Mass General Brigham Incorporated and Affiliates

Consolidated Financial Statements

September 30, 2021 and 2020

Mass General Brigham Incorporated and Affiliates
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September 30, 2021 and 2020

Report of Independent Auditors

To the Board of Directors of
Mass General Brigham Incorporated

We have audited the accompanying consolidated financial statements of Mass General Brigham Incorporated (the Company) and its affiliates, which comprise the consolidated balance sheets as of September 30, 2021 and 2020, and the related consolidated statements of operations, changes in net assets and of cash flows for the years then ended.

Management's Responsibility for the Consolidated Financial Statements

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

Auditors' Responsibility

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

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the Company's preparation and fair presentation of the consolidated financial statements 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, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Mass General Brigham Incorporated and its affiliates as of September 30, 2021 and 2020, and the results of their operations, changes in net assets and cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

PricewaterhouseCoopers LLP

Boston, Massachusetts
December 10, 2021

Mass General Brigham Incorporated and Affiliates
Consolidated Balance Sheets
September 30, 2021 and 2020

(in thousands of dollars)	2021	2020
Assets		
Current assets		
Cash and equivalents	$ 177,259	$ 2,129,189
Investments	3,395,005	1,142,275
Current portion of investments limited as to use	5,637,637	4,424,436
Patient accounts receivable, net	1,332,404	983,273
Research grants receivable, net	187,193	149,685
Other current assets	684,632	589,078
Total current assets	11,414,130	9,417,936
Investments limited as to use, less current portion	6,202,723	5,168,054
Long-term investments	2,950,684	2,179,220
Property and equipment, net	6,261,727	6,411,117
Right-of-use operating lease assets	1,108,275	1,139,626
Other assets	1,027,593	724,410
Total assets	$ 28,965,132	$ 25,040,363
Liabilities and Net Assets		
Current liabilities		
Current portion of long-term obligations	$ 381,987	$ 436,166
Accounts payable and accrued expenses	1,730,310	1,885,784
Accrued medical claims and related expenses	87,289	84,638
Accrued employee compensation and benefits	1,414,036	1,219,905
Current portion of operating lease obligations	200,706	191,259
Unexpended funds on research grants	345,403	367,858
Total current liabilities	4,159,731	4,185,610
Accrued professional liability	588,402	567,770
Accrued employee benefits	729,924	2,044,913
Interest rate swaps liability	472,011	662,384
Accrued other	254,673	197,986
Operating lease obligations, less current portion	782,650	797,096
Long-term obligations, less current portion	5,802,238	5,964,310
Total liabilities	12,789,629	14,420,069
Commitments and contingencies		
Net assets		
Unrestricted	12,806,328	8,099,064
Donor restricted	3,369,175	2,521,230
Total net assets	16,175,503	10,620,294
Total liabilities and net assets	$ 28,965,132	$ 25,040,363

The accompanying notes are an integral part of these consolidated financial statements.

Mass General Brigham Incorporated and Affiliates
Consolidated Statements of Operations
Years Ended September 30, 2021 and 2020

(in thousands of dollars)	2021	2020
Operating revenues		
Net patient service revenue	$ 11,432,255	$ 9,609,196
Premium revenue	910,312	830,191
Direct academic and research revenue	1,744,731	1,591,241
Indirect academic and research revenue	532,213	469,144
Other revenue	1,376,792	1,558,855
Total operating revenues	15,996,303	14,058,627
Operating expenses		
Employee compensation and benefit expenses	8,296,031	7,678,213
Supplies and other expenses	3,980,935	3,594,613
Medical claims and related expenses	645,514	610,310
Direct academic and research expenses	1,744,731	1,591,241
Depreciation and amortization expenses	724,477	742,187
Interest expense	162,128	192,576
Total operating expenses	15,553,816	14,409,140
Income (loss) from operations	442,487	(350,513)
Nonoperating gains (expenses)		
Income from investments	2,339,707	612,355
Change in fair value of interest rate swaps	190,373	(151,805)
Other nonoperating (expenses) income	(136,409)	(73,366)
Academic and research gifts, net of expenses	198,306	168,527
Non-service related pension income	127,735	58,317
Total nonoperating gains, net	2,719,712	614,028
Excess of revenues over expenses	3,162,199	263,515
Other changes in net assets		
Funds utilized for property and equipment	51,718	80,894
Change in funded status of defined benefit plans	1,486,475	376,740
Other changes in net assets	6,872	19,580
Increase in unrestricted net assets	$ 4,707,264	$ 740,729

The accompanying notes are an integral part of these consolidated financial statements.

Mass General Brigham Incorporated and Affiliates
Consolidated Statements of Changes in Net Assets
Years Ended September 30, 2021 and 2020

(in thousands of dollars)	Unrestricted	Donor Restricted	Total
Net assets at September 30, 2019	$ 7,358,335	$ 2,389,384	$ 9,747,719
Increases (decreases)			
Loss from operations	(350,513)	-	(350,513)
Income from investments	612,355	85,376	697,731
Change in fair value of interest rate swaps	(151,805)	-	(151,805)
Other nonoperating (expenses) income	(73,366)	93,334	19,968
Academic and research gifts, net of expenses	168,527	-	168,527
Non-service related pension income	58,317	-	58,317
Funds utilized for property and equipment	80,894	(48,658)	32,236
Change in funded status of defined benefit plans	376,740	-	376,740
Other changes in net assets	19,580	1,794	21,374
Change in net assets	740,729	131,846	872,575
Net assets at September 30, 2020	$ 8,099,064	$ 2,521,230	$ 10,620,294
Increases (decreases)			
Income from operations	442,487	-	442,487
Income from investments	2,339,707	466,855	2,806,562
Change in fair value of interest rate swaps	190,373	-	190,373
Other nonoperating (expenses) income	(136,409)	399,382	262,973
Academic and research gifts, net of expenses	198,306	-	198,306
Non-service related pension income	127,735	-	127,735
Funds utilized for property and equipment	51,718	(25,112)	26,606
Change in funded status of defined benefit plans	1,486,475	-	1,486,475
Other changes in net assets	6,872	6,820	13,692
Change in net assets	4,707,264	847,945	5,555,209
Net assets at September 30, 2021	$ 12,806,328	$ 3,369,175	$ 16,175,503

The accompanying notes are an integral part of these consolidated financial statements.

Mass General Brigham Incorporated and Affiliates
Consolidated Statements of Cash Flows
Years Ended September 30, 2021 and 2020

(in thousands of dollars)	2021	2020
Cash flows from operating activities		
Change in net assets	$ 5,555,209	$ 872,575
Adjustments to reconcile change in net assets to net cash provided by operating activities		
Change in funded status of defined benefit plans	(1,486,475)	(376,740)
Loss on refunding of debt	-	24,817
Change in fair value of interest rate swaps	(190,373)	151,805
Depreciation and amortization	724,477	742,187
Amortization of bond discount, premium and issuance costs	(12,117)	(11,838)
Gain on disposal of property	(69)	(1,258)
Change in right-of-use operating lease assets	178,991	170,854
Net realized and change in unrealized appreciation on investments	(3,054,762)	(907,825)
Restricted contributions and investment income	(367,506)	(121,064)
Cash premium upon issuance of bonds	-	79,262
Increases (decreases) in cash resulting from a change in		
Patient accounts receivable	(349,131)	148,008
Other assets	(138,340)	29,700
Accounts payable and other accrued expenses	286,776	510,870
Accrued medical claims and related expenses	2,651	27,088
Operating lease obligations	(152,639)	(211,546)
Settlements with third-party payers	(29,328)	35,040
Medicare accelerated payments	(293,624)	1,018,093
Net cash provided by operating activities	673,740	2,180,028
Cash flows from investing activities		
Purchases of property and equipment	(575,288)	(563,746)
Proceeds from sale of property	3,548	1,353
Purchase of investments	(3,510,944)	(2,350,917)
Proceeds from sales of investments	1,293,642	1,867,763
Net cash used for investing activities	(2,789,042)	(1,045,547)
Cash flows from financing activities		
Borrowings under lines of credit	-	375,000
Repayments under lines of credit	-	(375,000)
Payments on long-term obligations	(234,119)	(83,806)
Proceeds from long-term obligations, net of financing costs	-	1,463,860
Decrease (increase) in auction rate securities holdings	29,985	(29,985)
Deposits into refunding trusts	-	(760,232)
Restricted contributions and investment income	367,506	121,064
Net cash provided by financing activities	163,372	710,901
Net (decrease) increase in cash and equivalents	(1,951,930)	1,845,382
Cash and equivalents		
Beginning of year	2,129,189	283,807
End of year	$ 177,259	$ 2,129,189

The accompanying notes are an integral part of these consolidated financial statements.

(in thousands of dollars)

1. Organization and Community Benefit Commitments

Mass General Brigham Incorporated (the Company) is the parent organization and sole corporate member of numerous organizations whose financial condition and operations are described in these consolidated financial statements. The terms Mass General Brigham, We, Our or Us as used herein, unless otherwise stated or indicated by context, refer collectively to the Company and its affiliated organizations.

Mass General Brigham operates academic medical centers, community acute care hospitals, inpatient and outpatient mental health services facilities, urgent care centers, facilities that provide rehabilitation medicine and long-term care services, physician organizations, home health services, nursing homes and a graduate level program for health professions. Our mission is to provide world class health care services to the local communities in which we operate as well as to patients across the United States and the world. In addition, we are a nonuniversity-based non-profit private medical research enterprise and a principal teaching affiliate of the medical and dental schools of Harvard University. Our licensed, not-for-profit managed care organization and licensed, for-profit insurance company (collectively referred to as AllWays Health) provide health insurance products and administrative services to the Massachusetts Medicaid program (MassHealth), ConnectorCare (a state subsidized program for adults who meet income and immigration guidelines) and commercial populations.

Community Health

Through our community health programs we work with community residents and organizations to make measurable, sustainable improvements in the health status of underserved populations. In addition, we support initiatives related to equity, social determinants of health and work force development. Our hospitals and licensed affiliated health centers partner with the community to help low-income, vulnerable families overcome barriers to health and wellbeing.

Charity Care

We provide charity care to all emergent patients regardless of their ability to pay. The cost of and reimbursement for providing that care, as reflected in the consolidated statements of operations, is summarized below.

State Programs

Massachusetts

Acute care hospitals in The Commonwealth of Massachusetts (the Commonwealth or Massachusetts) are partially reimbursed for charity care services through the statewide Health Safety Net Trust Fund (HSN). A portion of the funding for the HSN is paid by an assessment on acute care hospitals’ charges for private sector payers. The statewide assessment was $165,308 in both 2021 and 2020 and the assessment expense on our acute care hospitals was $60,818 and $61,973 in 2021 and 2020, respectively.

(in thousands of dollars)

Acute care hospitals are reimbursed for charity care based on claims for eligible patients and services that are submitted to and adjudicated by the HSN. Payments are based on Medicare rates and payment policies. The HSN was under-funded by approximately $64,968 and $42,738 in 2021 and 2020, respectively. This shortfall is allocated to acute care hospitals based on their share of total statewide patient care costs with our share being approximately $22,086 and $12,064 in 2021 and 2020, respectively. Each hospital's share of the overall state shortfall cannot exceed its total charity care reimbursement. Hospitals with a high proportion of charity care and government funding receive more favorable reimbursement, including limiting their shortfall allocation to no more than 15% of their payments for charity care. In aggregate, our acute care hospitals received charity care funding covering 60% and 62% of the estimated cost of charity care provided in 2021 and 2020, respectively.

The Commonwealth levies an additional assessment on Massachusetts hospitals that is redistributed to the hospitals based on pay-for-performance criteria. The total assessment was $257,500 in both 2021 and 2020 and our assessment expense was $94,734 and $97,393 in 2021 and 2020, respectively. The total amount redistributed to hospitals was $265,000 in both 2021 and 2020 of which we received $55,469 and $55,542 in 2021 and 2020, respectively. Additionally, there is a separate assessment for our post-acute hospitals which totaled $3,178 and $6,783 in 2021 and 2020, respectively.

New Hampshire

The State of New Hampshire (New Hampshire) imposes a Medicaid Enhancement Tax (MET) on hospital net patient service revenue. For both of New Hampshire's fiscal years ended June 30, 2021 and 2020, the MET imposed was 5.4%. We incurred $20,330 and $18,513 of MET in 2021 and 2020, respectively.

New Hampshire acute care hospitals receive disproportionate share payments based on a portion of their charity care relative to other acute care hospitals. We received $10,950 and $10,697 in 2021 and 2020, respectively.

Medicaid

Medicaid is a health insurance program jointly funded by the states and the federal government. Each state administers its own program and sets rules for eligibility, benefits and provider payments within broad federal guidelines and in some cases, including the Commonwealth and New Hampshire, within a Waiver Agreement between each state and the federal government. The program provides health care coverage to low-income adults and children. Eligibility is determined by a variety of factors which include income relative to the federal poverty line, age, immigrant status and assets.

Medicaid payments to our providers do not cover the full cost of services provided to Medicaid patients. In aggregate, reimbursement from Medicaid covered approximately 62% of the estimated cost of services provided in both 2021 and 2020.

(in thousands of dollars)

Federal Program

Medicare

Medicare is a federally sponsored health insurance program for people age 65 or older, under age 65 with certain disabilities and any age with End-Stage Renal Disease. Medicare's payments historically have not kept pace with increases in the cost of care provided at many hospitals. Compounding this shortfall in payments is the continued shift of care from higher paying inpatient services to lower paying outpatient services.

Consequently, Medicare payments to our providers do not cover the full cost of services provided. In aggregate, reimbursement from Medicare covered approximately 71% and 68% of the estimated cost of services provided in 2021 and 2020, respectively.

Summary

For charity care, Medicaid and Medicare, the estimated cost of services provided is either obtained directly from a costing system or based on an entity specific ratio of cost to gross charges. In the latter case, cost is derived by applying this ratio to gross charges associated with providing care to charity care, Medicaid and Medicare patients. The following summarizes, by program, the cost of services provided, net reimbursement and cost of services in excess of reimbursement for each year:

	Years Ended September 30,	
	2021	**2020**
Cost of services provided		
Charity care	$ 92,362	$ 90,473
Medicaid	1,517,575	1,275,389
Medicare	4,657,140	4,134,589
	$ 6,267,077	$ 5,500,451
Net reimbursement		
Charity care	$ 44,256	$ 45,632
Medicaid	933,518	795,865
Medicare	3,311,087	2,800,316
	$ 4,288,861	$ 3,641,813
Cost of services in excess of reimbursement		
Charity care	$ 48,106	$ 44,841
Medicaid	584,057	479,524
Medicare	1,346,053	1,334,273
	$ 1,978,216	$ 1,858,638

(in thousands of dollars)

In addition to charity care and inadequate funding from the Medicaid and Medicare programs, there are significant losses related to self-pay patients who fail to make payment for services rendered or insured patients who fail to remit co-payments and deductibles as required under the applicable health insurance arrangement. The estimated cost of providing these services was approximately $66,215 and $65,171 for 2021 and 2020, respectively.

2. Summary of Significant Accounting Policies

Basis of Accounting

The accompanying consolidated financial statements have been prepared on the accrual basis of accounting and include the accounts of the Company and its affiliates. Significant interaffiliate accounts and transactions have been eliminated.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. Significant estimates are made in the areas of patient accounts receivable, research grants receivable, investments, receivables and accrual for settlements with third-party payers, accrued medical claims and related expenses, accrued employee compensation and benefits, accrued professional liability, interest rate swaps liability and accrued other.

Income Taxes

The Company and substantially all of its affiliates are tax-exempt organizations under Sections 501(c)(3) or 501(c)(4) of the Internal Revenue Code (IRC) or are disregarded entities for tax purposes.

In December 2017, the U.S. Government enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act (Tax Act). The Tax Act, effective in phases beginning in 2018, made broad and complex changes to the U.S. tax code. Beginning in 2018, the Tax Act required us to consider certain transportation fringe benefits provided to employees as unrelated business taxable income (UBTI). In addition, beginning in 2019, we were required to determine unrelated business income or loss on an activity-by-activity basis. In December of 2019, the provision of the Tax Act that considered certain transportation fringe benefits provided to employees as UBTI was repealed retroactive to its enactment. As a result, we filed amended tax returns to refund the taxes paid relative to this provision.

Total income tax credit of $5,357 and $6,666 was recognized for the years ended September 30, 2021 and 2020, respectively.

(in thousands of dollars)

Fair Value of Financial Instruments
The fair value of financial instruments approximates the carrying amount reported in the consolidated balance sheets for cash and equivalents, investments and investments limited as to use, patient accounts receivable, research grants receivable, accounts payable and accrued expenses and interest rate swaps liability.

Cash and Equivalents
Cash and equivalents represent cash, registered money market funds and highly liquid debt instruments with a maturity at the date of purchase of three months or less. Our cash and equivalents are maintained with several national banks, and cash deposits typically exceed federal insurance limits. Our policy is to monitor these banks' financial strength on an ongoing basis, and no losses have been experienced to date.

Investments
Investments in equity securities with readily determinable fair values, debt securities and alternative investments are measured at fair value. Alternative investments, consisting of various hedge funds, private equity funds, private debt funds, other private partnerships and restricted securities of public companies that are not traded on a national securities exchange, are valued based on amounts reported by the fund manager and evaluated by management. Investments in securities sold short or traded on a national securities exchange are valued based on quoted market prices.

Income from investments (including realized gains and losses, unrealized change in value of investments, interest, dividends and endowment income distributions) is included in excess of revenues over expenses unless the income or loss is restricted by donor or law. Income from investments is reported net of investment-related expenses.

Each year as part of our endowment spending policy, we establish a fixed distribution rate for spending. Distributions will come from either income and/or net accumulated appreciation.

Investments Limited as to Use
Investments limited as to use primarily include assets whose use is contractually limited by external parties as well as assets set aside by the boards (or management) for identified purposes and over which the boards (or management) retain control such that the boards (or management) may, at their discretion, subsequently use such assets for other purposes. Certain investments corresponding to deferred compensation are accounted for such that all income and appreciation (depreciation) is recorded as a direct addition (reduction) to the asset and corresponding liability.

Derivative Instruments
Derivatives are recognized on the balance sheet at fair value with changes in the fair value recorded in excess of revenues over expenses.

(in thousands of dollars)

Patient Accounts Receivable

The payments received for healthcare services rendered from federal and state agencies (under the Medicare and Medicaid programs), managed care payers, commercial insurance companies and patients are subject to explicit and implicit discounts. These discounts are based on contractual agreements, discount policies and management's assessment of historical experiences and are reflected in the period of service.

Research Grants Receivable

Mass General Brigham receives direct and pass through research funding from the National Institutes for Health and other federal agencies, industry, corporate, foundation non-profits and other sponsors. Research grants receivable include amounts due from these sponsors of externally funded research. These amounts have been billed or are billable to the sponsor, or in limited circumstances, represent accelerated spending in anticipation of future funding. Research grants receivable are recognized at net realizable value.

As of September 30, 2021, and 2020, we have approximately $4,066,168 and $4,075,000, respectively, of conditional research grants for future research to be performed. The timing and amounts of funds received under such grants are subject to continued government funding and may change over time.

Other Current Assets

Other current assets include prepaid expenses, inventory, nonpatient receivables, current portion of receivable for settlements with third-party payers, current portion of pledges receivable and premiums receivable. Inventory (primarily supplies and pharmaceuticals) is accounted for on a first-in, first-out method basis and is recorded at the lower of average weighted cost or net realizable value.

Property and Equipment

Property and equipment is reported on the basis of cost less accumulated depreciation. Donated items are recorded at fair value at the date of contribution. All research grants received for capital are recorded in the year of expenditure as a change in unrestricted net assets. Property and equipment is reviewed for impairment whenever events or changes in circumstances indicate that its carrying amount may not be recoverable. Depreciation of property and equipment is calculated by use of the straight-line method at rates intended to depreciate the cost of assets over their estimated useful lives, which generally range from three to fifty years. Interest costs incurred on borrowed funds during the period of construction of capital assets are capitalized, net of any interest earned, as a component of the cost of acquiring those assets.

Asset Retirement Obligations

Asset retirement obligations, reported in accrued other, are legal obligations associated with the retirement of long-lived assets. These liabilities are initially recorded at fair value and the related asset retirement costs are capitalized by increasing the carrying amount of the related assets by the same amount as the liability. Asset retirement costs are subsequently depreciated over the useful lives of the related assets. Any changes to the liability due either to the passage of time, better information or the settlement of an obligation are reflected in the current period.

(in thousands of dollars)

Other Assets
Other assets consist of long-term receivables, intangible assets, malpractice insurance receivables, receivable for settlements with third-party payers, investments in healthcare related limited partnerships and long-term pledges and contributions receivable. The carrying value of other assets is evaluated for impairment if the facts and circumstances suggest that the carrying value may not be recoverable.

Compensated Absences
In accordance with formal policies concerning vacation and other compensated absences, accruals of $413,304 and $375,627 were recorded as of September 30, 2021 and 2020, respectively.

Unexpended Funds on Research Grants
Research grants received in advance of corresponding grant expenditures are accounted for as a direct addition to investments limited as to use and unexpended funds on research grants.

Self-Insurance Reserves
We are generally self-insured for employee healthcare, disability, workers' compensation and certain other employee benefits. These costs are accounted for on an accrual basis to include estimates of future payments for claims incurred prior to year-end.

Net Assets
Donor restricted net assets include (a) the historical dollar amounts of contributions and the income and gains on such contributions which are required by donors to be retained and (b) contributions and the income and gains on these contributions which can be expended but for which restrictions have not yet been met. Such restrictions include purpose restrictions where donors have specified the purpose for which the net assets are to be spent, or time restrictions imposed by donors or implied by the nature of the contribution (capital projects, pledges to be paid in the future and life income funds) or by interpretations of law (gains available for appropriation but not appropriated in the current period). All remaining net assets are considered unrestricted.

Realized gains and losses are classified as unrestricted net assets unless they are restricted by the donor or law. Realized gains and net unrealized appreciation on donor restricted contributions are classified as donor restricted until appropriated for spending in accordance with policies established by Mass General Brigham and applicable provisions of the Uniform Prudent Management of Institutional Funds Acts (UPMIFA). Net losses on donor restricted endowment funds are classified as a reduction to donor restricted net assets.

Contributed Securities
Our policy is to sell securities contributed by donors upon receipt, unless prevented from doing so by donor request. For the years ended September 30, 2021 and 2020, contributed securities of $53,872 and $80,461, respectively, were received and liquidated. Donors restricted $25,536 and $10,787 of the proceeds received from the sale of these contributed securities for long-term purpose for the years ended September 30, 2021 and 2020, respectively.

(in thousands of dollars)

Statement of Operations
Activities deemed by management to be ongoing, major and central to the provision of healthcare services, teaching, research activities and health insurance are reported as operating revenues and expenses. Other activities are deemed to be nonoperating and include unrestricted contributions (net of fundraising expenses), external community benefit program support, net change in unexpended academic and research contributions, change in fair value of interest rate swaps, substantially all income (loss) from investments, interest on advanced borrowings and nonservice related pension income. Academic and research contributions largely consist of donor contributions (and the related investment income including realized gains and losses) designated to support the clinical, teaching or research efforts of a physician or department as directed by the donor. These contributions are reported as unrestricted, net of related support expenses, when donor restrictions are of a general nature that are inherent in the normal activities of the organization.

The consolidated statements of operations include excess of revenues over expenses. Changes in unrestricted net assets, which are excluded from excess of revenues over expenses, include contributions of long-lived assets (including assets acquired using contributions which by donor restriction were to be used for acquisition of such assets), change in funded status of defined benefit plans.

Revenues
To determine the appropriate revenue recognition policy, we first assess whether the transaction is an exchange or nonexchange transaction in accordance with accounting guidance. In general, an exchange transaction consists of an exchange of goods and/or services for commensurate value. Transactions that consist of transferring goods and/or services without receiving commensurate value in return are considered nonexchange transactions.

For exchange transactions, revenue is recognized as goods and/or services are provided and is based on the amount expected to be received in exchange for those goods and/or services. Revenue recognized as exchange transactions include net patient service revenue, premium revenue and other revenue.

Nonexchange transactions include contributions and grants for which the service provider does not receive commensurate value in return for the funding.

Contributions
Contributions are reported as other nonoperating gains in the consolidated statements of operations. Unconditional promises to give cash and other assets are reported at fair value at the date the promise is received. Conditional promises to give are recognized when the conditions are substantially met. Contributions are reported as donor restricted support if they are received with donor stipulations that limit the use of the donated assets. Donor restricted contributions whose restrictions are met within the same year as received are reported as unrestricted contributions in the consolidated statements of operations.

(in thousands of dollars)

Contributions of long-lived assets with explicit restrictions that specify use of assets and contributions of cash or other assets that must be used to acquire long-lived assets are reported as additions to donor restricted net assets if the assets are not placed in service during the year.

Grants
Grants and contracts normally provide for the recovery of direct and indirect costs, subject to audit. Revenue associated with direct and indirect costs is recognized as direct costs are incurred. The recovery of indirect costs is based on predetermined rates for U.S. Government grants and contracts and negotiated rates for other grants and contracts.

Medical Claims and Related Expenses
AllWays Health contracts with various hospitals, community health centers, primary care and specialty physician practices and other health care providers for the delivery of services to its members and compensates these providers on a capitated, fee-for-service, per diem or diagnosis-related group basis.

The cost of contracted health care services is accrued in the period in which services are provided and include certain estimated amounts. The estimated liability for medical claims and related expenses is actuarially determined based on analysis of historical claims-paid experience, modified for changes in enrollment, inflation and benefit coverage. The liability for medical claims and related expenses represents the anticipated cost of claims incurred but unpaid at the balance sheet date. Estimates for claims expense may be more or less than the amounts ultimately paid when claims are settled. Such changes in estimates are reflected in the current period in the consolidated statements of operations.

In the normal course of business, overpayments are recouped through reductions in future payments made to hospitals and other providers. Such overpayments are the result of, among other things, coordination of benefits and provider claim audits. For the years ended September 30, 2021 and 2020, we recorded a reduction in medical claims expense of $28,998 and $19,968, respectively, for such overpayments. As of September 30, 2021 and 2020, respectively, approximately $2,881 and $1,629 are recorded as receivables related to such overpayments.

Reinsurance
Reinsurance premiums are reported in medical claims and related expenses and reinsurance recoveries are reported as reductions in medical claims and related expenses.

Settlements
AllWays Health contracts with certain providers at negotiated rates based on historical and anticipated experience. These methods of reimbursement result in settlements based on actual versus anticipated experience which could result in payments due from (to) these providers. Settlements receivable of $4,446 and $5,514 were recorded in other current assets as of September 30, 2021 and 2020, respectively. Settlements payable of $1,223 and $2,921 were recorded in accrued medical claims and related expenses as of September 30, 2021 and 2020, respectively. The settlements are intended to include both reported and unreported incurred claims as of September 30, 2021 and 2020.

(in thousands of dollars)

In 2014, the Affordable Care Act introduced new settlements related to a risk adjustment program, a risk corridor program and a reinsurance program designed to mitigate the transitional impact on insurers for new members. The risk corridor program and reinsurance program ended on December 31, 2016 in accordance with the provision of the Affordable Care Act. Our estimated net receivable due from the federal government for these programs was $67,263 and $65,753 at September 30, 2021 and 2020, respectively. Similar to the federal program, the Executive Office of Health and Human Services of the Commonwealth (EOHHS) has a risk corridor program, and our estimated net payable due to EOHHS was $14,540 and $2,186 as of September 30, 2021 and 2020, respectively.

Premium Deficiency Reserves

Premium deficiency reserves are assessed and recognized on a product line basis based upon expected premium revenue, medical expense and administrative expense levels, and remaining contractual obligations using historical experience. There were no premium deficiency reserves as of September 30, 2021 or 2020.

Claims Adjustment Expenses

Claims adjustment expenses (CAE) are those costs expected to be incurred in connection with the adjustment and recording of health claims. We have recorded an estimate of unpaid CAE associated with incurred but unpaid claims, which is included in medical claims and related expenses in the accompanying consolidated statements of operations. Management believes the amount of the liability for unpaid CAE as of September 30, 2021, is adequate to cover the cost for the adjustment and recording of unpaid claims; however, actual expenses may differ from those established estimates. Adjustments to the estimates for unpaid CAE are reflected in operating results in the period in which the change in estimate is identified.

3. Pandemic

On March 11, 2020, the World Health Organization designated COVID-19 as a global pandemic resulting in an extraordinary impact to patient activity in 2020. Federal and state policies, including declarations of a state of emergency by the governors of Massachusetts and New Hampshire on March 10 and March 27, respectively, were enacted to help contain the spread of COVID-19. Beginning on March 18, 2020, our Massachusetts facilities were prohibited from performing nonessential elective procedures. On June 8, 2020, Massachusetts entered phase two of its reopening plan, which permitted our Massachusetts facilities to provide in-person care for certain routine services. Our New Hampshire facilities generally followed a similar timeline.

In response to COVID-19, the Coronavirus Aid Relief and Economic Security (CARES) Act was enacted which provided different types of economic support to a wide variety of companies and individuals. Mass General Brigham employed several CARES Act provisions, with the most significant impacts summarized below.

(in thousands of dollars)

Medicare Accelerated Payments (MAP)
As of September 30, 2020, we received approximately $1,018,093 in MAP funding which was recorded in accounts payable and accrued expenses as of September 30, 2020. Medicare started to recoup these payments beginning in April 2021 based upon the terms and conditions of this program and most will be recouped by the end of fiscal year 2022. As of September 30, 2021, we had $724,469 in MAP funding recorded in accounts payable and accrued expenses.

Deferred Payment of Employer Payroll Taxes
As of September 30, 2021 and 2020, we have accumulated $239,466 and $165,088, respectively, of deferred employer payroll taxes within accrued employee compensation and benefits. The CARES Act allows for deferred payments of only the employer share of payroll taxes through December 31, 2020 and requires payment of 50% of these deferred taxes by December 31, 2021 and 50% by December 31, 2022.

Provider Relief Funds (PRF)
For the year ended September 30, 2021 and 2020, we recognized approximately $232,063 and $546,373, respectively, of permanent grants from the PRF within other operating revenue. PRF were used to prevent, prepare for and respond to COVID-19. Based on our interpretation of available information as of September 30, 2021 and 2020, we have deferred $86,487 and $51,759, respectively, of PRF we received. These estimates could change as additional guidance becomes available.

4. Operating Revenues

Net Patient Service Revenue
Mass General Brigham's providers maintain agreements with The Centers for Medicare and Medicaid Services under the Medicare program, the Commonwealth under the Medicaid program and various managed care payers that govern payment for services rendered to patients covered by these agreements. The agreements generally provide for per case or per diem rates or payments based on discounted charges for inpatient care and discounted charges or fee schedules for outpatient care. Certain contracts also provide for payments that are contingent upon meeting agreed upon quality and efficiency measures.

(in thousands of dollars)

We recognize net patient service revenue for services provided to patients who have third-party payer coverage based on contractual rates for the services rendered. For uninsured patients that do not qualify for charity care, we recognize revenue based on our standard rates (subject to discounts) for services provided. Based on our historical experience, a significant portion of uninsured patients are unable or fail to pay for the services provided. Consequently, we have provided implicit discounts to uninsured patients. These discounts represent the difference between amounts billed to patients and amounts expected to be collected based on historical experience. The following summarizes net patient service revenue, net of contractual adjustments and discounts by significant payer:

	Years Ended September 30,			
	2021		2020	
Net patient service revenue (net of contractual adjustments and discounts)				
Medicare	$ 2,614,786	23.0%	$ 2,348,346	24.5%
Medicare managed care	696,301	6.1%	451,970	4.7%
Medicaid	698,353	6.1%	644,897	6.7%
Medicaid managed care	235,165	2.1%	150,968	1.6%
Massachusetts managed care organizations	4,192,422	36.6%	3,579,093	37.2%
Other commercial	2,310,323	20.2%	1,999,249	20.8%
All others	684,905	5.9%	434,673	4.5%
Total all payers	$ 11,432,255	100.0%	$ 9,609,196	100.0%

Net patient service revenue includes estimated retroactive revenue adjustments due to future audits, reviews and investigations. Retroactive adjustments are considered in the recognition of revenue on an estimated basis in the period the related services are rendered, and such amounts are adjusted in future periods as adjustments become known or as years are no longer subject to such audits, reviews and investigations. Contracts, laws and regulations governing the Medicare, Medicaid and charity care programs and managed care payer arrangements are complex and subject to interpretation. As a result, there is at least a reasonable possibility that recorded estimates will change by a material amount in the near term. A portion of the accrual for settlements with third-party payers has been classified as long-term because such amounts, by their nature or by virtue of regulation or legislation, will not be paid within one year.

(in thousands of dollars)

Third-party payers (accrual) receivable consists of the following:

	Balance Sheet Classification	September 30, 2021	September 30, 2020
Current portion			
Receivable for settlements with third-party payers	Other current assets	$ 104,874	$ 70,633
Accrual for settlements with third-party payers	Accounts payable and accrued expenses	(785,917)	(1,080,524)
		(681,043)	(1,009,891)
Long-term portion			
Receivable for settlements with third-party payers	Other assets	4,315	15,340
Accrual for settlements with third-party payers	Accrued Other	(28,162)	(33,291)
		(23,847)	(17,951)
Third-party payers (accrual) receivable		$ (704,890)	$ (1,027,842)

We recognize changes in third-party payer settlements and other estimates in the year of the change in estimate. For the years ended September 30, 2021 and 2020, adjustments to prior year estimates resulted in an increase to income from operations of $48,818 and $28,474, respectively. Subsequent changes to estimated discounts are generally recorded as adjustments to net patient service revenue in the period of change.

We provide either full or partial charity care to patients who cannot afford to pay for their medical services based on income and family size. Charity care is generally available to qualifying patients for medically necessary services. We report certain bad debts related to emergency services as charity care. As there is no expectation of collection, there is no net patient service revenue recorded related to charity care.

Premium Revenue

Premiums are due monthly and are recorded as earned during the period in which members are eligible to receive services. Premiums received prior to the first day of the coverage period are recorded as unearned premiums in accounts payable and accrued expenses.

Academic and Research Revenue

Academic and research revenue is recognized as either an exchange or nonexchange transaction, depending on the contract type. The following table sets forth total academic and research revenue received by funding source:

	Years Ended September 30, 2021		2020	
National Institute of Health and other federal agencies	$ 998,423	43.8%	$ 873,811	42.4%
Federal subcontracts	230,702	10.1%	188,050	9.1%
Industry/Corporate	198,651	8.8%	159,593	7.8%
Foundations/non-profits and other sponsors	625,795	27.5%	589,261	28.6%
Total research revenue	2,053,571		1,810,715	
Academic revenue	223,373	9.8%	249,670	12.1%
Total academic and research revenue	$ 2,276,944	100.0%	$ 2,060,385	100.0%

(in thousands of dollars)

Other Revenue

Other revenue includes all other operating revenue sources, the most significant being the following:

	Years Ended September 30, 2021	2020
Provider relief funds (CARES)	$ 232,063	$ 546,373
Specialty and retail pharmacy operations	457,750	298,070
Intellectual property and royalties	23,314	92,301
Parking and office rentals	63,197	59,770
Tuition	64,480	59,216
Outsourced services	45,423	36,832
Cafeteria sales	25,356	27,959
Contract administrative fees	34,220	32,432
Blood factor sales	37,467	26,071
Accountable care organization administration fees	37,104	23,706
Consulting services	13,028	15,096
International contracts	7,421	18,971
Investment income	10,909	13,716
Other	325,060	308,342
Total other revenue	$ 1,376,792	$ 1,558,855

5. Liquidity and Availability

Cash and investments are managed centrally under policies developed by the Investment Committee and reviewed by the Finance Committee of the Company's Board of Directors. Wherever possible, funds are commingled and are assigned to one of three investment pools (the Money Market Pool, the Aggregate Bond Pool and the Long-Term Pool, collectively, the Pools) which have been structured to provide a range of investment objectives, risk profiles and rates of return appropriate for our assets. Funds are allocated among the Pools based on expected liquidity needs as determined by multi-year financial plans, restrictions and management judgment.

The tiered time horizon structure of the Pools is designed to meet anticipated and contingent liquidity needs. The following tables set forth the periods within which funds are available to meet liquidity needs and, based on redemption provisions with investment managers, the specific Pools from which such funds would be drawn as of:

	September 30, 2021						
Investment Pool	**Same Day**	**1 Week**	**1 Month**	**3 Months**	**1 Year**	**> 1 Year**	**Total**
Money market	$ 387,288	$ -	$ -	$ -	$ -	$ -	$ 387,288
Aggregate bond	1,798,123	348,702	-	-	-	-	2,146,825
Long-term	155,521	1,602,470	1,147,679	4,284,623	1,542,435	5,933,595	14,666,323
Total	$ 2,340,932	$ 1,951,172	$ 1,147,679	$ 4,284,623	$ 1,542,435	$ 5,933,595	$ 17,200,436
Cumulative total	$ 2,340,932	$ 4,292,104	$ 5,439,783	$ 9,724,406	$ 11,266,841	$ 17,200,436	

(in thousands of dollars)

	September 30, 2020						
Investment Pool	**Same Day**	**1 Week**	**1 Month**	**3 Months**	**1 Year**	**> 1 Year**	**Total**
Money market	$ 2,278,647	$ -	$ 29,985	$ -	$ -	$ -	$ 2,308,632
Aggregate bond	550,234	71,194	-	-	-	-	621,428
Long-term	1,559,655	524,340	1,729,144	1,995,487	1,463,834	3,791,263	11,063,723
Total	$ 4,388,536	$ 595,534	$ 1,759,129	$ 1,995,487	$ 1,463,834	$ 3,791,263	$ 13,993,783
Cumulative total	$ 4,388,536	$ 4,984,070	$ 6,743,199	$ 8,738,686	$ 10,202,520	$ 13,993,783	

The market value of the Aggregate Bond Pool consisted of the following:

	September 30, 2021	September 30, 2020
Short-term investments and U.S. Treasuries	$ 424,763	$ 317,812
Separately managed mortgage and asset-backed securities and corporate bonds	160,291	169,060
Commingled fixed income vehicles	1,561,771	134,556
Total of Aggregate Bond Pool	$ 2,146,825	$ 621,428

As of September 30, 2021 and 2020, we had cash and equivalents not included in the Pools of $97,955 and $79,817, respectively. As of September 30, 2021 and 2020, we had net patient accounts receivable of $1,332,404 and $983,273, respectively, that would be available for general expenditures within one year of the balance sheet dates.

In addition, we maintain two lines of credit aggregating $375,000 as well as a $500,000 Taxable Commercial Paper program that provide access to same day funds.

6. Investments and Investments Limited as to Use

Investments are either invested in the Pools or separately managed. Substantially all affiliates participate in the Pools. Their respective ownership interests are tracked and updated monthly and are accounted for using the fair value method. Income (including realized gains and losses) from the Pools is allocated to each participant on a monthly basis based on its proportionate interest in the Pools.

Oversight of the management of the investable assets, including the Pools and pension assets, is provided by the Investment Committee of the Company’s Board of Directors which seeks to achieve incremental returns by manager selection and asset allocation (increasing/decreasing allocations within allowable ranges based on current and projected valuations). The Committee is supported by a professional staff, an outside investment consultant and a pension actuarial consultant.

(in thousands of dollars)

We utilize a target allocation policy and balance projected returns, correlation and volatility of various asset classes within the overall risk tolerance. Asset allocations are managed based on relative valuations among and within asset classes and the perceived ability of managers to outperform passive benchmarks. Exposure by asset class is the sum of allocation to those mangers whose mandates most closely fit the listed asset classes. Asset allocation can and will deviate from target exposures and is regularly monitored for rebalancing.

The Pools invest in a variety of assets which include private partnerships whose assets include equity, fixed income and other investments. As of September 30, 2021, the Pools have unfunded commitments of approximately $1,568,882 which will be drawn down by the various general partners over the next several years. The maximum annual drawdown is expected to be 3% to 5% of investments and investments limited as to use.

Investments and investments limited as to use are recorded in the balance sheet as follows:

	September 30, 2021	September 30, 2020
Current assets		
Investments	$ 3,395,005	$ 1,142,275
Current portion of investments limited as to use	5,637,637	4,424,436
	9,032,642	5,566,711
Long-term assets		
Investments limited as to use, less current portion	6,202,723	5,168,054
Long-term investments	2,950,684	2,179,220
	$ 18,186,049	$ 12,913,985

(in thousands of dollars)

Investments limited as to use consist of the following:

	September 30, 2021		September 30, 2020	
	Current Portion	Long-Term Portion	Current Portion	Long-Term Portion
Internally designated funds				
Reserved for capital expenditures	$ 1,414,284	$ -	$ 1,025,715	$ -
Unexpended academic and research gifts	-	5,031,167	-	3,989,810
Deferred compensation	-	593,834	-	474,875
Other	3,693,511	531,205	2,721,020	666,489
	5,107,795	6,156,206	3,746,735	5,131,174
Externally limited funds				
Unexpended funds on research	345,403	-	367,858	-
Contributions held for others	2,864	-	1,742	-
Professional liability trust fund	-	46,517	-	36,880
Held by trustees under debt and other agreements	181,575	-	308,101	-
	529,842	46,517	677,701	36,880
	$ 5,637,637	$ 6,202,723	$ 4,424,436	$ 5,168,054

Investment activity included in excess of revenues over expenses consists of the following:

	Years Ended September 30,	
	2021	2020
Investment income included in operations and reported in other revenue	$ 10,909	$ 13,716
Investment income included in nonoperating gains and reported in		
Income from investments		
Net realized gains on investments	303,166	212,690
Change in unrealized appreciation of investments	2,036,541	399,665
Academic and research gifts, net of expenses	251,297	217,531
Total investment activity included in excess of revenues over expenses	$ 2,601,913	$ 843,602

7. 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 (also referred to as exit price). Therefore, a fair value measurement should be determined based on the assumptions that market participants would use in pricing the asset or liability. In determining fair value, the use of various valuation approaches, including market, income and cost approaches, is permitted.

(in thousands of dollars)

Fair Value Hierarchy
A fair value hierarchy has been established based on whether the inputs to valuation techniques are observable or unobservable. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect the reporting entity's assumptions about the inputs market participants would use. The fair value hierarchy requires the reporting entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. In addition, for hierarchy classification purposes, the reporting entity should not look through the form of an investment to the nature of the underlying securities held by an investee.

The hierarchy is described below.

Level 1 Valuations using quoted prices in active markets for identical assets or liabilities. Valuations of these products do not require a significant degree of judgment. Level 1 assets and liabilities primarily include debt and equity securities that are traded in an active exchange market.

Level 2 Valuations using observable inputs other than Level 1 prices such as quoted prices in active markets for similar assets or liabilities; quoted prices for identical or similar assets or liabilities in markets that are not active; broker or dealer quotations; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities. Level 2 assets and liabilities primarily include debt securities with quoted prices that are traded less frequently than exchange-traded instruments as well as debt securities and derivative contracts whose value is determined using a pricing model with inputs that are observable in the market or can be derived principally from or corroborated by observable market data.

Level 3 Valuations using unobservable inputs that are supported by little or no market activity and are significant to the fair value of the assets or liabilities. Level 3 includes assets and liabilities whose value is determined using pricing models, discounted cash flow methodologies, or similar techniques reflecting the reporting entity's assumptions about the assumptions market participants would use as well as those requiring significant management judgment.

Valuation Techniques
Pooled investments, separately invested short-term investments and debt and equity securities are classified within Level 1 or Level 2 of the fair value hierarchy as they are valued using quoted market prices, broker or dealer quotations, or other observable pricing sources. Certain types of investments are classified within Level 3 of the fair value hierarchy because they have little or no market activity and therefore have little or no observable inputs with which to measure fair value.

The valuation of interest rate swaps is determined using widely accepted valuation techniques, including discounted cash flow analysis on the expected cash flows of each derivative. This analysis reflects the contractual terms of the derivatives, including the period to maturity, and uses observable market-based inputs, including interest rate curves and implied volatilities.

(in thousands of dollars)

The following tables summarize financial assets and liabilities measured at fair value on a recurring basis as of:

	September 30, 2021				
	Fair Value Measurements Using				
	Quoted Prices in Active Markets for Identical Items (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Investments Valued Using NAV as a Practical Expedient	Total
Assets					
Pooled investments					
Short-term investments	$ 485,457	$ -	$ -	$ -	$ 485,457
Separately managed investments	1,263,270	384,995	-	-	1,648,265
Mutual funds	1,561,770	-	-	-	1,561,770
Private partnerships, commingled funds and other	-	-	-	13,504,944	13,504,944
	3,310,497	384,995	-	13,504,944	17,200,436
Separately invested					
Short-term investments	41,339	-	-	-	41,339
Equities	38,045	-	-	-	38,045
Mutual funds	675,726	126,407	-	-	802,133
Beneficial interests in perpetual assets	-	-	61,316	-	61,316
	755,110	126,407	61,316	-	942,833
	$ 4,065,607	$ 511,402	$ 61,316	$ 13,504,944	$ 18,143,269
Interest rate swaps					
Liabilities		$ (472,011)			$ (472,011)

	September 30, 2020				
	Fair Value Measurements Using				
	Quoted Prices in Active Markets for Identical Items (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Investments Valued Using NAV as a Practical Expedient	Total
Assets					
Pooled investments					
Short-term investments	$ 1,628,674	$ 679,958	$ -	$ -	$ 2,308,632
Separately managed investments	1,693,788	732,375	-	-	2,426,163
Mutual funds	134,555	-	-	-	134,555
Commingled funds	-	1,164,116	-	-	1,164,116
Private partnerships and other	-	-	-	7,960,317	7,960,317
	3,457,017	2,576,449	-	7,960,317	13,993,783
Separately invested					
Short-term investments	103,865	-	-	-	103,865
Equities	66,803	-	-	-	66,803
Mutual funds	532,755	130,690	-	-	663,445
Beneficial interests in perpetual assets	-	-	52,864	-	52,864
	703,423	130,690	52,864	-	886,977
	$ 4,160,440	$ 2,707,139	$ 52,864	$ 7,960,317	$ 14,880,760
Interest rate swaps					
Liabilities		$ (662,384)			$ (662,384)

(in thousands of dollars)

8. Pledges and Contributions Receivable

Pledges receivable represent unconditional promises to give and are net of allowances for uncollectible amounts. Pledges are recorded at the present value of their estimated future cash flows. Pledges collectible within one year are classified as other current assets, net of allowances, and total $125,756 and $101,517 as of September 30, 2021 and 2020, respectively. Estimated cash flows due after one year are discounted using published treasury bond and note yields that are commensurate with estimated collection risks. The blended discount rate was 0.6% and 0.2% for 2021 and 2020, respectively. Pledges are expected to be collected as follows:

	September 30, 2021	September 30, 2020
Amounts due		
Within one year	$ 153,120	$ 128,375
In one to five years	170,934	151,247
In more than five years	69,461	51,820
Total pledges receivable	393,515	331,442
Less: Unamortized discount	5,700	1,401
	387,815	330,041
Less: Allowance for uncollectibles	32,035	31,473
Net pledges receivable	355,780	298,568
Contributions receivable from trusts	66,477	59,294
	$ 422,257	$ 357,862

9. Property and Equipment

Property and equipment consists of the following:

	September 30, 2021	September 30, 2020
Land and land improvements	$ 356,271	$ 353,815
Buildings and building improvements	8,990,955	8,768,567
Equipment	2,868,709	2,858,382
Construction in progress	388,724	343,874
Finance right-of-use lease assets	70,350	1,992
	12,675,009	12,326,630
Less: Accumulated depreciation	6,413,282	5,915,513
Property and equipment, net	$ 6,261,727	$ 6,411,117

(in thousands of dollars)

Depreciation expense for the years ended September 30, 2021 and 2020 was $721,199 and $710,684, respectively. Interest costs, net of interest earned, aggregating $1,257 and $1,581 were capitalized in 2021 and 2020, respectively.

For the years ended September 30, 2021 and 2020, fully depreciated assets with an original cost of $223,430 and $433,402, respectively, were written off.

10. Levels of Capital and Surplus

Risk-based capital (RBC) is a methodology adopted by the National Association of Insurance Commissioners for determining the minimum level of capital and surplus deemed necessary for an insurer based upon the types of assets held and business written. The Company has guaranteed to the Massachusetts Division of Insurance (DOI) (the RBC Guaranty) to maintain AllWays Health's capital and surplus at a specified minimum level, measured quarterly in accordance with an RBC methodology permitted by DOl. The RBC Guaranty may be enforced by the DOI. In 2021 and 2020, AllWays Health returned capital of $0 and $50,000, respectively, to the Company. AllWays Health's current contract with EOHHS requires AllWays Health to maintain a minimum net worth and/or financial insolvency insurance in an amount equal to the Minimum Net Worth calculation as defined in Massachusetts General Law 176G, Section 25. At December 31, 2020 and 2019 (AllWays Health's statutory year end), the minimum net worth requirement, as determined in accordance with EOHHS guidelines, was $43,702 and $40,527, respectively. AllWays Health's statutory net worth was $155,918 and $160,753 at December 31, 2020 and 2019, respectively, and thus exceeded the EOHHS requirements by $112,216 and $120,226, respectively.

11. Accrued Medical Claims and Related Expenses

Accrued medical claims and related expenses include estimates of expected trends in claims severity, frequency, and other factors, which could vary as the claims are ultimately settled and are based principally upon historical experience. For the years ended September 30, 2021 and 2020, changes in estimates resulted in an increase (decrease) of accrued medical claims and related expense of ($25,613) and $3,874 respectively. Increases (decreases) of this nature occur as the result of claim settlements and recoveries during the current year and as additional information is received regarding individual claims, causing changes from the original estimates of the cost of these claims. Ongoing analysis of the recent loss development trends is also taken into account in evaluating the overall adequacy of the reserves.

(in thousands of dollars)

Changes in accrued medical claims and related expenses are as follows:

	2021	2020
Balance at beginning of year	$ 84,638	$ 57,550
Less:		
Accrual for claims adjustment expenses	(13,609)	(3,040)
Accrued medical payables - other	(1,475)	(1,154)
Plus: Settlements payable, net	67,491	35,610
Net balance at beginning of year	137,045	88,966
Incurred related to		
Current year	671,127	606,436
Prior years	(25,613)	3,874
Total incurred	645,514	610,310
Paid related to		
Current year	592,738	497,575
Prior years	59,728	64,656
Total paid	652,466	562,231
Net balance at end of year	130,093	137,045
Plus:		
Accrual for claims adjustment expenses	1,602	1,475
Accrued medical payables - other	17,281	13,609
Less: Settlements payable, net	(61,687)	(67,491)
Balance at end of year	$ 87,289	$ 84,638

Medical claims and related expenses in the accompanying consolidated statements of operations include other nonclaims related costs. These nonclaims related expenses were for directly delivered services and medical cost risk sharing and incentives.

(in thousands of dollars)

12. Long-Term Obligations

Mass General Brigham's long-term obligations consist of the following:

	Final Maturity	September 30, 2021	2020
Massachusetts Health and Educational Facilities Authority Revenue Bonds			
Series 1997 P*, variable interest rate of 0.05% and 0.09%	2027	$ 150,000	$ 150,000
Series 2005 F*, variable interest rate of 0.08% and 0.29%	2040	227,950	229,650
Series 2007 G*, variable interest rate of 0.20% and 0.20%	2042	75,000	75,000
Series 2008 H*, variable interest rate of 0.08% and 0.19%	2042	162,590	165,195
Massachusetts Development Finance Agency (Agency) Revenue Bonds			
Series 2011 K*, average fixed interest rate of 4.76%, variable interest rate of 0.05% and 0.12%	2046	100,000	110,720
Series 2012 L*, average fixed interest rate of 4.49%	2023	8,635	15,770
Series 2014 M*, average fixed interest rate of 4.34%	2026	21,835	26,835
Series 2014 N*, variable interest rate of 0.69% and 0.68%	2044	127,950	129,650
Series 2015 O*, average fixed interest rate of 4.39%	2045	187,065	193,545
Series 2016 Q*, average fixed interest rate of 4.80%	2047	415,390	417,845
Series 2016 R*, variable interest rate of 0.63% and 0.67%	2052	100,000	100,000
Series 2017 S*, average fixed interest rate of 4.61%, variable interest rate of 0.52% and 0.59%	2047	907,630	940,130
Series 2019 T*, variable interest rate of 0.59% and 0.66%	2049	158,250	158,250
Series 2020 A*, average fixed interest rate of 4.84%	2050	294,195	304,885
New Hampshire Health and Education Facilities Authority Revenue Bonds			
Series 2017, average fixed interest rate of 5.00%	2041	92,840	95,160
MGB Taxable Debt			
Series 2007 Bonds, fixed interest rate of 6.26%	2037	100,000	100,000
2012 Senior Notes, fixed interest rate of 4.11%	2052	400,000	400,000
2014 Senior Notes, fixed interest rate of 4.73%	2044	150,000	150,000
Series 2015 Bonds, fixed interest rate of 4.12%	2055	300,000	300,000
2016 Senior Notes, fixed interest rate of 3.89%	2046	225,000	225,000
Series 2017 Bonds, fixed interest rate of 3.77%	2048	303,644	303,644
2018 Senior Notes, fixed interest rate of 4.60%	2049	400,000	400,000
Series 2020 Bonds, average fixed interest rate of 3.29%	2060	1,017,135	1,017,135
2020 Term Loan, fixed interest rate of 2.42%		-	150,000
Other obligations		6,574	7,388
Total long-term obligations, par value		5,931,683	6,165,802
Net unamortized bond premiums		277,409	290,870
Deferred financing costs		(24,867)	(26,211)
Total long-term obligations, net		6,184,225	6,430,461
Less:			
Current portion		381,987	436,166
Auction rate securities held		-	29,985
		$ 5,802,238	$ 5,964,310

* Denotes series is issued in multiple subseries
Variable interest rates are presented at September 30, 2021 and 2020, respectively

(in thousands of dollars)

As of September 30, 2021 and 2020, we held $0 and $29,985, respectively, of the Series 2005 F and Series 2007 G Revenue Bonds issued as auction rate securities. Although not legally extinguished, the bonds held by us have been reflected as extinguished under generally accepted accounting principles.

Scheduled maturities of long-term obligations (including the impact of net unamortized bond premiums and deferred financing costs) during the next five years and thereafter and other amounts classified as current liabilities, are as follows:

	Scheduled Maturities	Bonds Supported by Self Liquidity	Bonds Supported by Bank Facilities	Total
2022	$ 103,222	$ 210,015	$ 68,750	$ 381,987
2023	102,719	-	-	102,719
2024	105,782	-	-	105,782
2025	119,296	-	-	119,296
2026	67,436	-	-	67,436
Thereafter	5,407,005	-	-	5,407,005
	$ 5,905,460	$ 210,015	$ 68,750	$ 6,184,225

The scheduled maturities represent annual payments as required under debt repayment schedules. The current portion of long-term obligations includes the payments scheduled to be made in 2022, bonds supported by self-liquidity that can be tendered prior to September 30, 2022, and bonds supported by bank facilities with financial institutions (standby bond purchase agreements or letters of credit) that expire prior to September 30, 2022. The bonds supported by self-liquidity provide the bondholder with an option to tender the bonds to the Company. Accordingly, these bonds are classified as a current liability. The bonds supported by bank facilities provide the bondholder with an option to tender the bonds to the liquidity provider. Generally accepted accounting principles require bonds backed by bank facilities expiring within one year of the balance sheet date as well as potential principal amortization under bank facilities' term out provisions due within one year of the balance sheet date to be classified as a current liability.

If bonds supported by bank facilities cannot be remarketed, the repayment terms of those bank facilities would result in repayments of $68,750 in 2022, $142,650 in 2023, $86,400 in 2024 and $30,150 in 2025. If the bonds supported by self-liquidity cannot be remarketed, the bonds would be tendered to the Company on their respective earliest tender dates, which differ from scheduled maturity dates, and would result in payments of $210,015 in 2022, $119,870 in 2023, $69,250 in 2024, $61,935 in 2025, $130,000 in 2026 and $139,285 thereafter.

(in thousands of dollars)

Scheduled payments of long-term debt (excluding the impact of net unamortized bond premiums and deferred financing costs) for each of the next five years, assuming bonds backed by bank facilities are remarketed and the standby purchase agreements are renewed and bonds supported by self-liquidity are remarketed, are as follows:

2022	$ 103,222
2023	107,624
2024	110,887
2025	124,751
2026	93,686
Thereafter	5,391,513
	$ 5,931,683

Interest expense paid during the years ended September 30, 2021 and 2020 was $243,020 and $251,804, respectively.

In January 2020, we issued $304,885 of Mass General Brigham Series 2020 A Revenue Bonds, plus bond premium of $79,262. The bond proceeds, net of issuance costs of $1,511, were used to refund portions of Series J Bonds ($38,765), Series M Bonds ($50,000) and Series O Bonds ($50,000), and to finance certain capital projects ($243,871).

In January 2020, we issued $1,017,135 of Mass General Brigham Series 2020 Taxable Bonds. The bond proceeds, net of issuance costs of $6,649, were used to refund portions of Series L Bonds ($57,313), Series M Bonds ($241,104) and Series O Bonds ($68,559), to refund Series 2011 Taxable Bonds ($250,000), and to finance certain capital projects ($393,510).

Mass General Brigham bonds are general obligations of the Company supported by guarantees from Brigham Health, Inc., The Brigham and Women's Hospital, Inc., The Massachusetts General Hospital and The General Hospital Corporation which may be suspended under certain conditions.

Our debt agreements contain certain covenants, including a minimum debt service coverage ratio and limitations on additional indebtedness and asset transfers.

Lines of Credit
The Company maintains two lines of credit aggregating $375,000 that provide access to same day funds. Advances under the lines of credit bear a variable rate of interest based on the London Interbank Offered Rate (LIBOR). As of September 30, 2021, there were no amounts outstanding under the lines of credit. The two lines of credit expire in June 2023.

(in thousands of dollars)

Term Loan
In May 2020, the Company executed a $150,000 Term Loan with a fixed interest rate of 2.42% and final maturity in May 2022. The Term Loan was pre-paid in full in May 2021.

Taxable Commercial Paper
In September 2020, the Company established a $500,000 Taxable Commercial Paper (CP) program. As of September 30, 2021, there were no amounts outstanding under the CP program.

13. Derivatives

Interest Rate Swaps
We utilize swap contracts to lock-in long-term synthetic fixed rates and manage fluctuations in cash flows resulting from interest rate risk on certain of our variable rate bonds. These bonds expose us to variability in interest payments due to changes in interest rates. Management believes that it is prudent to limit this variability. To meet this objective and to take advantage of low interest rates, we have entered into various swap contracts involving the exchange of fixed rate payments by us for variable rate payments from several counterparties that are based on a percentage of LIBOR.

By using swap contracts to manage the risk of changes in interest rates, we expose ourselves to credit risk and market risk. Credit risk is the failure of the counterparty to perform under the terms of the swap contracts. When the fair value of a swap contract is positive, the counterparty has a liability to us, which creates credit risk. We minimize our credit risk by entering into swap contracts with several counterparties and requiring the counterparty to post collateral for our benefit based on the credit rating of the counterparty and the fair value of the swap contract. Conversely, when the fair value of a swap contract is negative, we have a liability to the counterparty and, therefore, we do not have credit risk. Under certain circumstances, we may be required to post collateral for the benefit of the counterparty. Market risk is the adverse effect on the value of a financial instrument that results from a change in interest rates. The market risk associated with interest rate changes is managed by establishing and monitoring parameters that limit the types and degree of market risk that we may undertake.

(in thousands of dollars)

The following is a summary of the outstanding positions under our swap contracts as of September 30, 2021:

Effective Date	Notional Amount	Maturity	Rate Paid	Rate Received
5/1/03	$ 150,000	7/1/45	3.40%	67% 1-month LIBOR
10/15/03	9,945	1/1/31	3.85%	70% 1-month LIBOR
7/1/05	150,000	7/1/50	3.09%	67% 1-month LIBOR
7/1/05	15,700	7/1/25	5.11%	67% 6-month LIBOR
9/1/05	1,510	1/1/23	3.26%	70% 1-month LIBOR
7/1/07	150,000	7/1/52	2.96%	67% 1-month LIBOR
7/1/09	100,000	7/1/50	3.58%	67% 1-month LIBOR
7/1/11	100,000	7/1/50	3.66%	67% 1-month LIBOR
7/1/13	100,000	7/1/48	3.80%	67% 1-month LIBOR
7/1/15	50,000	7/1/50	3.80%	67% 1-month LIBOR
4/1/16	100,000	7/1/52	3.76%	67% 1-month LIBOR
7/1/17	50,000	7/1/52	3.74%	67% 1-month LIBOR
7/1/19	50,000	7/1/49	1.85%	67% 1-month LIBOR
7/1/21	50,000	7/1/51	1.84%	67% 1-month LIBOR
7/1/23	50,000	7/1/53	1.80%	67% 1-month LIBOR
7/1/24	100,000	7/1/54	1.81%	67% 1-month LIBOR
7/1/25	50,000	7/1/55	1.77%	67% 1-month LIBOR
7/1/26	100,000	7/1/56	1.78%	67% 1-month LIBOR
7/1/27	100,000	7/1/57	1.79%	67% 1-month LIBOR
	$ 1,477,155			

Our swap contracts contain provisions that require collateral to be posted if the fair value of the swap exceeds certain thresholds. The collateral thresholds reflect the current credit ratings issued by major credit rating agencies on our and the counterparty's debt. Declines in our or the counterparty's credit ratings would result in lower collateral thresholds and, consequently, the potential for additional collateral postings by us or the counterparty. As of September 30, 2021 and 2020, we have posted collateral of $181,396 and $307,469, respectively. We have established procedures to ensure that liquidity and securities are available to meet collateral posting requirements.

Upon the occurrence of certain events of default or termination events identified in the swap contracts, either the Company or the counterparty could terminate the contracts in accordance with their respective terms. Termination results in the payment of a termination amount by one party that attempts to compensate the other party for its economic losses. If interest rates at the time of termination are lower than those specified in the swap contract, we would make a payment to the counterparty. Conversely, if interest rates at such time are higher, the counterparty would make a payment to us.

(in thousands of dollars)

14. Leases

We lease property and equipment under both finance and operating lease agreements. We recognize leases with a term greater than twelve months on the balance sheet.

Some lease agreements require us to pay variable costs including property taxes, insurance, maintenance and repairs. Variable costs are excluded from the right-of-use asset and liability. Lease and nonlease components of agreements are not separated. Some leases contain rental escalation clauses and renewal options that are included in lease payment calculations when appropriate. The estimated incremental borrowing rate is used to discount the lease payment amounts.

The components of lease expense consist of the following:

	Year Ended September 30, 2021		
	Supplies and Other Expenses	**Academic and Research Gifts, Net of Expenses**	**Total**
Operating lease expense	$ 215,745	$ 7,380	$ 223,125
Short-term lease expense	12,575	130	12,705
Variable lease expense	69,352	1,448	70,800
Finance lease expense			
Amortization of leased assets	6,633	58	6,691
Interest on lease liabilities	2,827	9	2,836
Total lease expense	$ 307,132	$ 9,025	$ 316,157

	Year Ended September 30, 2020		
	Supplies and Other Expenses	**Academic and Research Gifts, Net of Expenses**	**Total**
Operating lease expense	$ 204,709	$ 7,687	$ 212,396
Short-term lease expense	14,415	117	14,532
Variable lease expense	69,930	1,009	70,939
Finance lease expense			
Amortization of leased assets	593	-	593
Interest on lease liabilities	65	-	65
Total lease expense	$ 289,712	$ 8,813	$ 298,525

(in thousands of dollars)

Lease related assets and liabilities are as follows:

	Balance Sheet Classification	September 30, 2021	September 30, 2020
Operating lease assets	Right-of-use operating lease assets	$ 1,108,275	$ 1,139,626
Finance lease assets	Property and equipment, net	63,067	1,400
Total lease assets		$ 1,171,342	$ 1,141,026
Current operating lease liability	Current portion of operating lease obligations	$ 200,706	$ 191,259
Current finance lease liability	Accounts payable and accrued expenses	10,391	597
Noncurrent operating lease liability	Operating lease obligation, less current portion	782,650	797,096
Noncurrent finance lease liability	Accrued other	61,872	633
Total lease liabilities		$ 1,055,619	$ 989,585

Supplemental cash flow and other information related to leases are as follows:

	Years Ended September 30, 2021	2020
Cash paid for amounts included in the measurement of lease liabilities		
Operating cash flow for operating leases	$ 205,986	257,165
Operating cash flow for finance leases	1,583	51
Financing cash flows for finance leases	748	404
Weighted-average remaining term (years)		
Operating leases	11.7	12.8
Finance leases	18.8	1.5
Weighted-average discount rate		
Operating leases	4.10 %	4.17%
Finance leases	4.10 %	4.17%

Commitments related to noncancelable operating and finance leases for each of the next five years and thereafter are as follows:

	Operating Leases	Finance Leases
2022	$ 200,706	$ 10,391
2023	183,161	9,978
2024	154,254	9,251
2025	138,311	7,058
2026	126,543	3,684
Thereafter	371,786	102,759
Total minimum future payments	1,174,761	143,121
Less: Amount representing interest	(191,405)	(70,858)
Present value of minimum future payments	983,356	72,263
Less: Current portion	(200,706)	(10,391)
Long-term lease obligations	$ 782,650	$ 61,872

(in thousands of dollars)

We are also a lessor and sublessor of real estate under operating leases. Lease income for the year ended September 30, 2021 and 2020 was $14,220 and $12,831, respectively, and is included in other revenue in the consolidated statements of operations. Some of these leases include expenses such as utilities and maintenance costs in rent charges, however this variable lease income is not considered material. We do not separate lease and nonlease components by class of underlying asset for all asset classes. The underlying real estate assets are included in property and equipment, net in the consolidated balance sheets.

The future undiscounted cash flows to be received from these leases for each of the next five years and thereafter is as follows:

2022	$	6,067
2023		4,480
2024		4,121
2025		3,721
2026		2,442
Thereafter		164,204
	$	185,035

15. Construction Project

The Ragon Institute of Massachusetts General Hospital, Massachusetts Institute of Technology and Harvard University (the Ragon Institute) is constructing a new research facility at Kendall Square in Cambridge, Massachusetts. This new 318,000 square foot building (including 120 spaces of sub-level parking) is being built to meet both the current and future needs of the Ragon Institute, facilitating the important work that lies ahead in harnessing the power of the human immune systems to prevent and cure disease. It will include three floors of state-of-the-art laboratories supporting 60-open lab modules and 60-support lab modules, a vivarium, a Biosafety Level 3 laboratory, a translational research clinic and administrative space. As of September 30, 2021, accumulated costs incurred related to this project are approximately $15,946 with approximately $265,336 in outstanding commitments. The total cost of the project is expected to be approximately $387,000 with occupancy scheduled in the winter or spring of 2024. The General Hospital Corporation (the General) serves as the administrative home of Ragon Institute, and therefore the constructions costs are carried on the books of the General.

16. Pension and Postretirement Healthcare Benefit Plans

Substantially all Mass General Brigham employees are covered under noncontributory defined benefit pension plans and various defined contribution pension plans. In addition, certain affiliates provide subsidized healthcare benefits for retired employees on a self-insured basis, with the benefit obligation being partially funded. These retiree healthcare benefits are administered through an insurance company and are accounted for on the accrual basis, which includes an estimate of future payments for claims incurred.

(in thousands of dollars)

Total expense for Mass General Brigham plans consists of the following:

	Years Ended September 30, 2021	Years Ended September 30, 2020
Defined benefit plans	$ 266,338	$ 350,894
Defined contribution plans	181,462	181,972
Postretirement healthcare benefit plans	1,513	1,069
	$ 449,313	$ 533,935

Information regarding benefit obligations, plan assets, funded status, expected cash flows and net periodic benefit cost is as follows:

Benefit Obligations

	Defined Benefit Pension Plans		Postretirement Healthcare Benefit Plans	
	2021	2020	2021	2020
Change in benefit obligations				
Benefit obligations at beginning of year	$ 9,177,862	$ 8,683,960	$ 222,780	$ 201,237
Service cost	391,654	406,668	3,932	3,612
Interest cost	293,418	303,374	5,692	6,170
Plan amendments (gain) loss	70,068	-	-	-
Actuarial (gain) loss	300,699	64,352	2,666	8,978
Benefits paid	(277,251)	(266,939)	(8,471)	(8,615)
Expenses paid	(11,333)	(13,670)	(505)	-
Employee contributions	110	117	11,130	11,398
Benefit obligations at end of year	$ 9,945,227	$ 9,177,862	$ 237,224	$ 222,780

The accumulated benefit obligation for all defined benefit pension plans at the end of 2021 and 2020 was $9,605,264 and $8,902,070, respectively.

	Defined Benefit Pension Plans		Postretirement Healthcare Benefit Plans	
	2021	2020	2021	2020
Weighted-average assumptions used to determine end of year benefit obligation				
Discount rate	3.15%	3.16%	2.75% - 3.00%	2.50% - 3.00%
Rate of compensation increase	3.00% - 4.45%	3.00% - 4.45%	N/A	N/A
Postretirement healthcare cost trend rate for next year	N/A	N/A	6.25%	5.00%
Rate to which the cost trend rate is to decline	N/A	N/A	5.00%	5.00%
Year that rate reaches the ultimate trend rate	N/A	N/A	2027	2020

(in thousands of dollars)

Assumed healthcare cost trend rates have a significant effect on the amounts reported for the postretirement healthcare plans. A one-percentage-point change in assumed healthcare cost trend rates would have the following effect:

	One-Percentage-Point Increase	One-Percentage-Point Decrease
Effect on postretirement benefit obligation	$ 3,834	$ (4,429)

Plan Assets

	Defined Benefit Pension Plans 2021	Defined Benefit Pension Plans 2020	Postretirement Healthcare Benefit Plans 2021	Postretirement Healthcare Benefit Plans 2020
Change in plan assets				
Fair value of plan assets at beginning of year	$ 7,759,494	$ 6,799,224	$ 131,770	$ 121,772
Actual return on plan assets	2,252,417	813,785	34,339	4,147
Employer contributions	439,642	426,977	2,790	3,068
Employee contributions	110	117	11,130	11,398
Benefits paid	(277,251)	(266,939)	(8,471)	(8,615)
Expenses paid	(11,333)	(13,670)	(505)	-
Fair value of plan assets at end of year	$ 10,163,079	$ 7,759,494	$ 171,053	$ 131,770

The assets of the defined benefit pension plans are aggregated in a single master trust (Master Trust) and managed as one asset pool. The investment objective for the Master Trust is to achieve the highest reasonable total return after considering (i) plan liabilities, (ii) funding status and projected cash flows, (iii) projected market returns, valuations and correlations for various asset classes and (iv) ability and willingness to incur market risk.

Within the Master Trust, assets are allocated to managers with investment mandates that may range from a single sub-asset class to very broad mandates; with restrictions that range from long-only to unconstrained; and with management structures ranging from separately managed funds to mutual/commingled funds to private partnerships. Less market sensitive managers employ long/short equity and diversified strategies. Investment risks (concentration, correlation, valuation, liquidity, leverage, mandate compliance, etc.) are monitored at the manager level as well as the pool level.

(in thousands of dollars)

The following table presents the capital allocations and reported exposures by manager mandate within the Master Trust. Some managers, particularly less market sensitive managers, invest capital among multiple asset classes. The Long-Term Policy Benchmark is 70% Morgan Stanley Capital International All Country World Index and 30% Barclays Global Aggregate Bond.

	September 30, 2021		September 30, 2020	
	Dollars	**Reported Exposures**	**Dollars**	**Reported Exposures**
Global equity	$ 1,628,147	16.2 %	$ 1,397,021	18.0 %
Traditional U.S. equity	1,305,206	13.0 %	876,049	11.3 %
Traditional foreign developed equity	472,562	4.7 %	582,253	7.5 %
Traditional emerging markets equity	997,268	10.0 %	775,927	10.0 %
Private equity	2,073,307	19.6 %	1,139,772	14.7 %
Real assets	491,369	4.6 %	306,262	4.0 %
Less Market Sensitive managers	2,747,090	27.4 %	2,305,636	29.7 %
Fixed income managers	448,130	4.5 %	376,574	4.8 %
	$ 10,163,079	100.0 %	$ 7,759,494	100.0 %

The postretirement healthcare benefit plans assets are invested in commingled funds with the objective of achieving returns to satisfy plan obligations and with a level of volatility commensurate with our overall financial profile.

The following tables summarize plan assets measured at fair value on a recurring basis (using the fair value hierarchy defined in Note 7) as of:

	September 30, 2021 Fair Value Measurements Using			
	Quoted Prices in Active Markets for Identical Items (Level 1)	**Significant Other Observable Inputs (Level 2)**	**Investments Valued Using NAV as a Practical Expedient**	**Total**
Defined benefit pension plans				
Short-term investments	$ 241,571	$ -	$ -	$ 241,571
Separately managed investments	598,063	211,118	-	809,181
Private partnerships and commingled funds	-	-	9,112,327	9,112,327
	839,634	211,118	9,112,327	10,163,079
Postretirement healthcare benefit plans				
Commingled funds	29,472	-	141,581	171,053
Total plan assets	$ 869,106	$ 211,118	$ 9,253,908	$ 10,334,132

(in thousands of dollars)

	September 30, 2020 Fair Value Measurements Using			
	Quoted Prices in Active Markets for Identical Items (Level 1)	Significant Other Observable Inputs (Level 2)	Investments Valued Using NAV as a Practical Expedient	Total
Defined benefit pension plans				
Short-term investments	$ 63,627	$ -	$ -	$ 63,627
Separately managed investments	651,353	236,350	-	887,703
Commingled funds	-	1,434,895	-	1,434,895
Private partnerships	-	-	5,373,269	5,373,269
	714,980	1,671,245	5,373,269	7,759,494
Postretirement healthcare benefit plans				
Commingled funds	25,388	97,318	9,064	131,770
Total plan assets	$ 740,368	$ 1,768,563	$ 5,382,333	$ 7,891,264

In evaluating the Level at which private partnerships have been classified within the fair value hierarchy, management has assessed factors including but not limited to price transparency, the ability to redeem these investments at net asset value at the measurement date and the existence or absence of certain restrictions at the measurement date. Investments in private partnerships generally have limited redemption options for investors and, subsequent to final closing, may or may not permit subscriptions by new or existing investors. These entities may also have the ability to impose gates, lockups and other restrictions on an investor’s ability to readily redeem out of their investment interest in the fund. As of September 30, 2021 and 2020, we have excluded all assets from the fair value hierarchy for which fair value is measured using net asset value per share as a practical expedient.

(in thousands of dollars)

Funded Status

The funded status of the plans recognized in the balance sheet and the amounts recognized in unrestricted net assets is as follows:

	Defined Benefit Pension Plans		Postretirement Healthcare Benefit Plans	
	2021	2020	2021	2020
End of year				
Fair value of plan assets at measurement date	$ 10,163,079	$ 7,759,494	$ 171,053	$ 131,770
Benefit obligations at measurement date	(9,945,227)	(9,177,862)	(237,224)	(222,780)
Funded status	$ 217,852	$ (1,418,368)	$ (66,171)	$ (91,010)
Amounts recognized in the balance sheet consist of				
Noncurrent asset	$ 250,167	$ -	$ -	$ -
Current liabilities	(6,093)	(1,433)	(959)	(1,190)
Long-term liabilities	(26,222)	(1,416,935)	(65,212)	(89,820)
	$ 217,852	$ (1,418,368)	$ (66,171)	$ (91,010)
Amounts not yet recognized in net periodic benefit cost and included in unrestricted net assets consist of				
Actuarial net loss (gain)	$ 867,560	$ 2,434,412	$ 20,629	$ 49,478
Prior service cost (credit)	(123,852)	(227,789)	(8,353)	(13,642)
	$ 743,708	$ 2,206,623	$ 12,276	$ 35,836
Amounts recognized in unrestricted net assets consist of				
Current year actuarial (gain) loss	$ (1,418,309)	$ (255,997)	$ (23,994)	$ 11,917
Amortization of actuarial gain (loss)	(148,542)	(168,383)	(4,856)	(3,661)
Current year prior service cost (credit)	70,068	-	-	-
Amortization of prior service (cost) credit	33,868	34,095	5,289	5,289
	$ (1,462,915)	$ (390,285)	$ (23,561)	$ 13,545

As of September 30, 2021 and 2020, the projected benefit obligation, accumulated benefit obligation and fair value of plan assets for pension plans with an accumulated benefit obligation in excess of plan assets were as follows:

	September 30,	
	2021	2020
Accumulated benefit obligation in excess of, or below plan assets		
Projected benefit obligation	$ 9,945,227	$ 9,177,862
Accumulated benefit obligation	9,605,264	8,902,070
Fair value of plan assets	10,163,079	7,759,494

(in thousands of dollars)

Expected Cash Flows
Information about the expected cash flows for the defined benefit and postretirement healthcare benefit plans is as follows:

	Defined Benefit Pension Plans	Postretirement Healthcare Benefit Plans	Medicare Subsidy
Expected employer contributions			
2022	$ 312,288	$ 4,066	
Expected benefit payments (receipts)			
2022	$ 400,300	$ 12,540	(25)
2023	421,501	13,048	(21)
2024	438,695	13,705	(18)
2025	462,604	14,433	(15)
2026	487,071	15,098	(12)
2027-2031	2,723,246	81,191	(34)

Net Periodic Benefit Cost

	Defined Benefit Pension Plans		Postretirement Healthcare Benefit Plans	
	2021	**2020**	**2021**	**2020**
Service cost	$ 391,654	$ 406,668	$ 3,932	$ 3,612
Interest cost	293,418	303,374	5,692	6,170
Expected return on plan assets	(533,408)	(493,436)	(7,678)	(7,085)
Amortization of				
Prior service cost (credit)	(33,868)	(34,095)	(5,289)	(5,289)
Actuarial net (gain) loss	148,542	168,383	4,856	3,661
Non-service related pension income	(125,316)	(55,774)	(2,419)	(2,543)
Net periodic benefit cost	$ 266,338	$ 350,894	$ 1,513	$ 1,069

Amounts expected to be amortized from unrestricted net assets into net periodic benefit cost during the year ending September 30, 2022 are as follows:

	Defined Benefit Pension Plans	Postretirement Healthcare Benefit Plans
Actuarial net loss (gain)	$ 114,100	$ 470
Prior service cost (credit)	(27,899)	(5,289)

(in thousands of dollars)

	Defined Benefit Pension Plans		Postretirement Healthcare Benefit Plans	
	2021	**2020**	**2021**	**2020**
Weighted-average assumptions used to determine net periodic pension and postretirement cost				
Discount rate	3.16 %	3.40 %	2.50% - 3.00%	3.05% - 3.30%
Expected return on plan assets	7.00 %	7.00 %	6.00 %	6.00 %
Rate of compensation increase	3.00% - 4.45%	3.00% - 4.45%	N/A	N/A
Healthcare cost trend rate for this year	N/A	N/A	5.00% - 6.25%	5.00% - 5.50%
Rate to which the cost trend rate is to decline	N/A	N/A	5.00 %	5.00 %
Year that rate reaches the ultimate trend rate	N/A	N/A	2027	2021

We use a long-term return assumption which is validated annually by obtaining long-term asset return, volatility and correlation projections for relevant asset class indexes; modifying volatility and correlations to reflect the actual historical experience of the active managers; calculating the expected return using benchmark weights and indexes; and comparing the return assumption to the sum of the expected return and the historical outperformance of the actual return versus the benchmark. We regularly monitor the active risk of the Master Trust by a statistical regression of the return series of the actual portfolio to that of the policy benchmark.

Assumed healthcare cost trend rates have a significant effect on the amounts reported for the postretirement healthcare plans. A one-percentage-point change in assumed healthcare cost trend rates would have the following effect:

	One-Percentage-Point	
	Increase	**Decrease**
Effect on service and interest cost	$ 133	$ (136)

17. Professional Liability Insurance

We insure substantially all of our professional and general liability risk on a claims-made basis in cooperation with other healthcare organizations in the Greater Boston area through a captive insurance company, Controlled Risk Insurance Company Ltd. (CRICO). The Company owns 11% of CRICO. The policies cover claims made during their respective terms, but not those occurrences for which claims may be made after expiration of the policy. Management intends to renew its coverage on a claims-made basis and has no reason to believe that it will be prevented from such renewal. During 2020, CRICO announced and paid a dividend to member organizations. As a result, we recognized dividend income of $57,997 as a nonoperating gain. During 2020, CRICO also made a payment to member organizations for certain tail liabilities they had previously assumed on an occurrence basis, which was recorded as a reduction in the insurance receivable from CRICO of $88,939.

(in thousands of dollars)

We follow the accounting policy of establishing reserves to cover the ultimate costs of medical malpractice claims, which include costs associated with litigating or settling claims. The liability also includes an estimated tail liability, established to cover all malpractice claims incurred but not reported to the insurance company as of the end of the year. The total malpractice liability of $588,402 and $567,770 as of September 30, 2021 and 2020, respectively, is presented as an accrued professional liability in the consolidated balance sheets. These reserves have been recorded on a discounted basis using an interest rate of 2.5% and 3.0% as of September 30, 2021 and 2020, respectively.

We also recognize an insurance receivable from CRICO at the same time that it recognizes the liability, measured on the same basis as the liability, subject to the need for a valuation allowance for uncollectible amounts. The insurance receivable of $424,817 and $397,017 as of September 30, 2021 and 2020, respectively, is reported as a component of other assets in the consolidated balance sheets.

Management is not aware of any claims against us or factors affecting CRICO that would cause the expense for professional liability risks to vary materially from the amount provided.

18. Concentration of Credit Risk

Financial instruments that potentially subject us to concentration of credit risk consist of patient accounts receivable, research grants receivable, pledges receivable, premiums receivable, certain investments and interest rate swaps.

Mass General Brigham provider organizations receive a significant portion of payments for services rendered from a limited number of government and commercial third-party payers, including Medicare, Medicaid, Blue Cross and Blue Shield of Massachusetts, Harvard Pilgrim Health Care and Tufts Health Plan. Research funding is provided through many government and private sponsors. AllWays Health receives a portion of premium revenue from the Commonwealth. Pledges receivable are due from multiple donors. We assess the credit risk for pledges based on history and the financial wherewithal of donors, most of which are individuals or organizations well known to us.

Investments, which include government and agency securities, stocks and corporate bonds, private partnerships and other investments, are not concentrated in any corporation or industry or with any single counterparty. Alternative investments are less liquid than other investments. The reported values of the alternative investments may differ significantly from the values that would have been used had a ready market for those securities existed. These instruments may contain elements of both credit and market risk. Such risks include, but are not limited to, limited liquidity, absence of oversight, dependence upon key individuals, emphasis on speculative investments and nondisclosure of portfolio composition.

We minimize our credit risk exposure under interest rate swap agreements by utilizing several counterparties and requiring the counterparties to post collateral for our benefit when the fair value of the swap is positive. We minimize our counterparty risk by contracting with nine counterparties, none of which accounts for more than 20% of the aggregate notional amount of the swap contracts.

(in thousands of dollars)

19. Net Assets

Donor restricted net assets are available for the following purposes:

	September 30, 2021	September 30, 2020
Donor restricted		
Charity care	$ 221,875	$ 183,988
Buildings and equipment	392,886	126,464
Clinical care, research and academic	2,754,414	2,210,778
	$ 3,369,175	$ 2,521,230

Endowment

Our endowment consists of numerous individual funds established for a variety of purposes and includes both donor restricted endowment funds and funds designated by boards to function as endowment.

We have interpreted UPMIFA as requiring the preservation of the value of the original contribution of the donor restricted endowment funds absent explicit donor stipulations to the contrary. As a result of this interpretation, we classify as donor restricted net assets the original value of all contributions with donor stipulations to maintain in perpetuity, accumulated gains required to be maintained in perpetuity by explicit donor stipulation or accumulated gains which have been appropriated for expenditure in a manner consistent with the standard of prudence prescribed by UPMIFA. In accordance with UPMIFA, we consider several factors in making a determination to appropriate or accumulate donor restricted endowment funds. These factors include: the duration and preservation of the fund; the purposes of the organization and the donor restricted endowment fund; general economic conditions; the possible effect of inflation and deflation; the expected total return from income and the appreciation of investments; other resources of the organization; and the investment policies of the organization.

Endowment Funds with Deficits

From time to time, the value of assets associated with individual donor restricted endowment funds may fall below the value of the initial and subsequent donor contribution amounts. These deficits generally result from unfavorable market fluctuations that occurred after the investment of new donor restricted contributions or subsequent endowment additions. When such endowment deficits exist, they are classified as a reduction to donor restricted net assets.

(in thousands of dollars)

The following presents the endowment net asset composition by type of fund as of September 30, 2021 and 2020 and the changes in endowment assets for the years ended September 30, 2021 and 2020:

	Unrestricted	Donor Restricted	Total
Endowment net asset composition by type of fund as of September 30, 2021			
Donor restricted endowment funds	$ -	$ 2,543,776	$ 2,543,776
Board designated endowment funds	1,582,262	-	1,582,262
Total funds	$ 1,582,262	$ 2,543,776	$ 4,126,038

	Unrestricted	Donor Restricted	Total
Changes in endowment net assets			
Endowment net assets at September 30, 2020	$ 1,248,539	$ 1,977,011	$ 3,225,550
Investment return			
Investment income	299	466	765
Net realized and unrealized appreciation	344,230	535,621	879,851
Total investment return	344,529	536,087	880,616
Contributions	5,460	109,292	114,752
Appropriation of endowment assets for expenditure	(46,338)	(73,488)	(119,826)
Other changes	30,072	(5,126)	24,946
Total changes	333,723	566,765	900,488
Endowment net assets at September 30, 2021	$ 1,582,262	$ 2,543,776	$ 4,126,038

	Unrestricted	Donor Restricted	Total
Endowment net asset composition by type of fund as of September 30, 2020			
Donor restricted endowment funds	$ -	$ 1,977,011	$ 1,977,011
Board-designated endowment funds	1,248,539	-	1,248,539
Total funds	$ 1,248,539	$ 1,977,011	$ 3,225,550

(in thousands of dollars)

	Unrestricted	Donor Restricted	Total
Changes in endowment net assets			
Endowment net assets at September 30, 2019	$ 1,171,631	$ 1,839,545	$ 3,011,176
Investment return			
Investment income	640	977	1,617
Net realized and unrealized appreciation	101,300	150,734	252,034
Total investment return	101,940	151,711	253,651
Contributions	6,450	63,130	69,580
Appropriation of endowment assets for expenditure	(48,352)	(75,325)	(123,677)
Other changes	16,870	(2,050)	14,820
Total changes	76,908	137,466	214,374
Endowment net assets at September 30, 2020	$ 1,248,539	$ 1,977,011	$ 3,225,550

20. Functional Expenses

Expenses by functional classification are allocated based on management's judgement, the nature of the expense and historical experience. Such classifications and allocations are as follows:

	Healthcare Services	Research and Academic	Insurance	General and Administrative	Year Ended September 30, 2021
Operating expenses					
Employee compensation and benefit expense	$ 6,990,999	$ -	$ 59,405	$ 1,245,627	$ 8,296,031
Supplies and other expenses	3,816,656	-	61,836	102,443	3,980,935
Medical claims and related expenses	-	-	645,514	-	645,514
Direct academic and research expenses	-	1,744,731	-	-	1,744,731
Depreciation and amortization expenses	641,147	-	-	83,330	724,477
Interest expense	108,656	-	-	53,472	162,128
Total operating expenses	$ 11,557,458	$ 1,744,731	$ 766,755	$ 1,484,872	$ 15,553,816

Direct academic and research expenses include $1,065,480 of employee compensation and benefit expense and $679,251 of supplies and other expenses for the year ended September 30, 2021.

	Healthcare Services	Research and Academic	Insurance	General and Administrative	Year Ended September 30, 2021
Nonoperating expenses					
Employee compensation and benefit expense	$ -	$ -	$ -	$ 72,264	$ 72,264
Supplies and other expenses	-	-	-	35,048	35,048
Interest expense	-		-	68,426	68,426
Non-service related pension income	(95,602)	(14,329)	-	(17,804)	(127,735)
Total nonoperating expenses	$ (95,602)	$ (14,329)	$ -	$ 157,934	$ 48,003

(in thousands of dollars)

	Healthcare Services	Research and Academic	Insurance	General and Administrative	Year Ended September 30, 2020
Operating expenses					
Employee compensation and benefit expense	$ 6,599,548	$ -	$ 58,877	$ 1,019,788	$ 7,678,213
Supplies and other expenses	3,491,578	-	65,424	37,611	3,594,613
Medical claims and related expenses	-	-	610,310	-	610,310
Direct academic and research expenses	-	1,591,241	-	-	1,591,241
Depreciation and amortization expenses	654,612	-	-	87,576	742,188
Interest expense	113,807	-	-	78,768	192,575
Total operating expenses	$ 10,859,545	$ 1,591,241	$ 734,611	$ 1,223,743	$ 14,409,140

Direct academic and research expenses include $1,008,098 of employee compensation and benefit expense and $583,143 of supplies and other expenses for the year ended September 30, 2020.

	Healthcare Services	Research and Academic	Insurance	General and Administrative	Year Ended September 30, 2020
Nonoperating expenses					
Employee compensation and benefit expense	$ -	$ -	$ -	$ 69,202	$ 69,202
Supplies and other expenses	-	-	-	29,194	29,194
Interest expense	-	-	-	46,948	46,948
Non-service related pension income	(44,599)	(6,458)	-	(7,260)	(58,317)
Total nonoperating expenses	$ (44,599)	$ (6,458)	$ -	$ 138,084	$ 87,027

21. Contingencies

We are subject to complaints, claims and litigation which arise in the normal course of business. In addition, we are subject to reviews and investigations by various federal and state government agencies to assure compliance with applicable laws, some of which are subject to different interpretations. Governmental review of compliance by healthcare organizations has increased.

22. Subsequent Events

We have assessed the impact of subsequent events through December 10, 2021, the date the audited financial statements were issued. During this period, there were no subsequent events that require adjustment to the audited financial statements.