

Fixed Income Clearing Corporation

Financial Statements as of and for the Years Ended
December 31, 2018 and 2017, and Report of Independent
Registered Public Accounting Firm

FIXED INCOME CLEARING CORPORATION

TABLE OF CONTENTS

	Page
REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM	1
FINANCIAL STATEMENTS AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017:	
Statements of Financial Condition	2
Statements of Income	3
Statements of Changes in Shareholder's Equity	4
Statements of Cash Flows	5
Notes to Financial Statements	6 - 26



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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholder of the
Fixed Income Clearing Corporation
New York, NY

Opinion on the Financial Statements

We have audited the accompanying statements of financial condition of the Fixed Income Clearing Corporation (the "Company") as of December 31, 2018 and 2017, the related statements of income, changes in shareholder's equity, and cash flows, and the related footnotes for each of the two years in the period ended December 31, 2018 (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2018, in conformity with the accounting principles generally accepted in the United States of America.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB and in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

February 28, 2019

We have served as the Company's auditor since 2009.

FIXED INCOME CLEARING CORPORATION
STATEMENTS OF FINANCIAL CONDITION

(In thousands, except share data)	As of December 31,	
	2018	2017
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	\$ 265,724	\$ 236,922
Accounts receivable	9,802	11,490
Clearing Fund	26,522,224	21,252,617
Other Participants' assets	1,618	1,131
Other current assets	7,661	7,632
Total current assets	<u>26,807,029</u>	<u>21,509,792</u>
NON-CURRENT ASSETS:		
Premises and equipment - net of accumulated depreciation of \$304 and \$1,215 as of December 31, 2018 and 2017, respectively	680	701
Intangible assets - net of accumulated amortization of \$77,740 and \$70,840 as of December 31, 2018 and 2017, respectively	27,117	18,391
Total non-current assets	<u>27,797</u>	<u>19,092</u>
TOTAL ASSETS	<u>\$ 26,834,826</u>	<u>\$ 21,528,884</u>
LIABILITIES AND SHAREHOLDER'S EQUITY		
CURRENT LIABILITIES:		
Accounts payable and accrued expenses	\$ 10,328	\$ 6,621
Clearing Fund	26,522,224	21,252,617
Payable to Participants	1,618	1,131
Total current liabilities	<u>26,534,170</u>	<u>21,260,369</u>
OTHER NON-CURRENT LIABILITIES:		
Other non-current liabilities	12,358	14,906
Total liabilities	<u>26,546,528</u>	<u>21,275,275</u>
COMMITMENTS AND CONTINGENCIES (Note 14)		
SHAREHOLDER'S EQUITY		
Common stock, \$0.50 par value - 105,000 shares authorized; 20,400 shares issued and outstanding	10	10
Paid-in capital	86,617	86,617
Retained earnings	201,671	166,982
Total shareholder's equity	<u>288,298</u>	<u>253,609</u>
TOTAL LIABILITIES AND SHAREHOLDER'S EQUITY	<u>\$ 26,834,826</u>	<u>\$ 21,528,884</u>

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

FIXED INCOME CLEARING CORPORATION

STATEMENTS OF INCOME

(In thousands)	For the years ended December 31,	
	2018	2017
REVENUES		
Clearing services	\$ 261,999	\$ 237,111
Other services	563	—
	<u>262,562</u>	<u>237,111</u>
EXPENSES		
Employee compensation and related benefits	83,191	75,155
Information technology	16,372	13,914
Professional and other services	98,320	83,023
Occupancy	4,990	4,343
Depreciation and amortization	7,293	8,418
General and administrative	12,816	9,971
Impairment of Intangible assets	726	—
Total expenses	<u>223,708</u>	<u>194,824</u>
Total operating income	<u>38,854</u>	<u>42,287</u>
NON-OPERATING INCOME (EXPENSE)		
Interest income	155,573	89,326
Refunds to Participants	(151,117)	(87,313)
Interest expense	(4,586)	(5,214)
Other non-operating income	3,854	4,580
Total non-operating income	<u>3,724</u>	<u>1,379</u>
Income before taxes	42,578	43,666
Provision for income taxes	7,889	20,056
Net income	<u>\$ 34,689</u>	<u>\$ 23,610</u>

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

FIXED INCOME CLEARING CORPORATION

STATEMENTS OF CHANGES IN SHAREHOLDER'S EQUITY

<u>(In thousands)</u>	<u>Common Stock</u>	<u>Paid-In Capital</u>	<u>Retained Earnings</u>	<u>Total Shareholder's Equity</u>
BALANCE - January 1, 2017	\$ 10	\$ 86,617	\$ 143,372	\$ 229,999
Net income	—	—	23,610	23,610
BALANCE - December 31, 2017	10	86,617	166,982	253,609
Net income	—	—	34,689	34,689
BALANCE - December 31, 2018	<u>\$ 10</u>	<u>\$ 86,617</u>	<u>\$ 201,671</u>	<u>\$ 288,298</u>

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

FIXED INCOME CLEARING CORPORATION
STATEMENTS OF CASH FLOWS

(In thousands)	For the years ended December 31,	
	2018	2017
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net income	\$ 34,689	\$ 23,610
Adjustments to reconcile net income to net cash provided by/(used in) operating activities:		
Depreciation and amortization	7,293	8,418
Loss on Impairment of Intangible assets	726	—
Discount on Investments in marketable securities	(46)	(21)
Deferred income taxes	4,947	1,807
Net change in:		
Accounts receivable	1,734	2,873
Other assets	(29)	(5,367)
Other Participants' assets	448	(216)
Accounts payable and accrued expenses	3,707	2,403
Other liabilities	(7,495)	4,434
Clearing Fund liabilities, net	(1,993,596)	(844,546)
Payable to Participants	487	264
Net cash provided by/(used in) operating activities	<u>(1,947,135)</u>	<u>(806,341)</u>
CASH FLOWS FROM INVESTING ACTIVITIES:		
Maturities of Investments in marketable securities	75,000	75,000
Purchases of Investments in marketable securities	(50,000)	(75,000)
Purchases of Intangible assets	(16,724)	(11,344)
Net cash provided by/(used in) investing activities	<u>8,276</u>	<u>(11,344)</u>
Net increase/(decrease) in Cash and cash equivalents, Clearing Fund cash deposits, Cash in Other Participants' assets	(1,938,859)	(817,685)
Cash and cash equivalents, Clearing Fund cash deposits, Cash in Other Participants' assets - Beginning of year	<u>9,053,091</u>	<u>9,870,776</u>
Cash and cash equivalents, Clearing Fund cash deposits, Cash in Other Participants' assets - End of year	<u>\$ 7,114,232</u>	<u>\$ 9,053,091</u>
SUPPLEMENTAL DISCLOSURE:		
Cash income taxes paid to DTCC - net of refunds	<u>\$ 7,036</u>	<u>\$ 18,135</u>

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

1. BUSINESS AND OWNERSHIP

Fixed Income Clearing Corporation (FICC or the Company), a clearing agency registered with the U.S. Securities and Exchange Commission (SEC), provides central counterparty (CCP) services to firms that participate in the U.S. government and mortgage-backed securities markets (collectively referred to as Participants). Services provided by FICC consist principally of automated real-time trade comparison, netting, settlement, trade confirmation, risk management and electronic pool notification. FICC has two Divisions, the Government Securities Division (GSD) and the Mortgage-Backed-Securities Division (MBSD).

FICC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation (DTCC). Other subsidiaries of DTCC include The Depository Trust Company (DTC), National Securities Clearing Corporation (NSCC), DTCC ITP LLC, DTCC Deriv/SERV LLC, Business Entity Data, B.V. and DTCC Solutions LLC.

FICC is designated as a Systemically Important Financial Market Utility (SIFMU) by the U.S. Financial Stability Oversight Council pursuant to Title VIII of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, which subjects the Company to enhanced standards for operation and governance, as established by the SEC's Standards for Covered Clearing Agencies (CCAS).

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of presentation. The accompanying Financial Statements are prepared in accordance with generally accepted accounting principles in the United States of America (U.S. GAAP). The Company reclassified prior period amounts related to restricted cash, certain components of net periodic pension cost allocated, and allocated depreciation and amortization to conform to the current year presentation. See below and Note 3 for additional information.

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 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, fair value measurements and other matters that affect the reported amounts. Estimates are based on judgment and available information; therefore, actual results could differ materially from those estimates.

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

Fair value measurements. The Company may be required or permitted to measure and disclose certain assets and liabilities using fair value measurements. Fair value is defined as the price that would be received to sell an asset, or paid to transfer a liability, in an orderly transaction between market participants at the measurement date. The Company uses a three-level classification hierarchy of fair value measurements that establishes the quality of inputs used to measure fair value. The fair value of financial instruments is determined using various techniques that involve some level of estimation and judgment, the degree of which is dependent on the price transparency and the complexity of the instruments.

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

Clearing Fund. The rules of 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 Company. Margin deposits and Participant contributions are maintained within the Clearing Fund on the accompanying 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 may be applied to satisfy obligations of the depositing Participant, other Participants, or the Company as provided in FICC's rules.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

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

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

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 Statements of Income. Premises and equipment are reviewed for impairment whenever events or changes in circumstances indicate the related carrying amount may not be recoverable. The following table summarizes how the Company depreciates Premises and equipment:

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

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

Intangible assets. Intangible assets represent 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.

Intangible assets are reviewed for impairment whenever events or changes in circumstances indicate the related carrying amount may not be recoverable. Intangible assets are amortized over estimated useful lives ranging from three to five years using the straight-line method.

Revenue recognition. On January 1, 2018, the Company adopted Accounting Standard Update (ASU) 2014-09, *Revenue from Contracts with Customers* under the full retrospective method of adoption. See Note 3 for additional information.

The Company recognizes revenue to depict the transfer of promised services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those services. To achieve that principle, the Company applies the following steps: identify the contract(s) with the customer, identify the performance obligations in the contract(s), determine the transaction price, allocate the transaction price to the performance obligations in the contract and recognize revenue when (or as) the entity satisfies a performance obligation.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

The Company recognizes revenue from contracts with customers as performance obligations are satisfied when promised services are transferred to the customer. The majority of the promised services and related performance obligations are recognized at the point in time when the control of the promised service is transferred to the customer.

The amount of revenue recognized reflects the consideration the Company expects to be entitled to for transferring the promised services to the customer. For certain contracts with customers, the consideration in which the Company expects to be entitled to in exchange for transferring promised service to a customer consists of variable consideration. The variable consideration primarily relates to volume based discounts for certain services, however, the volume targets or thresholds typically reset on a monthly basis therefore, the variable consideration does not have an impact on the revenue recognition.

The Company derives its revenue from transaction fees and other services. Revenue from transaction fees is recognized at a point in time on the transaction date, as the customer obtains the control and benefit of the service at that point. Other services, which represent fees generated from offering referential based data and business processing solutions to financial institutions globally, is recognized when services are provided based on contractual terms. The Company typically bills its customers 30 days in arrears.

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

Clearing services. The Company delivers clearing services across the fixed income markets. Clearing services include mortgage backed securities clearing and government securities clearing.

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

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 records a receivable when revenue is recognized prior to payment and there is an unconditional right to payment. See Accounts receivable of the Statements of Financial Condition for the Company's receivables related to revenues from contracts with customers. Alternatively, when payment precedes the provision of the related services, the Company records deferred revenue until the performance obligations are satisfied. Deferred revenue represents the Company's contract liabilities related to billings or payments received in advance for other services, where the performance obligation has not yet been satisfied.

Restricted cash. As a result of the adoption of ASU 2016-18, *Statement of Cash Flows: Restricted Cash* under the full retrospective method of adoption, (see Note 3), the Company has reported the cash and cash equivalents related to Clearing Fund cash deposits, Cash in Other Participants' assets within the beginning and ending balances of Cash and cash equivalents, Clearing Fund cash deposits, Cash in Other Participants' assets on the accompanying Statements of Cash Flows.

A reconciliation of Cash and cash equivalents, Clearing Fund cash deposits, Cash in Other Participants' assets, reported within the Statements of Financial Condition that sum to the total of the same such amounts shown on the Statements of Cash Flows as of December 31, 2018 and 2017 follow (in thousands):

	2018	2017
Cash and cash equivalents	\$ 265,724	\$ 236,922
Clearing Fund cash deposits (see Note 4)	6,847,272	8,815,868
Cash in Other Participants' assets (see Note 5)	1,236	301
Total Cash and cash equivalents, Clearing Fund cash deposits, Cash in Other Participants' assets shown on the Statements of Cash Flows	<u>\$ 7,114,232</u>	<u>\$ 9,053,091</u>

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

As a result of this accounting change, net cash used in operating activities of approximately \$2 billion is primarily driven by the change in Clearing Fund liabilities and Payable to Participants.

Impacts to previously reported results. The impact of the new cash flows standard on the Company's previously reported results for the year ended December 31, 2017 follows (in thousands):

	For the year ended December 31, 2017		
	As Previously Reported	New Restricted Cash Standard Adjustment	As Restated
CASH FLOWS FROM OPERATING ACTIVITIES			
Other Participants' assets	\$ —	\$ (216)	\$ (216)
Clearing Fund liabilities, net	—	(844,546)	(844,546)
Payable to Participants	—	264	264
Net cash provided by/(used in) operating activities	38,157	(844,498)	(806,341)

Income taxes. The Provision for income taxes is computed using the asset and liability method. The tax currently payable is based on taxable income for the year. Taxable income differs from Income before taxes as reported in the accompanying Statement of Income because it excludes items of income or expense that are taxable or deductible in other years and it further excludes items that are never taxable or deductible. The Company records a deferred income tax (benefit) provision when there are 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 in non-current assets or liabilities on the accompanying Statements of Financial Condition. It is the Company's policy to provide for uncertain tax positions and the related interest and penalties based upon management's assessment of whether a tax benefit is more likely than not to be sustained upon examination by the tax authorities.

On December 22, 2017, the Tax Cuts and Jobs Act of 2017 (Tax Reform Act) was signed into law making significant changes to the Internal Revenue Code. Changes include a Federal corporate tax rate decrease from 35% to 21% for tax years beginning after December 31, 2017. The Company accounted for the tax effects of the Tax Reform Act on a provisional basis in its 2017 Financial Statements and completed the related accounting in the fourth quarter of 2018.

Expense allocations. Substantially all expenses are recorded at DTCC and are allocated to its subsidiaries, including FICC, based upon their estimated use of such goods or services as determined by various allocation factors including direct expenses, level of support provided and utilization of technology resources. Accordingly, the expenses in the accompanying Statements of Income represent allocated costs including Employee compensation and related benefits, Information technology, Professional and other services, Occupancy, Depreciation and amortization and General and administrative.

Retirement benefits. On January 1, 2018, the Company adopted ASU 2017-07, *Compensation: Retirement Benefits* under the retrospective method of adoption. See Note 3 for additional information.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Impacts to previously reported results. The impact of the new retirement benefits standard on the Company's previously reported results for the year ended December 31, 2017 follows (in thousands):

	For the year ended December 31, 2017		
	As Previously Reported	New Retirement Benefits Standard Adjustment	As Restated
Employee compensation and related benefits	\$ 75,789	\$ (634)	\$ 75,155
Interest expense	—	(5,214)	(5,214)
Other non-operating income	—	4,580	4,580

Reclassification. In the fourth quarter of 2018, the Company changed its financial statement presentation for allocated depreciation and amortization expenses. Accordingly, the Company reclassified prior period amounts related to allocated depreciation and amortization expenses to conform to the current year presentation. This reclassification had no impact on previously reported total assets, total liabilities, revenues, net income, and cash flows.

Impacts to previously reported results. The impact of the change in presentation for allocated depreciation and amortization on the Company's previously reported results for the year ended December 31, 2017 follows (in thousands):

	For the year ended December 31, 2017		
	As Previously Reported	Reclassification Presentation Adjustment	As Restated
Information technology	\$ 19,200	\$ (5,286)	\$ 13,914
Occupancy	5,563	(1,220)	4,343
General and administrative	3,465	6,506	9,971

3. ACCOUNTING AND REPORTING DEVELOPMENTS

Standard	Description	Impact on the financial statements or other significant matters
<i>Financial Accounting Standards Board Standard Issued, but not yet Adopted</i>		
ASU 2018-14 Changes to the Disclosure Requirements for Defined Benefit Plans <i>Issued August 2018</i>	<ul style="list-style-type: none"> Eliminates requirements for certain disclosures that are no longer considered cost beneficial and requires new ones that the Financial Accounting Standards Board (FASB) considers pertinent. 	<ul style="list-style-type: none"> Effective January 1, 2021. The Company is evaluating the impact on related disclosures in its Financial Statements.
ASU 2018-18 Clarifying how the revenue standard affects the accounting for collaborative arrangements <i>Issued November 2018</i>	<ul style="list-style-type: none"> Amends Collaborative Arrangement to clarify that certain transactions between participants in a collaborative arrangement should be accounted for under new revenue recognition standard when the collaborative partner is considered the customer. Requires revenues from such collaborative contracts to be recognized upon transfer of control of a good or service in the amount of consideration expected to be received from the collaborative partner. Precludes an entity from presenting collaborative arrangement consideration as revenue from contracts with customers if the collaborative partner is not considered the customer. 	<ul style="list-style-type: none"> Effective January 1, 2020. The Company is evaluating the impact on its Financial Statements and related disclosures.
ASU 2018-15 Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement (CCA) That Is a Service Contract <i>Issued August 2018</i>	<ul style="list-style-type: none"> Implementation costs incurred by customers in CCA that is a service contract are deferred if they would be capitalized by customers in software licensing arrangements under the internal-use software guidance. 	<ul style="list-style-type: none"> Effective January 1, 2020. The Company is evaluating the impact on its Financial Statements and related disclosures.
ASU 2018-13 Changes to the Disclosure Requirements for Fair Value Measurement <i>Issued August 2018</i>	<ul style="list-style-type: none"> Entities will no longer be required to disclose the amount of and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy (see Note 8). Public companies will be required to disclose the range and weighted average used to develop significant unobservable inputs for Level 3 fair value measurements. Modifies certain disclosure requirements for nonpublic entities to make them less burdensome. 	<ul style="list-style-type: none"> Effective January 1, 2020. The Company is evaluating the impact on related disclosures in its Financial Statements.

3. ACCOUNTING AND REPORTING DEVELOPMENTS (CONTINUED)

Standard	Description	Impact on the financial statements or other significant matters
<i>Financial Accounting Standards Board Standard Issued, but not yet Adopted (Continued)</i>		
<p>ASU 2016-13 Customer's Financial Instruments - Credit Losses</p> <p><i>Issued June 2016</i></p>	<ul style="list-style-type: none"> • Replaces the current incurred loss approach for credit losses with an "expected loss" model for instruments measured at amortized cost. • Requires all lifetime credit losses for financial assets held at the reporting date to be estimated based on factors such as historical experience, current conditions and forecasts. • Requires entities to record allowances for available-for-sale debt securities. 	<ul style="list-style-type: none"> • Effective January 1, 2020. • The Company is evaluating the impact on its Financial Statements and related disclosures.

Standard	Description	Impact on the financial statements or other significant matters
<i>Recently Adopted Accounting Standards</i>		
<p>ASU 2014-09 Revenue from Contracts with Customers</p> <p><i>Issued May 2014</i></p>	<ul style="list-style-type: none"> • Requires revenue from contracts with customers to be recognized upon transfer of control of a good or service in the amount of consideration expected to be received. • Changes the accounting for certain contract costs, including whether they may be offset against revenue in the accompanying Statements of Income, and requires additional disclosures about revenue and contract costs. • May be adopted using a full retrospective approach or a modified, cumulative effect approach wherein the guidance is applied only to existing contracts as of the day of initial application, and to new contracts transacted after that date. 	<ul style="list-style-type: none"> • Adopted January 1, 2018. • The Company adopted the revenue recognition standard under the full retrospective transition method of adoption. • The Company's implementation efforts included the identification of revenue within the scope of the standard and the evaluation of revenue contracts using the practical expedient portfolio approach. • The adoption of the standard did not have a material impact to the recognition and timing of its revenues.

3. ACCOUNTING AND REPORTING DEVELOPMENTS (CONTINUED)

Standard	Description	Impact on the financial statements or other significant matters
<i>Recently Adopted Accounting Standards (Continued)</i>		
<p>ASU 2017-07 Compensation - Retirement Benefits <i>Issued March 2017</i></p>	<ul style="list-style-type: none"> • Requires the components of the net periodic pension and postretirement benefit costs (service cost, interest cost, and actuarial gains/losses) to be reported separately from one another in the Company's Statements of Income. • Requires retrospective application and presentation in the Statements of Income. 	<ul style="list-style-type: none"> • Adopted January 1, 2018. • The adoption of the standard did not change the Company's net income, but required the Company to reclassify certain components of net periodic pension cost allocated to the Company (Note 9) from Total operating income to Total non-operating income (expense). The service cost component is presented in Employee compensation and related benefits, the interest cost component is presented in Interest expense, and all other components of net periodic pension cost allocated are presented in Other non-operating income (expense) in the accompanying Statements of Income. See Note 2 for additional information.
<p>ASU 2016-18 Statement of Cash Flows - Restricted Cash <i>Issued November 2016</i></p>	<ul style="list-style-type: none"> • Requires inclusion of restricted cash in the cash and cash equivalents balances in the Statements of Cash Flows. • Requires additional disclosures to supplement the Statements of Cash Flows. • Requires retrospective application to all periods presented. 	<ul style="list-style-type: none"> • Adopted January 1, 2018. • The Company adopted the new restricted cash standard under the retrospective method of adoption. • The adoption did not change the Company's Statements of Financial Condition or Statements of Income; however, it resulted in a presentation change related to the Statements of Cash Flows by broadening the definition of cash and cash equivalents to include items that are not on the balance sheet's cash line, e.g., Clearing Fund cash deposits and Cash in Other Participants' assets. See Note 2 for additional information.

FIXED INCOME CLEARING CORPORATION
NOTES TO FINANCIAL STATEMENTS
AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017

4. CLEARING FUND

Details for the Clearing Fund deposits as of December 31, 2018 and 2017 follow (in thousands):

	2018			2017		
	GS Division	MBS Division	Total	GS Division	MBS Division	Total
Required deposits	\$ 13,576,152	\$ 4,477,522	\$ 18,053,674	\$ 10,664,173	\$ 4,306,400	\$ 14,970,573
Excess deposits	7,029,000	1,439,550	8,468,550	5,409,570	872,474	6,282,044
Total	<u>\$ 20,605,152</u>	<u>\$ 5,917,072</u>	<u>\$ 26,522,224</u>	<u>\$ 16,073,743</u>	<u>\$ 5,178,874</u>	<u>\$ 21,252,617</u>

Details for the Clearing Fund deposits as of December 31, 2018 and 2017 follow (in thousands):

	2018			2017		
	GS Division	MBS Division	Total	GS Division	MBS Division	Total
Securities on deposit - at fair value	\$ 15,253,927	\$ 4,421,025	\$ 19,674,952	\$ 10,257,951	\$ 2,153,798	\$ 12,411,749
Cash deposits	5,351,225	1,496,047	6,847,272	5,815,792	3,000,076	8,815,868
Investments in marketable securities	—	—	—	—	25,000	25,000
Total	<u>\$ 20,605,152</u>	<u>\$ 5,917,072</u>	<u>\$ 26,522,224</u>	<u>\$ 16,073,743</u>	<u>\$ 5,178,874</u>	<u>\$ 21,252,617</u>

Details for the Clearing Fund cash deposits and investments in marketable securities as of December 31, 2018 and 2017 follow (in thousands):

	2018	2017
Bank deposits	\$ 5,466,272	\$ 6,116,868
Money market fund investments	931,000	2,139,000
Reverse repurchase agreements	450,000	560,000
U.S. Treasury bills	—	25,000
Total	<u>\$ 6,847,272</u>	<u>\$ 8,840,868</u>

Clearing Fund cash deposits and investments in marketable securities. Cash deposits and investments in marketable securities of the Clearing Fund, may be applied to satisfy obligations of the depositing Participant, other Participants, or the Company as provided in FICC's rules.

FIXED INCOME CLEARING CORPORATION
NOTES TO FINANCIAL STATEMENTS
AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017

5. OTHER PARTICIPANTS' ASSETS AND PAYABLE TO PARTICIPANTS

Details for Other Participants' assets and Payable to Participants as of December 31, 2018 and 2017 follow (in thousands):

	<u>2018</u>	<u>2017</u>
Assets:		
Other Participants' assets:		
Cash in Other Participants' assets	\$ 1,236	\$ 301
Other	382	830
Total Other Participants' assets	<u>\$ 1,618</u>	<u>\$ 1,131</u>
Liabilities:		
Payable to Participants	<u>\$ 1,618</u>	<u>\$ 1,131</u>

6. PREMISES AND EQUIPMENT

The cost, accumulated depreciation and net book value of Premises and equipment for the years ended December 31, 2018 and 2017 follow (in thousands):

	<u>Furniture and equipment</u>	<u>Leasehold improvements</u>	<u>Buildings and improvements</u>	<u>Land</u>	<u>Total</u>
Cost:					
As of January 1, 2017	\$ 17,180	\$ 72	\$ 913	\$ 175	\$ 18,340
Disposals	(16,352)	(72)	—	—	(16,424)
As of December 31, 2017	828	—	913	175	1,916
Disposals	(828)	—	(104)	—	(932)
As of December 31, 2018	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 809</u>	<u>\$ 175</u>	<u>\$ 984</u>
Accumulated depreciation:					
As of January 1, 2017	\$ 17,180	\$ 72	\$ 365	\$ —	\$ 17,617
Depreciation expense	—	—	22	—	22
Disposals	(16,352)	(72)	—	—	(16,424)
As of December 31, 2017	828	—	387	—	1,215
Depreciation expense	—	—	21	—	21
Disposals	(828)	—	(104)	—	(932)
As of December 31, 2018	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 304</u>	<u>\$ —</u>	<u>\$ 304</u>
Net book value:					
As of January 1, 2017	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 548</u>	<u>\$ 175</u>	<u>\$ 723</u>
As of December 31, 2017	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 526</u>	<u>\$ 175</u>	<u>\$ 701</u>
As of December 31, 2018	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 505</u>	<u>\$ 175</u>	<u>\$ 680</u>

FIXED INCOME CLEARING CORPORATION
NOTES TO FINANCIAL STATEMENTS
AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017

7. INTANGIBLE ASSETS

The gross carrying value, accumulated amortization and net carrying value of capitalized software for the years ended December 31, 2018 and 2017 follow (in thousands):

	<u>Capitalized Software</u>
Gross carrying value:	
As of January 1, 2017	\$ 126,947
Additions	11,344
Disposals	(49,060)
As of December 31, 2017	<u>89,231</u>
Additions	16,724
Impairment	(1,098)
As of December 31, 2018	<u><u>\$ 104,857</u></u>
Accumulated amortization:	
As of January 1, 2017	\$ 111,504
Amortization expense	8,396
Disposals	(49,060)
As of December 31, 2017	<u>70,840</u>
Amortization expense	7,272
Impairment	(372)
As of December 31, 2018	<u><u>\$ 77,740</u></u>
Net carrying value:	
As of January 1, 2017	<u>\$ 15,443</u>
As of December 31, 2017	<u><u>\$ 18,391</u></u>
As of December 31, 2018	<u><u>\$ 27,117</u></u>

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

2019	\$ 8,034
2020	9,464
2021	6,952
2022	2,667
Total future estimated amortization	<u><u>\$ 27,117</u></u>

The Company recognized impairment charges of \$726,000 and \$0 related to capitalized software for the years ended December 31, 2018 and 2017, respectively, that were determined to have no realizable value. The impairment charges were included in Impairment of Intangible assets in the accompanying Statements of Income.

8. FAIR VALUE MEASUREMENTS

Valuation hierarchy

U.S. GAAP provides for a three-level valuation hierarchy based on the transparency of inputs to the valuation of an asset or liability as of the measurement date. Details for the descriptions 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
<u>Assets - Clearing Fund - Securities on deposit</u>		
U.S. Treasury Securities	Obtained from pricing services engaged by the Company, and the Company receives one price for each security. The fair values provided by the pricing services are estimated using pricing models, where the inputs to those models are based on observable market inputs.	Level 1
U. S. Agency Issued Debt Securities (Non-Callable)		
U. S. Agency Issued Debt Securities (Callable)	Recent trades of similar securities.	Level 2
U.S. Agency Residential Mortgage-Backed Securities		
<u>Liabilities - Clearing Fund - Securities on deposit</u>		
Clearing Fund liabilities	Derived from the corresponding Clearing Fund assets (see above).	Level 1
		Level 2

FIXED INCOME CLEARING CORPORATION
NOTES TO FINANCIAL STATEMENTS
AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017

8. FAIR VALUE MEASUREMENTS (CONTINUED)

Fair value measurements for those items measured on a recurring basis are summarized below as of December 31, 2018 and 2017 (in thousands):

	2018			
	Level 1	Level 2	Level 3	Total
Assets - Clearing Fund				
Securities on deposit	\$ 16,045,178	\$ 3,629,774	\$ —	\$ 19,674,952
Clearing Fund - Securities liabilities	\$ 16,045,178	\$ 3,629,774	\$ —	\$ 19,674,952
	2017			
	Level 1	Level 2	Level 3	Total
Assets - Clearing Fund				
Securities on deposit	\$ 10,634,255	\$ 1,777,494	\$ —	\$ 12,411,749
Clearing Fund - Securities liabilities	\$ 10,634,255	\$ 1,777,494	\$ —	\$ 12,411,749

There were no transfers between levels within the fair value hierarchy, nor were any amounts classified as Level 3 during the years ended December 31, 2018 and 2017.

Financial assets and liabilities measured at other than fair value. For financial assets not required to be carried at fair value on a recurring basis the Company applies the following valuation techniques to measure fair value:

Product/Instrument	Valuation Methodology	Classification in the valuation hierarchy
<u>Assets - Current Assets - Clearing Fund</u>		
<u>Investments in marketable securities</u>		
U.S. Treasury bills	Obtained from pricing services engaged by the Company, and the Company receives one price for each security. The fair values provided by the pricing services are estimated using pricing models, where the inputs to those models are based on observable market inputs or recent trades of similar securities.	Level 1

Financial assets and liabilities whose carrying value approximates fair value. The carrying values of certain assets and liabilities approximate their fair values because they are short-term in duration, have no defined maturity, or have market-based interest rates. These instruments include Cash and cash equivalents, Accounts receivable, Clearing Fund - Cash deposits, Other Participants' assets, Accounts payable and accrued expenses and Payable to Participants.

FIXED INCOME CLEARING CORPORATION
NOTES TO FINANCIAL STATEMENTS
AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017

8. FAIR VALUE MEASUREMENTS (CONTINUED)

The tables below present the carrying values, fair values and fair value hierarchy levels of all financial instruments measured at other than fair value on the accompanying Statements of Financial Condition as of December 31, 2018 and 2017 (in thousands):

	2018				
	Carrying Amount	Total Fair Value	Level 1	Level 2	Level 3
Assets:					
Cash and cash equivalents	\$ 265,724	\$ 265,724	\$ 265,724	\$ —	\$ —
Accounts receivable	9,802	9,802	—	9,802	—
Clearing Fund:					
Cash deposits	6,847,272	6,847,272	6,397,272	450,000	—
Other Participants' assets	1,618	1,618	1,236	382	—
Total	\$ 7,124,416	\$ 7,124,416	\$ 6,664,232	\$ 460,184	\$ —
Liabilities:					
Accounts payable and accrued expenses	\$ 10,328	\$ 10,328	\$ —	\$ 10,328	\$ —
Clearing Fund - Cash deposits liabilities	6,847,272	6,847,272	6,847,272	—	—
Payable to Participants	1,618	1,618	1,618	—	—
Total	\$ 6,859,218	\$ 6,859,218	\$ 6,848,890	\$ 10,328	\$ —
2017					
	Carrying Amount	Total Fair Value	Level 1	Level 2	Level 3
Assets:					
Cash and cash equivalents	\$ 236,922	\$ 236,922	\$ 236,922	\$ —	\$ —
Accounts receivable	11,490	11,490	—	11,490	—
Clearing Fund:					
Cash deposits	8,815,868	8,815,868	8,255,868	560,000	—
Investments in marketable securities	25,000	24,920	24,920	—	—
Other Participants' assets	1,131	1,131	301	830	—
Total	\$ 9,090,411	\$ 9,090,331	\$ 8,518,011	\$ 572,320	\$ —
Liabilities:					
Accounts payable and accrued expenses	\$ 6,621	\$ 6,621	\$ —	\$ 6,621	\$ —
Clearing Fund - Cash deposits liabilities	8,840,868	8,840,868	8,840,868	—	—
Payable to Participants	1,131	1,131	1,131	—	—
Total	\$ 8,848,620	\$ 8,848,620	\$ 8,841,999	\$ 6,621	\$ —

Financial assets measured at fair value on a non-recurring basis. Certain assets are subject to measurement at fair value on a non-recurring basis. For these assets, measurement at fair value in periods subsequent to their initial recognition is applicable if determined to be impaired. Fair value is based on discounted cash flow analyses or comparing values of similar instruments. Discounted cash flow analyses are dependent upon various factors including estimated future cash flows, interest rate yield curves and volatility of inputs.

Fair values on the aforementioned impairments disclosed in Note 7 were based on discounted cash flows using Level 3 inputs under the fair value guidance. The cash flows are those expected to be generated by the market participants, discounted at a rate commensurate with the risk of the cash flows.

9. PENSION AND POSTRETIREMENT BENEFITS

Eligible DTCC employees participate in DTCC’s trustee non-contributory defined benefit pension plan, supplemental executive retirement plan and benefit restoration plan, which provide for certain benefits upon retirement. Eligible DTCC employees also participate in DTCC’s life insurance program, which provides for the payment of death benefits to beneficiaries of eligible retired employees, and DTCC’s health care program, which provides benefits to eligible retired employees.

Cost allocation. DTCC allocates the cost of these plans to its subsidiaries based primarily upon the estimated proportion of each subsidiary’s salary cost relative to DTCC’s total salary cost. The benefit plan costs allocated to FICC were \$1,682,000 and \$1,825,000 for the years ended December 31, 2018 and 2017, respectively. These costs are included in Employee compensation and related benefits, Interest expense, and Other non-operating income in the accompanying Statements of Income.

10. INCOME TAXES

FICC is included in DTCC’s consolidated Federal and various state tax returns. FICC also files other state tax returns on a separate company basis.

Details for the components of the Company’s Provision (Benefit) for income taxes calculated on a separate company basis for the years ended December 31, 2018 and 2017 follow (in thousands):

	<u>2018</u>	<u>2017</u>
Current income tax/(benefit):		
Federal	\$ 4,898	\$ 10,366
State and local	3,694	2,200
Total current income tax/(benefit)	<u>8,592</u>	<u>12,566</u>
Deferred income tax/(benefit):		
Federal	3,945	822
State and local	(4,648)	6,668
Total deferred income tax/(benefit)	<u>(703)</u>	<u>7,490</u>
Provision for income taxes	<u>\$ 7,889</u>	<u>\$ 20,056</u>

Pursuant to a tax sharing agreement between DTCC and FICC, the Company is liable for its allocable share of Federal, state and local tax liabilities that are paid by DTCC. For the years ended December 31, 2018 and 2017, the Company paid income taxes to DTCC, net of refunds, of \$7,036,000 and \$18,135,000, respectively.

The Company recognized a provisional income tax benefit of \$1,766,000 in 2017 as a result of the Tax Reform Act, which was included as a component of the Company's Provision for income taxes. The Company completed its analysis within the one year measurement period from the enactment date and recorded a tax benefit of \$338,000 for the year ended December 31, 2018.

FIXED INCOME CLEARING CORPORATION
NOTES TO FINANCIAL STATEMENTS
AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017

10. INCOME TAXES (CONTINUED)

The 2018 and 2017 effective tax rates differ from the 21% and 35% Federal statutory rate, respectively, primarily due to state and local taxes, changes in unrecognized tax benefits, the enactment of the Tax Reform Act, and settlements of tax audits. 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, 2018 and 2017 follow:

	<u>2018</u>	<u>2017</u>
U.S. statutory tax rate	21.0%	35.0%
State and local income taxes, net of Federal tax benefit	6.3	5.5
Change in unrecognized tax benefits	(10.5)	10.3
Enactment of the Tax Reform Act	(0.8)	(4.0)
Settlements of tax audits	3.4	0.1
Other	(0.9)	(1.0)
Effective tax rate	<u>18.5%</u>	<u>45.9%</u>

Details for the components of deferred tax assets and liabilities as of December 31, 2018 and 2017 follow (in thousands):

	<u>2018</u>	<u>2017</u>
<u>Deferred tax assets:</u>		
Accrued compensation and benefits	\$ —	\$ 326
Depreciation	50	54
Deferred rent	776	939
Other	905	2,092
Total deferred tax assets	<u>1,731</u>	<u>3,411</u>
<u>Deferred tax liabilities:</u>		
Accrued compensation and benefits	(929)	—
Capitalized software	(8,850)	(6,512)
Total deferred tax liabilities	<u>(9,779)</u>	<u>(6,512)</u>
Net deferred tax liabilities	<u>\$ (8,048)</u>	<u>\$ (3,101)</u>

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

Details for unrecognized tax benefits as of December 31, 2018 and 2017 follow (in thousands):

	<u>2018</u>	<u>2017</u>
Beginning balance at January 1,	\$ 5,647	\$ 2,639
Increases based on prior period tax positions	—	3,098
Decreases based on prior period tax positions	(2,432)	(75)
Decreases related to lapses in statute	(15)	—
Decreases related to settlements with taxing authorities	(950)	(15)
Ending balance as of December 31,	<u>\$ 2,250</u>	<u>\$ 5,647</u>

The Company classifies interest and penalties related to unrecognized tax benefits, if incurred, in Provision for income taxes in its accompanying Statements of Income. As of December 31, 2018 and 2017, accrued interest related to unrecognized tax benefits recorded on the accompanying Statements of Financial Condition totaled \$2,059,000 and \$4,313,000, respectively.

10. INCOME TAXES (CONTINUED)

Details for the periods currently under examination and remaining subject to examination by jurisdiction as of December 31, 2018 follow:

Jurisdiction	Tax Years	
	Under Examination	Subject to Examination
U.S. Federal - Internal Revenue Service	-	2015 - 2017
New York State	-	2015 - 2017
New York City	2010 - 2014	2015 - 2017
State of Illinois	2012 - 2013	2014 - 2017

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 our income tax provision and our results of operations.

11. TRANSACTIONS WITH RELATED PARTIES

In the ordinary course of the business, the Company enters into significant related party transactions with DTCC and its other subsidiaries.

Transactions with DTCC. FICC has an agreement with DTCC whereby DTCC pays for substantially all of the operational expenses of FICC. The related expenses are allocated to FICC based upon its estimated use of such goods or services. Further, the agreement provides that DTCC performs credit and quantitative risk services, and certain other services for FICC including administrative, internal audit, finance and legal services. In 2018 and 2017, the billing for these services was 107% and 108% of total allocated expenses, respectively, excluding charges passed through to Participants and capitalized software costs. The fee, representing the amount in excess of the actual cost, is included in Professional and other services in the accompanying Statements of Income. From time-to-time, the Company funds purchases of long-term assets acquired by DTCC on its behalf.

Details for related party transactions for 2018 and 2017 follow (in thousands):

Related party	Expenses		Payables ⁽²⁾	
	For the years ended December 31,		As of December 31,	
	2018	2017	2018	2017
DTCC ⁽¹⁾	\$ 13,660	\$ 13,539	\$ 4,725	\$ 2,988

(1) DTCC expenses relate to the 7% and 8% mark-up fee for services described above.

(2) Included in Accounts payable and accrued expenses on the accompanying Statements of Financial Condition.

12. CAPITAL REQUIREMENTS

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

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

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

Details for general business risk capital requirement, corporate contribution and liquid net assets funded by equity for the Company as of December 31, 2018 and 2017 follow (in thousands):

	<u>2018</u>	<u>2017</u>
General business risk capital requirement	\$ 107,845	\$ 93,203 ^(a)
Corporate contribution	53,922	46,602
Total requirement	<u>161,767</u>	<u>139,805 ^(a)</u>
Liquid net assets funded by equity	265,724	236,922
Excess/(shortfall)	<u>\$ 103,957</u>	<u>\$ 97,117</u>

(a) Restated due to the retrospective adoption of ASU 2017-07 *Compensation: Retirement Benefits*, which resulted in a reclassification of certain components of net periodic pension cost allocated from Total operating income to Total non-operating income (expense). See Notes 2 and 3 for additional information.

13. CREDIT RATINGS

Credit Ratings. The Company is rated by Moody's Investors Service, Inc. (Moody's) and S&P Global Inc. (S&P). Details for senior debt ratings and ratings outlooks for the Company as of December 31, 2018 follow:

Moody's ⁽¹⁾			S&P		
Long-term	Short-term	Outlook	Long-term	Short-term	Outlook
Aaa	P-1	Stable	AA	A-1+	Stable

(1) Moody's categorizes the long-term issuer ratings of the Company as a clearing counterparty rating (CCR) under the agency's Clearing Houses Rating Methodology.

14. COMMITMENTS AND CONTINGENCIES

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

15. GUARANTEES

FICC, through GSD and MBSD, provides CCP services, including clearing, settlement and risk management services. Acting as a CCP, FICC guarantees the settlement of trades in the event one or more of its Participants defaults. A Participant default is defined in each division's rules. In its guarantor role, FICC has equal claims to and from Participants on opposite sides of netted transactions. To cover its guarantee risk, FICC uses risk-based margining to collect cash and securities collateral through its Clearing Fund. FICC maintains separate Clearing Funds for each of GSD and MBSD.

GSD provides real-time trade matching, clearing, netting, risk management and settlement for trades in U.S. government debt including buy-sell transactions and repurchase agreement transactions. Securities processed by GSD include Treasury bills, bonds, notes, zero-coupon securities, government agency securities and inflation-indexed securities. The U.S. Government securities market is predominantly an over-the-counter market and most transactions are settled on trade date plus one day (T+1). Trades are guaranteed and novated upon comparison.

FICC's 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 required fund deposit, which, if applicable, may be collected on an intra-day basis through the Clearing Fund.

MBSD provides real-time trade matching, clearing, netting, risk management and settlement for trades in the U.S. mortgage-backed securities market. Specifically, MBSD processes to-be-announced transactions, specified pool trades and stipulated trades.

FICC's guarantee of MBSD transactions may result in potential liability to FICC. Guaranteed positions that have not yet settled are margined and collateralized daily through the Clearing Fund. The daily Clearing Fund includes a mark-to-market component that is calculated using guaranteed positions and prices as of prior end-of-day. In addition, a Participant may become subject to an intraday mark-to-market charge which, if applicable, may be collected on an intra-day basis through the Clearing Fund.

Details for each division's open positions for which a trade guarantee applied as of December 31, 2018 and 2017 follow (in billions):

Division	2018	2017
GSD	\$ 1,160	\$ 1,039
MBSD	333	312

There were no defaults by Participants to these obligations.

If a Participant defaults, such Participant's deposits to the applicable division's Clearing Fund is the first source of funds and collateral that FICC would use to cover any losses that may result from the close-out and liquidation of the defaulting Participant's positions. This includes any amounts that may be available from FICC's multilateral netting contract and limited cross-guaranty agreement with DTC, NSCC and The Options Clearing Corporation (OCC) (the "Cross-Guaranty Agreement"). In accordance with this agreement, these clearing agencies have agreed to make payments to each other for unsatisfied obligations of a common defaulting Participant to the extent that these clearing agencies have excess resources belonging to the defaulting Participant. Each division would apply its own respective resources and determine its own liquidation results. In determining FICC's available net resources for purposes of the Cross-Guaranty Agreement, FICC would first offset the available net resources of GSD with those of MBSD.

In addition, with respect to GSD, FICC has entered into a cross-margining agreement with the Chicago Mercantile Exchange Inc. (CME). Under this agreement, FICC and CME would apply available amounts to each other under specified circumstances.

15. GUARANTEES (CONTINUED)

If FICC incurs a loss resulting from the liquidation of a defaulting Participant and there is still a deficit after applying such Participant's deposits to the applicable division's Clearing Fund (along with any other resources of, or attributable to, the defaulting Participant that FICC may access under each division's rules), FICC will, in accordance with each division's rules, satisfy this deficit by applying the corporate contribution, (see Note 12), or such greater amount as the Board of Directors may determine, before allocating any remaining loss to Participants.

For purposes of loss allocation, Participant defaults are grouped together chronologically into discrete event periods of 10 business days. If there is remaining loss or liability from one or more Participant default events that occurred within the same event period, the division will divide such obligation between Tier 1 Participants and Tier 2 Participants. Tier 2 Participants will only be subject to such loss or liability to the extent they traded with the defaulting Participant. Tier 1 Participants will be assessed ratably in accordance with the respective amounts of their average daily required deposit to the Clearing Fund over the prior 70 business days. 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.

16. OFF BALANCE SHEET AND CONCENTRATION OF CREDIT RISKS

As a CCP, FICC is exposed to significant credit risk to third-parties including its customer base, which extends to companies within the global financial services industry. 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 primarily derived from clearing and settlement service operations. Customers are based in the United States of America and overseas and include participating brokers, dealers, banks, mutual fund companies, insurance carriers and other financial intermediaries. Credit risk also comes from financial assets, which consist principally of cash and cash equivalents, investments, accounts receivable and the Clearing Fund.

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 the securities industry and debt-issuing countries.

Cash and cash equivalents. The Company maintains cash and cash equivalents with various financial institutions including the Federal Reserve Bank. These financial institutions are located in the United States of America and Canada, and the Company's policy is designed to limit exposure with any one financial institution. As part of its credit and risk management processes, the Company performs periodic evaluations of the relative credit standing of the financial institutions with whom it places funds. The Company generally makes deposits with financial institutions 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 condition of the financial institutions with whom it places funds on an ongoing basis to identify any significant change in a financial institution's condition. If such a change takes place, the amounts deposited in such financial institutions may be adjusted.

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

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

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

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

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

The Company is exposed to credit risk on a daily basis. This risk arises at FICC as it guarantees certain obligations of its Participants under specified circumstances. 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 FICC clearing and settlement system. Various tools are utilized to mitigate these risks including, but not limited to: setting capital adequacy standards; assessing new applicants; performing continuous monitoring of Participants' financial condition; reviewing Participants' daily trading activity and determining appropriate collateral requirements; maintaining the Clearing Fund; trade and netting trades continuously; marking unsettled trades to market; and utilizing a variety of advanced quantitative analytical methodologies, such as back and stress testing.

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

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

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

The Company also limits its exposure to potential losses from default by Participants through its multilateral netting contract and limited cross-guaranty agreements with DTC, NSCC and OCC. 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.

17. SUBSEQUENT EVENTS

The Company evaluated events and transactions occurring after December 31, 2018 through February 28, 2019, for potential recognition or disclosure in these accompanying Financial Statements. No events or transactions occurred during such period that would require recognition or disclosure in these accompanying Financial Statements.