# CHICAGO MERCANTILE EXCHANGE INC.
# AND SUBSIDIARIES

## Financial Statements

## For the Years Ended December 31, 2021 and 2020

**CHICAGO MERCANTILE EXCHANGE INC. AND SUBSIDIARIES**
**FINANCIAL STATEMENTS**
**INDEX**


| | Page |
|---|---|
| Report of Independent Auditors | 2 |
| Consolidated Balance Sheets at December 31, 2021 and 2020 | 4 |
| Consolidated Statements of Income for the Years Ended December 31, 2021 and 2020 | 5 |
| Consolidated Statements of Comprehensive Income for the Years Ended December 31, 2021 and 2020 | 6 |
| Consolidated Statements of Shareholder's Equity for the Years Ended December 31, 2021 and 2020 | 7 |
| Consolidated Statements of Cash Flows for the Years Ended December 31, 2021 and 2020 | 8 |
| Notes to Consolidated Financial Statements | 9 |

Ernst & Young LLP
155 North Wacker Drive
Chicago, IL 60606-1787

Tel: +1 312 879 2000
Fax: +1 312 879 4000
www.ey.com

# Report of Independent Auditors

**The Board of Directors and Shareholders of**
**Chicago Mercantile Exchange Inc. and Subsidiaries**

## Opinion

We have audited the consolidated financial statements of Chicago Mercantile Exchange Inc. and subsidiaries, ("the Company"), which comprise the consolidated balance sheets as of December 31, 2021 and 2020, and the related consolidated statements of income, comprehensive income, shareholder's equity and cash flows for the years then ended, and the related notes (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 at December 31, 2021 and 2020, 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 of 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 of 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.

Ernst + Young LLP

March 18, 2022

## CHICAGO MERCANTILE EXCHANGE INC. AND SUBSIDIARIES

### CONSOLIDATED BALANCE SHEETS
**(in millions, except share and per share data)**

| | December 31, 2021 | December 31, 2020 |
|---|---|---|
| **Assets** | | |
| Current Assets: | | |
| Cash and cash equivalents | $ 605.1 | $ 539.5 |
| Marketable securities | 86.7 | 72.9 |
| Accounts receivable, net of allowance of $2.9 and $2.5 | 171.5 | 140.4 |
| Other current assets | 141.6 | 77.0 |
| Due from affiliates | 237.2 | 277.1 |
| Intercompany loan receivable | 59.5 | — |
| Performance bonds and guaranty fund contributions | 157,949.4 | 86,781.7 |
| Total current assets | 159,251.0 | 87,888.6 |
| Property, net | 390.4 | 400.0 |
| Goodwill | 17.7 | 17.7 |
| Intercompany loan receivable | — | 27.0 |
| Other assets | 209.8 | 264.0 |
| **Total Assets** | $ 159,868.9 | $ 88,597.3 |
| **Liabilities and Shareholder's Equity** | | |
| Current Liabilities: | | |
| Accounts payable | $ 32.2 | $ 47.4 |
| Other current liabilities | 231.6 | 207.6 |
| Due to affiliates | 60.1 | 75.8 |
| Performance bonds and guaranty fund contributions | 157,949.4 | 86,781.7 |
| Total current liabilities | 158,273.3 | 87,112.5 |
| Other liabilities | 389.6 | 398.9 |
| Total Liabilities | 158,662.9 | 87,511.4 |
| Shareholder's Equity: | | |
| Common stock, $0.01 par value, 1,000 shares authorized, 100 shares issued and outstanding | — | — |
| Additional paid-in capital | 1,060.4 | 1,006.1 |
| Retained earnings | 179.5 | 136.1 |
| Accumulated other comprehensive income (loss) | (33.9) | (56.3) |
| Total Shareholder's Equity | 1,206.0 | 1,085.9 |
| **Total Liabilities and Shareholder's Equity** | $ 159,868.9 | $ 88,597.3 |

See accompanying notes to consolidated financial statements.

**CHICAGO MERCANTILE EXCHANGE INC. AND SUBSIDIARIES**

**CONSOLIDATED STATEMENTS OF INCOME**
**(in millions)**

| | Year Ended December 31, | |
|---|---|---|
| | **2021** | **2020** |
| **Revenues** | | |
| Clearing and transaction fees | $ 1,348.4 | $ 1,359.6 |
| Fees from affiliates | 685.4 | 628.0 |
| Market data and information services | 196.1 | 177.1 |
| Other | 199.7 | 226.4 |
| **Total Revenues** | 2,429.6 | 2,391.1 |
| **Expenses** | | |
| Compensation and benefits | 506.1 | 495.7 |
| Technology support services | 144.2 | 129.8 |
| Professional fees and outside services | 64.2 | 94.3 |
| Depreciation and amortization | 111.8 | 105.6 |
| Licensing and other fee agreements | 219.7 | 221.5 |
| Other | 395.7 | 414.5 |
| **Total Expenses** | 1,441.7 | 1,461.4 |
| **Operating Income** | 987.9 | 929.7 |
| **Non-Operating Income (Expense)** | | |
| Investment income | 185.5 | 182.7 |
| Interest and other borrowing costs | (22.1) | (24.8) |
| Other | (89.3) | (123.9) |
| **Total Non-Operating Income (Expense)** | 74.1 | 34.0 |
| **Income before Income Taxes** | 1,062.0 | 963.7 |
| Income tax provision | 256.6 | 226.2 |
| **Net Income** | $ 805.4 | $ 737.5 |

See accompanying notes to consolidated financial statements.

**CHICAGO MERCANTILE EXCHANGE INC. AND SUBSIDIARIES**

**CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME**
**(in millions)**

| | Year Ended December 31, | |
|---|---|---|
| | **2021** | **2020** |
| **Net income** | $ 805.4 | $ 737.5 |
| Other comprehensive income, net of tax: | | |
| Defined benefit plan: | | |
| Net change in defined benefit plan arising during the period | 25.5 | (7.4) |
| Amortization of net actuarial losses and prior service costs included in pension expense | 4.4 | 4.6 |
| Income tax benefit (expense) | (7.5) | 0.7 |
| Defined benefit plan, net | 22.4 | (2.1) |
| Other comprehensive income (loss), net of tax | 22.4 | (2.1) |
| **Comprehensive income** | $ 827.8 | $ 735.4 |

See accompanying notes to consolidated financial statements.

## CHICAGO MERCANTILE EXCHANGE INC. AND SUBSIDIARIES

## CONSOLIDATED STATEMENTS OF SHAREHOLDER'S EQUITY
**(in millions, except shares)**

| | Common Stock (shares) | Common Stock and Additional Paid-in Capital | Retained Earnings | Accumulated Other Comprehensive Income (Loss) | Total Shareholder's Equity |
|---|---|---|---|---|---|
| **Balance at December 31, 2019** | 100 | $ 935.2 | $ 217.6 | $ (54.2) | $ 1,098.6 |
| Net income | | | 737.5 | | 737.5 |
| Other comprehensive income (loss) | | | | (2.1) | (2.1) |
| Cash dividends to CME Group Inc. | | | (819.0) | | (819.0) |
| Stock-based compensation | | 70.9 | | | 70.9 |
| **Balance at December 31, 2020** | 100 | 1,006.1 | 136.1 | (56.3) | 1,085.9 |
| Net income | | | 805.4 | | 805.4 |
| Other comprehensive income (loss) | | | | 22.4 | 22.4 |
| Cash dividends to CME Group Inc. | | | (762.0) | | (762.0) |
| Stock-based compensation | | 54.3 | | | 54.3 |
| **Balance at December 31, 2021** | 100 | $ 1,060.4 | $ 179.5 | $ (33.9) | $ 1,206.0 |

See accompanying notes to consolidated financial statements.

**CHICAGO MERCANTILE EXCHANGE INC. AND SUBSIDIARIES**

**CONSOLIDATED STATEMENTS OF CASH FLOWS**
**(in millions)**

| | Year Ended December 31, 2021 | Year Ended December 31, 2020 |
|---|---|---|
| **Cash Flows from Operating Activities** | | |
| Net income | $ 805.4 | $ 737.5 |
| Adjustments to reconcile net income to net cash provided by operating activities: | | |
| Stock-based compensation | 54.3 | 70.9 |
| Depreciation and amortization | 111.8 | 105.6 |
| Deferred income taxes | (12.0) | (4.8) |
| Change in assets and liabilities: | | |
| Net due to or from affiliates | 24.1 | 64.0 |
| Accounts receivable | (31.4) | 7.1 |
| Other current assets | (64.6) | 9.3 |
| Other assets | 88.3 | 40.4 |
| Accounts payable | (15.2) | 7.8 |
| Other current liabilities | 22.9 | 5.1 |
| Other liabilities | (9.5) | (24.7) |
| Other | 3.9 | 7.4 |
| **Net Cash Provided by Operating Activities** | 978.0 | 1,025.6 |
| **Cash Flows from Investing Activities** | | |
| Proceeds from sale of investment | 0.3 | — |
| Purchases of property, net | (101.1) | (151.2) |
| **Net Cash Used in Investing Activities** | (100.8) | (151.2) |
| **Cash Flows from Financing Activities** | | |
| Cash dividends to CME Group Inc. | (762.0) | (819.0) |
| Receipts from bilateral loan agreements with CME Group Inc. | 990.5 | 214.3 |
| Payments from bilateral loan agreements with CME Group Inc. | (1,023.0) | (222.3) |
| Change in performance bond and guaranty fund contributions | 71,167.6 | 49,704.7 |
| Other | (17.0) | (16.9) |
| **Net Cash Provided by Financing Activities** | 70,356.1 | 48,860.8 |
| Net change in cash, cash equivalents, restricted cash and restricted cash equivalents | 71,233.3 | 49,735.2 |
| Cash, cash equivalents, restricted cash and restricted cash equivalents, beginning of period | 87,321.2 | 37,586.0 |
| **Cash, Cash Equivalents, Restricted Cash and Restricted Cash Equivalents, End of Period** | $ 158,554.5 | $ 87,321.2 |
| **Reconciliation of cash, cash equivalents, restricted cash and restricted cash equivalents:** | | |
| Cash and cash equivalents | $ 605.1 | $ 539.5 |
| Restricted cash and restricted cash equivalents (performance bonds and guaranty fund contributions) | 157,949.4 | 86,781.7 |
| **Total** | $ 158,554.5 | $ 87,321.2 |
| **Supplemental Disclosure of Cash Flow Information** | | |
| Income taxes paid | $ 117.7 | $ 49.4 |
| Interest paid | 0.2 | 0.4 |

See accompanying notes to consolidated financial statements.

CHICAGO MERCANTILE EXCHANGE INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

## 1. ORGANIZATION AND BUSINESS

Chicago Mercantile Exchange Inc. (the exchange or CME), a wholly-owned subsidiary of CME Group Inc. (CME Group), is a designated contract market (DCM) for the trading of futures and options on futures contracts. CME offers a wide range of products including those based on interest rates, equities, foreign exchange and agricultural commodities. Trades are executed through electronic trading platforms, open outcry and privately negotiated transactions. CME is also a derivatives clearing organization (DCO). CME offers clearing, settlement, and guarantees for all products cleared through the company and its affiliates. CME also provides clearing and other services to non-affiliated third-parties. CME serves as a swap execution facility, which is a regulated platform for swap trading, and serves as a swap data repository, which provides public data on swap transactions and stores confidential swap data for regulatory purposes.

Consolidated CME also includes NEX Services North America (NEX Services), which a provides shared technology and other administrative services to affiliates of CME Group. CME and its subsidiaries are referred to collectively as "the company" or "CME" in the notes to the consolidated financial statements.

## 2. SIGNIFICANT ACCOUNTING POLICIES

**Basis of Presentation.** The accompanying consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States and include the accounts of the company and its majority-owned subsidiaries. All intercompany transactions and balances have been eliminated.

During the fourth quarter of 2021, the company revised the presentation of the consolidated statements of cash flows to include cash performance bonds and guaranty fund contributions as restricted cash and restricted cash equivalents within the beginning and ending balances of the reconciliation of cash, cash equivalents, restricted cash and restricted cash equivalents. Total cash flows from financing activities were revised to include the changes associated with the cash performance bonds and guaranty fund contribution liability. See note 5. Performance Bonds and Guaranty Fund Contributions for additional information on cash performance bonds and guaranty fund contributions.

The prior period amounts have been revised to conform to the current period presentation. The revision in presentation is considered immaterial to the company's overall financial statements and has had no impact on the consolidated balance sheets, consolidated statements of income, consolidated statements of comprehensive income or consolidated statements of equity, including all previously filed financial statements. These cash performance bonds and guaranty fund contributions cannot be used for the company's operations or to satisfy any operational liabilities.

The following table presents the effects of the changes on the presentation of these cash flows to the previously reported consolidated statements of cash flows:

| | 2020 | | |
|---|---|---|---|
| **(in millions)** | **As Previously Reported** | **Adjustments** | **Revised** |
| Net cash provided by (used in) financing activities | $ (843.9) | $ 49,704.7 | $ 48,860.8 |
| Net increase in cash, cash equivalents, restricted cash and restricted cash equivalents | 30.5 | 49,704.7 | 49,735.2 |

**Use of Estimates.** The preparation of consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts and the disclosure of contingent amounts on the consolidated financial statements and accompanying notes. Estimates are based on historical experience, where applicable, and assumptions management believes are reasonable under the circumstances. Due to the inherent uncertainty involved with estimates, actual results may differ.

**Cash and Cash Equivalents.** Cash and cash equivalents consist of cash and highly liquid investments with a maturity of three months or less at the time of purchase.

**Financial Investments.** The company maintains short-term marketable securities, classified as available-for-sale debt securities or trading securities. Available-for-sale debt investments are carried at their fair value, with unrealized gains and losses, net of deferred income taxes, reported as a component of accumulated other comprehensive income. Trading securities held in connection with non-qualified deferred compensation plans are recorded at fair value, with net realized and unrealized gains and losses and dividend income reported as investment income.

The company reviews its investments to determine whether a decline in fair value below the cost basis is other-than-temporary. If events and circumstances indicate that a decline in the value of the assets has occurred and is deemed to represent indicators of impairment, the carrying value of the investments is reduced to its fair value and a corresponding impairment is charged to earnings.

**Fair Value of Financial Instruments**. 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 a financial instrument is the amount 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 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.

The company uses a three-level classification hierarchy of fair value measurements for disclosure purposes:

- Level 1 inputs, which are considered the most reliable evidence of fair value, consist of quoted prices (unadjusted) for identical assets or liabilities in active markets.
- Level 2 inputs consist of observable market data, other than level 1 inputs, such as quoted prices for similar assets and liabilities in active markets or inputs other than quoted prices that are directly observable.
- Level 3 inputs consist of unobservable inputs which are derived and cannot be corroborated by market data or other entity-specific inputs.

**Accounts Receivable.** Accounts receivable are comprised of trade receivables and unbilled revenue. All accounts receivable are stated at net realizable value. Exposure to losses on receivables for clearing and transaction fees and other amounts owed by clearing and trading firms is dependent on each firm's financial condition. With respect to clearing firms, our credit loss exposure is mitigated by the memberships that collateralize fees owed to the company. The company retains the right to liquidate exchange memberships to satisfy an outstanding receivable. The allowance for doubtful accounts is calculated based on management's assessment of future expected losses over the life of the receivable, historical trends and the current economic environment within which we operate.

**Performance Bonds and Guaranty Fund Contributions.** Performance bonds and guaranty fund contributions held for clearing firms may be in the form of cash, securities or other non-cash deposits.

Performance bonds and guaranty fund contributions received in the form of cash held by CME may be invested in U.S. government securities, U.S. government agency securities and certain foreign government securities acquired through and held by a bank or broker-dealer subsidiary of a bank, a cash account at the Federal Reserve Bank of Chicago, reverse repurchase agreements secured with highly rated government securities, money market funds or through CME's Interest Earning Facility (IEF) program. Any interest earned on these investments accrues to CME and is included in investment income on the consolidated statements of income. CME may distribute any interest earned on its investments to the clearing firms at its discretion. Because CME has control of the cash collateral and the benefits and market risks of ownership accrue to CME, cash performance bonds and guaranty fund contributions are reflected on the consolidated balance sheets. The cash performance bonds and guaranty fund contributions are considered restricted cash as the cash deposits cannot be used for the company's operations or to satisfy any operational liabilities.

Securities and other non-cash deposits may include U.S. Treasury securities, U.S. government agency securities, Eurobonds, corporate bonds, other foreign government securities and gold bullion. Securities and other non-cash deposits are held in safekeeping by a custodian bank. Interest and gains or losses on securities deposited to satisfy performance bond and guaranty fund requirements accrue to the clearing firm. Because the benefits and risks of ownership accrue to the clearing firm, non-cash performance bonds and guaranty fund contributions are not reflected on the consolidated balance sheets.

**Property.** Property is stated at cost, less accumulated depreciation and amortization. Depreciation and amortization are calculated using the straight-line method, generally over two to seventeen years. Property and equipment are depreciated over their estimated useful lives. Leasehold improvements are amortized over the shorter of the remaining term of the respective lease to which they relate or the remaining useful life of the leasehold improvement. Land is reported at cost. Internal and external costs incurred in developing or obtaining computer software for internal use which meet the requirements for capitalization are amortized on a straight-line basis over the estimated useful life of the software, generally two to four years, but up to eight years for certain trading and clearing applications, depending upon expected useful lives.

**Leases.** The company accounts for our leases of office space as operating leases. Landlord allowances are recorded as a direct reduction to the capitalized lease asset, which is reported in other assets and amortized to rent expense over the term of the lease. The associated lease liability represents the present value of lease payments remaining in the lease term and is recorded within current and other liabilities depending upon the balance sheet classification of the payment obligations as short-term or long-term. For sale leaseback transactions, the company evaluates the sale and the lease arrangement based on the company's conclusion as to whether control of the underlying asset has been transferred and recognizes the sale leaseback as either a sale transaction or under the financing method, which requires the asset to remain on the consolidated balance sheets throughout the term of the lease and the proceeds to be recognized as a financing obligation. A portion of the lease payments is recognized as a reduction of the financing obligation and a portion is recognized as interest expense based on an imputed interest rate.

**Goodwill and Other Intangible Assets.** Goodwill represents the excess of the purchase price over the fair value of the net assets acquired in a business combination. The company reviews goodwill for impairment at least quarterly and whenever events or circumstances indicate that their carrying values may not be recoverable. The company may test goodwill quantitatively for impairment by comparing the carrying value of a reporting unit to its estimated fair value. Estimating the fair value of a reporting unit involves significant judgments inherent in the analysis, including estimating the amount and timing of future cash flows and the selection of appropriate discount rates and long-term growth rate assumptions. Changes in these estimates and assumptions could materially affect the determination of fair value for the reporting unit. If the carrying amount exceeds fair value, an impairment loss is recorded. In certain circumstances, goodwill may be reviewed qualitatively for indications of impairment without utilizing valuation techniques to estimate fair value.

**Business Combinations.** The company accounts for business combinations using the acquisition method. The method requires the acquirer to recognize the assets acquired, liabilities assumed, and any non-controlling interest in the acquiree at the acquisition date, measured at their fair values as of that date. The company may use independent valuation services to assist in determining the estimated fair values.

**Employee Benefit Plans.** The company recognizes the funded status of defined benefit postretirement plans on its consolidated balance sheets. Changes in that funded status are recognized in the year of change in other comprehensive income (loss). Plan assets and obligations are measured at year end. The company recognizes future changes in actuarial gains and losses and prior service costs in the year in which the changes occur through accumulated other comprehensive income (loss).

**Foreign Currency Accounting.** Foreign denominated assets and liabilities are re-measured into the functional currency using period-end exchange rates. Gains and losses from foreign currency transactions are included in other expense in the accompanying consolidated statements of income.

**Revenue Recognition.** Revenue recognition policies for specific sources of revenue are discussed below:

*Clearing and Transaction Fees.* Clearing and transaction fees include per-contract charges for trade execution, clearing, trading on the company's electronic trading platforms, portfolio reconciliation and compression services, risk mitigation, and other fees. Fees are charged at various rates based on the product traded, the method of trade, the exchange trading privileges of the customer making the trade and the type of contract. The majority of our clearing and transaction fees are recognized as revenue when a buy and sell order are matched. Therefore, unfilled or canceled buy and sell orders have no impact on revenue. On occasion, the customer's exchange trading privileges may not be properly entered by the clearing firm and incorrect fees are charged for the transactions. When this information is corrected within the time period allowed by the company, a fee adjustment is provided to the clearing firm. A reserve is established for estimated fee adjustments to reflect corrections to customer exchange trading privileges. The reserve is based on the historical pattern of adjustments processed as well as specific adjustment requests. The company believes the allowances are adequate to cover estimated adjustments.

*Market Data and Information Services.* Market data and information services represent revenue earned for the dissemination of market information. Revenues are accrued each month based on the number of devices reported by vendors or over a straight line basis in accordance with the market data subscription contract term. The company conducts periodic examinations of the number of devices reported and assesses additional fees as necessary. On occasion, customers will pay for services in a lump sum payment; however, revenue is recognized as services are provided.

*Other Revenues.* Other revenues include access and communication fees, fees for collateral management, equity membership subscription fees and fees for trade order routing through agreements from various strategic relationships as well as other services to customers. Revenue is recognized as services are provided.

**Marketing Costs.** Marketing costs are incurred for the production and communication of advertising as well as other marketing activities. These costs are expensed when incurred, except for costs related to the production of broadcast advertising, which are expensed when the first broadcast occurs.

**Income Taxes.** Deferred income taxes arise from temporary differences between the tax basis and book basis of assets and liabilities. A valuation allowance is recognized if it is anticipated that some or all of a deferred tax asset may not be realized. The company accounts for uncertainty in income taxes recognized in its consolidated financial statements by using a more-likely-than-not recognition threshold based on the technical merits of the tax position taken or expected to be taken. The company classifies interest and penalties related to uncertain tax positions in income tax expense.

**Newly Adopted Accounting Policies.** The company did not adopt new accounting policies in 2021. The company also does not currently expect any pending accounting pronouncements to have a material impact on the consolidated financial statements.

## 3. TRANSACTIONS WITH AFFILIATED COMPANIES

The company transacts business in the normal course of operations with affiliates including its parent and entities under common ownership control. Affiliates include, but are not limited to, CME Group, Board of Trade of the City of Chicago, Inc. (CBOT), New York Mercantile Exchange, Inc. (NYMEX) and Commodity Exchange, Inc. (COMEX).

**Fees from affiliates.** CME receives fees from affiliates for shared operational and administrative services including, but not limited to, clearing and transaction processing; data distribution; network and infrastructure connectivity and maintenance; marketing, and staffing resources. In 2021 and 2020, CME recognized fees from affiliates of $685.4 million and $628.0 million, respectively.

**Fees to affiliates.** CME pays a fee to various affiliates for marketing, software development and market data services. In 2021 and 2020, CME recognized fees to affiliates of $240.3 million and $273.8 million, respectively. These expenses were included in other expenses in the consolidated statements of income.

**Allocation of stock-based compensation expense.** CME employees receive stock option, restricted stock awards and performance shares under CME Group's stock-based incentive plans. Stock-based compensation costs related to stock-based incentives received by CME's employees are recorded as compensation expense with an offset to additional paid-in capital in shareholder's equity.

**Allocation of income taxes.** CME is included in the consolidated federal and state income tax returns of its parent, CME Group. Income tax expense is allocated to members of the consolidated group based on a separate entity basis and presented on a separate entity basis as well.

**Amounts due from and to affiliates.** Amounts due from and to affiliates represent unsecured receivables and payables for shared services and income taxes.

At December 31, 2021, amounts due from (to) affiliates consisted of the following:

| *(in millions)* | Shared Services | Income Taxes | Total | Due from Affiliates | Due to Affiliates | Total |
|---|---|---|---|---|---|---|
| CME Group | $ (24.6) | $ 12.0 | $ (12.6) | $ — | $ (12.6) | $ (12.6) |
| CBOT | 67.5 | — | 67.5 | 67.5 | — | 67.5 |
| NYMEX | 94.3 | — | 94.3 | 94.3 | — | 94.3 |
| Other affiliates | 27.9 | — | 27.9 | 75.4 | (47.5) | 27.9 |
| Total | $ 165.1 | $ 12.0 | $ 177.1 | $ 237.2 | $ (60.1) | $ 177.1 |

At December 31, 2020, amounts due from (to) affiliates consisted of the following:

| *(in millions)* | Shared Services | Income Taxes | Total | Due from Affiliates | Due to Affiliates | Total |
|---|---|---|---|---|---|---|
| CME Group | $ 23.3 | $ (22.1) | $ 1.2 | $ 1.2 | $ — | $ 1.2 |
| CBOT | 85.6 | — | 85.6 | 85.6 | — | 85.6 |
| NYMEX | 110.7 | — | 110.7 | 110.7 | — | 110.7 |
| Other affiliates | 3.8 | — | 3.8 | 79.6 | (75.8) | 3.8 |
| Total | $ 223.4 | $ (22.1) | $ 201.3 | $ 277.1 | $ (75.8) | $ 201.3 |

**Intercompany debt.** CME and CME Group have entered into an intercompany bilateral loan agreement in which each entity may make loans to the other entity. The agreement will expire in November 2022. The outstanding loan receivable or payable amount cannot exceed $750.0 million and can be voluntarily prepaid. Interest accrued based on the prime rate, which was 3.25% during 2021 and is payable quarterly or in connection with a voluntary prepayment. At December 31, 2021, the outstanding loan receivable under this loan agreement was $32.5 million. At December 31, 2020, there was not an outstanding loan balance.

NEX Services and CME Group have entered into an intercompany bilateral loan agreement in which each entity may make loans to the other entity. The agreement will expire in November 2022. The outstanding loan receivable or payable amount cannot exceed $75.0 million and can be voluntarily prepaid. Interest accrued based on the prime rate, which was 3.25% during 2021 and is payable quarterly or in connection with a voluntary prepayment. At December 31, 2021 and 2020, the outstanding loan receivable balance under the loan agreement was $27.0 million.

CME also maintains an intercompany committed line of credit agreement with CME Group. CME may use the proceeds for its general operating expenses and those of its subsidiaries. The line of credit provides for borrowings of up to $400.0 million. The agreement will expire in November 2022. The company has the option to request an increase in the line of credit from $400.0 million up to $500.0 million. During 2021 and 2020, the company did not borrow against this facility.

## 4. REVENUE RECOGNITION

**Revenue from Contracts with Customers.** The majority of revenue consists of clearing and transaction fees:

*Clearing and transaction fees*. Clearing and transaction fees include electronic trading fees and brokerage commissions, surcharges for privately-negotiated transactions, risk mitigation and other volume-related charges for trade contracts. Clearing and transaction fees are assessed upfront at the time of trade execution. As such, the company recognizes the majority of the fee revenue upon successful execution of the trade. The minimal remaining portion of the fee revenue related to settlement activities performed after trade execution is recognized over the short-term period that the contract is outstanding, based on management's estimates of the average contract lifecycle. These estimates are based on various assumptions to approximate the amount of fee revenue to be attributed to services performed through contract settlement, expiration, or termination. For cleared trades, these assumptions include the average number of days that a contract remains in open interest, contract turnover, average revenue per day, and revenue remaining in open interest at the end of each period.

The nature of contracts gives rise to several types of variable consideration, including volume-based pricing tiers, customer incentives associated with market maker programs and other fee discounts. The company includes fee discounts and incentives in the estimated transaction price when there is a basis to reasonably estimate the amount of the fee reduction. These estimates are based on historical experience, anticipated performance, and best judgment at the time. Because of the company's certainty in estimating these amounts, they are included in the transaction price of contracts.

*Market data and information services.* Market data and information services represent revenue from the dissemination of market data to subscribers, distributors, and other third-party licensees of market data. Pricing for market data is primarily based on the number of reportable devices used as well as the number of subscribers enrolled under the arrangement. Fees for these services are generally billed monthly. Market data services are satisfied over time and revenue is recognized on a monthly basis as the customers receive and consume the benefit of the market data services. However, the company also maintains certain annual license arrangements with one-time upfront fees. The fees for annual licenses are initially recorded as a contract liability and recognized as revenue monthly over the term of the annual period.

*Other.* Other revenues include certain access and communication fees, fees for collateral management, equity membership subscription fees, and fees for trade order routing through agreements from various strategic relationships. Access and communication fees are charges to customers that utilize various telecommunications networks and communications services. Fees for these services are generally billed monthly and the associated fee revenue is recognized as billed. Collateral management fees are charged to clearing firms that have collateral on deposit with the clearing house to meet their minimum performance bond and guaranty fund obligations on the exchange. These fees are calculated based on daily collateral balances and are billed monthly. This fee revenue is recognized monthly as billed as the customers receive and consume the benefits of the services. We also have an equity membership program which provides equity members the option to substitute a monthly subscription fee for their existing requirement to hold CME Group Class A common stock. Choosing to pay this fee in lieu of holding Class A shares is entirely voluntary and the client's choice. Fee revenue under this program is earned monthly as billed over the contractual term. Pricing for strategic relationships may be driven by customer levels and activity. There are fee arrangements that provide for monthly as well as quarterly payments in arrears. Revenue is recognized monthly for strategic relationship arrangements as the customers receive and consume the benefits of the services.

The following table represents a disaggregation of revenue from contracts with customers by timing for the years ended December 31, 2021 and 2020:

| (in millions) | 2021 | 2020 |
|---|---|---|
| **Timing of Revenue Recognition** | | |
| Services transferred at a point in time | $ 1,319.8 | $ 1,330.7 |
| Services transferred over time | 1,096.5 | 1,047.0 |
| One-time charges and miscellaneous revenues | 13.3 | 13.4 |
| **Total revenues** | $ 2,429.6 | $ 2,391.1 |

The timing of revenue recognition, billings and cash collections results in billed accounts receivable, and customer advances and deposits (contract liabilities) on the consolidated balance sheets. Certain fees for transactions, annual licenses, and other revenue arrangements are billed upfront before revenue is recognized, which results in the recognition of contract liabilities. These liabilities are reported on the consolidated balance sheets on a contract-by-contract basis at the end of each reporting period. For annual licenses and upfront fee arrangements, the company generally bills customers upon contract execution. These payments are recognized as revenue over time as the obligations under the contracts are satisfied. The contract liability balances during 2021 were not materially impacted by any other factors. The balance of contract liabilities was $8.5 million and $7.2 million as of December 31, 2021 and 2020, respectively.

## 5. PERFORMANCE BONDS AND GUARANTY FUND CONTRIBUTIONS

The clearing house clears and guarantees the settlement of contracts traded in the futures and options and interest rate swap markets. In its guarantor role, the clearing house has precisely equal and offsetting claims to and from clearing firms on opposite sides of each contract, standing as an intermediary on every contract cleared. In the U.S., clearing firm funds are held according to Commodity and Futures Trading Commission (CFTC) regulatory account segregation standards. To the extent that funds are not otherwise available to satisfy an obligation under the applicable contract, the clearing house bears counterparty credit risk in the event that future market movements create conditions that could lead to clearing firms failing to meet their obligations to the clearing house. The clearing house reduces the exposure through risk management programs that include initial and ongoing financial standards for designation as a clearing firm, performance bond requirements, daily mark-to-market, mandatory guaranty fund contributions and intra-day monitoring.

Each clearing firm is required to deposit and maintain balances in the form of cash, U.S. government securities, certain foreign government securities, bank letters of credit or other approved collateral investments to satisfy performance bond and guaranty fund requirements. All non-cash deposits and certain cash deposits with foreign currency exposure are marked-to-market and haircut on a daily basis. Securities deposited by the clearing firms are not reflected on the consolidated financial statements and the clearing house does not earn any interest on these deposits. These balances may fluctuate significantly over time due to collateral investment choices available to clearing firms and changes in the amount of contributions required.

The clearing house marks-to-market open positions at least once a day (twice a day for futures and options contracts), and requires payment from clearing firms whose positions have lost value and make payments to clearing firms whose positions have gained value. The clearing house has the capability to mark-to-market more frequently as market conditions warrant.

Under the extremely unlikely scenario of simultaneous default by every clearing firm who has open positions with unrealized losses, the maximum exposure at the time of default related to positions other than interest rate swap contracts would be one half day of changes in fair value of all open positions, before considering the clearing house's ability to access defaulting clearing firms' collateral deposits. For cleared interest rate swap contracts, the maximum exposure at the time of default related to the clearing house's guarantee would be one full day of changes in fair value of all open positions, before considering the clearing house's ability to access defaulting clearing firms' collateral. The clearing firms' collateral requirements are sized to cover at least one day of anticipated price movements. During 2021, the clearing house transferred an average of approximately $4.1 billion a day through the clearing system for settlement from clearing firms whose positions had lost value to clearing firms whose positions had gained value. The clearing house reduces its exposure through maintenance performance bond requirements and guaranty fund contributions. For futures and options products, the clearing firms' collateral requirements are sized to cover at least one day of anticipated price movements. For cleared swap products, the clearing firms' collateral requirements are sized to cover at least five days of anticipated price movements. Management has assessed the fair value of the company's settlement guarantee liability by taking the following factors into consideration: the design and operations of the clearing risk management process, the financial safeguard packages in place, historical evidence of default by a clearing member and the estimated probability of potential payouts by the clearing house. Based on the assessment performed, management estimates the guarantee liability to be nominal and therefore has not recorded any liability at December 31, 2021.

CME has been designated as a systemically important financial market utility by the Financial Stability Oversight Council and is authorized to maintain cash accounts at the Federal Reserve Bank of Chicago. At December 31, 2021 and 2020, the clearing house maintained $146.1 billion and $76.3 billion, respectively, within the cash accounts at the Federal Reserve Bank of Chicago. The cash deposited at the Federal Reserve Bank of Chicago is included within performance bonds and guaranty fund contributions on the consolidated balance sheets.

CME and The Options Clearing Corporation (OCC) have a perpetual cross-margin arrangement, whereby a clearing firm may maintain a cross-margin account in which a clearing firm's positions in certain equity index futures and options are combined with certain positions cleared by OCC for purposes of calculating performance bond requirements. The performance bond deposits are held jointly by CME and OCC. Cross-margin cash, securities and letters of credit jointly held with OCC under the cross-margin agreement are reflected at 50% of the total, or CME's proportionate share per that agreement. If a participating firm defaults, the gain or loss on the liquidation of the firm's open position and the proceeds from the liquidation of the cross-margin account would be allocated 50% each to CME and OCC. In the event of a remaining loss, CME would first apply assets of the defaulting clearing firm to satisfy its payment obligation. These assets include the defaulting firm's guaranty fund contributions, performance bonds and any other available assets, such as assets required for clearing membership and any associated trading rights. In addition, the clearing house would make a demand for payment pursuant to any applicable guarantee, if any, provided to it by the parent company of the clearing firm. Thereafter, if the payment default remains unsatisfied, the clearing house would use its corporate contributions designated for the respective financial safeguard package. The clearing house would then use guaranty fund contributions of other clearing firms within the respective financial safeguard package and funds collected through an assessment against solvent clearing firms within the respective financial safeguard package to satisfy the deficit.

In addition, CME has perpetual cross-margin agreements with Fixed Income Clearing Corporation (FICC) whereby the clearing firms' offsetting positions with CME and FICC are subject to reduced performance bond requirements. Clearing firms maintain separate performance bond deposits with each clearing house, but depending on the net offsetting positions between CME and FICC, each clearing house may reduce that firm's performance bond requirements. In the event of a firm default, the total liquidation net gain or loss on the firm's offsetting open positions and the proceeds from the liquidation of the performance bond collateral held by each clearing house's supporting offsetting positions would be divided evenly between CME and FICC. Additionally, if, after liquidation of all the positions and collateral of the defaulting firm at each respective clearing organization, and taking into account any cross-margining loss sharing payments, any of the participating clearing organizations has a remaining liquidating surplus, and any other participating clearing organization has a remaining liquidating deficit, any additional surplus from the liquidation would be shared with the other clearing house to the extent that it has a remaining liquidating deficit. Any remaining surplus funds would be passed to the bankruptcy trustee. In the event of a remaining loss, CME would first apply assets of the defaulting clearing firm to satisfy its payment obligation. These assets include the defaulting firm's guaranty fund contributions, performance bonds and any other available assets, such as assets required for clearing membership and any associated trading rights. In addition, the clearing house would make a demand for payment pursuant to any applicable guarantee, if any, provided to it by the parent company of the clearing firm. Thereafter, if the payment default remains unsatisfied, the clearing house would use its corporate contributions designated for the respective financial safeguard package. The clearing house would then use guaranty fund contributions of other clearing firms within the respective financial safeguard package and funds collected through an assessment against solvent clearing firms within the respective financial safeguard package to satisfy the deficit.

Each clearing firm for futures and options is required to deposit and maintain specified guaranty fund contributions in the form of cash or U.S. Treasury securities (base guaranty fund). In the event that performance bonds, guaranty fund contributions and other assets required to support clearing membership of a defaulting clearing firm are inadequate to fulfill that clearing firm's outstanding financial obligation, the base guaranty fund for contracts other than interest rate swaps is available to cover potential losses after first utilizing $100.0 million of corporate contributions designated by CME to be used in the event of a default of a clearing firm for the base guaranty fund.

The clearing house maintains a separate guaranty fund to support the clearing firms that clear interest rate swap products (cleared interest rate swaps contract guaranty fund). The funds for interest rate swaps are independent of the base guaranty fund and are isolated to clearing firms for products in the respective asset class. Each clearing firm for cleared interest rate swaps is required to deposit and maintain specified guaranty fund contributions in the form of cash or U.S. Treasury securities. In the event that performance bonds, guaranty fund contributions and other assets required to support clearing membership of a defaulting clearing firm for cleared interest rate swap contracts are inadequate to fulfill that clearing firm's outstanding financial obligation, the interest rate swaps contracts guaranty fund is available to cover potential losses after first utilizing $150.0 million of corporate contributions designated by CME to be used in the event of a default of a cleared interest rate swap clearing firm.

CME maintains a 364-day multi-currency line of credit with a consortium of domestic and international banks to be used in certain situations by the clearing house. CME may use the proceeds to provide temporary liquidity in the unlikely event of a clearing firm default, in the event of a liquidity constraint or default by a depositary (custodian of the collateral), or in the event of a temporary disruption with the domestic payments system that would delay payment of settlement variation between CME and its clearing firms. Clearing firm guaranty fund contributions received in the form of cash or U.S. Treasury securities as well as the performance bond assets of a defaulting firm can be used to collateralize the facility. The line of credit provides for borrowings of up to $7.0 billion. At December 31, 2021, guaranty fund contributions available for clearing firms were $9.7 billion. CME has the option to request an increase in the line from $7.0 billion to $10.0 billion, subject to the approval of participating banks. In addition to the 364-day fully secured, committed multi-currency line of credit, the company also has the option to use the $2.3 billion multi-currency revolving senior credit facility to provide liquidity for the clearing house in the unlikely event of default.

The clearing house is required under the Commodity Exchange Act in the U.S. to segregate cash and securities deposited by clearing firms from its customers. In addition, the clearing house requires segregation of all funds deposited by its clearing firms from operating funds.

Cash and non-cash deposits held as performance bonds and guaranty fund contributions at fair value at December 31 were as follows:

| | 2021 | | 2020 | |
|---|---|---|---|---|
| (in millions) | Cash | Non-Cash Deposits and IEF Funds (1) | Cash | Non-Cash Deposits and IEF Funds (1) |
| Performance bonds | $ 151,094.8 | $ 70,005.3 | $ 83,923.5 | $ 124,573.7 |
| Guaranty fund contributions | 6,745.6 | 3,326.1 | 2,770.0 | 6,015.7 |
| Cross-margin arrangements | 83.6 | — | 88.1 | 8.1 |
| Performance bond collateral for delivery | 25.4 | 2.1 | 0.1 | 2.1 |
| Total | $ 157,949.4 | $ 73,333.5 | $ 86,781.7 | $ 130,599.6 |

(1) IEF funds include customer-directed investments in IEF funds that are not included on the consolidated balance sheets.

Cross-margin arrangements include collateral for the cross-margin accounts with OCC and FICC.

Cash performance bonds may include intraday settlement, if any, that is owed to the clearing firms and paid the following business day. The balance of intraday settlements was $156.4 million and $134.7 million at December 31, 2021 and 2020, respectively. Intraday settlements may be invested on an overnight basis and are offset by an equal liability owed to clearing firms.

In addition to cash, securities and other non-cash deposits, irrevocable letters of credit may be used as performance bond deposits for clearing firms. At December 31, 2021 and 2020 these letters of credit, which are not included in the accompanying consolidated balance sheets, were as follows:

| (in millions) | 2021 | 2020 |
|---|---|---|
| Performance bonds | $ 3,739.5 | $ 3,394.8 |
| Total Letters of Credit | $ 3,739.5 | $ 3,394.8 |

All cash, securities and letters of credit posted as performance bonds are only available to meet the financial obligations of that clearing firm to the clearing house.

**6. PROPERTY**

A summary of the property accounts at December 31 is presented below:

| *(in millions)* | 2021 | 2020 | Estimated Useful Life |
|---|---|---|---|
| Building and building improvements | 131.9 | 131.9 | 3 - 5 years |
| Leasehold improvements | 139.4 | 131.4 | 3 - 17 years |
| Furniture, fixtures and equipment | 382.2 | 354.2 | 2 - 7 years |
| Software and software development costs | 564.9 | 509.3 | 2 - 4 years |
| Total property | 1,218.4 | 1,126.8 | |
| Less accumulated depreciation and amortization | (828.0) | (726.8) | |
| Property, net | $ 390.4 | $ 400.0 | |

**7. DEBT**

CME maintains a 364-day multi-currency revolving secured credit facility with a consortium of domestic and international banks to be used in certain situations by CME Clearing. The facility provides for borrowings of up to $7.0 billion. CME may use the proceeds to provide temporary liquidity in the unlikely event of a clearing firm default, in the event of a liquidity constraint or default by a depositary (custodian for our collateral), or in the event of a temporary disruption with the domestic payments system that would delay payment of settlement variation between us and our clearing firms. CME clearing firm guaranty fund contributions received in the form of cash or U.S. Treasury securities as well as the performance bond assets of a defaulting firm can be used to collateralize the facility. At December 31, 2021, guaranty funds available to collateralize the facility totaled $9.7 billion. We have the option to request an increase in the line from $7.0 billion to $10.0 billion. Throughout 2021 and 2020, the company did not borrow any funds against this facility. However, in order to ensure that the facility would operate as intended, CME periodically draws down nominal amounts of funds against the line of credit and immediately repays the amounts borrowed. The 364-day multi-currency line of credit contains a requirement that CME remain in compliance with a consolidated tangible net worth test, defined as CME consolidated shareholder's equity less intangible assets (as defined in the line of credit agreement) of not less than $800.0 million. At December 31, 2021, CME is in compliance with the covenant requirement. In addition to the 364-day multi-currency line of credit, CME also has the option to use CME Group's $2.3 billion multi-currency revolving senior credit facility to provide liquidity for clearing operations in the unlikely event of default in certain circumstances.

## 8. INCOME TAXES

The income tax provision consisted of the following for the years ended December 31. The company is subject to regulation under a wide variety of federal, state and foreign tax laws and regulations.

| *(in millions)* | 2021 | 2020 |
|---|---|---|
| Current: | | |
| Federal | $ 201.4 | $ 167.2 |
| State | 64.0 | 50.2 |
| Foreign | 3.2 | 4.0 |
| Total | 268.6 | 221.4 |
| Deferred: | | |
| Federal | (9.2) | 4.2 |
| State | (2.8) | 0.6 |
| Total | (12.0) | 4.8 |
| Total Income Tax Provision | $ 256.6 | $ 226.2 |

Reconciliation of the U.S. federal income tax rate (statutory tax rate) to the effective tax rate is as follows:

| | 2021 | 2020 |
|---|---|---|
| Statutory tax rate | 21.0 % | 21.0 % |
| State taxes, net of federal benefit | 4.6 | 4.2 |
| Foreign-derived intangible income deduction | (2.0) | (2.1) |
| Other, net | 0.6 | 0.4 |
| Effective Tax Rate | 24.2 % | 23.5 % |

In 2021 and 2020, the effective tax rates were higher than the statutory tax rate due to the impact of state taxes, partially offset by state allowed foreign-derived intangible income deduction (FDII) in Sec. 250(a) introduced during the Tax Cut and Jobs Act tax reform.

At December 31, net deferred income tax assets (liabilities) consisted of the following:

| *(in millions)* | 2021 | 2020 |
|---|---|---|
| Deferred Income Tax Assets: | | |
| Net operating losses | $ 1.7 | $ 2.1 |
| Accrued expenses, compensation, leases and other | 133.8 | 115.7 |
| Subtotal | 135.5 | 117.8 |
| Valuation allowance | (0.4) | (0.5) |
| Total deferred income tax assets | 135.1 | 117.3 |
| Deferred Income Tax Liabilities: | | |
| Property | (67.6) | (77.5) |
| Other | (64.0) | (39.2) |
| Total deferred income tax liabilities | (131.6) | (116.7) |
| Net Deferred Income Tax Assets | $ 3.5 | $ 0.6 |

At December 31, 2021 and 2020, net non-current deferred income tax assets were included in other assets in the consolidated balance sheets.

A valuation allowance is recorded when it is more-likely-than-not that some portion or all of the deferred income tax assets may not be realized. The ultimate realization of the deferred income tax assets depends on the ability to generate sufficient taxable income of the appropriate character in the future and in the appropriate taxing jurisdictions.

At December 31, 2021 and 2020, the company had gross domestic and foreign income tax loss carry forwards of $8.3 million and $10.1 million, respectively. These amounts primarily relate to the losses from the acquisition of Pivot, Inc. in 2012. At December 31, 2021 and 2020, the company has determined that a portion of the net operating loss deferred tax assets were not more-likely-than-not to be realized and a valuation allowance of $0.4 million and $0.5 million has been provided at December 31, 2021 and 2020, respectively. The net operating losses will expire between 2024 and 2032.

The following is a summary of the company's unrecognized tax benefits:

| *(in millions)* | 2021 | 2020 |
|---|---|---|
| Gross unrecognized tax benefits | $ 122.8 | $ 125.2 |
| Unrecognized tax benefits, net of tax impacts in other jurisdictions | 114.1 | 116.0 |
| Unrecognized interest and penalties related to uncertain tax positions | 15.6 | 15.0 |
| Interest and penalties recognized in the consolidated statements of income | 3.3 | 4.9 |

The company does not believe it is reasonably possible that within the next twelve months, unrecognized tax benefits will change by a significant amount.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

| *(in millions)* | 2021 | 2020 |
|---|---|---|
| Balance at January 1 | $ 125.2 | $ 130.1 |
| Additions based on tax positions related to the current year | 4.0 | 7.4 |
| Additions for tax positions of prior years | 3.6 | 0.7 |
| Reductions for tax positions of prior years | (0.2) | (4.4) |
| Settlements with taxing authorities | (9.7) | (8.6) |
| Reductions as a result of lapse of statutes of limitations | (0.1) | — |
| Balance at December 31 | $ 122.8 | $ 125.2 |

The company is subject to U.S. federal income tax as well as income taxes in Illinois and other state and foreign jurisdictions. As of December 31, 2021, substantially all federal and state income tax matters had been concluded through 2007 and 2006, respectively.

## 9. EMPLOYEE BENEFIT PLANS

**Pension Plan.** CME maintains a non-contributory defined benefit cash balance pension plan for eligible employees. CME's plan provides for a pay-based credit added to the cash balance account based on age and earnings and includes salary and cash bonuses in the definition of earnings. Employees who have completed a continuous 12-month period of employment and have reached the age of 21 are eligible to participate. Participant cash balance accounts receive an interest credit equal to the greater of the one-year constant maturity yield for U.S. Treasury notes or 4.0%. Participants become vested in their accounts after three years of service. The measurement date used for the plan is December 31.

The following is a summary of the change in projected benefit obligation:

| *(in millions)* | 2021 | 2020 |
|---|---|---|
| Balance at January 1 | $ 380.3 | $ 324.2 |
| Service cost | 27.8 | 26.7 |
| Interest cost | 10.7 | 11.7 |
| Actuarial (gain) loss | (12.9) | 25.2 |
| Benefits paid | (19.9) | (7.5) |
| Balance at December 31 | $ 386.0 | $ 380.3 |

The accumulated benefit obligation at December 31, 2021 and 2020 was $358.7 million and $350.3 million, respectively.

The following is a summary of the change in the fair value of plan assets:

| *(in millions)* | 2021 | 2020 |
|---|---|---|
| Balance at January 1 | $ 388.2 | $ 356.9 |
| Actual return on plan assets | 34.0 | 38.8 |
| Benefits paid | (19.9) | (7.5) |
| Balance at December 31 | $ 402.3 | $ 388.2 |

The plan assets are classified into a fair value hierarchy in their entirety based on the lowest level of input that is significant to each asset or liability's fair value measurement. Valuation techniques for level 2 assets use significant observable inputs such as quoted prices for similar assets, quoted market prices in inactive markets and other inputs that are observable or can be supported by observable market data. The fair value of each major category of plan assets as of December 31 is indicated below.

| *(in millions)* | 2021 | 2020 |
|---|---|---|
| Level 2: | | |
| Money market funds | $ 19.8 | $ 14.1 |
| Mutual funds: | | |
| Fixed income | 158.2 | 140.2 |
| U.S. equity | 142.8 | 149.4 |
| Foreign equity | 81.5 | 84.5 |
| Total | $ 402.3 | $ 388.2 |

At December 31, 2021 and 2020, the fair value of pension plan assets exceeded the projected benefit obligation by $16.3 million and $7.9 million, respectively, and the excess was recorded as a non-current pension asset in other assets.

CME's funding goal is to have its pension plan 100% funded at each year-end on a projected benefit obligation basis, while also satisfying any minimum required contribution and obtaining the maximum tax deduction. Year-end 2021 assumptions have been used to project the assets and liabilities from December 31, 2021 to December 31, 2022. The company anticipates based on this projection that no additional contribution in 2022 will be necessary for it to meet its funding goal. However, the amount of the actual contribution is contingent on various factors, including the actual rate of return on the plan assets during 2022 and the December 31, 2022 discount rate.

The components of net pension expense and the assumptions used to determine the end-of-year projected benefit obligation and net pension expense in aggregate are indicated below:

| *(in millions)* | 2021 | 2020 |
|---|---|---|
| Components of Net Pension Expense: | | |
| Service cost | $ 27.8 | $ 26.7 |
| Interest cost | 10.7 | 11.7 |
| Expected return on plan assets | (21.7) | (21.0) |
| Recognized net actuarial loss | 4.5 | 4.8 |
| Net Pension Expense | $ 21.3 | $ 22.2 |
| Assumptions Used to Determine End-of-Year Benefit Obligation: | | |
| Discount rate | 3.00 % | 2.70 % |
| Rate of compensation increase | 4.00 | 4.00 |
| Cash balance interest crediting rate | 4.00 | 4.00 |
| Assumptions Used to Determine Net Pension Expense: | | |
| Discount rate | 2.70 % | 3.40 % |
| Rate of compensation increase | 4.00 | 5.00 |
| Expected return on plan assets | 5.75 | 6.00 |
| Interest crediting rate | 4.00 | 4.00 |

The discount rate for the plan was determined based on the market value of a theoretical settlement bond portfolio. This portfolio consisted of U.S. dollar denominated Aa-rated corporate bonds across the full maturity spectrum. A single equivalent discount rate was determined to align the present value of the required cash flow with that settlement value. The resulting discount rate was reflective of both the current interest rate environment and the plan's distinct liability characteristics.

The basis for determining the expected rate of return on plan assets for the plan is comprised of three components: historical returns, industry peers and forecasted return. The plan's total return is expected to equal the composite performance of the security markets over the long term. The security markets are represented by the returns on various domestic and international stock, bond and commodity indexes. These returns are weighted according to the allocation of plan assets to each market and measured individually.

The overall objective of the plan is to achieve required long-term rates of return in order to meet future benefit payments. The component of the investment policy for the plan that has the most significant impact on returns is the asset mix. The asset mix has a minimum and maximum range depending on asset class. The plan assets are diversified to minimize the risk of large losses by any one or more individual assets. Such diversification is accomplished, in part, through the selection of asset mix and investment management. The asset allocation for the plan, by asset category, at December 31 was as follows:

| | 2021 | 2020 |
|---|---|---|
| Fixed income | 39.3 % | 36.1 % |
| Money market funds | 4.9 | 3.6 |
| U.S. equity | 35.5 | 38.5 |
| Foreign equity | 20.3 | 21.8 |

For 2022, management expects the fixed income asset class to be approximately 50% of the portfolio. The target allocation for the U.S. equity asset class is expected to range from 15% to 45% of the portfolio and the target allocation for the foreign equity asset class is expected to range from approximately 10% to 30% of the portfolio.

At times, the company may determine that it is necessary to place some assets in cash equivalent investments in order to pay expected plan liabilities. Given this, the actual asset allocation for the plan may not fall within the target allocation ranges from time to time.

According to the plan's investment policy, the plan is not allowed to invest in securities that compromise independence, short sales of securities directly owned by the plan, securities purchased on margin or other uses of borrowed funds, derivatives not used for hedging purposes, restricted stock or illiquid securities or any other transaction prohibited by employment laws. If the plan directly invests in short-term and long-term debt obligations, the investments are limited to obligations rated at the highest rating category by Standard & Poor's (S&P) or Moody's.

The pre-tax balance and activity of the prior service costs and actuarial losses for the pension plan, which are included in other comprehensive income (loss), for 2021 are as follows:

| *(in millions)* | Actuarial Loss |
|---|---|
| Balance at January 1 | $ 77.7 |
| Unrecognized net loss | (25.2) |
| Recognized as a component of net pension expense | (4.5) |
| Balance at December 31 | $ 48.0 |

At December 31, 2021, anticipated benefit payments from the plan in future years are as follows:

| *(in millions)* | |
|---|---|
| 2022 | $ 27.2 |
| 2023 | 28.0 |
| 2024 | 29.1 |
| 2025 | 30.0 |
| 2026 | 30.7 |
| 2027-2031 | 159.0 |

**Savings Plan.** CME maintains a defined contribution savings plan pursuant to Section 401(k) of the Internal Revenue Code, whereby all U.S. employees are participants and have the option to contribute to this plan. CME matches employee contributions up to 3% of the employee's base salary and may make additional discretionary contributions. Total expense for the savings plan was $7.1 million and $7.6 million in 2021 and 2020, respectively.

**Non-Qualified Plans.** CME maintains non-qualified plans, under which participants may make assumed investment choices with respect to amounts contributed on their behalf. Although not required to do so, CME invests such contributions in assets that mirror the assumed investment choices. The balances in these plans are subject to the claims of general creditors of the company and totaled $86.7 million and $72.6 million at December 31, 2021 and 2020, respectively. Although the value of the plans is recorded as an asset in marketable securities in the consolidated balance sheets, there is an equal and offsetting liability. The investment results of these plans have no impact on net income as the investment results are recorded in equal amounts to both investment income and compensation and benefits expense.

*Supplemental Savings Plan.* CME maintains a supplemental plan to provide benefits for employees who have been impacted by statutory limits under the provisions of the qualified pension and savings plan. Employees in this plan are subject to the vesting requirements of the underlying qualified plans.

*Deferred Compensation Plan.* A deferred compensation plan is maintained by CME, under which eligible officers and members of the board of directors may contribute a percentage of their compensation and defer income taxes thereon until the time of distribution.

## 10. LEASES AND OTHER COMMITMENTS

**Leases.** The company has operating leases for datacenters and corporate offices. The operating leases have remaining lease terms of up to 11 years, some of which include options to extend or renew the leases for up to an additional five years, and some of which include options to early terminate the leases in less than 12 months. Management evaluates the exercisability of these options at least quarterly in order to determine whether the contract term must be reassessed. For a small number of the leases, primarily the international locations, management's approach is to enter into short-term leases for a lease term of 12 months or less in order to provide for greater flexibility in the local environment. For certain office spaces, the company has entered into arrangements to sublease excess space to third parties, while the original lease contract remains in effect with the landlord.

The company also has one finance lease, which is related to the sale of our datacenter in March 2016. In connection with the sale, the company leased back a portion of the property. The sale leaseback transaction was recognized under the financing method and not as a sale leaseback arrangement.

The right-of-use lease asset is recorded within other assets, and the present value of the lease liability is recorded within other liabilities (segregated between short-term and long-term) on the consolidated balance sheets. The discount rate applied to the lease payments represents the company's incremental borrowing rate. The company has elected to utilize the short-term lease exception as prescribed in the leasing standard, such that the company has not capitalized on the balance sheet a lease asset or lease liability associated with leases with terms of 12 months or less from the commencement date.

The components of lease costs were as follows for the years ended December 31, 2021 and 2020:

| *(in millions)* | 2021 | 2020 |
|---|---|---|
| Operating lease expense: | | |
| Operating lease cost | $ 28.6 | $ 29.2 |
| Total operating lease expense included in other expense | $ 28.6 | $ 29.2 |
| Finance lease expense: | | |
| Interest expense | $ 3.1 | $ 3.3 |
| Depreciation expense | 8.7 | 8.7 |
| Total finance lease expense | $ 11.8 | $ 12.0 |
| Sublease revenue included in other revenue | $ 7.9 | $ 9.7 |

Supplemental cash flow information related to leases was as follows for years ended December 31, 2021 and 2020:

| *(in millions)* | 2021 | 2020 |
|---|---|---|
| Cash outflows for operating leases | $ 32.0 | $ 31.9 |
| Cash outflows for finance leases | 17.0 | 16.9 |

Supplemental balance sheet information related to leases was as follows as of December 31, 2021 and 2020:

***Operating leases***

| *(in millions)* | 2021 | 2020 |
|---|---|---|
| Operating lease right-of-use assets | $ 165.9 | $ 174.7 |
| | | |
| Operating lease liabilities: | | |
| Other current liabilities | $ 22.8 | $ 21.3 |
| Other liabilities | 231.0 | 244.0 |
| Total operating lease liabilities | $ 253.8 | $ 265.3 |
| | | |
| Weighted average remaining lease term (in months) | 121 | 131 |
| Weighted average discount rate | 4.2 % | 4.3 % |

***Finance leases***

| *(in millions)* | 2021 | 2020 |
|---|---|---|
| Finance lease right-of-use assets | $ 80.2 | $ 88.8 |
| | | |
| Finance lease liabilities: | | |
| Other current liabilities | $ 7.9 | $ 7.7 |
| Other liabilities | 75.9 | 83.8 |
| Total finance lease liabilities | $ 83.8 | $ 91.5 |
| | | |
| Weighted average remaining lease term (in months) | 111 | 123 |
| Weighted average discount rate | 3.5 % | 3.5 % |

Future minimum lease payments were as follows as of December 31, 2021 for operating and finance leases:

| *(in millions)* | Operating Leases |
|---|---|
| 2022 | 32.9 |
| 2023 | 33.8 |
| 2024 | 28.3 |
| 2025 | 28.7 |
| 2026 | 29.2 |
| Thereafter | 160.5 |
| Total lease payments | 313.4 |
| Less: imputed interest | (59.6) |
| Present value of lease liability | $ 253.8 |

| *(in millions)* | | Finance Lease |
|---|---|---|
| 2022 | | 17.1 |
| 2023 | | 17.2 |
| 2024 | | 17.4 |
| 2025 | | 17.5 |
| 2026 | | 17.6 |
| Thereafter | | 76.7 |
| Total lease payments | | 163.5 |
| Less: imputed interest | | (79.7) |
| Present value of lease liability | $ | 83.8 |

**Other Commitments.** Commitments include material contractual purchase obligations that are non-cancellable. Purchase obligations relate to licensing, hardware, software and maintenance as well as telecommunication services. At December 31, 2021, future minimum payments due under purchase obligations were payable as follows (in millions):

| **Year** | | |
|---|---|---|
| 2022 | $ | 107.6 |
| 2023 | | 88.1 |
| 2024 | | 57.2 |
| 2025 | | 107.1 |
| 2026 | | 107.1 |
| Thereafter | | 839.3 |
| Total | $ | 1,306.4 |

## 11. CONTINGENCIES

*Legal and Regulatory Matters.* In the normal course of business, the company discusses matters with its regulators raised during regulatory examinations or otherwise subject to their inquiry and oversight. These matters could result in censures, fines, penalties or other sanctions. Management believes the outcome of any resulting actions will not have a material impact on its consolidated financial position or results of operations. However, the company is unable to predict the outcome or the timing of the ultimate resolution of these matters, or the potential fines, penalties or injunctive or other equitable relief, if any, that may result from these matters.

In addition, the company is a defendant in, and has potential for, various other legal proceedings arising from its regular business activities. While the ultimate results of such proceedings against the company cannot be predicted with certainty, the company believes that the resolution of any of these matters on an individual or aggregate basis will not have a material impact on its consolidated financial position or results of operations.

No accrual was required for contingent legal and regulatory matters as none were probable and estimable as of December 31, 2021 and 2020.

*Intellectual Property Indemnifications.* Certain agreements with customers and other third parties related to accessing the CME Group platforms, utilizing market data services and licensing CME SPAN software may contain indemnifications from intellectual property claims that may be made against them as a result of their use of the applicable products and/or services. The potential future claims relating to these indemnifications cannot be estimated and therefore no liability has been recorded.

## 12. GUARANTEES

*Mutual Offset Agreement.* CCME and Singapore Exchange Limited (SGX) maintain a mutual offset agreement with a current term through May 2023. This agreement enables market participants to open a futures position on one exchange and liquidate it on the other. The term of the agreement will automatically renew for a one-year period after May 2023 unless either party provides advance notice of its intent to terminate. CME can maintain collateral in the form of irrevocable, standby letters of credit. At December 31, 2021, CME was contingently liable to SGX on irrevocable letters of credit totaling $330.0 million. CME also maintains a $350.0 million line of credit to meet its obligations under this agreement. Regardless of the collateral, CME guarantees all cleared transactions submitted through SGX and would initiate procedures designed to satisfy these financial obligations in the event of a default, such as the use of performance bonds and guaranty fund contributions of the defaulting clearing firm. Management has assessed the fair value of the company's guarantee liability under this mutual offset agreement by taking the following factors into consideration: the design and operations of the clearing risk management process, the financial safeguard packages in place, historical evidence of default by a clearing member and the estimated probability of potential payouts by the clearing house. Based on the assessment performed, management estimates the guarantee liability to be nominal and therefore has not recorded any liability at December 31, 2021.

*Family Farmer and Rancher Protection Fund.* In 2012, the company established the Family Farmer and Rancher Protection Fund (the Fund). The Fund is designed to provide payments, up to certain maximum levels, to family farmers, ranchers and other agricultural industry participants who use the company's agricultural products and who suffer losses to their segregated account balances due to their CME clearing member becoming insolvent. Under the terms of the Fund, farmers and ranchers are eligible for up to $25,000 per participant. Farming and ranching cooperatives are eligible for up to $100,000 per cooperative. The Fund has an aggregate maximum payment amount of $100.0 million. Since its establishment, the Fund has made payments of approximately $2.0 million, which leaves $98.0 million available for future claims. If payments to participants were to exceed this amount, payments would be pro-rated. Clearing members and customers must register in advance with the company and provide certain documentation in order to substantiate their eligibility. The company believes that its guarantee liability is nominal and therefore has not recorded any liability at December 31, 2021.

## 13. ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)

The following tables present changes in the accumulated balances for each component of other comprehensive income (loss), including current period other comprehensive income (loss) and reclassifications out of accumulated other comprehensive income (loss):

| *(in millions)* | Defined Benefit Plans | Total |
|---|---|---|
| Balance at December 31, 2020 | $ (56.3) | $ (56.3) |
| Other comprehensive income (loss) before reclassifications and income tax benefit (expense) | 25.5 | 25.5 |
| Amounts reclassified from accumulated other comprehensive income (loss) | 4.4 | 4.4 |
| Income tax benefit (expense) | (7.5) | (7.5) |
| Net current period other comprehensive income (loss) | 22.4 | 22.4 |
| Balance at December 31, 2021 | $ (33.9) | $ (33.9) |

| *(in millions)* | Defined Benefit Plans | Total |
|---|---|---|
| Balance at December 31, 2019 | $ (54.2) | $ (54.2) |
| Other comprehensive income (loss) before reclassifications and income tax benefit (expense) | (7.4) | (7.4) |
| Amounts reclassified from accumulated other comprehensive income (loss) | 4.6 | 4.6 |
| Income tax benefit (expense) | 0.7 | 0.7 |
| Net current period other comprehensive income (loss) | (2.1) | (2.1) |
| Balance at December 31, 2020 | $ (56.3) | $ (56.3) |

## 14. FAIR VALUE MEASUREMENTS

Level 1 assets generally include U.S. government agency securities and investments in publicly traded mutual funds with quoted market prices. In general, the company uses quoted prices in active markets for identical assets to determine the fair value of marketable securities and equity investments. If quoted prices are not available to determine fair value, the company uses other inputs that are directly observable. Assets included in level 2 generally consist of asset-backed securities. Asset-backed securities are measured at fair value based on matrix pricing using prices of similar securities with similar inputs such as maturity dates, interest rates and credit ratings. Assets included in level 3 include certain investments and fixed assets.

Financial assets and liabilities recorded in the consolidated balance sheet as of December 31, 2021 and 2020 were classified in their entirety based on the lowest level of input that was significant to each asset or liability's fair value measurement.

| | At December 31, 2021 | | | |
|---|---|---|---|---|
| *(in millions)* | Level 1 | Level 2 | Level 3 | Total |
| Assets at Fair Value: | | | | |
| Marketable Securities: | | | | |
| Mutual funds | $ 86.7 | $ — | $ — | $ 86.7 |
| Total Marketable Securities | 86.7 | — | — | 86.7 |
| Total Assets at Fair Value | $ 86.7 | $ — | $ — | $ 86.7 |

| | At December 31, 2020 | | | |
|---|---|---|---|---|
| *(in millions)* | Level 1 | Level 2 | Level 3 | Total |
| Assets at Fair Value: | | | | |
| Marketable Securities: | | | | |
| Mutual funds | $ 72.6 | $ — | $ — | $ 72.6 |
| Asset-backed securities | — | 0.3 | — | 0.3 |
| Total Marketable Securities | 72.6 | 0.3 | — | 72.9 |
| Total Assets at Fair Value | $ 72.6 | $ 0.3 | $ — | $ 72.9 |

There were no level 3 assets or liabilities valued at fair value on a recurring basis during 2021 and 2020.

There were also no level 3 assets or liabilities valued at fair value on a non-recurring basis during 2021.

## 15. REGULATORY REQUIREMENTS

CME is regulated by the CFTC as a DCO and a DCM. DCOs and DCMs are required to maintain capital as defined by the CFTC in an amount at least equal to one year of projected operating expenses as well as cash, liquid securities, or a line of credit at least equal to six months of projected operating expenses. CME is in compliance with the DCO and DCM financial requirements.

## 16. SUBSEQUENT EVENTS

The company has evaluated subsequent events through March 18, 2022, the date the financial statements were available to be issued, and has determined that there were no subsequent events that required disclosure.