree Medical Plan was frozen effective January 1, 2002 and is closed to new participants but is still in existence for employees hired prior to this date. In order to be eligible, management employees hired on or before January 1, 2002, upon termination, must meet the Rule of 75 (age plus year of service must equal 75) and must be over the age of 55 at termination. Bargaining unit employees hired on or before January 1, 2002, upon termination, must have at least 20 years of service and be age 55 or older. When an employee is eligible for retiree medical, they are also eligible for retiree life insurance.

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

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

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 the present values determined by discounting projected benefit distributions using the corresponding spot rates as of the measurement date from yield curves of high-quality corporate bonds available in the marketplace. The net periodic pension expense or income includes service and interest costs determined using the same yield curve spot rates, an expected return on plan assets based on an actuarially derived market-related value and amortization of prior years’ actuarial gains and losses and prior service cost (credit). Service costs, interest costs, and all other costs are included in Employee compensation and related benefits, Interest expense, and Other non-operating income, respectively, in the accompanying Consolidated Statements of Income.

Actuarial gains and losses include 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.

Market-related value of assets is a balance used to calculate the expected return on plan assets. The market-related value of plan assets is either fair value or a calculated value that recognized changes in fair value in a systematic and rational manner over not more than five years. 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.

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 overseen by the Company's Employee Benefit Plans Committee, which is appointed by the Board of Directors of the Company and is composed of designated Company officers. The Employee Savings Plan is a single employer plan covering non-bargaining unit employees. The Operations Level Savings Plan is a single employer plan covering bargaining unit employees.

The Company matches 50% of the first 6% of the employee’s contributions up to the IRC compensation limits. Company matching contributions and employee contributions vest immediately.

In addition to the Company matching contributions, the Company offers a supplemental contribution on behalf of the employees in lieu of the contributions to the Pension Plan, which is now frozen. Employees are able to participate in this Pension Contribution Account (PCA) after six months of service. The Company makes contributions equal to a percentage of base and incentive pay based on years of service (ranging from 3%-7% of eligible pay). Company supplemental contributions vest over five years at the rate of 20% for each year of service and vest immediately after five years or upon attaining age 55. These PCA contributions are employer-only contributions.

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

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

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

Business Employment Incentive Program. The Company participates in the New Jersey State Business Employment Incentive Program (BEIP). The intent of this program is to encourage businesses to locate and expand in the State of New Jersey through grants that the Company has elected to convert into refundable tax credits. The Company determined the classification of the refundable tax credits to be a form of government grant. The tax credits are recognized as Other non-operating income when the Company has complied with the terms and conditions of BEIP. Total BEIP income included in Other non-operating income, net in the accompanying Consolidated Statements of Income was $23,023,000 and $12,667,000 for the years ended December 31, 2023 and 2022, respectively. The BEIP receivable included in Other current assets on the accompanying Consolidated Statements of Financial Condition was $23,023,000 and $12,667,000 as of December 31, 2023 and 2022, respectively.

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 General and administrative 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 derivatives for hedging purposes to manage its exposure to changes in interest rates and currency exchange rates. The Company does not use derivatives for trading purposes. 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.

Fair Value Hedges. The Company uses interest rate swaps to mitigate the interest rate risk associated with fixed-rate long-term debt obligations by converting a portion of its interest expense exposure from fixed rate to a floating rate to more closely align with interest income received on its cash equivalents. See Note 14, Long-term debt, for the Company's fixed-rate senior notes being hedged through interest rate swaps.

Net Investment Hedges. The Company uses forward contracts to mitigate the foreign exchange risk associated with net investments in certain foreign subsidiaries whose functional currencies are not the U.S. dollar. Foreign currency 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. The gain or loss on net investment hedges, net of taxes, recorded in OCI as part of the cumulative translation adjustment, were gains of $0.2 million and losses of $0.5 million for the years ended December 31, 2023 and 2022, respectively.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

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

A reconciliation of Cash and cash equivalents, Participants' segregated cash, Participants' and Clearing Funds cash deposits, Cash in Other Participants' assets and Restricted cash reported within the accompanying Consolidated Statements of Financial Condition that sum to the total of the same such amounts shown on the accompanying Consolidated Statements of Cash Flows as of December 31, 2023 and 2022 follows (in thousands):

	2023	2022
Cash and cash equivalents	$ 15,774,381	$ 16,167,430
Participants' segregated cash	57	2,020
Participants' and Clearing Funds cash deposits	35,777,609	31,970,747
Cash in Other Participants' assets	4,510,304	931,071
Restricted cash included in Other non-current assets	268,918	8,087
Total Cash and cash equivalents, Participants' segregated cash, Participants' and Clearing Funds cash deposits, Cash in Other Participants' assets and Restricted cash shown on the Consolidated Statements of Cash Flows	$ 56,331,269	$ 49,079,355

Global Events and Crises. Global pandemics, sanctions, war, or natural disasters may have an adverse impact on market, economic and geopolitical conditions and trigger a period of global economic slowdown. Such a slowdown may have a material impact on the Company's financial results including changes in revenue, interest rates, liquidity/credit, and government and regulatory policy. At this time, the Company has not experienced any material adverse financial impacts from these events and crises.

3. ACCOUNTING AND REPORTING DEVELOPMENTS

Standard	Description	Impact on the financial statements or other significant matters
Financial Accounting Standards Board Standard Issued, but not yet Adopted		
ASU 2023-09 - Income Taxes (Topic 740): Improvements to Income Tax Disclosures *Issued December 2023*	• Enhances disclosures related to the rate reconciliation and income taxes paid. The amendment requires consistent categories and greater disaggregation of information in the rate reconciliation and income taxes paid disaggregated by jurisdiction. • The amendment requires disclosures of pretax income (or loss) and income tax expense (or benefit) to be consistent with the SEC Regulation S-X 210.4-08(h), Rules of General Application—General Notes to Financial Statements: Income Tax Expense, and eliminates disclosures that no longer are considered cost beneficial or relevant.	• Effective January 1, 2025. • The adoption of the standard will not have a material impact on the Company's consolidated financial statements and related disclosures.
ASU 2023-08 - Intangibles - Goodwill and Other - Crypto Assets (Subtopic 350-60): Accounting for and Disclosure of Crypto Assets *Issued December 2023*	• Requires an entity to measure crypto assets at fair value in the statement of financial position each reporting period and recognize changes from remeasurement in net income. • Requires an entity to present crypto assets measured at fair value separately from other intangible assets in the balance sheet and changes from the remeasurement of crypto assets separately from changes in the carrying amounts of other intangible assets in the income statement. Additionally, specific presentation is required for cash receipts arising from crypto assets that are received as noncash consideration in the ordinary course of business and are converted nearly immediately into cash. • Specific annual disclosures are required upon adoption	• Effective January 1, 2024. • The adoption of the standard will not have a material impact on the Company's consolidated financial statements and related disclosures.

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

Details for Participants' segregated cash, Other Participants' assets and Payable to Participants as of December 31, 2023 and 2022 follow (in thousands):

	2023	2022
Assets:		
Participants' segregated cash	$ 57	$ 2,020
Other Participants' assets - cash	4,510,304	931,071
Total	$ 4,510,361	$ 933,091
Liabilities:		
Payable to Participants	$ 4,510,361	$ 933,091

The balance of the Other Participants' assets is subject to fluctuation due to the timing of when the Company receives the cash and stock dividends, interest, reorganization and redemption proceeds, and the subsequent distribution to Participants.

5. ACCOUNTS RECEIVABLE

Details for Accounts receivable as of December 31, 2023 and 2022 follow (in thousands):

	2023	2022
Due from Participants and customers for services	$ 178,557	$ 172,330
Allowance for credit losses	(184)	(2,220)
Due from Participants and customers for services, net	178,373	170,110
Other receivables	19,463	21,134
Total	$ 197,836	$ 191,244

Details for allowance for credit losses for the years ended December 31, 2023 and 2022 follow (in thousands):

	2023	2022
Beginning balance of allowance for credit losses	$ 2,220	$ 253
(Decrease)/Increase in allowance	(1,723)	2,539
Less: Write-offs	(313)	(572)
Ending balance of allowance for credit losses	$ 184	$ 2,220

6. PARTICIPANTS' AND CLEARING FUNDS

Details for the Participants' and Clearing Funds as of December 31, 2023 and 2022 follow (in thousands):

	2023			
	DTC	NSCC	FICC	Total
Total deposits	$ 1,984,734	$ 12,386,378	$ 68,845,589	$ 83,216,701
Less: Required deposits	1,128,000	8,349,399	56,600,011	66,077,410
Excess deposits	$ 856,734	$ 4,036,979	$ 12,245,578	$ 17,139,291

	2022			
	DTC	NSCC	FICC	Total
Total deposits	$ 2,001,893	$ 12,002,310	$ 47,730,885	$ 61,735,088
Less: Required deposits	1,170,000	10,817,731	37,612,013	49,599,744
Excess deposits	$ 831,893	$ 1,184,579	$ 10,118,872	$ 12,135,344

6. PARTICIPANTS' AND CLEARING FUNDS (CONTINUED)

Cash and Securities. Details for cash and securities of the Participants' and Clearing Funds, which may be applied to satisfy obligations of the depositing Participant, other Participants, or the Company pursuant to the rules of the relevant subsidiaries of the Company, as of December 31, 2023 and 2022 follow (in thousands):

	2023			
	DTC	NSCC	FICC	Total
Cash and cash equivalents(1)	$ 1,984,734	$ 11,778,982	$ 22,013,893	$ 35,777,609
U.S. Treasury Securities	—	607,396	38,477,750	39,085,146
U.S. Agency Residential Mortgage-Backed Securities	—	—	7,501,633	7,501,633
U.S. Agency Issued Debt Securities	—	—	852,313	852,313
Total	$ 1,984,734	$ 12,386,378	$ 68,845,589	$ 83,216,701

	2022			
	DTC	NSCC	FICC	Total
Cash and cash equivalents(1)	$ 2,001,893	$ 11,201,776	$ 18,767,078	$ 31,970,747
U.S. Treasury Securities	—	800,534	25,939,504	26,740,038
U.S. Agency Residential Mortgage-Backed Securities	—	—	2,693,060	2,693,060
U.S. Agency Issued Debt Securities	—	—	331,243	331,243
Total	$ 2,001,893	$ 12,002,310	$ 47,730,885	$ 61,735,088

(1) The Company's cash and cash equivalents of the Participants' and Clearing Funds are all bank deposits as of December 31, 2023 and 2022.

7. PREMISES AND EQUIPMENT

The cost, accumulated depreciation and net book value of Premises and equipment as of December 31, 2023 and 2022 follow (in thousands):

	2023	2022
Furniture and equipment	$ 270,331	$ 262,709
Leasehold improvements	190,316	185,965
Buildings and improvements	22,534	22,483
Land	4,221	4,221
Total Premises and equipment	487,402	475,378
Less: Accumulated depreciation	(242,114)	(280,175)
Net book value	$ 245,288	$ 195,203

Depreciation expense for premises and equipment for the years ended December 31, 2023 and 2022 was $42,227,000 and $49,823,000, respectively, and is included in Depreciation and amortization in the accompanying Consolidated Statements of Income.

The Company disposed of fully depreciated premises and equipment that resulted in the removal of costs and accumulated depreciation of $80,697,000 and $28,074,000 for the years ended December 31, 2023 and 2022, respectively.

8. GOODWILL AND INTANGIBLE ASSETS

The gross carrying value, accumulated amortization and net book value of Goodwill and Intangible assets as of December 31, 2023 and 2022 follow (in thousands):

	2023	2022
Goodwill:		
Gross carrying value	$ 68,746	$ 57,699
Intangible assets:		
Customer relationships:		
Gross carrying value	231,700	231,700
Accumulated amortization	(197,910)	(178,602)
Net book value	33,790	53,098
Capitalized software:		
Gross carrying value	594,655	679,229
Accumulated amortization	(348,326)	(441,904)
Net book value	246,329	237,325
Total Intangible assets - net of accumulated amortization	$ 280,119	$ 290,423

Goodwill impairment testing. DTCC completed its annual goodwill impairment test in the fourth quarter of 2023 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. Amortization expense for intangible assets for the years ended December 31, 2023 and 2022 was $122,708,000 and $124,716,000, respectively, and is included in Depreciation and amortization in the accompanying Consolidated Statements of Income.

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

2024	$ 112,533
2025	85,885
2026	43,965
2027	13,736
2028	4,000
Thereafter	20,000
Total future estimated amortization	$ 280,119

During the years ended December 31, 2023 and 2022, disposals of fully amortized capitalized software resulted in the removal of cost and accumulated amortization of $181,125,000 and $37,376,000, respectively.

The Company recognized impairment charges of $14,296,000 and $17,467,000 related to capitalized software for the years ended December 31, 2023 and 2022, respectively. The impairment charges are included in Impairment of intangible assets in the accompanying Consolidated Statements of Income.

8. GOODWILL AND INTANGIBLE ASSETS (CONTINUED)

During the year ended December 31, 2023, the Company recognized the following impairments of internally developed software and purchased software related to these projects:

The Securities Financing Transactions project experienced delays in revenues and a significant reduction in revenue projections compared to the original forecast triggering an evaluation for impairment. The evaluation concluded that the $11,914,000 carrying value of its internally developed software was not recoverable and exceeded its fair value.

The Client Management Reporting System project experienced a reduction in revenue projections triggering an evaluation for impairment. The evaluation concluded that the $1,369,000 carrying value of its internally developed software was not recoverable and exceeded its fair value.

The Analytics and Reporting Management - Data Lineage project experienced a change in strategy due to gaps in technology and increased costs triggering an evaluation for impairment. The evaluation concluded that the $781,000 carrying value of its internally developed software was not recoverable and exceeded its fair value.

The closure of GMEI utility resulted in BED ceasing LOU operations triggering an evaluation for impairment. The evaluation concluded that the $232,000 carrying value of its total internally developed software was not recoverable and exceeded its fair value.

During the year ended December 31, 2022, the Company recognized the following impairments of internally developed software and purchased software related to these projects:

The GMEI project experienced cost over-runs exceeding projected revenue, the necessity for rewriting portions of the code and changes in legal and regulatory requirements triggering an evaluation for impairment. The evaluation concluded that the $6,369,000 carrying value of its internally developed software was not recoverable and exceeded its fair value.

The Client Management Reporting System project experienced a reduction in revenue projections triggering an evaluation for impairment. The evaluation concluded that the $6,225,000 carrying value of its internally developed software was not recoverable and exceeded its fair value.

The Common Matching project experienced a change in strategy that resulted in a reprioritization of efforts triggering an evaluation for impairment. The evaluation concluded that the $3,331,000 carrying value of its internally developed software was not recoverable and exceeded its fair value.

The Securities Financing Transactions Regulation project experienced a change in strategy and legal and regulatory requirements triggering an evaluation for impairment. The evaluation concluded that the $1,542,000 carrying value of its internally developed software was not recoverable and exceeded its fair value.

9. BUSINESS COMBINATIONS

On December 7, 2023, the Company acquired the equity of Securrency Inc. ("Securrency") via a merger of Securrency with a wholly-owned subsidiary of the Company in accordance with the merger agreement. Upon the completion of the merger, Securrency was the surviving entity, became a wholly-owned subsidiary of DTCC and operates under the name DTCC Digital (US) Inc. Securrency is a digital asset technology company that developed a platform that comprises of three key components: a capital markets platform, ledger scan, and digital asset composer. The acquisition will enable DTCC to establish a digital infrastructure that allows DTCC to extend its core services to the digital asset ecosystem and deliver no-touch processing.

9. BUSINESS COMBINATIONS (CONTINUED)

The Company acquired the equity of Securrency for a purchase price of approximately $50.5 million. The acquisition of Securrency was accounted for as a business combination using the acquisition method of accounting. The excess of purchase price over fair value of assets obtained and liabilities assumed was allocated to goodwill. In connection with the acquisition, the Company recorded approximately $11.0 million of goodwill and $40.0 million capitalized software. The capitalized software will be amortized to expense over 10 years. Expenses associated with the acquisition were approximately $6.5 million for the year ended December 31, 2023, which primarily consisted of legal and consulting costs and were expensed as incurred.

The assets acquired, liabilities assumed, and consideration paid in the acquisition were recorded at their estimated fair values based on management's best estimates using information available at the date of the acquisition and are subject to adjustment for up to one year after the closing date of the acquisition. While the fair values are not expected to be materially different from the estimates, accounting guidance provides that an acquirer must recognize adjustments to provisional amounts that are identified during the measurement period, which will run through December 6, 2024, in respect of the acquisition, in the measurement period in which the adjustment amounts are determined. The acquirer must record in the financial statements, the effect on earnings of changes in depreciation, amortization, or other income effects, if any, as a result of changes to the provisional amounts, calculated as if the accounting had been completed at the acquisition date.

The assets acquired and liabilities assumed as of the acquisition date follow (in thousands):

Purchase price allocation:		
Purchase price	$	50,503
Assets acquired:		
Cash and cash equivalents	$	1,856
Accounts receivable		645
Other current assets		431
Premises and equipment		211
Intangible assets		40,034
Operating lease right-of-use-asset		495
Other non-current assets		472
Total assets acquired		44,144
Liabilities assumed:		
Operating lease liability		523
Accounts payable and accrued expenses		2,497
Other current liabilities		1,394
Other non-current liabilities		274
Total liabilities assumed		4,688
Net assets acquired		39,456
Goodwill	$	11,047

10. LEASES

Details for operating lease assets and lease liabilities as of December 31, 2023 and 2022 follow (in thousands):

	2023	2022
Assets		
Operating lease right-of-use-asset	$ 156,027	$ 188,552
Liabilities		
Current portion of operating lease liability	25,148	30,512
Non-current operating lease liability	181,388	209,910
Total operating lease liabilities	$ 206,536	$ 240,422

Details for the maturity of operating lease liabilities as of December 31, 2023 for each of the next five years and thereafter follow (in thousands):

2024	$ 31,163
2025	31,912
2026	28,740
2027	25,128
2028	24,839
Thereafter	96,319
Total lease payments	238,101
Less: Imputed interest	(31,565)
Present value of lease liability	$ 206,536

Details for lease expense for the years ended December 31, 2023 and 2022 follow (in thousands):

	2023	2022
Occupancy	$ 31,655	$ 35,430
Information technology	7,510	5,642
Total lease expense	39,165	41,072
Sublease income [(1)]	(5,117)	(5,053)
Net lease expense	$ 34,048	$ 36,019

(1) Included in Occupancy and Other non-operating income, net in the accompanying Consolidated Statements of Income.

Details for supplemental cash flow information related to lease liabilities for the years ended December 31, 2023 and 2022 follow (in thousands):

	2023	2022
Lease payments included in the measurement of lease liabilities	$ (37,075)	$ (38,383)
Accretion of lease liabilities	7,710	7,379
Net decrease in Operating lease liability[(1)]	$ (29,365)	$ (31,004)

(1) Included in operating activities in the Consolidated Statements of Cash Flows

Details of the weighted average remaining lease term and weighted average discount rate used to determine the lease liability as of December 31, 2023 and 2022 follow:

	2023	2022
Weighted average remaining lease term (years)	8.1	8.9
Weighted average discount rate	3.59 %	3.02 %

Lease right-of-use assets obtained in exchange for operating lease obligations were $3,520,000 and $781,000 for the years ended December 31, 2023 and 2022, respectively.

11. OTHER ASSETS

Details for Other assets as of December 31, 2023 and 2022 follow (in thousands):

	2023	2022
Prepaid expenses	$ 151,157	$ 136,503
Interest receivable	39,472	25,838
Prepaid taxes	29,457	20,154
Business employment incentive program	23,023	12,667
Interest rate swaps(1)	—	1,035
Other current assets	1,087	1,731
Total other current assets	244,196	197,928
Restricted cash	268,918	8,087
Long-term incentive plan assets	126,298	121,171
Cash surrender value on insurance policies	65,722	65,105
Prepaids	61,112	51,103
Deferred tax assets	56,910	14,369
Pension and postretirement	40,531	28,867
Equity investments	7,278	50,389
Investment in Federal reserve stock	6,402	6,402
Other non-current assets	2,229	2,196
Total other non-current assets	635,400	347,689
Total	$ 879,596	$ 545,617

(1) The interest rate swaps may change from an asset to liability position.

12. OTHER LIABILITIES

Details for Other liabilities as of December 31, 2023 and 2022 follow (in thousands):

	2023	2022
Compensation payable	$ 179,441	$ 176,086
Accrued payroll and payroll withholdings	47,436	46,081
Long-term incentive plan liabilities	32,500	30,814
Payroll taxes payable	21,158	20,214
Deferred revenue	5,944	13,768
Deferred sublease income	4,066	5,687
Other current liabilities	1,830	115
Total other current liabilities	292,375	292,765
Long-term incentive plan liabilities	210,210	207,757
Unrecognized tax benefits	38,566	25,954
Asset retirement obligations(1)	2,676	2,597
Deferred revenue	597	764
Interest rate swaps(2)	311	—
Deferred tax liabilities	128	5,927
Total other non-current liabilities	252,488	242,999
Total	$ 544,863	$ 535,764

(1) The Company is legally required under certain lease agreements to restore its leased sites to the original condition at the end of the agreement. The amount of asset retirement obligations are accreted to the estimated undiscounted obligations that will be paid to restore the leased sites to the original condition and such accretion is recognized as expense.

(2) The interest rate swaps may change from an asset to liability position.

13. COMMERCIAL PAPER

Details for Commercial paper as of December 31, 2023 and 2022 follow (in thousands):

	2023	2022
Commercial paper - net of unamortized discount of $92,370 and $27,750 as of December 31, 2023 and 2022, respectively	$ 9,076,862	$ 9,109,638
Weighted-average interest rate	5.46 %	4.11 %

Interest expense on Commercial paper, included in Interest expense in the accompanying Consolidated Statements of Income, was $481,691,000 and $158,761,000 for the years ended December 31, 2023 and 2022, respectively.

14. LONG-TERM DEBT

Details for Long-term debt as of December 31, 2023 and 2022 follow (in thousands):

	2023	2022
Senior notes - net of unamortized discount and debt issuance costs	$ 3,731,774	$ 4,733,593
Less: Current portion of long-term debt	(398,813)	(1,997,307)
Non-current portion of long-term debt	$ 3,332,961	$ 2,736,286

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

2024	$ 400,000
2025	2,150,000
2026	—
2027	600,000
2028	600,000
Thereafter	—
Total	$ 3,750,000

Senior notes. The proceeds from the issuances constitute liquid resources that, together with other liquid resources of the Company, are available to enable NSCC to affect the settlement of its payment obligations in the event of the default of any of its Participants pursuant to NSCC's rules.

Details of the senior notes as of December 31, 2023 follow (in thousands):

Issue Date	Maturity	Payable	Rate	Principal Balance	Carrying Value
April 23, 2020	April 23, 2025	Semi-annually	1.50%	$ 1,000,000	$ 997,792
December 7, 2020	December 7, 2025	Semi-annually	0.75%	750,000	747,231
November 21, 2022	November 21, 2024	Semi-annually	5.05%	400,000	398,813
November 21, 2022	November 21, 2027	Semi-annually	5.10%	600,000	597,560
May 30, 2023	May 30, 2025	Semi-annually	5.15%	400,000	398,185
May 30, 2023	May 30, 2028	Semi-annually	5.00%	600,000	592,193
				$ 3,750,000	$ 3,731,774

14. LONG-TERM DEBT (CONTINUED)

Interest expense and amortization of discount and issuance costs, included in Interest expense in the accompanying Consolidated Statements of Income, were $118,201,000 and $49,933,000 for the years ended December 31, 2023 and 2022, respectively. The weighted-average interest rate was 3.25% and 1.84% as of December 31, 2023 and 2022, respectively. The aggregate unamortized debt issuance costs and discount associated with the senior notes were $17,915,000 and $17,850,000, as of December 31, 2023 and 2022, respectively.

Fair value hedge. The Company uses interest rate swaps to hedge the fair value of related fixed-rate senior notes. The Company designated the interest rate swaps as a fair value hedge of the related long-term debt and applied the short-cut method for hedge accounting purposes. The fair value of interest rate swaps are included in other assets or other liabilities in the accompanying Consolidated Statements of Financial Condition.

Details of the outstanding fair value hedges as of December 31, 2023 and 2022 follow (in thousands):

Date Entered	Notional of Swap	Debt Amount Hedged	Fixed Rate Receivable	Floating Rate Payable	Fair Value in Other Assets / (Other Liabilities)	
					2023	2022
November 21, 2022	$ 600,000	$ 600,000	5.10 %	USD-Federal Funds-OIS Compound plus 1.365%	$ 1,184	$ 1,443
May 30, 2023	$ 600,000	$ 600,000	5.00 %	USD-Federal Fund-OIS Compound plus 1.4621%	(1,495)	—
					$ (311)	$ 1,443

Interest rate swaps may expose the Company to credit-related losses in the event of nonperformance by its counterparty. Credit risk is monitored on an ongoing basis. See Note 21, Off Balance Sheet and Concentrations of Credit Risks, for the Company's concentration of credit risk related to interest rate swaps.

14. LONG-TERM DEBT (CONTINUED)

Lines of credit. DTCC maintains a committed line of credit for general funding purpose, while its subsidiaries DTC and NSCC maintain committed lines of credit, pursuant to its respective rules, to support settlement of its payment obligations in the event any of its Participants default.

Details for the terms of the outstanding lines of credit as of December 31, 2023 and 2022 follow:

	2023	2022
DTCC		
Committed Amount	$500 million	$500 million
Denomination	USD	USD
Number of Participants/Lenders	13/13	13/13
Borrowing Rate	Base Rate plus 0.125%, or Adjusted Term Secure Overnight Financing Rate (SOFR) or Adjusted Daily SOFR plus 1.125%	Base Rate plus 0.125%, or Adjusted Term Secure Overnight Financing Rate (SOFR) or Adjusted Daily SOFR plus 1.125%
Maturity Date	January 2025	January 2025
Annual Facility Fee	0.15%(1)	0.15%(1)
DTC		
Committed Amount	$1.9 billion	$1.9 billion
Denomination	USD	USD
Number of Participants/Lenders	29/35	30/36
Borrowing Rate	The greatest of the FRBNY rate, Adjusted Daily SOFR, or zero on the day of borrowing, plus 1.40%	The greatest of the FRBNY rate, Adjusted Daily SOFR, or zero on the day of borrowing, plus 1.40%
Maturity Date	April 2024	May 2023
Annual Facility Fee	0.10%(1)	0.10%(1)
NSCC		
Committed Amount	$9.5 billion	$10.0 billion
Denomination	USD	USD
Number of Participants/Lenders	29/35	30/36
Borrowing Rate	The greatest of the FRBNY rate, Adjusted Daily SOFR, or zero on the day of borrowing plus 1.40%	The greatest of the FRBNY rate, Adjusted Daily SOFR, or zero on the day of borrowing plus 1.40%
Maturity Date	April 2024	May 2023
Annual Facility Fee	0.10%(1)	0.10%(1)

(1) The annual facility fee associated with maintaining the line of credit is included in Professional and other services in the accompanying Consolidated Statements of Income.

There were no borrowings under the lines of credit during 2023 and 2022.

14. LONG-TERM DEBT (CONTINUED)

Details for debt covenants related to the lines of credit as of December 31, 2023 and 2022 follow:

	2023	2022
DTCC		
Minimum Net Worth	$1.65 billion	$1.65 billion
Maximum Priority Debt	$200 million	$200 million
DTC		
Minimum Net Worth	$200 million	$200 million
Minimum Participants Fund deposits	$750 million	$750 million
NSCC		
Minimum Net Worth	$200 million	$200 million
Minimum Clearing Fund deposits	$1.5 billion	$1.5 billion

As of December 31, 2023 and 2022, the Company was in compliance with its debt covenants.

Credit Ratings. DTCC, DTC, FICC and NSCC are rated by Moody's Investors Service, Inc. (Moody's) and S&P Global Inc. (S&P). Details for issuer credit ratings and ratings outlooks for DTCC and its three clearing agency subsidiaries as of December 31, 2023 follow:

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

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

15. FAIR VALUE MEASUREMENTS

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

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

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

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

Product/ Instrument	Valuation Methodology	Classification in the valuation hierarchy
Assets - Participants' and Clearing Funds - Securities on deposit		
U.S. Treasury Securities U. S. Agency Issued Debt Securities	Quoted market price of identical assets obtained from pricing services engaged by the Company.	Level 1
U. S. Agency Issued Debt Securities U.S. Agency Residential Mortgage-Backed Securities	Quoted market price of recent trades of similar securities obtained from pricing services engaged by the Company.	Level 2
Assets - Participants' and Clearing Funds - Cash deposits		
Money market fund investments	Quoted market price of identical assets obtained from pricing services engaged by the Company.	Level 1

15. FAIR VALUE MEASUREMENTS (CONTINUED)

Product/ Instrument	Valuation Methodology	Classification in the valuation hierarchy
Assets - Other assets		
Interest rate swaps	The fair value derived from discounted future cash flows using contractual terms like notional amount, coupon rates and observable market inputs and estimates.	Level 2
Assets - Other non-current assets		
Long-term incentive plan assets - Mutual fund and Stable value fund investments	Quoted market price of identical assets obtained from pricing services engaged by the Company.	Level 1
	Quoted market price of recent trades of similar securities obtained from pricing services engaged by the Company.	Level 2
Liabilities - Participants' and Clearing Funds - Securities liabilities		
Participants' and Clearing Funds liabilities	Derived from the corresponding Participants' and Clearing Funds assets (see above).	Level 1 and Level 2
Liabilities - Other liabilities		
Interest rate swaps	The fair value derived from discounted future cash flows using contractual terms like notional amount, coupon rates and observable market inputs and estimates.	Level 2

15. FAIR VALUE MEASUREMENTS (CONTINUED)

Fair value measurements of those items measured on a recurring basis as of December 31, 2023 and 2022 follow (in thousands):

	2023			
	Level 1	Level 2	Level 3	Total
Assets:				
Clearing Funds				
U.S. Treasury Securities	$ 39,085,146	$ —	$ —	$ 39,085,146
U.S. Agency Issued Debt Securities	615,495	236,818	—	852,313
U.S. Agency Residential Mortgage-Backed Securities	—	7,501,633	—	7,501,633
Other non-current assets				
Long-term incentive plan assets - Mutual fund and Stable value fund investments	111,928	14,370	—	126,298
Total assets	$ 39,812,569	$ 7,752,821	$ —	$ 47,565,390
Liabilities:				
Clearing Funds				
Securities liabilities	$ 39,700,641	$ 7,738,451	$ —	$ 47,439,092
Other non-current liabilities				
Interest rate swaps	—	311	—	311
Total liabilities	$ 39,700,641	$ 7,738,762	$ —	$ 47,439,403

	2022			
	Level 1	Level 2	Level 3	Total
Assets:				
Clearing Funds				
U.S. Treasury Securities	$ 26,740,038	$ —	$ —	$ 26,740,038
U.S. Agency Issued Debt Securities	217,206	114,038	—	331,244
U.S. Agency Residential Mortgage-Backed Securities	—	2,693,059	—	2,693,059
Other current assets				
Interest rate swaps	—	1,443	—	1,443
Other non-current assets				
Long-term incentive plan assets - Mutual fund and Stable value fund investments	102,528	18,643	—	121,171
Total assets	$ 27,059,772	$ 2,827,183	$ —	$ 29,886,955
Liabilities:				
Clearing Funds				
Securities liabilities	$ 26,957,244	$ 2,807,097	$ —	$ 29,764,341
Total liabilities	$ 26,957,244	$ 2,807,097	$ —	$ 29,764,341

15. FAIR VALUE MEASUREMENTS (CONTINUED)

Financial Assets and Liabilities measured at other than fair value

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

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, 2023 follow (in thousands):

	2023				
	Carrying Amount	Total Fair Value	Level 1	Level 2	Level 3
Assets:					
Cash and cash equivalents	$15,774,381	$15,774,381	$15,774,381	$ —	$ —
Participants' segregated cash	57	57	57	—	—
Short-term investments	250,000	250,000	—	250,000	—
Participants' and Clearing Funds:					
Cash deposits - Bank deposits	35,777,609	35,777,609	35,777,609	—	—
Other Participants' assets	4,510,304	4,510,304	4,510,304	—	—
Total	$56,312,351	$56,312,351	$56,062,351	$ 250,000	$ —
Liabilities:					
Commercial paper	$ 9,076,862	$ 9,076,862	$ —	$ 9,076,862	$ —
Participants' and Clearing Funds:					
Cash deposits - Bank deposits	35,777,609	35,777,609	35,777,609	—	—
Payable to Participants	4,510,361	4,510,361	4,510,361	—	—
Long-term debt	3,731,774	3,682,992	—	3,682,992	—
Total	$53,096,606	$53,047,824	$40,287,970	$12,759,854	$ —

15. FAIR VALUE MEASUREMENTS (CONTINUED)

The carrying values, fair values and fair value hierarchy levels of all financial instruments measured at other than fair value on the accompanying Consolidated Statements of Financial Condition as of December 31, 2022 follow (in thousands):

	2022				
	Carrying Amount	Total Fair Value	Level 1	Level 2	Level 3
Assets:					
Cash and cash equivalents	$16,167,430	$16,167,430	$16,167,430	$ —	$ —
Participants' segregated cash	2,020	2,020	2,020	—	—
Short-term investments	750,000	750,000	—	750,000	—
Participants' and Clearing Funds:					
Cash deposits - Bank deposits	31,970,747	31,970,747	31,970,747	—	—
Other Participants' assets	931,071	931,071	931,071	—	—
Total	$49,821,268	$49,821,268	$49,071,268	$ 750,000	$ —
Liabilities:					
Commercial paper	$ 9,109,638	$ 9,109,638	$ —	$ 9,109,638	$ —
Participants' and Clearing Funds:					
Cash deposits - Bank deposits	31,970,747	31,970,747	31,970,747	—	—
Payable to Participants	933,091	933,091	933,091	—	—
Long-term debt	4,733,593	4,570,058	—	4,570,058	—
Total	$46,747,069	$46,583,534	$32,903,838	$13,679,696	$ —

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

Financial assets measured at fair value on a non-recurring basis include equity investments, which are classified as Level 3 instruments. On October 31, 2023, the Company made a cash investment related to an equity investment, Fnality International Limited, of $6,084,000. The carrying amount of the investments were $7,278,000 and $50,389,000 as of December 31, 2023 and December 31, 2022, respectively. See Note 2 Summary of Significant Accounting Policies - Equity Investment for the sale of Acadia.

16. RETIREMENT PLANS

U.S. 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	
	2023	2022	2023	2022
Benefit obligations, beginning of year:	$ 813,364	$ 1,130,979	$ 46,230	$ 62,473
Service cost	1,147	1,532	272	445
Interest cost	41,897	26,376	2,268	1,361
Gross benefits paid	(66,601)	(77,010)	(1,394)	(1,463)
Expenses paid	(1,365)	(1,445)	—	—
Actuarial loss (gain)	17,706	(267,068)	(6,174)	(16,586)
Total benefit obligations at end of year	$ 806,148	$ 813,364	$ 41,202	$ 46,230
Total accumulated benefit obligations at end of year	$ 804,617	$ 811,279	N/A	N/A

The Accumulated Benefit Obligations are defined as the actuarial present value of Pension benefits attributed to employee services rendered before December 31, 2023 and 2022, and based on employee service and compensation prior to the measurement date.

Funded status. The funded status of the plans, as of December 31, 2023 and 2022, follow (in thousands):

	Pension Benefits				Other Benefits	
	Pension Plan		Other Supplemental Pension Plans		Medical & Life Plans	
	2023	2022	2023	2022	2023	2022
Benefit obligations at end of year:						
Qualified plan	$ 727,906	$ 728,634	$ —	$ —	$ —	$ —
Other plans	—	—	78,242	84,730	41,202	46,230
Total benefit obligations at end of year	727,906	728,634	78,242	84,730	41,202	46,230
Total fair value of plan assets at end of year	766,720	756,941	—	—	—	—
Funded (unfunded) status	$ 38,814	$ 28,307	$ (78,242)	$ (84,730)	$ (41,202)	$ (46,230)
Amounts recognized in the Consolidated Statements of Financial Condition consist of:						
Non-current assets	$ 38,814	$ 28,307	$ —	$ —	$ —	$ —
Current liability	—	—	(24,127)	(17,498)	(3,609)	(3,918)
Non-current liability	—	—	(54,115)	(67,232)	(37,593)	(42,312)
Amount recognized, end of year	$ 38,814	$ 28,307	$ (78,242)	$ (84,730)	$ (41,202)	$ (46,230)

16. RETIREMENT PLANS (CONTINUED)

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	
	2023	2022	2023	2022
Fair value of plan assets, beginning of year	$ 756,941	$ 1,027,140	$ —	$ —
Actual return on plan assets	64,453	(213,928)	—	—
Employer contribution	13,292	22,185	1,394	1,439
Gross benefits paid	(66,601)	(77,010)	(1,394)	(1,439)
Expenses paid	(1,365)	(1,446)	—	—
Fair value of plan assets, end of year	$ 766,720	$ 756,941	$ —	$ —

Details of the classification of plan assets in accordance with the three-tier fair valuation hierarchy and current asset allocations as of December 31, 2023 and 2022, follow (in thousands, except percentages):

	Target Allocation 2023	Percentage of Plan Assets, December 31, 2023	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)(1)	Quoted Prices in Active Markets for Similar Assets (Level 2)(1)
Pension assets as of December 31, 2023:					
Short-term investment fund	0.50 %	0.85 %	$ 6,533	$ —	$ 6,533
Equity Portfolio:					
Domestic large cap growth			14,182	—	14,182
Domestic large cap value			14,246	—	14,246
Domestic large cap core			28,398	—	28,398
Domestic small core			5,969	3,002	2,967
International core			8,868	8,868	—
International emerging markets			2,936	2,936	—
Total equity securities	9.50 %	9.73 %	74,599	14,806	59,793
Fixed income portfolio:					
Domestic liability driven investment (2)	88.00 %	88.44 %	678,112	—	678,112
Guaranteed insurance contracts:					
Group annuity contract (3)	2.00 %	0.98 %	7,476	—	—
Total pension assets as of December 31, 2023			$ 766,720	$ 14,806	$ 744,438

16. RETIREMENT PLANS (CONTINUED)

	Target Allocation 2022	Percentage of Plan Assets, December 31, 2022	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)(1)	Quoted Prices in Active Markets for Similar Assets (Level 2)(1)
Pension assets as of December 31, 2022:					
Short-term investment fund	0.50 %	0.53 %	$ 4,021	$ —	$ 4,021
Equity Portfolio:					
Domestic large cap growth			14,178	—	14,178
Domestic large cap value			14,553	—	14,553
Domestic large cap core			29,081	—	29,081
Domestic small core			5,512	2,740	2,772
International core			8,692	8,692	—
International emerging markets			2,882	2,882	—
Total equity securities	9.50 %	9.90 %	74,898	14,314	60,584
Fixed income portfolio:					
Domestic liability driven investment (2)	88.00 %	88.57 %	670,423	—	670,423
Guaranteed insurance contracts:					
Group annuity contract (3)	2.00 %	1.00 %	7,599	—	—
Total pension assets as of December 31, 2022			$ 756,941	$ 14,314	$ 735,028

(1) Investments are classified based on the lowest level of input that is significant to the fair value measurement.

(2) *Pension Plan concentration of investments.* During 2022, Wells Fargo Institutional Retirement and Trust (Wells Fargo) was the trustee of all investments in the Pension Plan exclusive of the group annuity contract, which was managed by MetLife. Wells Fargo sold the trust and custody business to Principal Financial Group, who became the trustee of the Pension Plan effective February 22, 2022. As of December 31, 2023, the balance included Principal/Multi-Manager Liability Driven Solution Collective Investment Trust I of $363 million and Principal/Multi-Manager Liability Driven Solution Collective Investment Trust II of $308 million, representing 47% and 40% of total investments, respectively. As of December 31, 2022, the balance included Principal/Multi-Manager Liability Driven Solution Collective Investment Trust I of $365 million and Principal/Multi-Manager Liability Driven Solution Collective Investment Trust II of $299 million, representing 48% and 39% of total investments, respectively.

(3) This group annuity contract is accounted for at contract value, which approximates fair value. This investment is reported at contract value because it is the amount received by Plan participants if they were to initiate permitted transactions under the terms of the pension plan. Contract value as reported represents contributions made under the contract, plus earnings, less participant withdrawals and administrative expenses.

16. RETIREMENT PLANS (CONTINUED)

Net periodic benefit expense (income). Net periodic benefit expense (income) are included in Employee compensation and related benefits, Interest expense, and Other non-operating income, net, in the accompanying Consolidated Statements of Income. Details of the components of net periodic benefit expense (income) for the years ended December 31, 2023 and 2022, follow (in thousands):

	Pension Benefits		Other Benefits	
	2023	2022	2023	2022
Components of net periodic benefit expense (income):				
Expected return on plan assets	$ (46,417)	$ (38,124)	$ —	$ —
Interest cost	41,897	26,376	2,268	1,360
Service cost	1,147	1,532	272	444
Amortizations:				
Prior service cost (credit)	87	88	—	(1,040)
Actuarial loss (gain)	95	9,217	(1,474)	135
Settlement loss	1,101	1,628	—	—
Net periodic benefit expense (income)	$ (2,090)	$ 717	$ 1,066	$ 899

Changes in OCI. Details of the changes in plan assets and benefit obligations recognized in OCI for the years ended December 31, 2023 and 2022, follow (in thousands):

	Pension Benefits		Other Benefits	
	2023	2022	2023	2022
Other changes recognized in OCI:				
Net loss (gain) arising during the period	$ (329)	$ (15,015)	$ (6,174)	$ (16,585)
Amortizations:				
Prior service credit (cost)	(87)	(87)	—	1,040
Actuarial and settlement gain (loss)	(1,196)	(10,846)	1,474	(135)
Net other changes in OCI, pre-tax	$ (1,612)	$ (25,948)	$ (4,700)	$ (15,680)

Details of the net amount recognized in Accumulated other comprehensive loss on the accompanying Consolidated Statements of Financial Condition as of December 31, 2023 and 2022, follow (in thousands):

	Pension Benefits		Other Benefits	
	2023	2022	2023	2022
Amount not reflected in net periodic benefit (cost) and included in Accumulated other comprehensive income (loss):				
Prior service credit (cost)	$ (1,478)	$ (1,565)	$ —	$ —
Accumulated income (loss)	(222,326)	(223,851)	12,627	7,926
Accumulated other comprehensive income (loss), pre-tax	$ (223,804)	$ (225,416)	$ 12,627	$ 7,926

16. RETIREMENT PLANS (CONTINUED)

Assumptions for net periodic benefit expense (income). Details for the defined benefit plans assumptions used by actuaries to determine net periodic benefit expense (income) as of December 31, 2023 and 2022 follow:

	Pension Benefits		Other Benefits	
	2023	2022	2023	2022
Weighted-average assumptions used to determine net periodic benefit expense (income) for the years ended December 31:				
Discount rate	5.42%	2.86%	5.41%	2.77%
Expected long-term rate of return on plan assets	5.3%	4.05%	n/a	n/a
Assumed health care cost trend rates as of December 31:				
Health care cost trend rate assumed for next year			6.6%	5.81%
Rate to which the cost trend rate is assumed to decline				
(the ultimate trend rate)			4.00%	4.00%
Year that the rate reaches the ultimate trend rate			2047	2045

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

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

Details for the defined benefit plans assumptions used by actuaries to determine benefit obligations as of December 31, 2023 and 2022 follow:

	Pension Benefits		Other Benefits	
	2023	2022	2023	2022
Weighted-average assumptions used to determine benefit obligations as of December 31:				
Discount rate	5.15%	5.42%	5.13%	5.41%
Rate for interest cost	5.42%	2.49%	5.34%	2.29%
Rate for service cost	n/a	n/a	5.42%	2.93%
Rate for interest on service cost	n/a	n/a	5.42%	2.80%
Assumed health care cost trend rates as of December 31:				
Health care cost trend rate assumed for next year			6.26%	6.60%
Rate to which the cost trend rate is assumed to decline				
(the ultimate trend rate)			4.00%	4.00%
Year that the rate reaches the ultimate trend rate			2047	2047

16. RETIREMENT PLANS (CONTINUED)

Assumptions for defined benefit obligations. Mortality is a key assumption used to determine the benefit obligations for the Company's defined benefit plans. The mortality assumption for all plans uses the Pri-2012 mortality tables projected generationally with scale MMP-2021. The mortality tables use a white collar adjustment for the SERP, Restoration Plan and non-union Retiree Medical and Life Insurance Plans and a blue collar adjustment for the union Retiree Medical and Life Insurance Plans. The Pension Plan continues to use no collar adjustment. On a lump sum basis, mortality is based on the Internal Revenue Service (IRS) prescribed tables projected using scale MP-2021, with segmented interest rate adjustments.

Expected cash flows. The Company did not make any contributions to the Pension Plan during 2023 and 2022. Settlement losses relate to early retirement of executives who elected lump-sum and periodic payments. Settlement losses totaled $1,101,000 and $1,628,000 for the years ended December 31, 2023 and 2022, respectively. There were no participant contributions to the plans in 2023 and 2022.

Details for the benefit payments for the pension plans and other plans for 2023 and 2022 follow (in thousands):

	2023	2022
Pension plans	$ 66,601	$ 77,010
Other plans	1,394	1,439
Total	$ 67,995	$ 78,449

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

	Pension	Employer Benefits Payments	Medicare Subsidy Receipts
2024	$ 78,800	$ 3,609	$ 7
2025	58,526	3,634	6
2026	58,884	3,581	5
2027	60,420	3,493	4
2028	58,569	3,461	4
Thereafter	294,391	15,494	11
Total	$ 609,590	$ 33,272	$ 37

Defined contribution retirement plans. Total expense for the defined contribution retirement plans included in Employee compensation and related benefits in the accompanying Consolidated Statements of Income was $49,768,000 and $49,933,000 for the years ended December 31, 2023 and 2022, respectively.

17. INCOME TAXES

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

Details for the components of the Company's Provision for income taxes for the years ended December 31, 2023 and 2022 follow (in thousands):

	2023	2022
Current income tax/(benefit):		
Federal	$ 135,091	$ 61,228
State and local	44,260	50,521
Foreign	20,175	20,716
Total current income tax/(benefit)	199,526	132,465
Deferred income tax/(benefit):		
Federal	(35,127)	(4,608)
State and local	(22,747)	2,253
Foreign	7,800	(7,030)
Total deferred income tax/(benefit)	(50,074)	(9,385)
Provision for income taxes	$ 149,452	$ 123,080

The 2023 and 2022 effective tax rates differ from the 21% Federal statutory tax rate mainly due to state and local taxes, changes in unrecognized tax benefits, U.S. taxes on foreign operations, rate differential from foreign operations, and valuation allowance. 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, 2023 and 2022 follow:

	2023	2022
U.S. statutory tax rate	21.0 %	21.0 %
State and local income taxes, net of Federal income tax benefit	3.1	7.2
Change in unrecognized tax benefits	1.5	0.4
Research activities	(0.2)	0.2
Benefit on foreign operations	(0.9)	(1.3)
Income from foreign operations	(0.3)	(1.2)
Valuation allowance	(0.2)	0.9
Other	0.8	(0.2)
Effective tax rate	24.8 %	27.0 %

17. INCOME TAXES (CONTINUED)

Details for the components of deferred tax assets and liabilities as of December 31, 2023 and 2022 follow (in thousands):

	2023	2022
Deferred tax assets:		
Accrued compensation and benefits	$ 75,228	$ 87,914
Operating lease liabilities and deferred rent	46,805	57,092
Capitalized Software	9,068	—
Other	39,396	44,772
Total deferred tax assets	170,497	189,778
Deferred tax liabilities:		
Capitalized software	—	(40,636)
Lease right-of-use asset	(33,140)	(42,054)
Investment tax basis difference	(39,000)	(54,685)
Depreciation	(36,866)	(39,758)
Total deferred tax liabilities	(109,006)	(177,133)
Net deferred tax assets before valuation allowance	61,491	12,645
Valuation allowance	(4,709)	(4,203)
Net deferred tax assets	$ 56,782	$ 8,442

A valuation allowance has been recorded against deferred tax assets of $4,709,000 and $4,203,000 as of December 31, 2023 and 2022, respectively, due to uncertainties related to the ability to utilize these assets. In assessing whether its deferred tax assets are realizable, the Company considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized and adjusts the valuation allowance accordingly. The Company considers all available positive and negative evidence including future reversals of existing taxable temporary differences, taxable income in prior carryback years, projected future taxable income, tax planning strategies and recent financial operations. For the remaining deferred tax assets, they are expected to be fully realized and, accordingly, no valuation allowance was established.

Details for unrecognized tax benefits, included in Other non-current liabilities, as of December 31, 2023 and 2022 follow (in thousands):

	2023	2022
Beginning balance	$ 23,645	$ 19,954
Increases:		
Prior period tax positions	3,500	4,635
Current period tax positions	14,955	6,162
Decreases:		
Prior period tax positions	(4,788)	(5,879)
Statute of limitations	(2,066)	(1,227)
Unrecognized tax benefit	35,246	23,645
Accrued interest	3,320	2,309
Ending balance	$ 38,566	$ 25,954

In addition, the Company classifies interest and penalties related to unrecognized tax benefits, if incurred, in Provision for income taxes in its accompanying Consolidated Statements of Income. The Company recognized accrued interest of $1,011,000 and $441,000 for the years ended December 31, 2023 and 2022, respectively.

17. INCOME TAXES (CONTINUED)

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

Details for the periods currently under examination and remaining subject to examination by jurisdiction as of December 31, 2023 follow:

	Tax Years	
Jurisdiction	**Under Examination**	**Subject to Examination**
U.S. Federal - Internal Revenue Service	-	2020 - 2022
New York State	-	2020 - 2022
New York City	2015 - 2017	2020 - 2022
State of Florida	-	2020 - 2022
State of California	2017 - 2018	2020 - 2022
State of New Jersey	2019 - 2021	2022

18. SHAREHOLDERS' EQUITY

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

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

DTCC Series D Fixed Rate Reset Non-Cumulative Perpetual Preferred stock. DTCC issued 2,000 shares of Fixed Rate Reset Non-Cumulative Perpetual Preferred stock, Series D, $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 D Preferred stock are payable in arrears on June 20 and December 20 of each year, beginning December 20, 2021 through June 20, 2026, at a fixed rate of 3.375% per annum. From June 20, 2026 onward, dividends will accrue at a rate equal to the five-year U.S. Treasury rate plus 2.606% per annum.

Details of dividends paid to holders of the Series D Preferred Stock during the year ended December 31, 2023 follow:

Approved and Declared Date	Record Date	Payment Date	Declared Dividend	Shares Outstanding	Dividend Paid
November 1, 2023	November 30, 2023	December 20, 2023	$ 4,218.75	2,000	$ 8,437,500
April 17, 2023	May 31, 2023	June 20, 2023	$ 4,218.75	2,000	$ 8,437,500

18. SHAREHOLDERS' EQUITY (CONTINUED)

Details of dividends paid to holders of the Series D Preferred Stock during the year ended December 31, 2022 follow:

Approved and Declared Date	Record Date	Payment Date	Declared Dividend	Shares Outstanding	Dividend Paid
November 10, 2022	November 10, 2022	December 20, 2022	$ 4,218.75	2,000	$ 8,437,500
May 9, 2022	May 10, 2022	June 21, 2022	$ 4,218.75	2,000	$ 8,437,500

DTC Series A Non-Cumulative Perpetual Preferred stock. Under a plan adopted by the Board of Directors, each Participant of DTC is required to own shares of DTC Series A preferred stock. The ownership of DTC preferred stock is reported as non-controlling interests in the consolidated financial statements. There was $150,000,000 of DTC Series A preferred stock (1,500,000 shares at par value of $100 per share) outstanding as of December 31, 2023 and December 31, 2022. Dividends are subject to regulatory limitations and restrictions per the New York Banking Law and Federal Reserve Act and must be approved and declared by the Board of Directors. When declared, dividend amounts are based on the weighted-average rate of interest paid by the Company on required Participants' Fund deposits during the dividend period as disclosed in the DTC's rules.

There were no dividends declared to holders of the DTC Series A Preferred Stock during the year ended December 31, 2023.

Details of dividends paid to holders of the DTC Series A Preferred Stock during the year ended December 31, 2023 follow:

Approved and Declared Date	Record Date	Payment Date	Declared Dividend	Dividend Paid
February 23, 2022	February 23, 2022	April 11, 2022	$ 45,000	$ 45,000
December 15, 2021	December 17, 2021	January 11, 2022	$ 90,000	$ 90,000

19. CAPITAL REQUIREMENTS

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

General Business Risk Capital Requirement. This capital requirement is held to cover potential general business losses so that the clearing agencies can continue operations and provide services as a going concern if those losses materialize. It is determined based on the general business risk profile and estimated time to execute a recovery or orderly wind-down of critical operations for each of the clearing agencies and, at a minimum, is equal to six months of operating expenses.

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

19. CAPITAL REQUIREMENTS (CONTINUED)

Details of the general business risk capital requirement, corporate contribution and liquid net assets funded by equity for the clearing agencies as of December 31, 2023 and 2022 follow (in thousands):

	2023		
	DTC	NSCC	FICC
General business risk capital requirement	$ 234,639	$ 270,191	$ 163,369
Corporate contribution	117,320	135,096	81,684
Total requirement	351,959	405,287	245,053
Liquid net assets funded by equity	731,373	637,350	393,085
Excess	$ 379,414	$ 232,063	$ 148,032

	2022		
	DTC	NSCC	FICC
General business risk capital requirement	$ 229,966	$ 224,590	$ 150,500
Corporate contribution	114,983	112,295	75,250
Total requirement	344,949	336,885	225,750
Liquid net assets funded by equity	648,185	645,416	336,147
Excess	$ 303,236	$ 308,531	$ 110,397

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 CFTC in the United States; ESMA in Europe; FCA in the UK; OSC in Canada; and the MAS in Singapore.

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

DTC capital and leverage ratios required by the FRBNY and the NYSDFS as of December 31, 2023 follow:

	Ratio	Minimum Capital Ratio[a]	Well Capitalized Ratio[a]
Tier 1 capital ratio [1]	49.94 %	6.00 %	8.00 %
Total capital ratio [1]	49.94 %	8.00 %	10.00 %
Tier 1 leverage ratio [2]	15.07 %	4.00 %	4.00 %

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

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

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

20. GUARANTEES

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

FICC, through GSD, provides real-time trade matching, clearing, netting, risk management and settlement for trades in U.S. government securities, including buy-sell transactions and repurchase agreement ("Repo") transactions. Securities cleared by GSD include U.S. Treasury bills, bonds, notes, STRIPS (zero-coupon securities), floating-rate notes, inflation-indexed securities, and fixed and zero-coupon government agency securities as well as certain eligible agency mortgage-backed securities in its GCF Repo service and Sponsored GC service. The U.S. government securities market is predominantly an over-the-counter market and most buy-sell transactions are settled on trade date plus one day (T+1). Most DVP Repo transactions settle same day, or T+0, via FICC's Same Day Settling service. With the exception of Sponsored GC Trades, eligible trades are guaranteed and novated upon comparison. Regarding Sponsored GC Trades, only the End Leg of such transactions can be novated, and the End Leg of such transactions are novated once all requirements set forth in GSD Rules have been met. 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 intraday supplemental fund deposit, which, if applicable, may be collected on an intraday basis through the Clearing Fund.

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

If a Participant defaults in either NSCC or FICC, such Participant's deposits to the applicable Clearing Fund is the first source of funds and collateral that the NSCC and FICC would use to cover any losses that may result from the close-out and liquidation of the defaulting Participant’s positions. To address potential tail losses, NSCC and FICC each separately maintain additional prefunded resources. These consist of (i) the CCP’s Clearing Fund that, in the aggregate, currently serves as the CCP’s default fund, and (ii) the CCP's corporate contribution, (see Note 19). If, after closing out and liquidating a defaulting Participant’s positions, the CCP were to suffer a loss, such loss would be satisfied as follows: (i) first, applying the defaulter’s Clearing Fund deposit, including any amounts available under cross-guaranty agreements to which the CCPs are a party, described below; (ii) next, the CCPs may apply their corporate contribution (or such higher amount as approved by their Board of Directors), and (iii) by allocating any remaining loss to Participants.

20. GUARANTEES (CONTINUED)

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

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

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

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

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

Details for open CCP positions for which a trade guaranty applied as of December 31, 2023 and 2022 follow (in billions):

	2023	2022
FICC		
GSD	$ 2,231	$ 1,418
MBSD	360	282
NSCC	197	166

There were no defaults by Participants to these obligations in 2023 and 2022.

21. 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 within the global financial services industry. DTCC's global Participant base includes brokers, dealers, institutional investors, banks, trust issuers, mutual fund companies, insurance carriers, hedge funds, qualified institutional buyer clients via the sponsored membership service 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 providing clearing and settlement service to Participants.

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

The Company is exposed to credit risk on a daily basis. This risk arises at DTCC as it guarantees certain obligations of its Participants under specified circumstances pursuant to its rules or 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 for membership; performing continuous monitoring of Participants' financial condition; reviewing Participants' daily activity and determining appropriate collateral requirements; maintaining its risk-based Participants' and Clearing Funds; netting obligations; marking unsettled obligations to market; and utilizing quantitative analytical tools.

To become a Participant 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' or Clearing Funds 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 and/or other forms of surveillance to risk-rate or monitor Participants. The resulting rating or degree of surveillance determines the level of financial review to be performed on each Participant and may impact their Participants' and Clearing Funds 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 a Participant's net debit balance from exceeding 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 testing, stress testing and model performance monitoring of the quality and accuracy of its risk management systems to ensure the adequacy of Participants' and Clearing Fund requirements and to respond to other risk factors that the monitoring may reveal.

DTC maintains a committed, secured line of credit to support potential liquidity needs in the event of a Participant default. NSCC maintains liquid resources to support potential liquidity needs in the event of a Participant default. In addition to the cash deposits to the Clearing Fund, these resources also include the cash that would be obtained from a committed, secured line of credit, proceeds from issuance of senior notes, and proceeds from a commercial paper and extendable note program. NSCC has the Supplemental Liquidity Deposit ("SLD") - a rules-based funding obligation that requires Members whose activity generate liquidity needs in excess of NSCC's then available liquid resources, to fund such additional amounts. SLD deposits must be in cash and are held and maintained in the same manner as other Clearing Fund deposits. FICC maintains a rules-based, committed liquidity resource (i.e., the capped contingency liquidity facility) for each division to support potential liquidity needs in the event of a Participant default.

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

The Company also limits its exposure to potential losses from Participant default 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 unsatisfied obligations of a common defaulting Participant to the extent they have excess resources of the defaulting Participant. NSCC and DTC are also party to a netting contract and limited cross-guaranty agreement that includes special cross-guaranties and related arrangements designed to permit transactions to flow smoothly between DTC's system and NSCC's CNS system in a collateralized environment. These guaranties reduce risk at NSCC by ensuring that long allocations, or the approximate value of long allocations, will be made available to NSCC in a default situation.

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

Credit risk also comes from the investment of financial assets, which consist principally of cash and cash equivalents, investments, accounts receivable and Participants' and Clearing Funds. 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 FRBNY. The Company’s investment policy is designed to limit its exposure with any one financial institution. As part of its credit and risk management processes, the Company performs periodic evaluations of the relative credit standing of the financial institutions with whom it places funds. The Company generally makes deposits with financial institutions having 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 credit ratings 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 in such financial institutions may be adjusted.

Marketable securities. The Company may invest in reverse repurchase agreements, money market funds, bank deposits, and directly in U.S. Treasury securities and debt obligations of the U.S. government or those U.S. government agencies guaranteed by the U.S. government, pursuant to its investment policy. Credit risk related to investments in marketable securities involves the risk of nonperformance by the counterparty, which could result in a material loss.

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

Participants' and Clearing Funds. Cash deposits to the Participants' and Clearing Funds are invested in bank accounts that provide same day access to funds.

Derivatives and hedging. Derivatives may give rise to counterparty credit risk, which is the risk that a derivative counterparty will default on, or otherwise be unable to perform pursuant to, an uncollateralized derivative exposure. To mitigate derivative credit risk, counterparties are required to be pre-approved and rated as investment grade, and counterparty risk exposures are centrally monitored.

22. 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, 2023 and 2022 require management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses. Management believes that the estimates utilized in the preparation of the condensed financial statements are reasonable. Actual results could differ materially from these estimates.

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

	As of December 31,	
	2023	2022
ASSETS:		
Cash and cash equivalents	$ 781,514	$ 1,004,487
Short-term investments	50,000	—
Investments in subsidiaries	2,354,736	1,991,521
Due from subsidiaries	370,669	276,573
Premises, equipment and intangible assets	224,044	176,158
Operating lease right-of-use asset	141,932	170,533
Other assets	479,742	470,591
TOTAL ASSETS	$ 4,402,637	$ 4,089,863
LIABILITIES AND SHAREHOLDERS' EQUITY:		
LIABILITIES:		
Pension and postretirement benefits	$ 119,443	$ 130,999
Operating lease liability	191,830	221,338
Other liabilities	380,787	469,575
Total liabilities	692,060	821,912
SHAREHOLDERS' EQUITY:		
Preferred stock	491,500	491,500
Common stock	5,091	5,091
Additional paid-in capital	411,065	411,065
Retained earnings	2,982,973	2,546,925
Accumulated other comprehensive loss, net of tax	(180,052)	(186,630)
Total shareholders' equity	3,710,577	3,267,951
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	$ 4,402,637	$ 4,089,863

22. PARENT COMPANY CONDENSED FINANCIAL STATEMENTS (CONTINUED)

DTCC Parent Company has an agreement with its subsidiaries whereby the DTCC Parent Company pays for substantially all of the expenses for the operations of its subsidiaries. The related expenses are allocated to subsidiaries based upon their estimated use of such goods or services as determined by applicable allocation factors. Further, the agreement provides that the DTCC Parent Company performs credit and quantitative risk services, and certain other services for its subsidiaries, including among other things, administrative, internal audit, finance and legal services. The billing for these services as a percentage of total allocated expenses ranged from 104% to 108% in 2023 and 2022, 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,	
	2023	**2022**
REVENUES:		
Equity in earnings of subsidiaries	$ 340,424	$ 249,934
Interest and other income	166,192	95,593
Total revenues	506,616	345,527
OPERATING EXPENSES (INCOME):		
Professional services	9,663	11,095
Other	10,035	(35,618)
Total operating expenses (income)	19,698	(24,523)
Income before taxes	486,918	370,050
Provision for income taxes	33,995	37,462
Net income attributable to DTCC	$ 452,923	$ 332,588

22. PARENT COMPANY CONDENSED FINANCIAL STATEMENTS (CONTINUED)

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

	For the years ended December 31, 2023	2022
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net income	$ 452,923	$ 332,588
Adjustments to reconcile net income to net cash provided by/(used in) operating activities:		
Equity in earnings of subsidiaries	(340,424)	(249,934)
Deferred income taxes	(17,672)	17,592
Other	6,275	20,984
Net change in:		
Due from subsidiaries	(94,096)	146,864
Operating lease liability	(7,181)	(17,321)
Other operating assets and liabilities, net	236,068	505,075
Net cash provided by operating activities	235,893	755,848
CASH FLOWS FROM INVESTING ACTIVITIES:		
Investments in subsidiaries	(300,470)	(210,333)
Purchase of Short-term investments	(50,000)	—
Capitalized software development costs and purchases of Premises and equipment	(91,554)	(56,156)
Cash used in investing activities	(442,024)	(266,489)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Preferred stock dividend payments	(16,875)	(16,876)
Cash used in financing activities	(16,875)	(16,876)
Effect of foreign exchange rate changes on Cash and cash equivalents	33	(56)
Net (decrease)/increase in Cash and cash equivalents	(222,973)	472,427
Cash and cash equivalents - Beginning of year	1,004,487	532,060
Cash and cash equivalents - End of year	$ 781,514	$ 1,004,487
SUPPLEMENTAL DISCLOSURES:		
Interest paid	$ 2,276	$ 2,788
Income taxes paid - net of refunds	$ 76,428	$ 5,677

23. SUBSEQUENT EVENTS

The Company evaluated events and transactions occurring after December 31, 2023 through March 25, 2024, the date these consolidated financial statements were available to be issued, for potential recognition or disclosure. No additional events or transactions, other than as disclosed below, occurred during such period that would require recognition or disclosure in these consolidated financial statements.

A 2023 dividend amount of $6,300,000 was approved and declared by the Board of Directors in March 2024, and will be paid in April 2024, to the holders of DTC Series A Preferred stock during 2023.