NEW YORK CITY HOUSING DEVELOPMENT CORPORATION Management's Discussion and Analysis Year Ended October 31, 2020

INTRODUCTION

The New York City Housing Development Corporation ("HDC" or the "Corporation") is a state public benefit corporation created pursuant to Article XII of the New York State Private Housing Finance Law ("PHFL") that finances affordable housing in New York City. HDC issues taxexempt and taxable debt and uses the proceeds along with other monies of the Corporation to make loans to finance new residential construction and the rehabilitation of existing multi-family housing. HDC, which is financially self-supporting, also lends its own internally generated funds for these purposes. All these activities are reported in the financial statements under the heading "Housing Development Corporation."

HDC currently has two active subsidiaries that are presented as blended component units in the financial statements. The New York City Residential Mortgage Insurance Corporation ("REMIC") insures residential mortgages in New York City. The New York City Housing Assistance Corporation ("HAC") made mortgage loans for affordable housing in the 1980s. Presently, it provides rental subsidy assistance to one residential development.

The Corporation's annual financial report consists of four parts: *management's discussion and analysis*, the basic *financial statements, required supplementary information*, which includes the Schedule of Changes in the Net Postemployment Benefit Other Than Pensions ("OPEB") Liability and Related Ratios, the Schedule of the Corporation's OPEB Contributions, the Schedule of the Corporation's Proportionate Share of the Net Pension Liability, and the Schedule of the Corporation's Pension Contributions, and *supplementary information*, which includes the Schedule of Net Position and the Schedule of Revenues, Expenses and Changes in Net Position for the Housing Revenue Bond Program and the Multi-Family Secured Mortgage Revenue Bond Program. This follows directly after the notes to the financial statements.

This section of the Corporation's annual financial report presents our discussion and analysis of the Corporation's financial performance during the fiscal year that ended on October 31, 2020. This period is also referred to as fiscal year ("FY") 2020. Reported amounts have been rounded to facilitate reading.

OVERVIEW OF THE FINANCIAL STATEMENTS

The Corporation is a self-supporting entity and follows enterprise fund reporting. An enterprise fund reports activity that is financed with debt that is secured solely by a pledge of the net revenue from that activity as well as activity that is not supported by taxes or similar revenues. HDC's financial statements are presented using the economic resources measurement focus and the accrual basis of accounting. The accrual basis of accounting matches revenues and expenses to the period in which they are earned or attributable, respectively, which may differ from the period in which the associated cash is received or expended.

Enterprise fund statements offer short-term and long-term financial information about the Corporation's activities. While detailed sub-fund information is not presented in the

Corporation's financial statements, separate accounts are maintained for each bond issue and component unit, as well as the Corporation's general operating fund, known as the Corporate Services Fund. These sub-funds permit HDC to control and manage money for the purposes they were intended and to demonstrate that the Corporation is properly using specific resources. In addition, HDC also services construction and permanent loans on behalf of New York City's Department of Housing Preservation and Development ("HPD").

CORPORATE AND FINANCIAL HIGHLIGHTS

Despite the current uncertainties associated with the global pandemic, the Corporation's financial position remains strong and it continues to carry out the mission of providing financing for multi-family affordable housing in the City of New York. The ongoing economic downturn caused by the coronavirus pandemic has provided some challenges; however, HDC's mortgage loan portfolio, including the loan participation receivables, which comprises 75.79% of total assets, has performed well as repayments continue to remain close to pre-pandemic levels. We continue to work closely with mortgagors to monitor their financial positions and remain ready to provide support in the form of forbearance or use of reserves should they begin to experience financial difficulties. As of the fiscal year end, four mortgages had been granted forbearance, and one had resumed making their monthly payments.

The Corporation's mix of financial activities has also presented opportunities; bond issuances have continued with only a slight interruption. Of the \$1.8 billion bond issuances in FY 2020 close to \$1 billion was issued after the pandemic was declared. Among the Corporation's bond issuances in FY 2020 was the inauguration of the Housing Impact Bond Resolution adopted in February 2020. The bond proceeds, from the initial issuance, were used to finance a bundle of developments pursuant to the Permanent Affordability Commitment Together ("PACT") program, a ten-year plan to rehabilitate and preserve 62,000 units, of the New York City Housing Authority ("NYCHA") portfolio.

In FY 2020, eighteen new mortgages were closed in addition to seven refinancings for a total of \$1.2 billion in senior mortgages. Additionally, HDC committed \$130.6 million for subsidy loans to finance affordable housing from its corporate reserves.

The Corporation's net position increased in FY 2020 by \$286.0 million, compared to the \$300.5 million increase in FY 2019. Operating revenues totaled \$584.5 million, increasing by \$26.9 million from the prior year when it was \$557.6 million. The increase was led by interest on loans, up 9.88% from FY 2019, as a result of a \$2.9 billion increase in the loan portfolio. Operating expenses were \$429.1 million, a decrease of \$8.7 million from 2019. Bond and other debt obligations' interest expense, which was 86.23% of total operating expenses, decreased \$8.5 million or 2.24%. HDC took advantage of lower interest rates to redeem higher fixed rate debt as well as savings on the variable rate portfolio. Non-Operating income, which is mainly comprised of earnings on investments, was \$128.8 million, a decrease of \$51.8 million as a result of the low interest rate environment and less funds under management.

In FY 2020, the Corporation adopted Governmental Accounting Standards Board (GASB) Statement No. 84, *Fiduciary Activities* ("GASB 84"). In the Corporation's normal course of business, it is in control of custodial assets which it holds and expends for the benefit of others. Those activities are now required to be reported in separate fiduciary fund financial statements.

CONDENSED STATEMENT OF NET POSITION

The condensed statement of net position presents the Corporation's total assets, deferred outflows of resources, liabilities, deferred inflows of resources, and net position as of October 31, 2020 and 2019. The following table represents the changes in the Corporation's net position between October 31, 2020 and 2019 and should be read in conjunction with the financial statements. (*Dollar amounts are in thousands*):

	2020	2019	Change	Percent Change
Assets				
Cash and Investments	\$4,575,145	\$5,910,569	(\$1,335,424)	(22.59%)
Mortgage Loans	16,050,524	13,790,266	2,260,258	16.39
Loan Participation Receivable	464,890	1,075,529	(610,639)	(56.78)
Notes Receivable	513,548	552,461	(38,913)	(7.04)
Accrued Interest	131,573	112,935	18,638	16.50
Other Receivables	13,585	28,106	(14,521)	(51.67)
Capital Assets	1,003	1,874	(871)	(46.48)
Other Assets	39,538	619	38,919	6287.40
Total Assets	21,789,806	21,472,359	317,447	1.48
	CX	A		
Deferred Outflows of Resources	183,100	112,330	70,770	63.00
Liabilities				
Bonds Payable & Debt Obligations, net	13,442,880	12,710,039	732,841	5.77
Interest Payable	138,888	135,926	2,962	2.18
Payable to The City of New York:		U'		
Loan Participation Agreements	464,890	1,075,529	(610,639)	(56.78)
Housing Finance Fund Section 661	3,011,639	2,523,338	488,301	19.35
Other	105,727	833,420	(727,693)	(87.31)
Payable to Mortgagors	399,646	855,422	(455,776)	(53.28)
Restricted Earnings on Investments	22,632	23,265	(633)	(2.72)
Accounts and Other Payables	62,397	49,635	12,762	25.71
Net Pension Liability	11,922	10,049	1,873	18.64
Net OPEB Liability	8,562	7,154	1,408	19.68
Interest Rate Swaps	173,054	102,907	70,147	68.17
Unearned Revenues and Other				
Liabilities	703,518	115,565	587,953	508.76
Total Liabilities	18,545,755	18,442,249	103,506	0.56
Deferred Inflows of Resources	9,213	10,522	(1,309)	(12.44)
Net Position				
Net Investments in Capital Assets	1,003	1,874	(871)	(46.48)
Restricted for Insurance Requirements	98,310	85,918	12,392	14.42
Restricted for Bond Obligations	2,602,573	2,236,470	366,103	16.37
Unrestricted	716,052	807,656	(91,604)	(11.34)
Total Net Position	\$3,417,938	\$3,131,918	\$286,020	9.13%

Enterprise Fund - Assets of the Corporation

Assets consist largely of the following: cash and investments from bond proceeds, debt service and other reserves, funds designated for various housing programs, mortgage loans, other assets, which include participation interests in cash flows from pools of mortgage loans, housing-related notes receivable and purpose investments. At October 31, 2020, HDC's total assets were \$21.8 billion, a net increase of \$317.4 million or 1.48% from FY 2019. The increase was primarily a result of the Corporation's mortgage lending, and bond financing activities. In FY 2019, total assets were \$21.5 billion.

Cash and Investments: The Corporation ended the fiscal year with \$4.6 billion in cash and investments. Other than collateralized and purpose investments, investments were recorded at fair value. Approximately \$2.8 billion of that balance was un-advanced construction loan monies already committed to fund mortgage loans that have already closed. Cash and investments decreased by a net of \$1.3 billion or 22.59%, \$568.1 million was due to mortgage loan advances exceeding bond and debt obligations issuances this fiscal year. Additionally, as a result of the adoption of GASB Statement 84, on November 1, 2019 \$775.9 million from the prior year was removed from the Enterprise Fund and reported in a separate Fiduciary Fund.

Mortgage Loans: Mortgage loans comprised 73.66% of the Corporation's total assets. The mortgage loan portfolio at the end of the fiscal year was \$16.0 billion, an increase of \$2.3 billion or 16.39% from the previous year. At October 31, 2019, the mortgage loan portfolio was \$13.8 billion. During FY 2020, mortgage loan activities included advances of approximately \$2.9 billion and principal loan repayments of \$642.4 million.

Loan Participation Receivable: Loan participation receivable at October 31, 2020 was \$464.9 million, a \$610.6 million decrease from a year ago. In October 2020, the Corporation purchased the residual interest in the loan participation agreements in the 2014 Series B and 2018 Series B bond programs in the Open Resolution. The loan participation agreements included two pools of mortgage loans, including the Sheridan Trust securitized by the Corporation with the proceeds of the above-mentioned bond proceeds. According to the participation agreements, at the final maturity of the underlying bonds the residual interest in the mortgage loans would revert to the City of New York. The purchase of the residual interest cancelled the reversion of the mortgage loans to the City, reducing the participation interest by \$589.8 million from a year ago. Additionally, there was a \$20.8 million decrease in the Mitchell-Lama loan participation portfolio mainly due to the prepayments of two mortgages.

Notes Receivable: Notes receivable was \$513.5 million, down from \$552.5 million in 2019. The Corporation has two outstanding notes receivable that relate to the bonds issued for a military housing development at Fort Hamilton ("Military Housing") and a Capital Fund ("Capital Fund Note") financing for NYCHA, with outstanding balances of \$43.0 million and \$470.5 million, respectively. In FY 2020, there were \$38.9 million in notes repayments. The Military Housing notes are secured by pledged revenues of the development and the Capital Fund Note is secured by payments from the United States Department of Housing and Urban Development ("HUD").

Accrued Interest: Interest receivable increased from \$112.9 million at October 31, 2019 to \$131.6 million at October 31, 2020, an \$18.6 million or 16.50% increase from FY 2019. Interest receivable has increased comparable to the loan portfolio. Interest on loans this fiscal year was \$490.4 million, collections were \$438.4 million, and \$13.7 million of accrued interest was capitalized.

Other Receivables: Other receivables were \$13.6 million at October 31, 2020, a decrease from October 31, 2019 when it was \$28.1 million. The decrease is primarily related to servicing fees and interest billed on loans service for the City of New York now reported in a separate fiduciary Funds.

Capital and Other Assets: Other assets increased \$38.9 million. This increase was mainly due to the purchase of the residual interest in the mortgage loan portfolio under the 2014 Series B and the 2018 Series B participation agreements for \$40.0 million. This amount represents the discounted value of the residual loan balance amount after the final bond maturity scheduled in 2046. As of October 31, 2020, the excess of the mortgage loan balance over the bond's payable was \$586.4 million. Additionally, there was a \$0.3 million decrease relating to the amortization on the 2011 participation interest cash flow. The participation interest asset included the purchase of interest reduction payments in a pool of second mortgage loans owned by the City and a \$0.9 million decrease in capital assets.

Deferred Outflows of Resources

Deferred outflows of resources ("deferred outflows") were \$183.1 million at October 31, 2020, a net increase of \$70.8 million from October 31, 2019 when deferred outflows were \$112.3 million. Deferred outflows consist of (a) interest swaps and caps purchased to mitigate the Corporation's exposure to its variable rate bonds in its General Resolution, (b) the loss incurred on the early retirement of debt due to an advance refunding in 2013, (c) deferred outflows related to the pension plan liability and (d) deferred outflows related to the OPEB plan liability. In FY 2020, deferred outflows related to the interest rate swaps increased by \$70.1 million due to the decrease in the fair market valuation. The amount amortized on the deferred loss on early debt retirement was \$0.8 million. Included in deferred outflows related to the pension plan is the net difference between projected and actual earnings on the pension plan investments, the change in assumptions and the change in proportion related to the Corporation's pension liability as calculated by the New York City Office of the Actuary ("NYCOA"). Deferred outflows related to OPEB in FY 2020.

Liabilities of the Corporation

Total liabilities were \$18.5 billion at October 31, 2020, an increase of \$103.5 million or 0.56%, related to the Enterprise Fund. At October 31, 2019, total liabilities were \$18.4 billion, which included payables to The City of New York and mortgagors. Liabilities are grouped into three main categories. The largest are HDC Bonds Payable and Debt Obligations, which were approximately \$13.4 billion, and accounted for approximately 72.48% of total liabilities. The second largest category is Payable to The City of New York. This includes the return at maturity of loans made by the Corporation with funds granted to it by the City acting through HPD under Section 661 of the PHFL ("HPD Section 661 Grant Funds"). The last category of liabilities

includes Payable to Mortgagors, Accounts and Other Payables, which is mainly comprised of unadvanced loan proceeds, and Unearned Revenues.

Bonds Payable and Debt Obligations: Bonds and outstanding debt obligations were \$13.4 billion at October 31, 2020, an increase of \$732.8 million. At October 31, 2019, bonds and outstanding debt obligations were \$12.7 billion. In FY 2020, HDC issued 21 new bond series for a total of \$1.8 billion. Government debt obligation draws during FY 2020 totaled \$17.2 million. Bond principal repayments this fiscal year amounted to \$1.0 billion. The Corporation's scheduled debt service principal payments were \$185.7 million, and redemptions were \$842.3 million. There were \$138.8 million related to debt obligation repayments which were primarily refunded by simultaneous bond issuances. Pursuant to the forward bond purchase agreement, the Corporation issued bonds in the Open Resolution and refunded the debt obligations. Additionally, HDC signed a new loan participation agreement with the Federal Financing Bank ("FFB") on the 148th Street Jamaica Development in the amount of \$65.6 million. There were \$3.4 million of principal repayments to the FFB. (See Note 10: "Bonds Payable and Debt Obligations")

Interest Payable: Accrued interest payable increased by \$3.0 million to \$138.9 million at October 31, 2020 from \$135.9 million at October 31, 2019. This increase reflects the Corporation's bond issuances during the year.

Payable to The City of New York: Payable to The City of New York at October 31, 2020 was \$3.6 billion, a net decrease of \$850.0 million from 2019. Payable to the City is grouped into three categories for reporting purposes: loan participation agreements, HPD grant programs such as HPD Section 661 Grant Funds and other. The HPD Section 661 Grant Funds had an outstanding balance of \$3.0 billion, a net increase of \$488.3 million as a result of funds received during the fiscal year. Under the program, the City, acting through HPD, grants monies to the Corporation pursuant to Section 661 of the PHFL for making loans on its behalf to developments that are also financed by HDC. Upon maturity of the Corporation's related senior loan, the subordinate loan made on behalf of the City is returned to the City. The Mitchell-Lama and City loan participation programs had an outstanding balance of \$464.9 million, a net decrease of \$610.6 million due to the Corporation's purchase of the residual interest in the City loan participation mortgages reducing the payable to the City by \$589.8 million. The Mitchell-Lama participation was reduced by \$20.8 million due to two mortgage payoffs and the partial repayments of others in the portfolio. The Other Payable to The City of New York had a net decrease of \$727.7 million. There was a decrease of \$7.2 million related to the Stuyvesant Town loan made by HAC on behalf of the City in December 2015 and a decrease of \$2.5 million of subsidy payments made on behalf of the City to one development. As a result of the adoption of GASB Statement 84, on November 1, 2019, \$718.2 million was removed from the Enterprise Fund and reported in a separate Fiduciary Fund, as restricted assets of the City of New York.

Payable to Mortgagors: Payable to mortgagors was \$399.6 million at October 31, 2020, a net decrease of \$455.8 million from \$855.4 million in 2019. As a result of the adoption of GASB Statement 84, on November 1, 2019, \$692.0 million previously reported as payable to mortgagors is now reported in a separate Fiduciary Fund as restricted assets of the mortgagors. Additionally, there was a net increase of \$238.8 million primarily due to unadvanced loan proceeds held by the Corporation under its Housing Impact Bond 2020 Series A and 2020 Series B for the PACT Brooklyn Bundle II development.

Accounts Payable: Accounts payable at fiscal year-end was \$62.4 million, up from \$49.6 million at October 31, 2019. The net increase of \$12.8 million was primarily attributable to \$9.4 million of collateral funds received on behalf of one development. There was also an increase of \$3.6 million in bond issuance costs and mortgage insurance premiums payable. Additionally, there was a net decrease of \$0.4 million of interest billed net of payments payable to other entities, a decrease of \$0.2 in payable to lenders and an increase of \$0.4 million in accrued salaries payable.

Restricted Earnings on Investments: Restricted earnings on investments represents cumulative amounts by which pass-through revenues exceed expenses. They represent accumulated earnings on investments that are credited to the mortgagors. There was a slight decrease from \$23.3 million in FY 2019 to \$22.6 million in FY 2020, as a result of lower investment earnings in FY 2020.

Net Pension and OPEB Liabilities: The accumulated amount of the Corporation's net pension liability as calculated by the NYCOA, amounted to \$11.9 million as of October 31, 2020, a net increase of \$1.9 million from 2019. The increase includes \$1.8 million of the Corporation's annual expense, and \$0.2 million of net amortization of deferred amounts. The Corporation recorded a net OPEB liability of \$8.6 million as of October 31, 2020, an increase of \$1.4 million from \$7.2 million in 2019. The increase was due to the \$1.6 million in the annual service cost offset by the change in interest assumptions and benefit payments.

Interest Rate Swaps Liability: The Corporation entered various interest rate swap contracts as a means of mitigating its exposure to its variable rate debt. In FY 2020, the Corporation amended six existing LIBOR fixed payer swap agreements. The restructuring enabled the Corporation to save between 10 to 30 basis points by either extending the start date for HDC's option to put the bonds at par, extend the maturity, or in the case of one swap, both the maturity date and the optionality date. As interest rates continue to trend lower, the fair market value of the Corporation's swap portfolio increased its liability position from \$102.9 million at October 31, 2019 to \$173.1 million at October 31, 2020. As the hedges were deemed to be effective the changes in the fair value were offset by a deferred outflow of resources.

Unearned Revenues and Other Liabilities: Unearned revenues and other liabilities increased by \$588.0 million to \$703.5 million at October 31, 2020. The increase was mainly due to the purchase of the City's residual interest in a portfolio of mortgage loans. The offsetting increase relating to a decrease in Payable to The City of New York. The residual amount as of October 31, 2020 of \$586.4 million was deferred and will be amortized to the scheduled reversion date of November 1, 2046. There was a net increase in deferred bond and construction financing fees of \$2.8 million offset by amortization of deferred guaranty and regulatory fees of \$1.6 million. There was a \$0.3 million positive arbitrage rebate or yield restriction liability accrued as of October 31, 2020.

Deferred Inflows of Resources

Deferred inflows of resources decreased from \$10.5 million to \$9.2 million at October 31, 2020. The \$1.3 million decrease included a \$0.8 million decrease in the Corporation's pension liability and a decrease of \$0.5 million in the OPEB liability due to changes in assumptions.

The following chart presents the comparative data of the Corporation's assets including deferred outflows, and liabilities including deferred inflows, over the last five years:



* These amounts do not reflect GASB 84

Net Position

Net position, the excess of assets and deferred outflows of resources over liabilities and deferred inflows of resources, totaled \$3.4 billion as of October 31, 2020. This represents an increase of \$286.0 million or 9.13% over the balance from the previous year. In 2019, net position increased by \$300.5 million. Net position is classified as either restricted or unrestricted net position, with restricted net position being committed by law or contract for specific purposes. HDC's most significant restricted assets include debt service reserves for HDC bond issues and undisbursed bond proceeds held prior to construction advances. Unrestricted assets may be classified as designated or undesignated. Designated assets are those allocated by action or policy for specific purposes determined by HDC's Members, such as rating agency reserves (to support the Corporation's general obligation rating), specific housing loan programs to which the Corporation has committed resources under the Mayor's *Housing New York Plan* and working capital. Virtually all the Corporation's net position is either restricted or designated.

The following chart presents the comparative data of the Corporation's net position over the last five years:



* These amounts do not reflect GASB 84

Condensed Statement of Revenues, Expenses and Changes in Net Position

The condensed Statement of Revenues, Expenses and Changes in Net Position presents total revenues recognized in and expenses attributed to the fiscal year ended October 31, 2020. The table below summarizes the Corporation's revenues and expenses and presents comparative data. It should be read in conjunction with the financial statements. (*Dollar amounts are in thousands*):

	2020	2019	Change	Percent Change
Revenues				
Interest on Loans	\$490,371	\$446,267	\$44,104	9.88%
Fees and Charges	69,640	85,006	(15,366)	(18.08)
Income on Loan Participation				
Interests	21,709	22,710	(1,001)	(4.41)
Other Income	2,823	3,651	(828)	(22.68)
Total Operating Revenues	584,543	557,634	26,909	4.83
Expenses				
Bond Interest and Amortization	370,030	378,494	(8,464)	(2.24)
Salaries and Related Expenses	28,644	27,274	1,370	5.02
Trustees and Other Fees	10,177	9,271	906	9.77
Bond Issuance Costs	13,034	16,644	(3,610)	(21.69)
Corporate Operating Expenses	7,227	6,133	1,094	17.84
Total Operating Expenses	429,112	437,816	(8,704)	(1.99)
Operating Income	155,431	119,818	35,613	29.72
	100,101	119,010	00,010	
Non-Operating Revenues (Expenses)	6.3	9		
Earnings on Investments	89,632	114,054	(24,422)	(21.41)
Unrealized Gains (Losses) on Investments	(2,212)	25,490	(27,702)	(108.68)
Other Non-Operating Revenues	41,379	41,088	291	0.71
Total Non-Operating Revenues, net	128,799	180,632	(51,833)	(28.70)
Operating Transfers from Fiduciaries	1,824		1,824	100.00
Net Income	286,054	300,450	(14,396)	(4.79)
Change in Net Position	286,054	300,450	(14,396)	(4.79)
Net Position, Beginning of the Year	3,131,884	2,831,468	300,416	10.61
Net Position, End of the Year	\$3,417,938	\$3,131,918	\$286,020	9.13%

Revenues of the Corporation are classified as operating and non-operating. Interest income from mortgages represents the Corporation's major source of operating revenue. It also includes various loan and bond program fees such as commitment, bond financing, mortgage insurance and servicing fees. The Corporation's non-operating revenues consist mostly of earnings on investments and purpose investments and grants revenue. Earnings on investments accrues to the benefit of the program for which the underlying sources of funds are utilized. Also reported separately as part of non-operating revenues is the amount of unrealized depreciation on investments reported by the Corporation during the year.

HDC's expenses are also classified as operating and non-operating. Operating expenses consist primarily of interest on bonds, which accounted for 86.23% of operating expenses in FY 2020. Other operating expenses include corporate operating expenses (salaries, overhead and depreciation) and fees. The Corporation's largest non-operating expense was the amortization of the capitalized value of a purchased cash flow.

RESULTS OF OPERATIONS

Revenues

The Corporation had total revenues of \$713.3 million, a decrease of \$24.9 million from a year ago. Operating revenues were \$584.5 million in FY 2020 compared to \$557.6 million in FY 2019, an increase of \$26.9 million or 4.83%. Operating revenues were approximately 81.94% of total revenues in FY 2020. Net operating income for the FY 2020 was \$155.4 million. In FY 2020, HDC recorded non-operating revenues of \$130.6 million, which included \$87.4 million of net earnings on investments and \$41.4 million from grants, and \$1.8 million in operating transfers from custodial funds.

Interest on Loans: Interest on loans, the largest component of operating revenues, was \$490.4 million, an increase of \$44.1 million or 9.88% from FY 2019. In FY 2019, interest on loans was \$446.3 million. The increase in FY 2020 was a result of the higher mortgage loans receivable balances consistent with an increase in the Corporation's mortgage lending.

Fees and Charges: Fees and charges, which are mainly comprised of loan origination and servicing related fees, was \$69.6 million in FY 2020, a decrease of \$15.4 million or 18.08% from FY 2019. Loan origination fees decreased by \$5.8 million from FY 2019 as fewer loans were closed this fiscal year. Bond financing fees, construction financing and bond servicing fees decreased by \$12.8 million. The Corporation also saw a decrease of \$1.8 million in loan restructuring and satisfaction fees.

Income on Loan Participation Interests: Loan participation income in FY 2020 was \$21.7 million, compared to \$22.7 million the previous year. Loan participation income is driven by prepayments or restructuring of the second mortgage loans in the Mitchell-Lama Restructuring Program ("MLRP"). In FY 2020 there were two mortgage payoffs in addition to partial repayments of other loans in the portfolio.

Other Income: Other income in FY 2020 was \$2.8 million compared to \$3.7 million in FY 2019. Other income is mainly comprised of a receivable setup for debt service on the NYCHA Capital Fund Grant program bonds ("NYCHA Bonds"), income on mortgage participations, and administrative fees on the CDBG Superstorm Sandy related loans.



Expenses

Operating Expenses: Operating expenses in FY 2020 were \$429.1 million, a decrease of \$8.7 million or 1.99% compared to the previous year, when operating expenses amounted to \$437.8 million. This decrease was mainly attributable to lower bond interest expense as a result of lower interest rates on floating rate debt offset by payments to counterparties on the interest rate swap portfolio. Debt issuance costs decreased by \$3.6 million, as bond issuances during FY 2020 were lower. Salaries and other corporate operating expenses increased by \$2.5 million.

Bond Interest and Amortization: Interest expense constituted 86.23% of the total operating expenses. Total interest, net of amortization, was \$370.0 million, a 2.24% decrease from FY 2019 when it was \$378.5 million. The bonds and other debt obligations portfolio increased \$732.8 million from FY 2019.

Salaries and Related Expenses: Salaries and related expenses were \$28.6 million in FY 2020, a net increase of \$1.4 million or 5.02% from \$27.3 million in FY 2019.

Bond Issuance and Other Expenses: Trustees' and other fees, mortgage insurance premiums, bond issuance costs and corporate operating expenses decreased by \$1.6 million. Bond issuance costs were \$13.0 million during FY 2020 compared to \$16.6 million in FY 2019. The \$3.6 million decrease was due to the lower bond issuances. In FY 2020, HDC issued \$1.8 billion in bonds compared to \$2.2 billion in FY 2019. Corporate operating expenses increased by \$1.1 million from \$6.1 million in FY 2019 to \$7.2 million in FY 2020.

The following chart presents the comparative data of the Corporation's operating revenues and expenses over the last five years:



* These amounts do not reflect GASB 84

Non-Operating Revenues (Expenses)

Earnings on Investments and Unrealized Losses: Earnings on investments are recognized as non-operating income. Investment income, including the fair value adjustment on outstanding investments was \$87.4 million in FY 2020 compared to \$139.5 million in FY 2019. The decrease was primarily due to lower outstanding balance of investments and lower interest rates on such investments. The Corporation ended FY 2020 with \$4.6 billion of investments and cash equivalents under management. Additionally, throughout FY 2020, as rates were falling the Corporation diligently tried to balance maintaining liquidity and maximizing its return on investments. Realized investment income was \$89.6 million, a decrease of \$24.4 million from a year ago. The Corporation reported a \$2.2 million unrealized loss on investments in FY 2020 compared to a \$25.5 million unrealized gain in FY 2019.

Other Non-Operating Revenues (Expenses): Other non-operating revenues include \$41.3 million in 421-A Grant Revenue from the Battery Park City Authority ("BPCA"), \$0.2 million in pass-through related revenue on the City loan sale participation programs and \$0.2 million of amortization on the 2011 participation interests purchased cash flow, as a result of prepayments and restructuring of loans in the portfolio.

Change in Net Position

Change in net position for FY 2020 was \$286.0 million, down from \$300.5 million the previous year. The Corporation generated \$244.8 million from normal operating activities, and in addition \$41.3 million was received from the 421-A Grant Revenue Program with the BPCA.

DEBT ADMINISTRATION

At year-end, the Corporation had approximately \$13.4 billion of bond principal and debt obligations outstanding, net of discount and premium, an increase of 5.77% over the prior year. The following table summarizes the changes in bonds payable and debt obligations between October 31, 2020 and October 31, 2019. (Dollar amounts are in thousands):

	2020	2019	Percentage increase FY 2019 to 2020
Bonds Payable & Debt			
Obligations	\$13,442,880	\$12,710,039	5.77%

In FY 2020, all variable rate demand obligation ("VRDO") bond series were successfully remarketed and no bonds were tendered to become bank bonds. Additional information about HDC's debt is presented in Note 10 to the financial statements.

NEW BUSINESS

In FY 2020, the Corporation issued nineteen new Housing Revenue Bonds series totaling \$1.4 billion, and two series of Housing Impact Bonds totaling \$375 million. Included in this total were seventeen series of tax-exempt bonds totaling \$1.6 billion and four series of taxable bonds totaling \$260.9 million. The Corporation also made low interest loans from its net position.

Subsequent to October 31, 2020, bonds issued during the Corporation's normal business activities were \$289,065,000 in the Housing Impact Bond resolution, and \$532,950,000 in the Housing Revenue Bond resolution.

CONTACTING THE CORPORATION'S FINANCIAL MANAGEMENT

This financial report is designed to provide a general overview of the Corporation's finances and to demonstrate the Corporation's accountability for the resources at its disposal. If you have questions about this report or need additional financial information, contact the Public Information Officer, New York City Housing Development Corporation, 110 William Street, New York, NY 10038. The Corporation also maintains information on its website at www.nychdc.com.

New York City Housing Development Corporation Statement of Net Position Proprietary Fund Type - Enterprise Fund

At October 31, 2020 (with comparative summarized financial information as of October 31, 2019) (\$ in thousands)

		HD	C and Compon	ent U	nits				
		v York City Housing velopment	New York (Housing Assistanc	City	New York City Residential Mortgage Insurance		Τα	otal	
	Co	orporation	Corporation	on	Corporation		2020		2019
Assets									
Current Assets:									
Cash and cash equivalents (note 3)	\$	609,276	\$	-	\$ -	\$	609,276	\$	801,401
Investments (note 3)	Ŷ	11,853	Ψ	_	÷ -	Ŷ	11,853	Ŷ	202,891
Receivables:		,					,		,-,
Mortgage loans (note 4)		623,037		-	-		623,037		330,788
Accrued interest		43,528		-	-		43,528		38,933
Notes (note 5)		37,385		-	-		37,385		38,913
Other (note 7)		5,222		-	-		5,222		5,431
Total Receivables		709,172		_			709,172		414,065
Other assets		17		-	_		17		-14,005
Total Current Assets	CX.	1,330,318	A	_			1,330,318		1,418,373
		1,000,010					1,000,010		1,110,070
Noncurrent Assets:									
Restricted cash and cash equivalents (note 3)		1,366,937	1,	,539	12,867		1,381,343		1,656,270
Restricted investments (note 3)		2,400,359	5,	,941	138,436		2,544,736		3,221,510
Purpose investments (note 2)		27,937		-	-		27,937		28,497
Mortgage loans (note 4)		320,732		-	-		320,732		274,342
Restricted receivables:									
Mortgage loans (note 4)		14,651,378	114	,912	-		14,766,290		12,906,173
Mortgage loan participation - Federal Financing Bank (note 4)		340,465		-	-		340,465		278,963
Loan participation receivable - The City of NY (note 6)		464,890		-	-		464,890		1,075,529
Accrued interest		88,045		-	-		88,045		74,002
Notes (note 5)		476,163		-	-		476,163		513,548
Other (note 7)		8,363		-	-		8,363		22,675
Total Restricted Receivables		16,029,304	114	,912	-		16,144,216		14,870,890
Primary government/component unit receivable (payable)		(820)		(17)	(19))	(856)		-
Capital assets		1,003		-	-		1,003		1,874
Other assets (note 8)		40,377		-	-		40,377		603
Total Noncurrent Assets		20,185,829	122,	,375	151,284		20,459,488		20,053,986
Total Assets		21,516,147	122,	,375	151,284		21,789,806		21,472,359
Deferred Outflows of Resources									
Interest rate caps (note 9)		136		-	-		136		214
Deferred loss on early retirement of debt (note 9)		4,143		-	-		4,143		4,920
Deferred outflows related to pensions (note 13)		4,839		-	-		4,839		3,264
Deferred outflows related to interest rate swaps (note 9)		173,054		-	-		173,054		102,907
Deferred outflows related to OPEB (note 14)		928		-	-		928		1,025
Total Deferred Outflows of Resources	\$	183,100	\$	-	\$ -	\$	183,100	\$	112,330

New York City Housing Development Corporation Statement of Net Position (continued) Proprietary Fund Type - Enterprise Fund

At October 31, 2020 (with comparative summarized financial information as of October 31, 2019) (\$ in thousands)

		HD	C and Component	Units			
	H	York City Iousing relopment	New York City Housing Assistance	New York City Residential Mortgage Insurance	Te	otal	
	Co	rporation	Corporation	Corporation	2020		2019
Liabilities							
Current Liabilities:							
Bonds payable (net) (note 10)	\$	455,099	\$ -	\$ -	\$ 455,099	\$	342,849
Debt obligations payable		725	-	-	725		93
Loan participation payable to Federal Financing Bank		3,728	-	-	3,728		2,980
Accrued interest payable		138,888	-	-	138,888		135,926
Payable to mortgagors		-	-	-	-		194,650
Restricted earnings on investments		22,632	-	-	22,632		23,265
Accounts and other payables		62,397	_	-	62,397		49,635
Total Current Liabilities		683,469	-	-	683,469		749,398
Noncurrent Liabilities:							
Bonds and debt obligations payable:							
Bonds payable (net) (note 10)		12,468,640		-	12,468,640		11,788,584
Debt obligations payable		174,280	\cap	-	174,280		296,570
Loan participation payable to Federal Financing Bank		340,408		-	340,408		278,963
Payable to The City of New York:		540,400			540,400		270,905
Loan participation agreements (note 12)		464,890	· .	_	464,890		1,075,529
Housing finance fund (Section 661)		3,011,639			3,011,639		2,523,338
Other		(16,623)	122,350	_	105,727		833,420
Payable to mortgagors		399,646	122,330	_	399,646		660,772
		11,922		-	11,922		10,049
Net pension liabilities (note 13)		8,562	-	-	8,562		7,154
OPEB liability (note 14)			-	-			
Derivative instrument - interest rate swaps (note 9)		173,054	-	-	173,054		102,907
Unearned revenues and other liabilities		703,202	-	-	703,202		115,565
Due to the United States Government (note 15)		316	-	-	 316		-
Total Noncurrent Liabilities		17,739,936	122,350	-	17,862,286		17,692,851
Total Liabilities		18,423,405	122,350	-	18,545,755		18,442,249
Deferred Inflows of Resources							
Deferred inflows related to pensions (note 13)		917	-	-	917		1,737
Deferred inflows related to OPEB (note 14)		8,296	-	-	8,296		8,785
Total Deferred Inflows of Resources		9,213	-	-	9,213		10,522
Net Position							
Net investment in capital assets		1,003	-	-	1,003		1,874
Restricted for bond obligations (note 19)		2,602,548	25	-	2,602,573		2,236,470
Restricted for insurance requirement and others		-,,	-	98,310	98,310		85,918
Unrestricted (note 19)		663,078	-	52,974	716,052		807,656

New York City Housing Development Corporation Statement of Revenues, Expenses and Changes in Net Position Proprietary Fund Type - Enterprise Fund

For the Year ended October 31, 2020 (with comparative summarized financial information for the year ended October 31, 2019) (\$ in thousands)

		HD	C and Component U			
	I Dev	York City Housing velopment rporation	New York City Housing Assistance Corporation	New York City Residential Mortgage Insurance Corporation		al 2019
Operating Revenues						
Interest on loans (note 4)	\$	490,363	\$ 8	\$ -	\$ 490,371	\$ 446,267
Fees and charges (note 7)		66,056	-	3,584	69,640	85,006
Income on loan participation interests (note 6)		21,709	-	-	21,709	22,710
Other		2,823	-	-	2,823	3,651
Total Operating Revenues		580,951	8	3,584	584,543	557,634
Operating Expenses						
Interest and amortization of bond premium and discount (note 10)		370,030	-	-	370,030	378,494
Salaries and related expenses		28,644	-	-	28,644	27,274
Trustees' and other fees		10,177	-	-	10,177	9,271
Bond issuance costs		13,034	-	-	13,034	16,644
Corporate operating expenses (note 11)		7,227		-	7,227	6,133
Total Operating Expenses		429,112	()	-	429,112	437,816
Operating Income		151,839	8	3,584	155,431	119,818
Non-operating Revenues (Expenses)						
Earnings on investments (note 3)		85,805	· • • •	3,827	89,632	114,054
Unrealized (losses) gains on investments (note 3)		(2,259)	26	21	(2,212)	25,490
Other non-operating revenues, net (note 7)		41,379	-	-	41,379	41,088
Payments from REMIC subsidiary to HDC		572	-	(572)	-	-
Other		• 9	(9)	-	-	-
Total Non-operating Revenues, net		125,506	17	3,276	128,799	180,632
Income before transfers from Custodial Funds		277,345	25	6,860	284,230	300,450
Transfer from Custodial Funds		1,824	-	-	1,824	-
Changes in Net Position		279,169	25	6,860	286,054	300,450
Total net position - beginning of year		2,987,460	-	144,424	3,131,884	2,831,468
Total Net Position - End of Year	\$	3,266,629	\$ 25			

New York City Housing Development Corporation Statement of Cash Flows Proprietary Fund Type - Enterprise Fund

Year ended October 31, 2020 (with comparative summarized financial information for the year ended October 31, 2019) (\$ in thousands)

	HDO	C and Component U	Inits		
	New York City Housing Development	New York City Housing Assistance	New York City Residential Mortgage Insurance	Total	
	Corporation	Corporation	Corporation	2020	2019
Cash Flows From Operating Activities					
Mortgage loan repayments	\$ 1,052,784	\$ -	\$ -	\$ 1,052,784 \$	1,138,648
Note repayments	62,818	-	-	62,818	62,805
Receipts from fees and charges	64,344	-	72	64,416	91,133
Mortgage escrow receipts	800	-	-	800	214,945
Reserve for replacement receipts	93	-	-	93	72,962
Mortgage loan advances	(2,889,788)	2	-	(2,889,786)	(2,077,112)
Escrow disbursements	(974)	-	-	(974)	(175,855
Reserve for replacement disbursements	(7)	-	-	(7)	(55,896
Payments to employees	(27,801)	-	-	(27,801)	(26,292
Payments to suppliers for corporate operating expenses	(6,593)	-	-	(6,593)	(5,471
Project contributions and funds received from NYC	486,225	-	-	486,225	930,040
Advances and other payments for NYC	(1,050)		-	(1,050)	(116,018
Bond cost of issuance	(17,249)	<u> </u>	-	(17,249)	(17,047
Other receipts	562,450	\cap	-	562,450	170,691
Other payments	(356,452)	(2,511)	-	(358,963)	(138,358)
Net Cash (Used in) Provided by Operating Activities	(1,070,400)	(2,509)	72	(1,072,837)	69,175
Cash Flows From Non Capital Financing	Activities	\mathbf{O}			
Description of the second seco	1,823,968		-	1,823,968	
Proceeds from sale of bonds	1,823,908			1,023,700	2,216,745
Proceeds from loan participation - FFB	65,630	· ·	-	65,630	2,216,745
) <u> </u>	-		2,216,745 - 40,021
Proceeds from loan participation - FFB	65,630		- -	65,630	40,021
Proceeds from loan participation - FFB Proceeds from debt obligations	65,630 17,151		- - -	65,630 17,151	40,021 (1,517,547)
Proceeds from loan participation - FFB Proceeds from debt obligations Retirement of bonds	65,630 17,151 (1,170,319)		- - -	65,630 17,151 (1,170,319)	40,021 (1,517,547)
Proceeds from loan participation - FFB Proceeds from debt obligations Retirement of bonds Interest paid	65,630 17,151 (1,170,319) (365,726)		- - - 2,940	65,630 17,151 (1,170,319) (365,726)	40,021 (1,517,547) (365,279)
Proceeds from loan participation - FFB Proceeds from debt obligations Retirement of bonds Interest paid Grant proceeds from BPCA	65,630 17,151 (1,170,319) (365,726) 41,323		- - - 2,940 2,940	65,630 17,151 (1,170,319) (365,726) 41,323	40,021 (1,517,547) (365,279) 41,668
Proceeds from loan participation - FFB Proceeds from debt obligations Retirement of bonds Interest paid Grant proceeds from BPCA Payments from/to component units Net Cash Provided by Non Capital Financing Activities	65,630 17,151 (1,170,319) (365,726) 41,323 (4,695) 407,332	-	,	65,630 17,151 (1,170,319) (365,726) 41,323 (1,755)	40,021 (1,517,547) (365,279) 41,668
Proceeds from loan participation - FFB Proceeds from debt obligations Retirement of bonds Interest paid Grant proceeds from BPCA Payments from/to component units Net Cash Provided by Non Capital Financing Activities Cash Flows From Capital and Related Fi	65,630 17,151 (1,170,319) (365,726) 41,323 (4,695) 407,332	-	,	65,630 17,151 (1,170,319) (365,726) 41,323 (1,755) 410,272	40,021 (1,517,547 (365,279 41,668
Proceeds from loan participation - FFB Proceeds from debt obligations Retirement of bonds Interest paid Grant proceeds from BPCA Payments from/to component units Net Cash Provided by Non Capital Financing Activities Cash Flows From Capital and Related Fi Purchase of capital assets	65,630 17,151 (1,170,319) (365,726) 41,323 (4,695) 407,332	-	,	65,630 17,151 (1,170,319) (365,726) 41,323 (1,755)	40,021 (1,517,547) (365,279) 41,668 - -
Proceeds from loan participation - FFB Proceeds from debt obligations Retirement of bonds Interest paid Grant proceeds from BPCA Payments from/to component units Net Cash Provided by Non Capital Financing Activities Cash Flows From Capital and Related Fi	65,630 17,151 (1,170,319) (365,726) 41,323 (4,695) 407,332 nancing Activ	-	,	65,630 17,151 (1,170,319) (365,726) 41,323 (1,755) 410,272	40,021 (1,517,547) (365,279) 41,668 415,608 (372)
Proceeds from loan participation - FFB Proceeds from debt obligations Retirement of bonds Interest paid Grant proceeds from BPCA Payments from/to component units Net Cash Provided by Non Capital Financing Activities Cash Flows From Capital and Related Fi Purchase of capital assets Net Cash Provided by (Used in) Capital and Related Financing	65,630 17,151 (1,170,319) (365,726) 41,323 (4,695) 407,332 nancing Activ 237	-	,	65,630 17,151 (1,170,319) (365,726) 41,323 (1,755) 410,272 237	40,021 (1,517,547 (365,279 41,668 - 415,608 (372
Proceeds from loan participation - FFB Proceeds from debt obligations Retirement of bonds Interest paid Grant proceeds from BPCA Payments from/to component units Net Cash Provided by Non Capital Financing Activities Cash Flows From Capital and Related Fi Purchase of capital assets Net Cash Provided by (Used in) Capital and Related Financing Activities	65,630 17,151 (1,170,319) (365,726) 41,323 (4,695) 407,332 nancing Activ 237	-	,	65,630 17,151 (1,170,319) (365,726) 41,323 (1,755) 410,272 237	40,021 (1,517,547) (365,279)

Purchase of investments	(17,296,980)	(7,723)	(152,529)	(17,457,232)	(19,411,250)
Interest and dividends collected		94,395	145	3,818	98,358	116,015
Net Cash Provided by (Used in) Investing Activities		547,002	(5,772)	(14,297)	526,933	(608,898)
(Decrease) in cash and cash equivalents		(115,829)	(8,281)	(11,285)	(135,395)	(124,487)
Cash and cash equivalents at beginning of year		2,092,042	9,820	24,152	2,126,014	2,582,158
Cash and Cash Equivalents at End of Year	\$	1,976,213 \$	1,539 \$	12,867 \$	1,990,619 \$	2,457,671

New York City Housing Development Corporation Statement of Cash Flows (continued) Proprietary Fund Type - Enterprise Fund

Year ended October 31, 2020 (with comparative summarized financial information for the year ended October 31, 2019) (\$ in thousands)

		HD	C an	nd Component U	nits					
	D	w York City Housing evelopment orporation		ew York City Housing Assistance Corporation	New York Residen Mortga Insurar Corpora	tial ge nce		To 2020	otal	2019
Reconciliation of Operating Income to Net Cash (Used in) Provide by Operating Activities:	d									
Operating Income	\$	151,839	\$	8	\$	3,584	\$	155,431	\$	119,818
Adjustments to Reconcile Operating Income to Net Cash (Used in) Provided by Operating Activities:										
Depreciation expense		634		-		-		634		662
Amortization of bond discount and premium		(3,590)		-		-		(3,590)		(3,959)
Amortization of deferred loss on early retirement of debt		776		-		-		776		740
Non-operating bond interest payment		365,727		-		-		365,727		365,279
Changes in Assets & Liabilities:										
Mortgage loans		(2,261,282)		7,155		-		(2,254,127)		(1,528,711)
Loan participation receivable - NYC		2,384		-		-		2,384		3,172
Accrued interest receivable		(44,390)		. .		-		(44,390)		(26,922)
Notes receivable		38,913		- / ·		-		38,913		37,529
Other receivables		(432)				-		(432)		6,134
Primary government/component unit receivable (payable)		6,584		-	((3,512)		3,072		-
Other assets		(111,547)				-		(111,547)		(70,869)
Payable to The City of New York		(122,048)		(9,672)		-		(131,720)		1,054,692
Payable to mortgagors		232,961		\sim		-		232,961		(10,477)
Accounts and other payables		85,988				-		85,988		127,895
Due to the United States Government		(1)		-		-		(1)		-
Restricted earnings on investments		(3,615)		-		-		(3,615)		(1,355)
Unearned revenues and other liabilities		587,738		-		-		587,738		(18,965)
Accrued interest payable	XC	2,961		-		-		2,961		14,512
Net Cash (Used in) Provided by Operating Activities	\$	(1,070,400)	\$	(2,509)	\$	72	\$	(1,072,837)	\$	69,175
on Cash Investing Activities:										
(Decrease) increase in fair value of investments	\$	(2,259)	¢	26	\$	21	¢	(2,212)	¢	25,490

New York City Housing Development Corporation **Statement of Fiduciary Net Position** Fiduciary Funds October 31, 2020

(\$ in thousands)

	Custo	dial Funds	Other Em Benefit Tru	- •
Assets				
Cash and cash equivalents	\$	687,380	\$	282
Investments at fair value:				
Bonds		127,961		8,463
Total investments		127,961		8,463
Receivables:				
Mortgage loans		620,594		-
Accrued interest		30,037		-
Other		15,905		-
Total Receivables		666,536		-
Primary government/component unit receivable (payable)		856		-
Total Assets		1,482,733		8,745
Net Position				
Restricted for:				
Mortgagors		745,086		-
The City of New York		736,438		-
Other Entities		1,209		-
Postemployment benefits other than pensions		-		8,745
Total Net Position	\$	1,482,733	\$	8,745

New York City Housing Development Corporation Statement of Changes in Fiduciary Net Position Fiduciary Funds For the Year Ended October 31, 2020

(\$ in thousands)

	Custodial Funds E \$ 205	Other Employee Benefit Trust Fund
Additions		
Interest on loans	\$ 205	\$ -
Investment earnings:		
Interest, dividends and other	1,585	213
Total investment earnings	1,585	213
Total Additions	1,790	213
Deductions		
Benefit payments	-	(101)
Transfers to Enterprise Fund	(1,824)	-
Total Deductions	(1,824)	(101)
Net (decrease) increase in fiduciary net position	(34)	112
Net position - beginning of year	1,482,767	8,633
Net Position - End of Year	\$ 1,482,733	\$ 8,745
See accompanying notes to the basic financial statements.		

Note 1: Organization

The New York City Housing Development Corporation (the "Corporation" or "HDC") is a corporate governmental agency constituting a public benefit corporation organized and existing under the laws of the State of New York (the "State"). The Corporation is also a tax-exempt organization under Section 501(c)(3) of the Internal Revenue Code of 1986, as amended (the "Code"). The Corporation was established in 1971 under the provisions of Article XII of the Private Housing Finance Law (the "Act") of the State and is to continue in existence for at least as long as bonds, notes or other obligations of the Corporation are outstanding.

The Corporation was created to encourage the investment of private capital through low-interest mortgage loans in order to increase the supply of safe and sanitary dwelling accommodations for families and persons whose need for housing accommodations cannot be provided by unassisted private enterprise. To accomplish its objectives, the Corporation is empowered to finance housing through new construction or rehabilitation and to provide permanent financing for multi-family residential housing. The Corporation finances significant amounts of its activities through the issuance of bonds, notes and debt obligations. The bonds, notes, and debt obligations of the Corporation are not debts of either the State or The City of New York (the "City").

Pursuant to Governmental Accounting Standards Board ("GASB") Codification 2100, Defining the Financial Reporting Entity, the Corporation's financial statements are included in the City's financial statements as a component unit for financial reporting purposes.

Primary Government Entity

For the purpose of these financial statements, the Corporation is the primary government entity. Financial activity in HDC's bond and loan programs and in its Corporate Services Fund are aggregated and reported in the financial statements under Housing Development Corporation. The Corporation sells bonds, administers bond proceeds and manages bond revenues and repayments in accordance with bond resolutions adopted by its Board Members (see Note 10: "Bonds Payable and Debt Obligations"). Bond proceeds are used to make loans and provide for related costs and reserves, and loan repayments are applied to pay principal and interest on the related bonds (see Note 4: "Mortgage Loans"; Note 5: "Notes Receivable"; and Note 6: "Loan Participation Receivable for The City of New York"). Corporation resources that are not pledged under or governed by a bond resolution are managed in the Corporate Services Fund. This fund accounts for (1) fees and earnings transferred from the bond and loan programs; (2) fees earned on loans serviced for HDC and for the City; (3) compliance monitoring fees; (4) income from Corporate Services Fund investments; (5) grant revenues; (6) payments of the Corporation's operating expenses; and (7) loans made with corporate funds.

The Corporation currently has four blended component units, two of which are inactive.

The New York City Housing Assistance Corporation ("HAC") and the New York City Residential Mortgage Insurance Corporation ("REMIC") are active subsidiaries and together with HDC, the Housing New York Corporation ("HNYC") and the Real Estate Owned Corporation comprise the reporting entity.

HAC and REMIC have been included in the Corporation's financial statements as blended component units of HDC. All of these entities have been reported as component units because HDC's Members comprise all or a controlling majority of the Board for each entity and HDC's staff provides all services for each entity.

Component Units

(A) New York City Housing Assistance Corporation

HAC is a public benefit corporation established pursuant to Section 654-b of the Act as a subsidiary of the Corporation.

HAC is empowered to receive monies from any source, including, but not limited to, the Corporation, the City or the State, for the purpose of assisting rental developments to maintain rentals affordable to low and moderate-income persons for whom the ordinary operation of private enterprise cannot supply safe, sanitary and affordable housing accommodations. In order to accomplish this objective, HAC may transfer, lend, pledge or assign these monies to any rental development or assist the Corporation in financing such developments. As a subsidiary of HDC, HAC's functions are administered by the Corporation and its Board Members substantially overlap with HDC's Board Members, so it is reported as a blended component unit in HDC's financial statements.

(B) New York City Residential Mortgage Insurance Corporation

REMIC is a public benefit corporation established pursuant to Section 654-d of the Act as a subsidiary of HDC. REMIC is the successor entity to the New York City Rehabilitation Mortgage Insurance Corporation ("Old REMIC"), which was dissolved on January 27, 1993. REMIC has the authority to insure residential mortgage loans throughout the City in order to promote the preservation of neighborhoods which are blighted, are becoming blighted or may become blighted, to discourage divestment and encourage the investment of mortgage capital in such neighborhoods and to provide safe, sanitary and affordable housing accommodations to persons and families for whom the ordinary operations of private enterprise cannot supply such accommodations.

REMIC currently maintains two reserves, the Housing Insurance Fund and the Premium Reserve Fund. The Housing Insurance Fund can be used as a revolving fund solely for the payment of liabilities arising from housing insurance contracts issued by REMIC. The Housing Insurance Fund requirement (as of any particular date) is established by statute and must be in an amount equal to the aggregate of (i) one hundred percent of the insured amounts due and payable pursuant to housing insurance contracts, plus (ii) twenty percent of the insured amounts under housing insurance contracts other than insured amounts which are due and payable pursuant to (i) above, plus (iii) twenty percent of the amounts to be insured under REMIC's commitments to insure. The Housing Insurance Fund requirement at October 31, 2020 is \$98,310,000.

Any income or interest earned on the Housing Insurance Fund in excess of its respective requirements is transferred at least annually to the Premium Reserve Fund. The Premium Reserve Fund must also be maintained to provide for the payment of REMIC's liabilities arising from its operations, including liabilities arising from housing insurance contracts. REMIC also maintains an Operating Fund for operation purposes. As a component unit of HDC, REMIC functions are administered by the Corporation. The Premium Reserve Fund and Operating Fund have a combined balance of \$52,974,000 at October 31, 2020. REMIC is a blended component unit because HDC's Members comprise a controlling majority of the Board and HDC's staff provides all services for REMIC.

Inactive Component Units

(C) Real Estate Owned Corporation

The NYC HDC Real Estate Owned Corporation ("REO Subsidiary Corporation") was established under Section 654-a of the Act on September 20, 2004. The REO Subsidiary Corporation has the power to hold property whenever, in the sole discretion of the Corporation, it has become necessary to acquire a project in the case of sale under foreclosure or in lieu of foreclosure to effectuate the purposes of the Act. There was no activity undertaken by this subsidiary during FY 2020 and it did not have any assets or liabilities at October 31, 2020. The REO Subsidiary Corporation is treated as a blended component unit of HDC.

(D) Housing New York Corporation

The Housing New York Corporation is a public benefit corporation established pursuant to Section 654c of the Act as a subsidiary of the Corporation. Authorization for the funding of the Housing New York Program ended on July 1, 1995. Consequently, HNYC can no longer issue bonds or notes to fund the Housing New York Program.

Upon repayment of all the outstanding HNYC bonds on November 3, 2003, HNYC became an inactive subsidiary of the Corporation and its remaining funds were transferred out of HNYC. However, HNYC is not expected to be dissolved.

Note 2: Summary of Significant Accounting Policies

The Corporation follows the principles of fund accounting, with a sub-fund for each bond series, for the Corporate Services Fund, and for each component unit. Each fund's assets, liabilities and net position are accounted for as separate entities and follow enterprise fund reporting. Certain individual funds are aggregated into larger categories for the purpose of financial reporting. The accompanying financial statements are presented using the economic resources measurement focus and the accrual basis of accounting wherein revenues are recognized when earned and expenses when incurred. In its accounting and financial reporting, the Corporation follows the pronouncements of the GASB.

Other significant accounting policies are:

A. Revenue and Expense Recognition

The Corporation's operating revenues consist of earnings on loans and loan participation interests, fees and charges associated with both financing and servicing mortgages and loans, and other revenues that are received to cover the costs of raising capital. All other revenue, which is primarily earnings on investments and grant revenue are considered non-operating. Revenues are recognized when earned.

Operating expenses include bonding costs, expenses for administering the various bond resolutions, personnel expenses, corporate operating expenses, bond issuance and financing costs, and depreciation expense. The Corporation reports all other expenses, including distributions of first mortgage earnings to the City in connection with loan participations and the payment, if necessary, of mortgage loan principal receipts on bond payments, as non-operating expenses. Expenses are recognized as incurred.

Virtually all resources are either restricted or designated. Net position has been restricted in accordance with terms of an award, agreement or by state law. Designated net position is committed for specific purposes pursuant to HDC policy and/or Board directives (see Note 19: "Net Position" for more detailed information).

B. Cash Equivalents and Investments

Short-term bank deposits and investments with stated maturities of 90 days or less are reported as Cash and Cash Equivalents. All investments are reported at fair value, except for certificates of deposit and investment agreements. The Corporation's investment agreements, which can take the form of open time deposits or fixed repurchase agreements, are reported at an amount equal to principal and accrued interest.

Generally Accepted Accounting Principles ("GAAP") require that restricted assets be reported as noncurrent assets. In the case of cash equivalents and investments, this treatment generally causes restricted investments with maturities less than one year to be reported as non-current. However, to more accurately report the alignment of HDC's current liability for payment of bond principal and interest with funds available to satisfy these liabilities, HDC has included cash, cash equivalents and investments totaling \$595,590,000 at October 31, 2020, to cover the payment of bond principal and interest due in the following year.

C. Purpose Investments

As part of its financing activities, HDC has made three housing development loans that are secured by GNMA certificates rather than mortgages on the related properties. The GNMA certificates provide payments at such times and in such amounts as to fully repay the respective HDC loans and are the only source of repayment for these loans. The GNMA certificates are treated under U.S. Treasury regulations as acquired program obligations. The GNMA certificates are classified in the financial statements as purpose investments and identified separately from other investments and restricted investments in the financial statements. However, interest earned on the GNMA certificates is included in earnings on

investments.

It is the Corporation's policy to record GNMA certificates at amortized cost, which amounted to \$27,937,000 at October 31, 2020. The fair value of these purpose investments amounted to \$31,344,000 at October 31, 2020.

D. Mortgage Loans

As part of the Corporation's major financing activities, mortgage loans are funded from bond and debt obligation proceeds and corporate reserves. The mortgage loans funded from bond proceeds and debt obligations are generally classified as restricted receivables because the loan repayments of all such loans are pledged to cover the debt service on the related bonds and obligations. The loans funded from corporate reserves are not restricted but designated for a specific purpose.

E. Allowance for Credit Losses

HDC's loans are underwritten according to standards the Corporation believes prudent and are closely monitored for payment and for management of the associated housing developments. In addition, many of the Corporation's mortgages have credit enhancements through letters of credit, mortgage insurance and other supports. Therefore, HDC believes that the likelihood of experiencing material credit losses relating to its bonded mortgage programs is remote. Management has determined that current charges against income are not required.

F. Summarized Financial Information

The basic financial statements include summarized comparative information as of and for the year ended October 31, 2019 in total but not by reporting unit. Such information does not include enough detail to constitute a presentation in conformity with generally accepted accounting principles. Accordingly, such information should be read in conjunction with the Corporation's financial statements for the year ended October 31, 2019 from which the summarized information was derived (which are available from the Corporation and on its website).

G. Fiduciary Fund Statements

The Statement of Fiduciary Net Position and the Statement of Changes in Fiduciary Net Position provide information on the Corporation's fiduciary activities in (1) Custodial Funds and (2) the Other Post-Employment Benefits Trust ("OPEB") Fund. The Custodial Funds report assets held by the Corporation on behalf of mortgagors and the City. These assets are derived from the servicing of the Corporation's permanent loans and construction and permanent loans serviced on behalf of the New York City Department of Housing Preservation and Development (HPD), using funds provided by mortgagors and HPD. All such funds are the property of the mortgagors and HPD and thus are reported as restricted net position for mortgagors and the City in the fiduciary statement of net position. Investment earnings on monies held for the City, project reserves for replacement and certain other project escrows are reported as additions to restricted net position in the Fiduciary Fund. The Other Employee Benefit Trust Fund

reports resources that are required to be held in trust for the members and beneficiaries of the Corporation's OPEB plan.

H. Recent and Upcoming Accounting Pronouncements

Accounting Standards Issued and Adopted

GASB Statement No. 84, *Fiduciary Activities*, ("GASB 84") was issued in January 2017. The primary objective of GASB 84 is to improve guidance regarding the identification of fiduciary activities for accounting and financial reporting purposes and how those activities should be reported. GASB 84 establishes criteria for identifying fiduciary activities of all state and local governments. The focus of the criteria generally is on (1) whether a government is controlling the assets of the fiduciary activity and (2) the beneficiaries with whom a fiduciary relationship exists. Separate criteria are included to identify fiduciary component units and postemployment benefit arrangements that are fiduciary activities.

GASB 84 describes four fiduciary funds that should be reported, if applicable: (1) pension (and other employee benefit) trust funds, (2) investment trust funds, (3) private-purpose trust funds, and (4) custodial funds. Custodial funds generally should report fiduciary activities that are not held in a trust or equivalent arrangement that meets specific criteria. The Corporation early adopted GASB 84 on November 1, 2019. As of November 1, 2019, the Corporation identified two fiduciary funds (1) custodial funds and (2) other post-employment benefits trust funds. The cumulative effect of adopting GASB 84 was a \$34,000 reduction to the enterprise fund beginning net position restricted for bond obligations and the establishment of beginning net position of \$1,482,767,000 in Custodial Funds and \$8,633,000 in beginning net position restricted for post-employment benefits other than pension in the Other Employee Benefit Trust Fund. The Other Employee Benefit Trust Fund had not been reported prior to the adoption of GASB 84.

GASB Statement No. 89, Accounting for Interest Cost Incurred before the End of a Construction Period, ("GASB 89") was issued in June 2018. The objectives of GASB 89 are (1) to enhance the relevance and comparability of information about capital assets and the cost of borrowing for a reporting period and (2) to simplify accounting for interest cost incurred before the end of a construction period.

GASB 89 establishes accounting requirements for interest cost as incurred before the end of a construction period. Such interest cost includes all interest that previously was accounted for in accordance with the requirements of paragraphs 5–22 of Statement No. 62, *Codification of Accounting and Financial Reporting Guidance Contained in Pre-November 30, 1989 FASB and AICPA Pronouncements*, which are superseded by GASB 89. GASB 89 requires that interest cost incurred before the end of a construction period be recognized as an expense in the period in which the cost is incurred for financial statements prepared using the economic resources measurement focus. As a result, interest cost incurred before the end of a construction period will not be included in the historical cost of a capital asset reported in a business-type activity or enterprise fund.

GASB 89 also reiterates that in financial statements prepared using the current financial resources measurement focus, interest cost incurred before the end of a construction period should be recognized as an expenditure on a basis consistent with governmental fund accounting principles.

The requirements of GASB 89 are effective for reporting periods beginning after December 15, 2020. The Corporation early adopted GASB 89 and it had no impact on the financial statements.

GASB Statement No. 90, *Majority Equity Interests* – an amendment of GASB Statements No. 14 and No. 61, ("GASB 90") was issued in August 2018. The primary objectives of this GASB 90 are to improve the consistency and comparability of reporting a government's majority equity interest in a legally separate organization and to improve the relevance of financial statement information for certain component units. It defines a majority equity interest and specifies that a majority equity interest in a legally separate organization should be reported as an investment if a government's holding of the equity interest meets the definition of an investment. A majority equity interest that meets the definition of an investment should be measured using the equity method, unless it is held by a special-purpose government engaged only in fiduciary activities, a fiduciary fund, or an endowment (including permanent and term endowments) or permanent fund. Those governments and funds should measure the majority equity interest at fair value.

For all other holdings of a majority equity interest in a legally separate organization, a government should report the legally separate organization as a component unit, and the government or fund that holds the equity interest should report an asset related to the majority equity interest using the equity method. GASB 90 establishes that ownership of a majority equity interest in a legally separate organization results in the government being financially accountable for the legally separate organization and, therefore, the government should report that organization as a component unit.

GASB 90 also requires that a component unit in which a government has a 100% equity interest account for its assets, deferred outflows of resources, liabilities, and deferred inflows of resources at acquisition value at the date the government acquired a 100% equity interest in the component unit. Transactions presented in statements of the component unit in that circumstance should include only transactions that occurred subsequent to the acquisition.

The requirements of GASB 90 are effective for reporting periods beginning after December 15, 2019. Earlier application is encouraged. The requirements should be applied retroactively, except for the provisions related to (1) reporting a majority equity interest in a component unit and (2) reporting a component unit if the government acquires a 100% equity interest. Those provisions should be applied on a prospective basis. The Corporation early adopted GASB 90 and it had no impact on the financial statements.

GASB Statement No. 95, *Postponement of the Effective Dates of Certain Authoritative Guidance*, ("GASB 95") provides temporary relief to governments and other stakeholders in light of the COVID-19 pandemic. That objective is accomplished by postponing the effective dates of certain provisions in Statements and Implementation Guides that first became effective or are scheduled to become effective for periods beginning after June 15, 2018, and later.

The effective dates of certain provisions contained in the following pronouncements are postponed by one year:

- Statement No. 83, Certain Asset Retirement Obligations
- Statement No. 84, Fiduciary Activities
- Statement No. 88, Certain Disclosures Related to Debt, including Direct Borrowings and Direct Placements
- Statement No. 89, Accounting for Interest Cost Incurred before the End of a Construction Period
- Statement No. 90, *Majority Equity Interests*
- Statement No. 91, Conduit Debt Obligations
- Statement No. 92, *Omnibus 2020*
- Statement No. 93, Replacement of Interbank Offered Rates
- Implementation Guide No. 2017-3, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions (and Certain Issues Related to OPEB Plan Reporting)
- Implementation Guide No. 2018-1, Implementation Guidance Update 2018
- Implementation Guide No. 2019-1, Implementation Guidance Update 2019
- Implementation Guide No. 2019-2, *Fiduciary Activities*.

The effective dates of the following pronouncements are postponed by 18 months:

- Statement No. 87, *Leases*
- Implementation Guide No. 2019-3, *Leases*.

Earlier application of the provisions addressed in GASB 95 is encouraged and is permitted to the extent specified in each pronouncement as originally issued. The requirements of GASB 95 are effective immediately. The Corporation adopted GASB 95 which deferred the adoption of several pronouncements as detailed below.

Accounting Standards Issued and Not Yet Adopted

GASB Statement No. 87, *Leases*, ("GASB 87") was issued in June 2017. The primary objective of GASB 87 is to better meet the information needs of financial statement users by improving accounting and financial reporting for leases by governments. GASB 87 increases the usefulness of governments' financial statements by requiring recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. It establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. Under GASB 87, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources, thereby enhancing the relevance and consistency of information about governments' leasing activities. GASB 87 is effective for fiscal years beginning after June 15, 2021 and all reporting periods thereafter. The Corporation is in the process of evaluating the impact of its adoption on the financial statements.

GASB Statement No. 91, *Conduit Debt Obligations*, ("GASB 91") was issued in May 2019. The primary objectives of GASB 91 are to provide a single method of reporting conduit debt obligations by issuers and eliminate diversity in practice associated with (1) commitments extended by issuers, (2) arrangements

associated with conduit debt obligations, and (3) related note disclosures. GASB 91 achieves those objectives by clarifying the existing definition of a conduit debt obligation; establishing that a conduit debt obligation is not a liability of the issuer; establishing standards for accounting and financial reporting of additional commitments and voluntary commitments extended by issuers and arrangements associated with conduit debt obligations; and improving required note disclosures. GASB 91, as amended, is effective for fiscal years beginning after December 15, 2021. The Corporation is in the process of evaluating the impact of its adoption on the financial statements.

In January 2020, GASB approved Statement No. 92, *Omnibus 2020* ("GASB 92"). GASB 92 addresses practice issues that have been identified during implementation and application of certain GASB Statements. GASB 92 addresses a variety of topics including issues related to the effective date of Statement No. 87, "Leases", and postemployment benefits (pensions and other postemployment benefits), fiduciary activities, asset retirement obligations, reporting by public entity risk pools, nonrecurring fair value measurements, and derivative instruments terminology. The effective date of this standard varies by topic and was superseded in accordance with GASB 95 as described above. The Corporation is in the process of evaluating the impact of its adoption on the financial statements.

In March 2020, GASB approved Statement No. 93, *Replacement of Interbank Offered Rates* ("GASB 93"). Some governments have entered into agreements in which variable payments made or received depend on an interbank offered rate ("IBOR")—most notably, the London Interbank Offered Rate ("LIBOR"). As a result of global reference rate reform, LIBOR is expected to cease to exist in its current form at the end of 2021, prompting governments to amend or replace financial instruments for the purpose of replacing LIBOR with other reference rates, by either changing the reference rate or adding or changing fallback provisions related to the reference rate. The objective of GASB 93 is to address those and other accounting and financial reporting implications that result from the replacement of an IBOR. The removal of LIBOR as an appropriate benchmark interest rate is effective for reporting periods ending after December 31, 2021. In accordance with GASB 95 as described above, all other requirements of GASB 93 are effective for fiscal years beginning after June 15, 2021. Earlier application is encouraged. The Corporation is in the process of evaluating the impact of its adoption on the financial statements.

GASB Statement No. 94, *Public-Private and Public-Public Partnerships and Availability Payment Arrangements*, ("GASB 94") was issued in March 2020. The primary objective of GASB 94 is to improve financial reporting by addressing issues related to public-private and public-public partnership arrangements (PPPs). As used in GASB 94, a PPP is an arrangement in which a government (the transferor) contracts with an operator (a governmental or nongovernmental entity) to provide public services by conveying control of the right to operate or use a nonfinancial asset, such as infrastructure or other capital asset (the underlying PPP asset), for a period of time in an exchange or exchange-like transaction. Some PPPs meet the definition of a service concession arrangement (SCA), which the Board defines in GASB 94 as a PPP in which (1) the operator collects and is compensated by fees from third parties; (2) the transferor determines or has the ability to modify or approve which services the operator is required to provide, to whom the operator is required to provide the services, and the prices or rates that can be charged for the services; and (3) the transferor is entitled to significant residual interest in the service utility of the underlying PPP asset at the end of the arrangement.

GASB 94 also provides guidance for accounting and financial reporting for availability payment arrangements (APAs). As defined in GASB 94, an APA is an arrangement in which a government compensates an operator for services that may include designing, constructing, financing, maintaining, or operating an underlying nonfinancial asset for a period of time in an exchange or exchange-like transaction. The requirements of GASB 94 are effective for fiscal years beginning after June 15, 2022, and all reporting periods thereafter. The Corporation is in the process of evaluating the impact of its adoption on the financial statements.

In May 2020, GASB approved Statement No. 96, *Subscription-Based Information Technology Arrangements* ("GASB 96"). The primary objective of GASB 96 is to provide guidance on the accounting and financial reporting for subscription-based information technology arrangements ("SBITAs") for government end users. GASB 96 (1) defines a SBITA; (2) establishes that a SBITA results in a right-to-use subscription asset (an intangible asset) and a corresponding subscription liability; (3) provides the capitalization criteria for outlays other than subscription payments, including implementation costs of a SBITA; and (4) requires note disclosures regarding a SBITA. The requirements of GASB 96 are effective for fiscal years beginning after June 15, 2022, and all reporting periods thereafter. Earlier application is encouraged. The Corporation is in the process of evaluating the impact of its adoption on the financial statements.

In June 2020, GASB issued Statement No. 97, *Certain Component Unit Criteria, and Accounting and Financial Reporting for Internal Revenue Code Section 457 Deferred Compensation Plans—an amendment of GASB Statements No. 14 and No. 84, and a supersession of GASB Statement No. 32* ("GASB 97"). The primary objective of GASB 97 is to require that Internal Revenue Code ("IRC") Section 457 deferred compensation plans ("Section 457 plans") be classified as either a pension plan or another employee benefit plan, depending on whether the plan meets the definition of a pension plan and (2) clarifies that GASB 84, as amended, should be applied to all arrangements organized under IRC Section 457 to determine whether those arrangements should be reported as fiduciary activities. The requirements of GASB 97 are effective for either fiscal years or reporting periods beginning after June 15, 2021. Earlier application is encouraged. The Corporation is in the process of evaluating the impact of its adoption on the financial statements.

Note 3: Investments and Deposits

The Corporation is authorized to engage in investment activity pursuant to the Act and the Corporation's respective bond resolutions. Investment policies are set for the Corporation by the Members of the Corporation on an annual basis, through the annual adoption of written investment guidelines. Investments are reviewed on a periodic basis by the Corporation's Audit Committee. Day-to-day investment decisions are made by the Corporation's Investment Committee. The Corporation principally invests in securities of the United States and its agencies, open time deposits ("OTDs") in the form of investment agreements, demand accounts, repurchase agreements, and certificates of deposits. In FY 2020, HDC continued investing in taxable municipal bonds of New York State and New York City, consistent with the Corporation's enabling statute and Investment Guidelines. The Corporation did not enter into any reverse repurchase agreements during the year ended October 31, 2020. The Corporation is not aware of any violations of any provisions of the foregoing policies.

All securities, other than securities held by the respective trustees for the benefit of the bondholders, were held by the Corporation or its agents in the Corporation's name. Bond program investments are held by the trustee of the applicable program.

All investment transactions are recorded on the trade date. Investments, other than purpose investments, which are reported at fair value at October 31, 2020, were as follows:

Investment Maturities at October 31, 2020 (in Years)

Enterprise Fund - HDC and Component Units

T	2020	x .1 .1	1.5	c 10	More than
Investment Type	2020	Less than 1	1-5	6-10	10
(in thousands)					
Money Market and NOW Accounts	\$1,792,713	\$1,792,713	\$ —	\$ —	\$ —
FHLMC Bonds	553,601		130,744	409,660	13,197
Federal Farm Credit Bond	535,123	30,027	60,907	444,189	
FHLB	275,423	93,494	15,024	119,829	47,076
NYS/NYC Municipal Bonds *	193,582	97,540	40,057	55,985	
Fixed Repurchase Agreements	165,039	165,039			
FNMA Bonds	54,858		10,736	24,849	19,273
U.S. Treasury (Bonds, Notes, Bills)	8,934	5,400	3,534		
Total	3,579,273	2,184,213	261,002	1,054,512	\$79,546
Less amounts classified as cash					
equivalents	(1,963,152)	(1,963,152)	() –		
Total investments	\$1,616,121	\$221,061	\$261,002	\$1,054,512	\$79,546

*Note: Primarily taxable VRDO instruments which can be put weekl

Fiduciary Funds

*Note: Primarily taxable VRDO instrum	ents which can b	pe put weekly.			
Fiduciary Funds	Investment Maturities at October 31, 2020 (in Years)				
Investment Type	2020	Less than 1	1-5	6-10	More than 10
(in thousands)					
Money Market and NOW Accounts	\$682,441	\$682,441	\$ —	\$ —	\$ —
FHLMC Bonds	72,966	_		72,966	
FNMA Bonds	39,966		34,268		5,698
Federal Farm Credit Bond	13,065		5,008	8,057	
Fixed Repurchase Agreements	2,689	2,689	_		
FHLB	1,999		_	1,999	
Total	813,126	685,130	39,276	83,022	5,698
Less amounts classified as cash					
equivalents	(685,130)	(685,130)			
Total investments	\$127,996	\$ —	\$39,276	\$83,022	\$5,698

Enterprise Fund - HDC and Component Units

Total investments recorded on the Statement of Net Position at October 31, 2020 of \$2,556,554,000 is made up the following: (a) investments recorded at fair value of \$1,616,121,000, (b) certificates of deposits in the amount of \$304,880,000 and (c) OTDs in the amount of \$635,553,000.

As required by GASB No. 31, the Corporation has recorded a fair value adjustment in its investment portfolio. HDC recorded a net depreciation of \$2,212,000 for the year ended October 31, 2020.

Under Statement No. 72, *Fair Value Measurement and Application*, HDC categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the assets. Level 1 inputs are quoted prices in active markets for identical assets, Level 2 inputs are significant other observable inputs, and Level 3 inputs are significant unobservable inputs. The Corporation does not hold any securities valued using Level 3 inputs as of October 31, 2020.

The Corporation has the following recurring fair value measurements as of October 31, 2020:

- NYC/NYS Municipal securities of \$193,582,000 are valued using quoted market prices. (Level 1 inputs)
- U.S. Treasury securities of \$8,934,000 are valued based on models using observable inputs. (Level 2 inputs)
- U.S. Agency securities of \$1,419,005,000 are valued based on models using observable inputs. (Level 2 inputs)

Money Market and Now accounts of \$1,792,713,000 are valued at cost. In addition to the investments identified above, as of October 31, 2020, the Corporation held \$27,468,000 uninvested as cash in various trust and escrow accounts.

Interest Rate Risk: As a means of limiting its exposure to fair value losses arising from rising interest rates, the Corporation's Investment Guidelines charge the Investment Committee with "...determining appropriate investment instruments...based on...length of time funds are available for investment purposes..." among other factors. Thus, maturities are matched to the Corporation's liquidity needs. As part of the Corporation's investment policies, it looks to invest its bond and corporate related reserves in long-term securities that carry a higher yield, with the intent to hold the investments to maturity.

Credit Risk: The Corporation's investment guidelines and policies are designed to protect principal by limiting credit risk. This is accomplished by making decisions based on a review of ratings, collateral, and diversification requirements that vary according to the type of investment.

As of October 31, 2020, investments in Federal National Mortgage Association ("FNMA" or "Fannie Mae"), Federal Home Loan Mortgage Corporation ("FHLMC" or "Freddie Mac"), Federal Home Loan Bank ("FHLB") and Federal Farm Credit Bank ("FFCB") were rated by Standard & Poor's and/or Moody's Investors Service (Fannie Mae, Freddie Mac, FHLB and FFCB are collectively referred to as

"Agency"). Standard & Poor's ratings for long-term and short-term were AA+ and A-1+, respectively. Moody's long-term and short-term ratings were Aaa and P-1, respectively. Investments in Fannie Mae, Freddie Mac, FHLB and FFCB are implicitly guaranteed by the U.S. government. They carry ratings equivalent to the credit ratings for the U.S. government. Some investments were not rated by Fitch Ratings. Of the investments that were rated by Fitch Ratings, they carried ratings of AAA for long-term and F1+ for short-term. Money market accounts and certificates of deposits are either backed by collateral held by the provider or letters of credit provided by third parties.

NYS/NYC municipal bonds are usually the highest rated securities held at HDC. The ratings by Standard & Poor's ranged from AAA to AA-; Moody's ranged from Aa1 to Aa3 and Fitch Ratings Service ranged from AAA to AA. Money market, open time deposits and repurchase agreements in the form of OTDs are not rated; however, the providers are rated.

Custodial Credit Risk: For investments, custodial credit risk is the risk that in the event of the failure of the counterparty, the Corporation will not be able to recover the value of its investments or collateral securities that are in the possession of the outside party. Investment securities are exposed to custodial credit risk if the securities are uninsured, are not registered in the name of the Corporation, and are held by either the counterparty or the counterparty's trust department or agent but not in the name of the Corporation. The Corporation manages custodial credit risk by limiting its investments to highly rated institutions and/or requiring high quality collateral be held by the counterparty in the name of the Corporation.

As of October 31, 2020, open time deposits in the amount of \$30,093,000, repurchase agreements in the amount of \$165,039,000, certificates of deposits in the amount of \$304,880,000 and demand accounts in the amount of \$1,783,543,000 were collateralized by high quality instruments such as U.S. Treasury Notes, U.S. Treasury Bills, and Agency investments and letters of credits held by the Corporation's agent in the name of the Corporation. A portion of collateral supporting the demand accounts was in the form of FHLB letters of credit.

For deposits, custodial credit risk is the risk that in the event of a bank failure the Corporation's deposit may not be returned to it. HDC bank deposits amounted to \$31,858,000 at October 31, 2020, of which \$30,919,000 was uninsured by the Federal Deposit Insurance Corporation ("FDIC") and uncollateralized. Correspondingly, \$26,449,000 was secured in trust accounts, which are protected under state law and \$5,409,000 was held in demand deposit accounts ("DDA"). HDC limits its deposits to highly rated institutions, and such deposits are either in trust accounts or partially insured through the FDIC. The maximum coverage of \$250,000 is available to depositors under the FDIC's general deposit insurance rules. All the Corporation's funds held in the DDA are subject to this provision.

Concentration of Credit Risk: The Corporation follows its annually adopted investment guidelines in accordance with concentration limits and reviews its credit concentration monthly. The Corporation's Credit Risk unit monitors concentration risk amongst issuers and reports regularly to the Members of the Corporation's Audit Committee.

The following tables shows issuers that represent 5% or more of total investments at October 31, 2020 *(in thousands):*

Issuer	Dollar Amount	Percentage	
Signature Bank (*)	\$905,160	20.03%	
FHLMC	551,640	12.21	
Toronto-Dominion Bank (TD)	515,830	11.41	
FFCB	506,930	11.22	
NY Community Bank (*)	440,680	9.75	
Sterling National Bank (*)	343,530	7.60	
Customers Bank (*)	314,550	6.96	
FHLB	275,420	6.09	

Enterprise Fund - HDC and Component Units

*Note: Either fully or partially covered by FHLB securities and/or FHLB letter of credit collateral held by the Corporation.

Fiduciary Funds

Issuer	Dollar Amount	Percentage
Signature Bank (*)	\$243,294	29.92%
Bridgehampton National Bank (*)	139,199	17.12
Customers Bank (*)	134,867	16.59
FHLMC	72,966	8.97
NY Community Bank (*)	70,159	8.63
Sterling National Bank (*)	56,133	6.90

*Note: Either fully or partially covered by FHLB securities and/or FHLB letter of credit collateral held by the Corporation.

Note 4: Mortgage Loans

The Corporation had outstanding, under various loan programs, mortgage loans of \$16,671,118,000 as of October 31, 2020. These amounts represent the portion of mortgage loans for which the Corporation has advanced monies. Of the total loans outstanding above, \$321,318,000 of loans funded from corporate reserves were not restricted assets as they were not pledged to any specific bonds or under any bond resolutions. However, they are considered designated as defined under Note 19: "Net Position". The portion of mortgage loans that have not yet been advanced is recorded as investments and amounted to \$2,762,145,000 at October 31, 2020 (see Note 16: "Commitments").

Changes in Mortgage Loans

The changes in Mortgage Loans are as follows:					
(in thousands)					Enterprise
		Loan			Fund-
	A	Participation			Mortgage
	Total	Receivable -			Loans Net of
	Mortgage	The City of	Mortgage	Fiduciary	Fiduciary
	Loans	New York	Loans (net)	Funds	Funds
Mortgage Loans Outstanding at					
Beginning of the Year	\$14,829,367	\$1,039,101	\$13,790,266	\$602,268	\$13,187,998
Mortgage Advances	2,889,786		2,889,786	-	2,889,786
Other Additions*	52,758	223	52,535	18,489	34,046
Principal Collections	(658,080)	(15,472)	(642,608)	(163)	(642,445)
Other Deductions (Loan Participation)		(581,134)	581,134	-	581,134
Discount/Premium Amortized	5		5	_	5
Mortgage Loans Outstanding at End					
of the Year	17,113,836	442,718	16,671,118	620,594	16,050,524
NYC Loan Participation Interest					
Receivable	22,172	22,172	-	-	-
Total	\$17,136,008	\$464,890	\$16,671,118	\$620,594	\$16,050,524

*Loan assignments and capitalized interest.

Of the mortgage loans outstanding at October 31, 2020, \$620,594,000 was related to fiduciary funds.

(A) New York City Housing Development Corporation

(i) The HDC mortgage loans listed above were originally repayable over terms of 2 to 50 years and bear interest at rates from 0.06% to 10.36% per annum. Almost all mortgage loans receivable are collateralized by first or second mortgages on the property of the housing sponsors and contain exculpatory clauses with respect to the liability of the principals of such housing sponsors. The table above does not include loans which are not secured by mortgages, which include a military housing loan and a loan to NYCHA, each of which are secured by notes (see Note 5: "Notes Receivable"), and loans secured by GNMA certificates (see Note 2C: "Purpose Investments"). Of the total HDC mortgages including those that are in the Mitchell-Lama programs held as of October 31, 2020, 62% are first mortgages and 38% are subordinate loans.
(ii) In fiscal year 2014, the Corporation entered into a new financing agreement with the FFB for selling beneficial ownership interests in mortgage loans originated by housing finance agencies and insured with mortgage insurance provided by the Federal Housing Administration ("FHA") pursuant to a risk sharing agreement between FHA and such housing finance agency like the Corporation. The Corporation was selected to be the first housing finance agency to participate in this new federal initiative to reduce the costs of capital for affordable housing. The Corporation acts as servicer of the loans and receives the monthly mortgage payments from the borrower as per the schedule of the Certificates of Participation. The monthly loan principal and interest payment will be remitted to the FFB as per the schedule of the Certificates of Participation.

The mortgage loan participation program with the FFB had a payable balance of \$344,136,000 at October 31, 2020. For more details on the loans included in the FFB Loan Participation program, see Note 10: "Bonds Payable and Debt Obligations".

(B) Housing Assistance Corporation

The Housing Assistance Corporation financed construction and capitalized interest costs for eight affordable housing projects during the period of 1986 to 1990. These loans, funded by the City, accrue interest at the rate of 0-1% per annum.

The cash flows from these loans were used to provide funding for City directed subsidy programs. Beginning in 2003, the cash flows from mortgage loan interest and the investment portfolio were not sufficient to meet the payment requirements for the subsidy program. HDC's Members approved fund transfers from the Corporation to HAC for an amount at any one time not to exceed \$10,000,000 in total to cover the shortfall of payments required.

In order to continue to fund the City subsidy program for the project named Ruppert/Yorkville ("RY Subsidy Program") and to repay HDC for the obligations, HAC's Board Members approved the sale of the remaining five mortgage loans in the HAC loan portfolio to HDC at its meeting on September 19, 2017. The total outstanding balance on these loans at the time of the loan sale was \$32,400,000. The sale raised \$23,800,000 for HAC. This amount represented the discounted value of the future cash flow on the purchased loans. A portion of the sale proceeds was used to repay HDC for outstanding obligations and the remainder should be enough to continue to provide funds for the RY Subsidy Program through 2023.

In fiscal year 2016, the City requested that the Corporation help facilitate the implementation of the new affordable housing regime for Stuyvesant Town-Peter Cooper Village. On December 15, 2015, HDC and Wells Fargo Bank entered into a Participation Agreement whereby HDC funded a \$143,236,000 subordinate loan to the purchasers of Stuyvesant Town-Peter Cooper Village. The Corporation executed this transaction through its subsidiary HAC. This subordinate loan bears no interest and is forgiven at the rate of 1/20 per annum over its 20-year term. HDC will be reimbursed for this transaction pursuant to a memorandum of understanding with the City. In FY 2020, \$7,162,000 of the Stuyvesant Town-Peter Cooper Village loan was forgiven according to the 20-year term stated in the Participation Agreement.

As of October 31, 2020, the outstanding mortgage loan balance was \$114,589,000 and HDC has received a total of \$112,576,000 in Stuyvesant Town fund reimbursements from the City to date. The total loan outstanding balance in HAC was \$114,912,000 at October 31, 2020.

Note 5: Notes Receivable

HDC has loans outstanding that are secured by notes and pledged revenues. Military Housing notes receivable of \$47,545,000 was received in connection with the 2004 Series A Class I & II Military Housing Revenue Bond (Fort Hamilton LLC Project) issuance. The notes are secured by pledged revenues of the development under a Master Trust Indenture. The interest rate on the mortgage loan is a blended rate of 6.32% which is equal to the bond interest rate. The interest on the mortgage is collected semi-annually on the debt service date. As of October 31, 2020, the outstanding Military Housing notes receivable was \$43,030,000.

During fiscal year 2013, notes receivable from NYCHA received in connection with the Corporation's 2005 Series A Capital Fund Program Revenue Bonds were replaced upon the issuance of the Corporation's 2013 Series A Capital Fund Program Revenue Bonds. As of October 31, 2020, the outstanding NYCHA notes receivable relating to the 2013 Series A Bonds was \$94,783,000.

In addition to the NYCHA notes receivable of the 2013 Series A Bonds, the Corporation also agreed to provide additional funds for a second note from NYCHA for the purpose of modernizing and making capital improvements at NYCHA projects across the City. The Corporation issued the 2013 Series B Capital Fund Program Revenue Bonds for this purpose. As of October 31, 2020, the outstanding NYCHA notes receivable relating to the 2013 Series B Bonds was \$375,735,000.

The 2013 Series A and B notes receivable are secured by a first priority pledge of NYCHA's capital grant money provided by the United States Department of Housing and Urban Development ("HUD").

Note 6: Loan Participation Receivable for The City of New York

In fiscal year 2002, the Corporation acquired interests in two real estate mortgage investment trusts in connection with its housing activities. In addition, the Corporation entered into various agreements with the City whereby HDC sold bonds and used the bond proceeds to purchase from the City interests in various mortgage loans and pools of mortgage loans.

In each of fiscal years 2002 and 2003, HDC used bond proceeds from its Multi-Family Housing Revenue Bonds, 2002 Series D (the "2002 Series D Bonds"), and Multi-Family Housing Revenue Bonds, 2003 Series D (the "2003 Series D Bonds"), to purchase a subordinated position in a 100% participation interest in a portion of the cash flows from a pool of mortgage loans the City had previously securitized in 1996. This pool is known as the Sheridan Trust II and HDC's purchased asset is the Sheridan Trust II Class B Certificate. Upon completion of the 2003 transaction, HDC's participation interest included the City's total cash flow from the Sheridan Trust II. In September 2005, the senior lien interests were satisfied and HDC became the primary beneficiary of the Sheridan Trust II. At that time, therefore, the loan asset was added to HDC's Statement of Net Position and was valued at its principal amount.

In 2006, the Corporation issued its Multi-Family Housing Revenue Bonds, 2006 Series A, which refinanced its 2002 Series D and 2003 Series D Bonds. On May 1, 2014, the 2006 Series A bonds were fully redeemed. Simultaneously, the Corporation issued the Multi-Family Housing Revenue Bonds, 2014 Series B-1 and 2014 Series B-2 (collectively, the "2014 Series B Bonds") to re-securitize the remaining underlying loan portfolio, which included the Sheridan Trust II Class B Certificate. At that time, the Sheridan Trust II had a balance of \$57,372,000. The Sheridan Trust II, along with the other remaining underlying loans under the 2006 Series A Bonds totaling \$246,698,000, were transferred to the 2014 Series B Bonds.

In April 2018, the Corporation issued its Multi-Family Housing Revenue Bonds, 2018 Series B Bonds. The proceeds were used to purchase and securitize a 100% participation interest in various pools of City mortgage loans totaling \$671,611,000.

In October 2020, at the request of the City, the Corporation purchased the City's residual interest in the Loan Participation Receivable related to the 2014 Series B and 2018 Series B Bonds mortgage portfolio including the Sheridan Trust II for a purchase price of \$40,000,000. The Loan Participation agreement was amended, and the amended agreement "eliminated the reversion of ownership of the mortgage portfolio under the agreement to the City" after the full repayment of the underlying 2014 Series B and 2018 Series B Bonds. As of the purchase date, the amount of the participation interest of \$586,357,000 was reduced to offset against the Payable to the City.

As of October 31, 2020, the balance included under "Loan Participation Receivable – The City of New York" totaled \$464,890,000 is related to the Corporation's Mitchell-Lama loan participating program. "Loan Participation Receivable - The City of New York" are pledged to the associated bonds but revert to the City when such bonds are retired (see Note 12: "Payable to The City of New York and Mortgagors").

Note 7: Other Receivables

Other receivables of \$13,585,000 represent mortgage related fees, servicing fees receivable, Corporate Services Fund loans not secured by mortgages on the properties, bond interest receivable from HUD, and servicing fees receivable on Department of Housing Preservation and Development ("HPD") loans serviced (but not owned) by HDC.

Under Fiduciary Funds, other receivables were \$15,905,000 as of October 31, 2020. This primarily consisted of deferred interest receivable, interest and mortgage servicing fees billed for HPD serviced loans.

The Corporation continues to receive funds from the BPCA under the "Pay-as-You-Go" capital funds program as directed by the City. The Corporation received \$41,323,000 during this past fiscal year. As of October 31, 2020, the Corporation received a total of \$214,312,000 from the BPCA.

Note 8: Other Non-Current Assets

On June 27, 2011, a trust created by the City was dissolved and the Corporation and the City entered into the 2011 Participation Agreement. The trust when created consisted of a pledge of the income from Interest Reduction Payment Contracts ("Section 236 Contracts") from HUD on 32 developments. Under the 2011 Participation Agreement, the Corporation holds a 100% participation interest in the second mortgages and related Section 236 Contracts on the remaining properties. The Corporation paid the City \$10,266,000 as the purchase price, which represents the discounted value of the future cash flows (monthly interest reduction payments). During FY 2020, \$226,000 was amortized and was recorded as a non-operating expense. The unamortized value of the 2011 participation interest was \$377,000 at October 31, 2020.

In October 2020 at the request of the City, the Corporation purchased the residual interest in the 2014 Series B and the 2018 Series B loan participation interest, for a purchase price of \$40 million. This amount represented the discounted value of the residual interest at the final bond maturity date of November 1, 2046.

Note 9: Deferred Inflows/Outflows of Resources

(A) Interest Rate Caps

The Corporation uses interest rate caps to mitigate its exposure to rising interest rates on its variable rate debt.

Trade Date	Bonds	Current Notional Amount	Counterparty	Effective Date	Termination Date	Cap Strike	Cap Ceiling	Fair Value at 10/31/20
11/29/2005	2008 Series K, as well as similar outstanding variable rate bonds	\$34,610,000	Goldman Sachs	12/2/2005	5/1/2027	7.35%	14.85%	\$628
11/29/2005	2008 Series K, as well as similar outstanding variable rate bonds	90,695,000	Goldman Sachs	12/2/2005	11/1/2032	7.35%	14.85%	34,622
10/24/2014	2014 Series B-2, as well as similar outstanding variable rate bonds	50,000,000	PNC	11/1/2014	11/1/2033	4.50%	7.50%	99,843
7/30/2015	2002 Series C, as well as similar outstanding variable rate bonds	150,000,000	Barclays Bank	8/3/2015	11/1/2020	3.50%	8.00%	-
10/16/2017	2017 Series A-2, as well as similar outstanding variable rate bonds	39,825,000	U.S. Bank	2/1/2018	2/1/2023	3.25%	7.50%	687
Total Caps		\$365,130,000						\$135,780

At October 31, 2020 the fair values of all the interest rate caps were:

(B) Interest Rate Swaps

HDC has entered certain interest rate swap contracts to manage the risk associated with the variable rate bonds in its portfolio.

In June and July 2020, HDC amended six existing LIBOR fixed payer swap agreements, two with PNC Bank, National Association ("PNC"), two with Wells Fargo Bank, N.A., one with Citibank, N.A. and one with Royal Bank of Canada ("RBC"). HDC has been able to save between 10-30 basis points by either extending the start date for HDC's option to put the bonds at par, extend the maturity, or in the case of one swap, both the maturity date and the optionality date. Where HDC extended the maturity date, the amortization was also revised.

As of October 31, 2020, the fair value balances of the interest rate swaps were recognized as liabilities, offset by deferred outflows of resources. The fair value for the derivative instruments is the estimated exit price that assumes a transaction takes place in the market.

Trade Date	Counter Party	Description	Classification	Fair Value Amount	Classification	Current Notional Amount
	Counter 1 arty	Description	Classification	Alloulit	Classification	Allouit
		Cash flow hedges:				
		Pay-Fixed interest	Deferred			
7/26/2016	Wells Fargo	rate swap	Outflow	(\$7,821,000)	Debt	\$65,305,000
11/2/2016	PNC Bank	Pay-Fixed interest rate swap	Deferred Outflow	(11,289,000)	Debt	85,000,000
		Pay-Fixed interest	Deferred			
7/5/2017	Wells Fargo	rate swap	Outflow	(13,607,000)	Debt	54,126,000
4/5/2018	PNC Bank	Pay-Fixed interest rate swap	Deferred Outflow	(23,764,000)	Debt	100,000,000
8/10/2018	Wells Fargo	Pay-Fixed interest rate swap	Deferred Outflow	(16,521,000)	Debt	73,171,000
8/10/2018	Wells Fargo	Pay-Fixed interest rate swap	Deferred Outflow	(13,735,000)	Debt	75,000,000
12/14/2018	Royal Bank Canada	Pay-Fixed interest rate swap	Deferred Outflow	(31,184,000)	Debt	184,000,000
12/18/2018	Citibank	Pay-Fixed interest rate swap	Deferred Outflow	(22,418,000)	Debt	98,895,000
12/19/2018	Citibank	Pay-Fixed interest rate swap	Deferred Outflow	(32,715,000)	Debt	135,460,000
Total Swaps				(\$173,054,000)		\$870,957,000

The fair value recorded was derived from a third-party source as listed below as of October 31, 2020.

At October 31, 2020, the total fair value of the interest rate swaps amounted to (\$173,054,000) and were valued using other significant observable inputs (Level 2 inputs).

The following table displays the objectives and terms of HDC's interest rate swaps outstanding at October 31, 2020.

Trade Date	Туре	Objective	Current Notional Amount	Counter- party	Term	Effective Date	Termination Date	Counter- party Rating Moody's /S&P
7/26/2016	Pay-Fixed interest	Hedge of changes in cash flows for 2016 Series A drawdown bond and bank loan funded by Wells Fargo in accordance with the participation agreement	\$65,305,000	Wells Fargo	Pay 2.089%; receive 100% 3M LIBOR; CXL-8/1/2036 (1)	8/1/2019	5/1/2047	402/4
11/2/2016	rate swap Pay-Fixed interest rate swap	Hedge of changes in cash flows for 2016 Series G-2 bonds, as well as similar outstanding variable rate bonds	85,000,000	PNC Bank	(1) Pay 1.921%; receive 100% 3M LIBOR; 7.50% Ceiling (2) (3)	5/1/2019	11/1/2042	Aa2/A+
	Pay-Fixed interest	Hedge of changes in cash flows for 2017 Series C-4 bonds (FFB Lexington Gardens)	54,126,000	Wells	Pay 2.691%; receive 100% 3M LIBOR; CXL-11/1/2036		5/1/2050	
7/5/2017	rate swap Pay-Fixed interest	Hedge of changes in cash flows for 2018 Series B-2	54,120,000	Fargo	(4) Pay 2.8909%; receive 100% 3M LIBOR; CXL-2/1/2039	2/1/2021	5/1/2030	Aa2/A+
4/5/2018	rate swap	bonds	100,000,000	Bank	(5)	2/1/2019	5/1/2046	A2/A
8/10/2018	Pay-Fixed interest rate swap	Hedge of changes in cash flows for overall FHLB variable rate bonds	73,171,000	Wells Fargo	Pay 3.022%; receive 100% 3M LIBOR	2/1/2019	2/1/2036	Aa2/A+
8/10/2018	Pay-Fixed interest rate swap	Hedge of changes in cash flows for variable rate SIFMA index bonds	75,000,000	Wells Fargo	Pay 2.367%; receive 100% SIFMA; CXL-8/1/2039 (6) Pay 2.24%;	5/1/2019	5/1/2059	Aa2/A+
12/14/2018	Pay-Fixed interest rate swap	Hedge of changes in cash flows for outstanding variable rate bonds	184,000,000	Royal Bank Canada	receive 77.5% 1M LIBOR CXL-12/1/2045 (7)	5/1/2024	5/1/2050	Aa2/AA-
12/18/2018	Pay-Fixed interest rate swap	Hedge of changes in cash flows for interest rate risk during construction	98,895,000	Citibank	Pay 2.19347%; receive 77.5% 1M LIBOR CXL-12/1/2043 (8)	7/1/2022	5/1/2051	Aa3/A+
12/19/2018	Pay-Fixed interest rate swap	Hedge of changes in cash flows for interest rate risk during construction	135,460,000	Citibank	Pay 2.9563%; receive 100% 3M LIBOR	1/1/2021	11/1/2038	Aa3/A+
Total Swaps		· ~ ~ ~	\$870,957,000					

1) Modified on 6/17/20 to push out option exercise date from 8/1/31 to 8/1/36.

2) Modified on 6/11/20 to push out amortization and maturity from 11/1/35 to 11/1/42 (excluding cap component).

3) Floating leg has 3M LIBOR rate ceiling of 7.50% which expires on 11/1/35.

4) Modified on 6/18/20 to push out amortization and maturity from 5/1/48 to 5/1/50, and option exercise date from 2/1/33 to 11/1/36.

5) Modified on 7/9/20 to push out option exercise date from 2/1/34 to 2/1/39.

6) Modified on 8/15/19 to push out amortization and maturity from 11/1/43 to 5/1/59, and option exercise date from 5/1/34 to 8/1/39.

7) Modified on 6/18/20 to push out option exercise date from 12/1/38 to 12/1/45.

8) Modified on 7/16/20 to push out option exercise date from 12/1/38 to 12/1/43.

Credit Risk: HDC is exposed to credit risk of its counterparties on hedging derivative instruments. To mitigate the risk, HDC requires the swap to be collateralized by the counterparty if the counterparty's credit rating falls below Baa1/BBB+. At October 31, 2020, the counterparty ratings on all of the hedging derivative instruments were above the threshold; therefore, no collateral was required.

Termination Risk: HDC or the counterparty may terminate the swap if the other party fails to perform under the terms of the contract. If at the time of the termination, the fair value of the swap is negative, HDC would be liable to the counterparty for a payment equal to the fair value of the instrument. To mitigate this termination risk, the swap agreement provides that the counterparty may terminate the swap only if HDC's rating falls below investment grade (Baa3 or BBB-) for PNC and Baa2 or BBB for Wells Fargo. HDC's current ratings are Aa2 and AA, respectively.

Interest Rate Risk: HDC is exposed to interest rate risk on the pay-fixed, receive-variable interest rate swaps. As LIBOR decreases, HDC's net payments on such swaps increase and vice versa.

Basis Risk: HDC is exposed to basis risk on its pay-fixed interest rate swaps, because the variable-rate payments received by HDC on these derivative instruments are on a rate other than rates HDC pays on its hedged variable-rate debt. Under the terms of its fixed rate swap transactions, HDC pays a variable rate on its bonds based on the Securities Industry and Financial Markets Association (SIFMA) and U.S. Treasury, but receives a variable rate on the swaps based on a percentage of LIBOR plus basis points.

Rollover Risk: HDC is exposed to rollover risk on hedging derivative instruments should a termination event occur prior to the maturity of the hedged debt.

(C) Deferred Loss on Early Retirement of Debt

On September 10, 2013, the 2005 Series A Capital Fund Program Revenue Bonds (NYCHA) were retired through an advance refunding and the Corporation incurred a loss in the amount of \$8,958,000 which will be amortized over the shorter of the life of the old bonds or the new bonds. At October 31, 2020, the balance of the unamortized deferred loss on early retirement of debt was \$4,143,000. This loss was covered by NYCHA as a part of the costs related to this transaction.

(D) Pension

At October 31, 2020, the Corporation's pension contribution after the measurement date was \$2,400,000. The Corporation recorded a net increase in Deferred Outflows of Resources in the amount of \$1,575,000 (as per New York City Employees' Retirement System ("NYCERS") pension report). This amount represents the net difference between expected and actual experience, the change in assumptions and changes in proportionate share. The outstanding balance of Deferred Outflows of Resources was \$4,839,000 at October 31, 2020. The Corporation recorded a net decrease in Deferred Inflows of Resources in the amount of \$820,000. This amount represents the net difference between expected and actual experience, the change in assumptions, changes in proportionate share and the net difference between projected and actual investment earnings on pension plan investments. The outstanding balance of Deferred Inflows of Resources was \$917,000 at October 31, 2020.

(E) OPEB

As of November 1, 2016, HDC adopted GASB Statement No. 75, "*Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*". HDC reported Deferred Outflows of Resources of \$928,000 and Deferred Inflows of Resources of \$8,296,000 related to OPEB as of October 31, 2020 (see Note 14: "Postemployment Benefits Other Than Pensions" for more details).

Note 10: Bonds Payable and Debt Obligations

The Corporation's authority to issue bonds and notes for any corporate purpose is limited by the Act to the extent that (i) the aggregate principal amount outstanding may not exceed \$15.5 billion, exclusive of refunding bonds or notes, and (ii) the maximum Capital Reserve Fund requirement may not exceed \$85 million. No bonds are currently subjected to the Capital Reserve Fund requirement. These limits may be changed from time to time through State legislation. During the year ended October 31, 2020, the limit on the aggregate principal amount outstanding was increased from \$14.5 billion to \$15.5 billion.

Bond Programs

The Corporation issues bonds and notes to fund mortgage loans for multi-family residential developments under the bond programs described below. As of October 31, 2020, the Corporation had bonds outstanding in the aggregate principal amount of \$12,902,217,000. All the bonds are separately secured, except for the bonds issued under the General Resolution which are equally and ratably secured by the assets pledged under the General Resolution (see "C. Housing Revenue Bond Program" below). None of the bonds under the bond programs described in "A. Multi-Family Mortgage Revenue Bond Program", "B. Military Housing Revenue Bond Program", "E. Capital Fund Revenue Bond Program", "F. Pass-Through Revenue Bond Program" and, "G. Housing Impact Bond Program" provide security under the General Resolution, and none of the bonds under these programs are secured by the General Resolution.

<u>A. Multi-Family Mortgage Revenue Bond Program</u> The Corporation established its Multi-Family Program to develop privately-owned multi-family housing, all or a portion of which is reserved for low income tenants. The following describes the Corporation's activities under its Multi-Family Program.

(1) Rental Projects; Fannie Mae or Freddie Mac Enhanced: The Corporation has issued tax-exempt and/or taxable bonds which either (i) are secured by mortgage loan payments, which payments are secured by obligations of Fannie Mae under various collateral agreements, (ii) are secured by a Direct Pay Credit Enhancement Instrument issued by Fannie Mae or (iii) are secured by a Direct Pay Credit Enhancement Agreement with Federal Home Loan Mortgage Corporation ("Freddie Mac").

(2) Rental Projects; Letter of Credit Enhanced: The Corporation has issued tax-exempt and/or taxable bonds to finance a number of mixed income projects and entirely low-income projects, which bonds are secured by letters of credit issued by investment-grade rated commercial lending institutions.

(3) Residential Housing; Credit Enhanced: The Corporation has issued bonds to provide financing for residential facilities for hospital staff and for post-secondary students, faculty and staff which bonds are secured by letters of credit issued by investment-grade rated institutions.

(4) Rental Projects; Not Rated: The Corporation has issued bonds and obligations to provide financing for rental projects, which bonds and obligations are not rated by a rating agency and were not publicly offered.

(5) Commercial Mortgage Backed Security Program: Under this program, the Corporation has issued bonds structured as commercial mortgage backed securities to refinance a multi-family housing development.

<u>B. Military Housing Revenue Bond Program</u> Under this program, the Corporation has issued taxable obligations in order to fund a portion of the cost of the design, demolition, renovation, construction and operation of housing units in residential family housing areas located at Fort Hamilton.

<u>C. Housing Revenue Bond Program</u> Under its Housing Revenue Bond Program, the Corporation may issue bonds payable solely from and secured by the assets held under its General Resolution which include a pool of mortgage loans, some of which are construction loans (which pool contains FHA-insured mortgage loans, REMIC-insured mortgage loans, State of New York Mortgage Agency ("SONYMA") insured mortgage loans, GNMA mortgage-backed securities, other mortgage loans and participation interests in mortgage loans), the revenues received on account of all such loans and securities, and other assets pledged under such resolution and any supplemental resolution for a particular series of bonds. Certain of the projects, which secure a portion of the mortgage loans, receive the benefits of subsidy payments.

<u>D. Liberty Bond Program</u> In accordance with Section 301 of the Job Creation and Worker Assistance Act of 2002, the Corporation has issued tax-exempt and taxable bonds, each secured by a letter of credit to finance the development of multi-family housing within an area of lower Manhattan designated in such legislation as the "Liberty Zone".

<u>E. Capital Fund Revenue Bond Program</u> Under this program, the Corporation has issued tax-exempt obligations in order to assist NYCHA with the execution of a multi-year construction initiative that addressed critical capital improvement needs of their aging housing portfolio.

<u>*F. Pass-Through Revenue Bond Program*</u> Under this program, the Corporation has issued bonds to finance loans evidenced by a note and secured by a mortgage of privately-owned multi-family housing. All repayments and prepayments derived from the associated mortgage loans, including a payment of insurance, if any, are passed through to the bondholder to redeem the bonds on a monthly basis.

<u>*G. Housing Impact Bond Program*</u> Under this program, the Corporation has issued bonds to finance mortgage loans for public housing developments under the City's "Permanent Affordability Commitment Together" ("PACT") Program. Under the Housing Impact Bond Program, the Corporation has issued tax-exempt and taxable bonds for NYCHA-owned public housing developments receiving financing through the PACT Program so that they may be preserved, rehabilitated and improved. Under the PACT Program,

the developments are converted from public housing to Section 8 assisted housing. NYCHA leases the developments to for-profit and/or not-for-profit mortgagors in order to provide for the ownership, financing, and rehabilitation of the developments.

<u>Changes in Bonds Payable:</u> (*in thousands*)

The summary of changes in Bonds Payable was as follows:

Bonds Payable outstanding at beginning of the year	\$12,131,433
Bonds Issued	1,820,460
Bond Principal Retired	(1,028,072)
Net Premium/Discount on Bonds Payable	(82)
Bonds Payable outstanding at end of the year	\$12,923,739

Details of changes in HDC bonds payable for the year ended October 31, 2020 were as follows:

Description of Bonds as Issued	Balance at beginning of the year	Issued	Retired	Balance at end of the
(in thousands)	tile year	Issueu	Kettieu	year
(In nousanus)				
MULTI-FAMILY MORTGAGE REVENUE BOND PROGRAM:		\mathcal{O}		
Multi-Family Rental Housing Revenue Bonds – Rental Projects; Fannie Mae or Freddie Mac Enhanced	30			
1999 Series A (AMT) Brittany Development Project – 0.08% to 6.95% Variable Rate Bonds due upon demand through 2029	\$48,600	\$ —	\$ —	\$48,600
2000 Series A (AMT) Related West 89th Street Development – 0.08% to 4.95% Variable Rate Bonds due upon demand through 2029	53,000			53,000
2001 Series A Queenswood Refunding – 0.07% to 6.90% Variable Rate Bonds due upon demand through 2031	10,200		(500)	9,700
2001 Series A (AMT) Related Lyric Development – 0.08% to 6.95% Variable Rate Bonds due upon demand through 2031	85,000			85,000
2001 Series B (Federally Taxable) Related Lyric Development – 0.09% to 6.95% Variable Rate Bonds due upon demand through 2031	3,400		(400)	3,000

Description of Bonds as Issued	Balance at beginning of the year	Issued	Retired	Balance at end of the year
(in thousands)				
2002 Series A (AMT) The Foundry – 0.08% to 6.95% Variable Rate Bonds due upon demand through 2032	55,100			55,100
2003 Series A (AMT) Related-Sierra Development – 0.08% to 6.95% Variable Rate Bonds due upon demand through 2033	56,000			56,000
2004 Series A (AMT) Related-Westport Development – 0.08% to 6.95% Variable Rate Bonds due upon demand through 2034	110,000			110,000
2004 Series B (Federally Taxable) Related- Westport Development – 0.09% to 6.95% Variable Rate Bonds due upon demand through 2034	9,800	_	(1,100)	8,700
2005 Series A Royal Charter Properties – 0.07% to 6.90% Variable Rate Bonds due upon demand through 2035	88,200		(2,900)	85,300
2005 Series A (AMT) Atlantic Court Apartments – 0.08% to 6.95% Variable Rate Bonds due upon demand through 2035	83,700	_		83,700
2005 Series B (Federally Taxable) Atlantic Court Apartments – 0.09% to 6.95% Variable Rate Bonds due upon demand through 2035	4,500		(2,300)	2,200
2005 Series A The Nicole – 3.42% Fixed Rate Term Bonds due 2035	54,600			54,600
2006 Series A (AMT) Rivereast Apartments – 0.09% to 5.74% Variable Rate Bonds due upon demand through 2036	50,000			50,000
2006 Series A (AMT) Seaview Towers – 3.70% to 4.75% Fixed Rate Serial and Term Bonds due 2039	13,995		(13,995)	
2007 Series A (AMT) Ocean Gate Development – 0.09% to 5.21% Variable Rate Bonds due upon demand through 2040	8,445			8,445
2007 Series B (AMT) Ocean Gate Development – 4.80% to 5.35% Fixed Rate Term Bonds due 2025	7,245		(1,030)	6,215

Description of Bonds as Issued	Balance at beginning of the year	Issued	Retired	Balance at end of the year
(in thousands)	~			v
2007 Series A (AMT) 155 West 21st Street Apartments – 0.08% to 4.95% Variable Rate Bonds due upon demand through 2037	37,900	_		37,900
2007 Series B (Federally Taxable) 155 West 21st Street Apartments – 0.10% to 4.25% Variable Rate Bonds due upon demand through 2037	8,200		(1,000)	7,200
2008 Series A (AMT) Linden Plaza – 0.09% to 5.21% Variable Rate Bonds due upon demand through 2043	56,240		(2,110)	54,130
2009 Series A Gateways Apartments – 2.65% to 4.50% Fixed Rate Term Bonds due 2025	19,700		(345)	19,355
2009 Series A The Balton – 0.07% to 4.65% Variable Rate Bonds due upon demand through 2049	29,750	_		29,750
2009 Series A Lexington Courts – 0.08% to 5.78% Variable Rate Bonds due upon demand through 2039	16,600	<u> </u>	(1,000)	15,600
2014 Series A-1 NYCHA Triborough Preservation Development – 0.55% to 3.95% Fixed Rate Serial and Term Bonds due 2044	220,340		(3,515)	216,825
2019 Series A (Federally Taxable) The Nicole – 3.90% Fixed Rate Term Bonds due 2035	4,400			4,400
Multi-Family Mortgage Revenue Bonds – Rental Project; Fannie Mae or Freddie Mae Enhanced				
2001 Series A (AMT) West 48th Street – 1.08% to 1.20% Variable Rate Bonds due upon demand through 2034	18,600		(18,600)	
2004 Series A (AMT) Aldus Street Apartments – 0.09% to 5.74% Variable Rate Bonds due upon demand through 2037	8,100	_	(100)	8,000
2004 Series A (AMT) 941 Hoe Avenue Apartments – 0.09% to 5.74% Variable Rate Bonds due upon demand through 2037	6,660		(100)	6,560

Description of Bonds as Issued	Balance at beginning of the year	Issued	Retired	Balance at end of the year
(in thousands)				
2004 Series A (AMT) Peter Cintron Apartments – 1.12% to 1.19% Variable Rate Bonds due upon demand through 2037	7,840		(7,840)	
2004 Series A (AMT) State Renaissance Court – 0.09% to 5.74% Variable Rate Bonds due upon demand through 2037	35,200			35,200
2004 Series A (AMT) Louis Nine Boulevard Apartments – 0.08% to 4.95% Variable Rate Bonds due upon demand through 2037	7,300		(100)	7,200
2004 Series A (AMT) Courtlandt Avenue Apartments – 0.08% to 4.95% Variable Rate Bonds due upon demand through 2037	7,905	_	(100)	7,805
2004 Series A (AMT) Ogden Avenue Apartments – 0.10% to 5.75% Variable Rate Bonds due upon demand through 2038	4,760			4,760
2004 Series A (AMT) Nagle Courtyard Apartments – 0.10% to 5.75% Variable Rate Bonds due upon demand through 2038	4,200	_		4,200
2005 Series A (AMT) Morris Avenue Apartments – 1.12% to 1.19% Variable Rate Bonds due upon demand through 2038	14,700		(14,700)	_
2005 Series A (AMT) Vyse Avenue Apartments – 0.10% to 5.75% Variable Rate Bonds due upon demand through 2038	4,335		(4,335)	
2005 Series A (AMT) 33 West Tremont Avenue Apartments – 0.10% to 5.75% Variable Rate Bonds due upon demand through 2038	3,490			3,490
2005 Series A (AMT) Ogden Avenue Apartments II – 0.08% to 6.95% Variable Rate Bonds due upon demand through 2038	2,500			2,500
2005 Series A (AMT) White Plains Courtyard Apartments – 0.08% to 6.95% Variable Rate Bonds due upon demand through 2038	4,900		(100)	4,800

Description of Bonds as Issued	Balance at beginning of the year	Issued	Retired	Balance at end of the year
(in thousands)				
2005 Series A (AMT) 89 Murray Street				
Development – 0.08% to 6.95% Variable Rate Bonds due upon demand through 2039	49,800			49,800
2005 Series A (AMT) 270 East Burnside Avenue Apartments – 0.83% to 1.71% Variable Rate Bonds due upon demand through 2039	6,400		(6,400)	
2006 Series A (AMT) Reverend Ruben Diaz Gardens Apartments – 0.09% to 5.74% Variable Rate Bonds due upon demand through 2038	6,400			6,400
2006 Series A (AMT) Villa Avenue Apartments – 0.09% to 5.74% Variable Rate Bonds due upon demand through 2039	5,990	_		5,990
2006 Series A (AMT) Bathgate Avenue Apartments – 0.10% to 5.75% Variable Rate Bonds due upon demand through 2039	4,435			4,435
2006 Series A (AMT) Spring Creek Apartments I & II – 0.10% to 6.95% Variable Rate Bonds due upon demand through 2039	24,000	_	(24,000)	
2006 Series A (AMT) Linden Boulevard Apartments – 3.90% to 4.75% Fixed Rate Serial and Term Bonds due 2039	11,420		(335)	11,085
2006 Series A (AMT) Markham Garden Apartments – 0.08% to 6.95% Variable Rate Bonds due upon demand through 2040	16,000			16,000
2008 Series A 245 East 124th Street – 2.10% Fixed Rate Term Bonds due 2046	35,400			35,400
2008 Series A Bruckner by the Bridge – 0.07% to 5.67% Variable Rate Bonds due upon demand through 2048	36,800			36,800
2008 Series A Hewitt House Apartments – 0.06% to 4.95% Variable Rate Bonds due upon demand through 2048	4,100			4,100
2010 Series A Eliot Chelsea Development – 0.08% to 5.78% Variable Rate Bonds due upon demand through 2043	40,750			40,750

Description of Bonds as Issued	Balance at beginning of the year	Issued	Retired	Balance at end of the year
(in thousands)				
2011 Series A (AMT) West 26th Street				
Development – 0.11% to 5.80% Variable Rate				
Bonds due upon demand through 2041	28,700		—	28,700
2011 Series B West 26th Street Development -				
0.07% to 5.80% Variable Rate Bonds due upon				
demand through 2045	8,470			8,470
demand unough 2015	0,170			0,170
2012 Series A West 26th Street Development -				
0.07% to 5.80% Variable Rate Bonds due upon				
demand through 2045	41,530		—	41,530
Multi-Family Mortgage Revenue Bonds – Rental				
Project; Letter of Credit Enhanced				
2003 Series A (AMT) Related-Upper East – 0.08%				
to 4.75% Variable Rate Bonds due upon demand				
through 2036	67,000			67,000
				,
2003 Series B (Federally Taxable) Related-Upper				
East – 0.10% to 4% Variable Rate Bonds due upon				
demand through 2036	3,000			3,000
	\mathbf{O}			
2004 Series A (AMT) Manhattan Court Development – 0.09% to 5.73% Variable Rate				
Bonds due upon demand through 2036	17,500			17,500
Bonds due upon demand unough 2030	17,500			17,500
2004 Series A (AMT) East 165th Street				
Development – 0.09% to 5.73% Variable Rate				
Bonds due upon demand through 2036	7,665			7,665
2004 Series A (AMT) Parkview Apartments –				
0.08% to 5.05% Variable Rate Bonds due upon demand through 2036	5,935		(5,935)	
	5,755		(3,755)	
2005 Series A (AMT) 2007 LaFontaine Avenue				
Apartments -0.10% to 5.76% Variable Rate Bonds				
due upon demand through 2037	3,825		—	3,825
2005 Series A (AMT) La Casa del Sol Apartments				
- 0.11% to 5.75% Variable Rate Bonds due upon	4 150		(200)	2 050
demand through 2037	4,150		(200)	3,950
2005 Series A (AMT) 15 East Clarke Place				
Apartments -0.08% to 4.95% Variable Rate Bonds				
due upon demand through 2037	5,230		(200)	5,030

Description of Bonds as Issued	Balance at beginning of the year	Issued	Retired	Balance at end of the year
(in thousands)				
2005 Series A (AMT) Urban Horizons II Development – 0.11% to 5.75% Variable Rate Bonds due upon demand through 2038	4,865		(100)	4,765
2005 Series A (AMT) 1090 Franklin Avenue Apartments – 0.10% to 7.02% Variable Rate Bonds due upon demand through 2037	2,320			2,320
2005 Series A (AMT) Parkview II Apartments – 0.10% to 7.01% Variable Rate Bonds due upon demand through 2037	4,255		(4,255)	
2006 Series A (AMT) Granville Payne Apartments – 0.09% to 5.73% Variable Rate Bonds due upon demand through 2039	5,560			5,560
2006 Series A (AMT) Beacon Mews Development - 0.09% to 4.95% Variable Rate Bonds due upon demand through 2039	23,500			23,500
2006 Series A (AMT) Granite Terrace Apartments - 0.10% to 5.74% Variable Rate Bonds due upon demand through 2038	4,060	_		4,060
2006 Series A (AMT) Intervale Gardens Apartments – 0.10% to 5.74% Variable Rate Bonds due upon demand through 2038	3,115			3,115
2006 Series A (AMT) 500 East 165th Street Apartments – 0.10% to 7.02% Variable Rate Bonds due upon demand through 2039	7,255		(7,255)	
2006 Series A (AMT) 1405 Fifth Avenue Apartments – 0.09% to 5.73% Variable Rate Bonds due upon demand through 2039	14,190			14,190
2007 Series A (AMT) 550 East 170th Street Apartments – 0.09% to 5.74% Variable Rate Bonds due upon demand through 2042	5,500			5,500
2007 Series A (AMT) Susan's Court – 0.10% to 7.02% Variable Rate Bonds due upon demand through 2039	24,000			24,000

Description of Bonds as Issued	Balance at beginning of the year	Issued	Retired	Balance at end of the year
(in thousands)				·
2007 Series A (AMT) The Dorado Apartments – 0.10% to 7.01% Variable Rate Bonds due upon demand through 2040	3,470			3,470
2007 Series A (AMT) Boricua Village Apartments Site A-2 – 0.08% to 5.05% Variable Rate Bonds due upon demand through 2042	4,250			4,250
2007 Series A (AMT) Boricua Village Apartments Site C $- 0.08\%$ to 4.95% Variable Rate Bonds due upon demand through 2042	6,665			6,665
2007 Series A (AMT) Cook Street Apartments – 0.10% to 7.01% Variable Rate Bonds due upon demand through 2040	4,080	_	(100)	3,980
2008 Series A (AMT) Las Casas Development – 0.10% to 5.20% Variable Rate Bonds due upon demand through 2040	19,200	<u> </u>		19,200
2010 Series A 101 Avenue D Apartments – 1.53% to 6.65% Variable Rate Bonds due upon demand through 2043	22,700	_		22,700
Residential Revenue Bonds – Residential Housing; Letter of Credit Enhanced				
2012 Series A College of Staten Island Residences – 2.00% to 4.15% Fixed Rate Serial and Term Bonds due 2046	63,540		(820)	62,720
Multi-Family Mortgage Revenue Bonds – Rental Project; Not Rated				
2007 Series A Queens Family Courthouse Apartments – 5.41% Fixed Rate Term Bonds due 2047	40,000			40,000
2016 Series A 148th Street Jamaica – 3.34% to 3.40% Variable Rate Bonds due upon demand through 2056	22,130		(22,130)	
2016 Series A (Federally Taxable) Queens Family Courthouse Apartments – 5.97% Fixed Rate Term Bonds due 2047	15,000			15,000

Description of Bonds as Issued	Balance at beginning of the year	Issued	Retired	Balance at end of the year
(in thousands)		100000		<i>y</i> • • • •
2019 Series A 535 Carlton Avenue – 4.08% to				
6.35% Term Rate Term Bonds due 2027	73,000	—	—	73,000
2020 Series A 38 Sixth Avenue – 4.38% Term Rate Term Bonds due 2059		83,240		83,240
Multi-Family Commercial Mortgage Backed Securities				
2014 Series A, B and C - 8 Spruce Street (Federally Taxable) – 3.71% to 3.93% Fixed Rate Term Bonds due 2048	346,100			346,100
Total Multi-Family Mortgage Revenue Bonds	2,418,660	83,240	(147,900)	2,354,000
MILITARY HOUSING REVENUE BOND PROGRAM:	2			
2004 Series A (Federally Taxable) Class I & II Fort Hamilton Housing LLC Project – 5.60% to 6.72%		()	(7.0.0)	
Fixed Rate Term Bonds due 2049	43,530		(500)	43,030
Total Military Housing Revenue Bond Program	43,530		(500)	43,030
HOUSING REVENUE BOND PROGRAM:				
Multi-Family Mortgage Revenue Bonds Under the Corporation's General Resolution, assets pledged to bondholders in a pool of mortgage loans.				
1998 Series A (Federally Taxable) – 6.84% Fixed Rate Term Bonds due 2030	100			100
1998 Series B – 3.75% to 5.25% Fixed Rate Serial and Term Bonds due 2031	100			100
1999 Series A-1 (Federally Taxable) – 5.83% to 6.06% Fixed Rate Term Bonds due 2022	3,985		(1,200)	2,785
1999 Series C (AMT) – 4.40% to 5.70% Fixed Rate Serial and Term Bonds due 2031	115			115
1999 Series $E - 4.40\%$ to 6.25% Fixed Rate Serial and Term Bonds due 2036	100			100

Description of Bonds as Issued	Balance at beginning of the year	Issued	Retired	Balance at end of the year
(in thousands)				J
2002 Series C (Federally Taxable) – 0.41% to 1.96% Index Floating Rate Term Bonds due 2034	36,855		(1,425)	35,430
1.90% fildex Floating Rate Term Donds due 2054	50,055		(1,+23)	55,+50
2003 Series B-2 (AMT) - 2.00% to 4.60% Fixed				
Rate Serial and Term Bonds due 2036	100			100
2003 Series E-2 (AMT) – 2.25% to 5.05% Fixed				
Rate Serial and Term Bonds due 2036	100		—	100
2006 Series J-1 – 3.50% Term Rate Term Bonds due 2046	100,000			100,000
440 2010	100,000			100,000
2007 Series A (Federally Taxable) -5.26% to				
5.52% Fixed Rate Term Bonds due 2041	22,585	—	(500)	22,085
2008 Series E (Federally Taxable) -0.41% to	· . 0'			
1.96% Index Floating Rate Term Bonds due 2037	84,365	_	(2,215)	82,150
2				
2008 Series F (Federally Taxable) -0.41% to				
1.96% Index Floating Rate Term Bonds due 2041	70,305	—	(1,410)	68,895
2008 Series J (Federally Taxable) -0.86% to				
2.52% Index Floating Rate Term Bonds due 2043	28,600			28,600
2008 Series K (Federally Taxable) – 0.86% to				
2.52% Index Floating Rate Term Bonds due 2043	66,555			66,555
2009 Series A – 2.00% to 4.20% Fixed Rate Serial				
Bonds due 2019	295		(295)	
2009 Series I-2 (Federally Taxable) – 0.73% to 2.39% Index Floating Rate Term Bonds due 2039	22,015		(235)	21,780
2.59% fildex Ploating Rate Term Bonds due 2059	22,013		(233)	21,780
2009 Series L-1 - 1.65% to 4.95% Fixed Rate				
Serial and Term Bonds due 2043	21,480		(21,480)	
2010 Series A-1 – 3.35% to 4.90% Fixed Rate				
Serial and Term Bonds due 2041	25,325		(25,325)	_
			(,c)	
2010 Series C – 1.50% to 4.95% Fixed Rate Serial				
and Term Bonds due 2047	13,485		(13,485)	
2010 Series D-1-A – 1.60% to 5.00% Fixed Rate				
Serial and Term Bonds due 2042	29,085		(29,085)	

Description of Bonds as Issued	Balance at beginning of the year	Issued	Retired	Balance at end of the year
(in thousands)	the year	Issueu	Ketheu	ycai
2010 Series $E - 0.80\%$ to 3.85% Fixed Rate Serial				
and Term Bonds due 2019	445		(445)	
2010 Series F – 1.70% to 4.75% Fixed Rate Serial and Term Bonds due 2030	2,930		(2,930)	
2010 Series G – 0.40% to 4.75% Fixed Rate Serial and Term Bonds due 2041	31,845		(2,215)	29,630
2010 Series H (Federally Taxable) – 0.79% to 2.45% Index Floating Rate Term Bonds due 2040	22,570			22,570
2010 Series J-1 – 0.75% to 5.00% Fixed Rate Serial Bonds due 2022	8,135		(2,180)	5,955
2010 Series K-1 – 2.05% to 5.25% Fixed Rate Serial and Term Bonds due 2032	4,390		(180)	4,210
2010 Series L-1 – 2.35% to 5.00% Fixed Rate Serial and Term Bonds due 2026	9,040	<u> </u>	(1,000)	8,040
2010 Series N – 0.60% to 4.25% Fixed Rate Serial Bonds due 2021	1,020		(580)	440
2011 Series C – 2.25% to 4.50% Fixed Rate Serial and Term Bonds due 2022	940		(260)	680
2011 Series D – 0.28% to 3.37% Fixed Rate Serial and Term Bonds due 2020	950		(640)	310
2011 Series $E - 1.40\%$ to 4.93% Fixed Rate Serial and Term Bonds due 2036	14,545		(585)	13,960
2011 Series F-2 (Federally Taxable) -0.73% to 2.39% Index Floating Rate Term Bonds due 2040	32,545		(1,855)	30,690
2011 Series F-3 (Federally Taxable) -0.73% to 2.39% Index Floating Rate Term Bonds due 2040	10,905		(85)	10,820
2011 Series G-2-A – 0.35% to 3.10% Fixed Rate Serial and Term Bonds due 2021	9,110		(3,540)	5,570
2011 Series H-2-A – 1.10% to 4.40% Fixed Rate Serial and Term Bonds due 2031	16,960		(1,325)	15,635

Description of Bonds as Issued	Balance at beginning of the year	Issued	Retired	Balance at end of the year
(in thousands)				
2011 Series H-2-B – 4.00% to 4.40% Fixed Rate Term Bonds due 2031	15,970			15,970
2011 Series H-3-B – 2.51% Fixed Rate Term Bonds due 2022	5,020		(1,370)	3,650
2011 Series J-1 – 4.00% to 4.80% Fixed Rate Term Bonds due 2044	38,345			38,345
2011 Series J-2 – 1.55% to 2.55% Fixed Rate Term Bonds due 2022	3,255		(880)	2,375
2012 Series B (Federally Taxable) – 0.66% to 3.93% Fixed Rate Serial Bonds due 2025	22,515		(3,160)	19,355
2012 Series D-1-A – 0.80% to 4.30% Fixed Rate Serial and Term Bonds due 2045	47,705		(270)	47,435
2012 Series D-1-B – 0.35% to 4.30% Fixed Rate Serial and Term Bonds due 2045	74,320	<u> </u>	(2,115)	72,205
2012 Series E (Federally Taxable) – 0.34% to 4.40% Fixed Rate Serial and Term Bonds due 2032	52,740		(3,130)	49,610
2012 Series F – 0.80% to 3.90% Fixed Rate Serial and Term Bonds due 2045	36,475		(845)	35,630
2012 Series G – 0.95% to 3.90% Fixed Rate Serial and Term Bonds due 2045	29,735		(705)	29,030
2012 Series I (Federally Taxable) – 0.40% to 4.49% Fixed Rate Serial and Term Bonds due 2044	46,940		(6,605)	40,335
2012 Series K-1-A – 0.45% to 4.00% Fixed Rate Serial and Term Bonds due 2045	88,210		(2,015)	86,195
2012 Series L-1 – 1.80% to 3.90% Fixed Rate Serial and Term Bonds due 2042	12,305		(170)	12,135
2012 Series L-2-A – 0.30% to 4.00% Fixed Rate Serial and Term Bonds due 2044	99,600		(1,060)	98,540
2012 Series L-2-B (AMT) – 2.30% to 3.60% Fixed Rate Serial and Term Bonds due 2026	1,930		(240)	1,690

Description of Bonds as Issued	Balance at beginning of the year	Issued	Retired	Balance at end of the year
(in thousands)	une year	100404		<i>j</i> eu 2
2012 Series M-2 – 1.10% to 4.00% Fixed Rate				
Serial and Term Bonds due 2047	9,285		(195)	9,090
2012 Series M-3 – 1.40% to 4.65% Fixed Rate				
Serial and Term Bonds due 2047	10,025		(200)	9,825
2013 Series B-1-A – 1.10% to 4.60% Fixed Rate				
Term Bonds due 2045	74,150			74,150
2013 Series B-1-B $- 0.35\%$ to 4.60% Fixed Rate	44.155		(0.145)	12 010
Serial and Term Bonds due 2045	44,155		(2,145)	42,010
2013 Series D-1 (Federally Taxable) – 0.70% to				
3.78% Fixed Rate Serial and Term Bonds due 2028	28,510		(2,590)	25,920
2013 Series D-2 (Federally Taxable) -0.90% to				
2.56% Index Floating Rate Term Bonds due 2038	55,000			55,000
2013 Series E-1-A – 0.25% to 4.90% Fixed Rate				
Serial and Term Bonds due 2038	36,365		(1,750)	34,615
2013 Series E-1-B $-$ 0.75% to 4.95% Fixed Rate Term Bonds due 2043	14,060			14,060
Term Bonds due 2045	14,000			14,000
2013 Series E-1-C – 0.75% to 4.95% Fixed Rate				
Term Bonds due 2046	45,025		—	45,025
2013 Series F-1 – 1.25% to 4.50% Fixed Rate				
Serial and Term Bonds due 2047	28,390		(465)	27,925
Schar and Term Bonds due 2047	20,370		(+03)	21,925
2014 Series A $-$ 0.20% to 4.35% Fixed Rate Serial				
and Term Bonds due 2044	6,545		(110)	6,435
2014 Series B-1 (Federally Taxable) -0.25% to				
3.69% Fixed Rate Serial Bonds due 2024	25,825		(12,940)	12,885
	- 7			,
2014 Series B-2 (Federally Taxable) -0.74% to				
2.40% Index Floating Rate Term Bonds due 2033	50,000			50,000
2014 Series C-1-A – 0.70% to 4.30% Fixed Rate				
Serial and Term Bonds due 2047	94,765	_	(1,840)	92,925
				,
2014 Series C-1-C – 1.10% to 4.00% Fixed Rate				
Serial and Term Bonds due 2047	12,185	—	(245)	11,940
	12,105		(243)	11,740

Description of Bonds as Issued	Balance at beginning of the year	Issued	Retired	Balance at end of the year
(in thousands)				
2014 Series D-1 (Federally Taxable) -0.40% to				
4.10% Fixed Rate Serial and Term Bonds due 2027	21,165		(2,085)	19,080
2014 Series D-2 (Federally Taxable) -0.74% to 2.40% Index Floating Rate Term Bonds due 2037	38,000			38,000
2.10% index i found fuile ferrir bonds due 2057	50,000			50,000
2014 Series $E = 2.90\%$ to 3.75% Fixed Rate Serial	27.260			27.260
and Term Bonds due 2035	37,360			37,360
2014 Series G-1 – 0.20% to 4.00% Fixed Rate				
Serial and Term Bonds due 2048	207,280		(5,570)	201,710
2014 Series G-2 – 0.25% to 4.00% Fixed Rate				
Serial and Term Bonds due 2048	3,290		(70)	3,220
2014 Series H-1 (Federally Taxable) – 0.76% to 4.32% Fixed Rate Serial and Term Bonds due 2035	66,270	_	(3,000)	63,270
			(-,)	•••,=••
2014 Series H-2 (Federally Taxable) -0.72% to	50.000			50.000
2.38% Index Floating Rate Term Bonds due 2044	50,000			50,000
2015 Series A-1 – 0.70% to 4.00% Fixed Rate				
Serial and Term Bonds due 2048	9,440		(125)	9,315
2015 Series A-2 – 2.25% to 3.75% Fixed Rate				
Serial and Term Bonds due 2035	6,150			6,150
2015 0 · · · D 1 /E 1 · · II · T · · II ·) · 0 /00/ /·				
2015 Series B-1 (Federally Taxable) – 0.60% to 3.53% Fixed Rate Serial Bonds due 2027	20,215		(3,150)	17,065
	- 7 -			. ,
2015 Series B-2 (Federally Taxable) -0.65% to	22,000			22,000
2.31% Index Floating Rate Term Bonds due 2044	33,000			33,000
2015 Series D-1-A - 1.30% to 4.35% Fixed Rate				
Serial and Term Bonds due 2048	63,140		(1,100)	62,040
2015 Series D-1-B – 0.85% to 4.35% Fixed Rate				
Serial and Term Bonds due 2048	135,890		(2,215)	133,675
2015 Series D-2 – 0.45% to 4.00% Fixed Rate				
Serial and Term Bonds due 2035	50,035		(4,275)	45,760
			(-,=)	,
2015 Series E-1 – 0.30% to 4.05% Fixed Rate	25 195		(0.95)	24 200
Serial and Term Bonds due 2047	35,185		(985)	34,200

Description of Bonds as Issued	Balance at beginning of the year	Issued	Retired	Balance at end of the year
(in thousands)				J
2015 Series E-2 – 0.30% to 3.75% Fixed Rate Serial and Term Bonds due 2035	5,200		(730)	4,470
2015 Series G-1 (SNB) – 0.30% to 3.95% Fixed Rate Serial and Term Bonds due 2049	71,015		(17,730)	53,285
2015 Series G-2 (SNB) – 1.45% to 3.95% Fixed Rate Serial and Term Bonds due 2049	32,720		(300)	32,420
2015 Series H (SNB) – 2.95% Term Rate Term Bonds due 2026	136,470			136,470
2015 Series I (SNB) – 2.95% Term Rate Term Bonds due 2026	60,860			60,860
2016 Series A (SNB) – 0.35% to 3.75% Fixed Rate Serial and Term Bonds due 2047	36,800		(615)	36,185
2016 Series D (SNB) – 0.50% to 3.75% Fixed Rate Serial and Term Bonds due 2047	50,855	<u> </u>	(1,510)	49,345
2016 Series C-1-A (SNB) – 1.20% to 3.45% Fixed Rate Serial and Term Bonds due 2050	119,330	_	(35,570)	83,760
2016 Series C-1-B (SNB) – 1.38% to 3.40% Fixed Rate Term Bonds due 2047	61,020		(40,500)	20,520
2016 Series C-2 (SNB) – 0.85% Term Rate Term Bonds due 2050	26,375		(8,235)	18,140
2016 Series E-1-A (SNB) – 0.40% to 5.00% Fixed Rate Serial and Term Bonds due 2047	52,740		(1,775)	50,965
2016 Series E-1-B (SNB) – 1.30% to 3.40% Fixed Rate Term Bonds due 2047	37,855			37,855
2016 Series F-1-A (SNB) – 1.95% to 3.37% Fixed Rate Serial and Term Bonds due 2051	23,675			23,675
2016 Series F-1-B (SNB) – 2.75% to 3.15% Fixed Rate Term Bonds due 2041	40,275			40,275
2016 Series F-2 (AMT) (SNB) – 1.25% to 2.25% Fixed Rate Serial Bonds due 2025	8,075		(100)	7,975

Description of Bonds as Issued	Balance at beginning of the year	Issued	Retired	Balance at end of the year
(in thousands)	v			e
2016 Series G-1(Federally Taxable) (SNB) – 0.85% to 2.82% Fixed Rate Serial Bonds due 2027	16,190		(4,295)	11,895
2016 Series G-2 (Federally Taxable) (SNB) – 0.76% to 2.42% Index Floating Rate Term Bonds due 2045	78,000			78,000
2016 Series I-1-A (SNB) – 1.80% to 4.30% Fixed Rate Serial and Term Bonds due 2050	111,095		(175)	110,920
2016 Series I-1-B (SNB) – 3.60% to 4.30% Fixed Rate Term Bonds due 2050	36,300			36,300
2016 Series I-2-A-1 (SNB) – 2.00% Fixed Rate Term Bonds due 2020	25,185	_	(7,010)	18,175
2016 Series I-2-A-2 (SNB) – 2.00% Fixed Rate Term Bonds due 2020	74,840	_	(74,840)	
2016 Series I-2-B (SNB) – 1.85% to 2.00% Fixed Rate Term Bonds due 2021	65,320	<u> </u>	(65,320)	
2016 Series J-1 (Federally Taxable) (SNB) – 0.93% to 2.59% Index Floating Rate Term Bonds due 2052	161,500			161,500
2016 Series J-2 (SNB) – 0.93% to 2.59% Index Floating Rate Term Bonds due 2052	29,500		_	29,500
2017 Series A-1-A (SNB) – 1.45% to 4.05% Fixed Rate Serial and Term Bonds due 2052	51,610		(90)	51,520
2017 Series A-1-B (SNB) – 3.80% to 4.05% Fixed Rate Term Bonds due 2052	11,165			11,165
2017 Series A-2-A (SNB) – 1.90% Fixed Rate Term Bonds due 2021	48,880		(38,560)	10,320
2017 Series A-2-B (SNB) – 1.90% Fixed Rate Term Bonds due 2021	11,285		(11,285)	
2017 Series A-3 (SNB) – 0.65% to 1.79% Index Floating Rate Term Bonds due 2021	50,000		(50,000)	

Description of Bonds as Issued	Balance at beginning of the year	Issued	Retired	Balance at end of the year
(in thousands)				
2017 Series B-1 (Federally Taxable) (SNB) – 1.60% to 3.81% Fixed Rate Serial and Term Bonds due 2029	22,285		(2,185)	20,100
2017 Series B-2 (Federally Taxable) (SNB) – 0.68% to 2.34% Index Floating Rate Term Bonds due 2046	61,500		_	61,500
2017 Series C-1 (SNB) – 1.20% to 3.85% Fixed Rate Serial and Term Bonds due 2057	139,725			139,725
2017 Series C-2 (SNB) – 1.70% Fixed Rate Term Bonds due 2021	103,025			103,025
2017 Series C-3-A (SNB) – 1.70% Fixed Rate Term Bonds due 2021	40,000	_	(595)	39,405
2017 Series C-3-B (SNB) – 1.70% Fixed Rate Term Bonds due 2021	40,000	<u> </u>	(40,000)	
2017 Series C-4 (SNB) – 0.09% to 5.03% Variable Rate Term Bonds due 2057	57,830			57,830
2017 Series E-1 (SNB) – 1.50% to 3.55% Fixed Rate Serial and Term Bonds due 2043	60,465			60,465
2017 Series E-2 (SNB) – 1.20% to 3.35% Fixed Rate Serial and Term Bonds due 2036	3,535		(150)	3,385
2017 Series G-1 (SNB) – 1.15% to 3.85% Fixed Rate Serial and Term Bonds due 2057	195,530		(1,635)	193,895
2017 Series G-2 (SNB) – 2.00% Fixed Rate Term Bonds due 2057	101,330			101,330
2017 Series G-3 (SNB) – 0.07% to 5.95% Variable Rate Term Bonds due 2057	85,950			85,950
2018 Series A-1 (SNB) – 1.55% to 3.90% Fixed Rate Serial and Term Bonds due 2048	50,355		(755)	49,600
2018 Series B-1 (Federally Taxable) (SNB) – 2.32% to 3.65% Fixed Rate Serial Bonds due 2028	65,410		(575)	64,835

Description of Bonds as Issued	Balance at beginning of the year	Issued	Retired	Balance at end of the year
(in thousands)	uic year	Issued	Retificu	ycui
2018 Series B-2 (Federally Taxable) (SNB) –				
0.70% to 2.36% Index Floating Rate Term Bonds due 2046	100,000			100,000
due 2040	100,000			100,000
2018 Series C-1-A (SNB) – 2.10% to 4.13% Fixed				
Rate Serial and Term Bonds due 2058	237,965			237,965
2018 Series C-1-B (SNB) – 3.70% to 4.00% Fixed				
Rate Term Bonds due 2053	168,925			168,925
Kate Term Bonds due 2033	108,923			108,925
2018 Series C-2-A (SNB) – 2.20% to 2.35% Fixed				
Rate Term Bonds due 2022	135,040			135,040
2018 Series C-2-B (SNB) – 2.35% Fixed Rate				
2018 Series C-2-B (SNB) – 2.55% Fixed Rate Term Bonds due 2022	8,615	_	_	8,615
	8,015			0,015
2018 Series D (Federally Taxable) (SNB) - 3.26%				
to 4.10% Fixed Rate Serial and Term Bonds due				
2038	75,000			75,000
2019 S				
2018 Series E-1 (Draper Hall) – 1.25% to 4.00% Fixed Rate Serial and Term Bonds due 2048	17,560		(705)	16,855
Tixed Rate Serial and Term Donds due 2048	17,500		(705)	10,855
2018 Series F (SNB) – 3.20% to 3.80% Fixed Rate				
Serial and Term Bonds due 2047	25,425			25,425
	~			
2018 Series E-2 (Stanley Commons) – 1.25% to	0.1.50			
4.00% Fixed Rate Serial and Term Bonds due 2048	9,150		(365)	8,785
2018 Series H (SNB) – 4.00% to 4.05% Fixed Rate				
Term Bonds due 2048	84,765			84,765
2018 Series I (Federally Taxable) (SNB) – 3.22%				
to 4.48% Fixed Rate Serial and Term Bonds due 2038	125.000			125 000
2038	125,000			125,000
2018 Series N (Federally Taxable) (Avalon				
Morningside Apartments) – 3.95% Term Rate				
Term Bonds due 2046	12,500			12,500
2018 Series E-3 (3475 Third Avenue - La Casa del				
Mundo) - 1.65% to 4.35% Fixed Rate Serial and				
Term Bonds due 2048	5,710		(100)	5,610
	5,,10		(100)	2,010
2018 Series E-4 (MHANY) - 1.30% to 4.05%				
Fixed Rate Serial and Term Bonds due 2049	5,000	—	(65)	4,935

Description of Bonds as Issued	Balance at beginning of the year	Issued	Retired	Balance at end of the year
(in thousands)				
2018 Series K (SNB) – 1.75% to 4.20% Fixed Rate Serial and Term Bonds due 2058	271,585		(1,000)	270,585
2018 Series L-1 (SNB) – 2.75% Term Rate Term Bonds due 2050	125,000			125,000
2018 Series L-2 (SNB) – 2.75% Term Rate Term Bonds due 2050	59,000			59,000
2019 Series A-1 (SNB) – 4.15% to 4.25% Fixed Rate Term Bonds due 2043	85,000			85,000
2019 Series A-2 (SNB) – 3.90% Fixed Rate Term Bonds due 2033	25,000			25,000
2019 Series A-3-A (SNB) – 1.50% to 3.95% Fixed Rate Serial and Term Bonds due 2049	114,670		(5,210)	109,460
2019 Series A-3-B (SNB) – 3.90% to 4.05% Fixed Rate Term Bonds due 2054	35,100	<u> </u>		35,100
2019 Series A-4 (SNB) – 0.09% to 6.75% Variable Rate Term Bonds due 2058	30,000			30,000
2019 Series B-1-A (SNB) – 1.40% to 3.85% Fixed Rate Serial and Term Bonds due 2058	112,635		(180)	112,455
2019 Series B-1-B (SNB) – 3.40% to 3.75% Fixed Rate Term Bonds due 2054	36,435			36,435
2019 Series B-2 (SNB) – 2.10% Fixed Rate Term Bonds due 2058	27,810			27,810
2019 Series D-1 (Prospect Plaza III) – 1.30% to 3.80% Fixed Rate Serial and Term Bonds due 2049	7,390		(60)	7,330
2019 Series E-1 (SNB) – 1.45% to 3.45% Fixed Rate Serial and Term Bonds due 2059	359,640			359,640
2019 Series E-2 (SNB) – 1.75% Fixed Rate Term Bonds due 2059	130,955			130,955
2019 Series E-3 (SNB) – 0.07% to 6.25% Variable Rate Term Bonds due 2059	45,000			45,000

Description of Bonds as Issued	Balance at beginning of the year	Issued	Retired	Balance at end of the year
(in thousands)				<i>j</i> =
2019 Series F (Federally Taxable) (SNB) – 2.02% to 3.77% Fixed Rate Serial and Term Bonds due 2044	175,000		(2,070)	172,930
2019 Series G-1-A (SNB) – 1.10% to 2.25% Fixed Rate Serial Bonds due 2031	79,380		(575)	78,805
2019 Series G-1-B (SNB) – 2.55% to 3.05% Fixed Rate Term Bonds due 2050	126,505			126,505
2019 Series G-2 (AMT) (SNB) – 1.75% to 2.10% Fixed Rate Serial Bonds due 2027	8,460			8,460
2019 Series H – 1.30% Term Rate Term Bonds due 2049	113,175	_	(113,175)	
2019 Series I – 1.40% to 1.42% Index Floating Rate Term Bonds due 2052	42,910	_	(42,910)	
2019 Series J (SNB) – 1.25% to 3.35% Fixed Rate Serial and Term Bonds due 2065	- E	243,170		243,170
2019 Series K – 1.15% Term Rate Term Bonds due 2050	30-	22,130	(22,130)	_
2019 Series L (Federally Taxable) (SNB) – 1.83% to 3.74% Fixed Rate Serial and Term Bonds due 2055		71,330		71,330
2020 Series A-1-A (SNB) – 0.75% to 2.90% Fixed Rate Serial and Term Bonds due 2059		22,040		22,040
2020 Series A-2 (SNB) – 1.10% Fixed Rate Term Bonds due 2059		52,735		52,735
2020 Series B-1 – 0.80% Term Rate Term Bonds due 2049		52,295	(52,295)	
2020 Series A-1-B (SNB) – 0.90% to 5.00% Fixed Rate Serial and Term Bonds due 2045		25,715		25,715
2020 Series A-1-C (SNB) – 2.35% to 3.00% Fixed Rate Term Bonds due 2055		133,745		133,745
2020 Series A-3 (SNB) – 1.13% Fixed Rate Term Bonds due 2060		99,370		99,370

Description of Bonds as Issued	Balance at beginning of the year	Issued	Retired	Balance at end of the year
(in thousands)				J
2020 Series C (One Flushing) – 2.10% to 4.40% Fixed Rate Term Bonds due 2055		42,710		42,710
2020 Series D-1-A (SNB) – 0.15% to 2.30% Fixed Rate Serial and Term Bonds due 2045		46,595		46,595
2020 Series D-1-B (SNB) – 2.00% to 2.50% Fixed Rate Term Bonds due 2055		120,710		120,710
2020 Series D-2 (SNB) – 0.70% Fixed Rate Term Bonds due 2060		25,000		25,000
2020 Series E (AMT) (SNB) – 0.09% to 0.15% Variable Rate Term Bonds due 2050		11,510		11,510
2020 Series F-1 (Federally Taxable) (SNB) – 1.45% to 3.10% Fixed Rate Serial and Term Bonds due 2045	oit	72,500	_	72,500
2020 Series F-2 (Federally Taxable) (SNB) – 0.13% to 0.14% Variable Rate Term Bonds due 2060	$\frac{2}{2}$	38,490		38,490
		,		,
2020 Series G – 0.20% Term Rate Term Bonds due 2052		218,140		218,140
2020 Series H (SNB) – 1.85% to 2.75% Fixed Rate				
Serial and Term Bonds due 2060		64,035		64,035
Multi-Family Secured Mortgage Revenue Bonds				
2011 Series A (Federally Taxable) Secured Mortgage Revenue Bonds – 1.26% to 4.78% Fixed Rate Serial and Term Bonds due 2026	27,150		(3,695)	23,455
The serie and rein Bonds due 2020	27,150		(3,075)	23,133
2013 Series A (Federally Taxable) Secured Mortgage Revenue Bonds – 0.48% to 5.34% Fixed Rate Serial and Term Bonds due 2035	31,885		(1,905)	29,980
2017 Series A-1 (Federally Taxable) (SNB) Secured Mortgage Revenue Bonds – 1.37% to 3.48% Fixed Rate Serial Bonds due 2029	22,420		(1,660)	20,760

Description of Bonds as Issued	Balance at beginning of the year	Issued	Retired	Balance at end of the year
(in thousands)	the year	Issueu	Retificu	ycai
2017 Series A-2 (Federally Taxable) (SNB)				
Secured Mortgage Revenue Bonds – 0.66% to				
2.32% Index Floating Rate Term Bonds due 2041	39,825			39,825
Federal New Issue Bond Program (NIBP)				
2009 Series 1-5-A HRB (NIBP) – 2.47% Fixed				
Rate Term Bonds due 2048	112,570			112,570
				,
2009 Series 1-5-B HRB (NIBP) (AMT) – 2.47%				
Fixed Rate Term Bonds due 2041	20,110		(1,770)	18,340
2009 Series 2-5 HRB (NIBP) – 2.47% Fixed Rate				
2009 Series 2-3 HKB (NIBP) – 2.47% Fixed Rate Term Bonds due 2048	15,750		(1,700)	14,050
	15,750		(1,700)	11,050
Total Housing Revenue Bond Program	8,429,740	1,362,220	(838,200)	8,953,760
			· · · · ·	
LIBERTY BOND PROGRAM:				
Multi-Family Mortgage Revenue Bonds				
2005 G				
2005 Series A 90 Washington Street – 0.07% to 5.67% Variable Rate Bonds due upon demand	\mathbf{O}	5		
through 2035	74,800			74,800
	•			, 1,000
2006 Series A 90 West Street – 0.06% to 4.90%				
Variable Rate Bonds due upon demand through				
2036	104,000			104,000
2006 Series B (Federally Taxable) 90 West Street -				
0.10% to 4.25% Variable Rate Bonds due upon				
demand through 2036	6,700		(600)	6,100
2006 Series A - 2 Gold Street - 0.06% to 4.90%				
Variable Rate Bonds due upon demand through	1 (2 000			1
2036	162,000			162,000
2006 Series B (Federally Taxable) - 2 Gold Street -				
0.10% to 4.25% Variable Rate Bonds due upon				
demand through 2036	30,700	—	(3,800)	26,900
2006 Series A 201 Pearl Street – 0.06% to 4.90%				
Variable Rate Bonds due upon demand through 2041	65,000			65,000
2071	05,000			03,000

Description of Bonds as Issued	Balance at beginning of the year	Issued	Retired	Balance at end of the year
(in thousands)	the year	155000	Ketheu	ycai
2006 Series B (Federally Taxable) 201 Pearl Street - 0.10% to 4.25% Variable Rate Bonds due upon	21.100		(000)	20,200
demand through 2041	21,100		(900)	20,200
2014 Series Classes D, E and F (8 Spruce Street) – 3.00% to 4.50% Fixed Rate Term Bonds due 2048	203,900			203,900
Total Liberty Bond Program	668,200		(5,300)	662,900
CAPTIAL FUND PROGRAM REVENUE BONDS (New York City Housing Authority ('NYCHA'))				
2013 Series A Capital Fund Program – 2.00% to 5.00% Fixed Rate Serial Bonds due 2025	107,305	_	(15,840)	91,465
2013 Series B-1 Capital Fund Program – 2.00% to 5.25% Fixed Rate Serial Bonds due 2033	257,725	_	(19,265)	238,460
2013 Series B-2 Capital Fund Program – 5.00% to 5.25% Fixed Rate Serial Bonds due 2032	122,170	<u> </u>		122,170
Total Capital Fund Program Revenue Bonds	487,200		(35,105)	452,095
Pass-Through Revenue Bond Program	•			
2014 Series A (Federally Taxable) – 3.05% Fixed Rate Term Bonds due 2036	4,219		(138)	4,081
2017 Series A (Federally Taxable) (SNB) – 3.10% Fixed Rate Term Bonds due 2046	58,280		(929)	57,351
Total Pass-Through Revenue Bond Program	62,499		(1,067)	61,432
Housing Impact Bond Program				
2020 Series A HIB NYCHA – 2.55% to 2.80% Fixed Rate Term Bonds due 2050		296,380		296,380
2020 Series B (Federally Taxable) HIB NYCHA – 1.65% to 3.12% Fixed Rate Serial and Term Bonds due 2038		78,620		78,620
Total Housing Impact Bond Program		375,000		375,000

Description of Bonds as Issued	Balance at beginning of the year	Issued	Retired	Balance at end of the year
(in thousands)				
Total Bonds Payable Prior to Net Premium				
Unamortized (Discount) on Bonds Payables	12,109,829	1,820,460	(1,028,072)	12,902,217
Net Premium (Discount) on Bonds Payables	21,604	3,508	(3,590)	21,522
Total Bonds Payable (Net)	\$12,131,433	\$1,823,968	(\$1,031,662)	\$12,923,739

Interest on the Corporation's variable rate debt is based on the Securities Industry and Financial Markets Association ("SIFMA") rate and is reset daily and/or weekly.

Bonds Issued in Fiscal Year 2020

On December 20, 2019, three Multi-Family Housing Revenue Bonds series were issued in an amount totaling \$336,630,000. The fixed rate 2019 Series J Bonds were issued in the amount of \$243,170,000, the fixed rate 2019 Series L (Federally Taxable) Bonds were issued in the amount of \$71,330,000, and the term rate 2019 Series K Bonds were issued in the amount of \$22,130,000. The 2019 Bonds were issued and combined with other available monies to finance construction and permanent mortgage loans for certain developments and to pay for certain other related costs.

On February 12, 2020, two fixed rate Housing Impact Bonds series were issued in an amount totaling \$375,000,000. The fixed rate 2020 Series A Bonds were issued in the amount of \$296,380,000, and the fixed rate 2020 Series B (Federally Taxable) Bonds were issued in the amount of \$78,620,000. The 2020 Bonds were issued to finance two mortgage loans to the borrowers for the purpose of paying a portion of the costs of acquiring, rehabilitating and equipping of 37 public housing buildings and two community centers in the borough of Brooklyn, New York and to pay for certain other related costs.

On March 18, 2020, three Multi-Family Housing Revenue Bonds series were issued in an amount totaling \$127,070,000. The fixed rate 2020 Series A-1-A Bonds were issued in the amount of \$22,040,000, the fixed rate 2020 Series A-2 Bonds were issued in the amount of \$52,735,000, and the term rate 2020 Series B-1 Bonds were issued in the amount of \$52,295,000. The 2020 Bonds were issued and combined with other available monies to finance construction and permanent mortgage loans for certain developments and to refund certain outstanding bonds of the Corporation.

On June 04, 2020, three Multi-Family Housing Revenue Bonds series were issued in an amount totaling \$258,830,000. The fixed rate 2020 Series A-1-B Bonds were issued in the amount of \$25,715,000, the fixed rate 2020 Series A-1-C Bonds were issued in the amount of \$133,745,000, and the fixed rate 2020 Series A-3 Bonds were issued in the amount of \$99,370,000. The 2020 Bonds were issued and combined with other available monies to finance construction and permanent mortgage loans for certain developments and to refund certain outstanding bonds of the Corporation.

On June 04, 2020, the fixed rate Multi-Family Housing Revenue Bonds, 2020 Series C, were issued in the amount of \$42,710,000 to refund the Multi-Family Mortgage Revenue Debt Obligations (One Flushing) as the project converted to permanent status in March 2020.

On June 10, 2020, the term rate Multi-Family Mortgage Revenue Bonds, 2020 Series A, were issued in the amount of \$83,240,000 to refund the Multi-Family Mortgage Revenue Debt Obligations (38 Sixth Avenue) as the project converted to permanent status in June 2020.

On August 20, 2020, seven Multi-Family Housing Revenue Bonds series were issued in the amount totaling \$532,945,000. The fixed rate 2020 Series D-1-A Bonds were issued in the amount of \$46,595,000, the fixed rate 2020 Series D-1-B Bonds were issued in the amount of \$120,710,000, the fixed rate 2020 Series D-2 Bonds were issued in the amount of \$25,000,000, the fixed rate 2020 Series F-1 (Federally Taxable) Bonds were issued in the amount of \$72,500,000, the variable rate 2020 Series E (AMT) Bonds were issued in the amount of \$11,510,000, the variable rate 2020 Series F-2 (Federally Taxable) Bonds were issued in the amount of \$38,490,000 and the term rate 2020 Series G Bonds were issued in the amount of \$218,140,000. The 2020 Bonds were issued and combined with other available monies to finance construction and permanent mortgage loans for certain developments, to refund certain outstanding bonds and to finance other corporate purposes of the Corporation.

On October 22, 2020, the fixed rate Multi-Family Housing Revenue Bonds, 2020 Series H, were issued in the amount of \$64,035,000 to finance a mortgage loan for a development located in the borough of Brooklyn, New York and to pay for certain other related costs.

All the bonds listed above are subject to regular redemption and certain issues are also subject to special redemption provisions as well. The parameters under which the redemptions may occur are set forth in the respective bond resolutions.

In fiscal year 2010, the U.S Department of the Treasury, as part of the Housing Finance Agency ("HFA") initiative used authority provided to it pursuant to the Housing and Economic Recovery Act of 2008 ("HERA") to help expand resources to provide affordable mortgages for low and middle income households, and to support the development and rehabilitation of affordable housing units. In this program, the Corporation issued bonds under the New Issue Bond Program ("NIBP") in the amount of \$500 million. HDC issued two programs under the NIBP. The variable rate 2009 Housing Revenue Bonds Series 1 (Federally Taxable) Bonds were issued in the amount of \$415,000,000 and the 2009 Housing Revenue Bonds Series 2 (Federally Taxable) Bonds were issued in the amount of \$85,000,000 on December 23, 2009. During the period between June 2010 and December 2011, all the principal amount of the 2009 Series 1 (NIBP) Bonds and the 2009 Series 2 (NIBP) Bonds were converted to fixed rate tax exempt bonds. These bonds were designated as the "Converted Bonds". As of October 31, 2020, portions of the NIBP Converted Bonds in the amount of \$355,040,000 were redeemed and \$144,960,000 remain outstanding.

Debt Obligations Program

The Corporation entered into funding loan agreements with Citibank and Jones Lang LaSalle to finance mortgage loans under its Multi-Family Mortgage Revenue Debt Obligations Program. Under the agreements, Citibank and Jones Lang LaSalle will provide the funds to the Corporation, which the Corporation will then use to advance to the project. This is also referred to as "Back to Back".

At October 31, 2020, the aggregate principal amount outstanding under the Debt Obligations program was \$175,005,000.

<u>Changes in Debt Obligations Payable:</u> (*in thousands*)

Debt Obligation Payable outstanding at beginning of the year	\$296,663
Debt Obligation Issued	17,152
Debt Obligation Principal Retired	(138,810)
Debt Obligation Payable outstanding at end of the year	\$175,005

Details of changes in HDC debt obligations for the year ended October 31, 2020 were as follows:

Description of Debt Obligations as Issued	Balance at beginning of the year	Issued	Retired	Balance at end of the year
(in thousands)	ž			U
MFMR Debt Obligations (Harlem Dowling		~		
Residential) – 2.49% to 5.21% Fixed Rate due 2047	\$4,990	\$ —	(\$100)	\$4,890
MFMR Debt Obligations (38 Sixth Avenue) –		\sim		
2.08% to 7.20% Variable Rate due 2059	83,240		(83,240)	
MFMR Debt Obligations (One Flushing) – 4.14% Fixed Rate due 2055	54,518	952	(55,470)	
C				
MFMR Debt Obligations (1133 Manhattan) – 3.86% Fixed Rate due 2027	45,600		_	45,600
MFMR Debt Obligations (1133 Manhattan) (Federally Taxable) – 3.86% Fixed Rate due 2027	15,600			15,600
MFMR Debt Obligations (Far Rockaway) – 3.65% Fixed Rate due 2058	72,230			72,230
MFMR Debt Obligations (MEC 125 Parcel B West)				
- 2.91% to 4.53% Variable Rate due 2052	20,485	3,515		24,000
MFMR Debt Obligations (Caton Flats) – 5.67% Fixed Rate due 2053		12,685		12,685
Total Debt Obligations Payable	\$296,663	\$17,152	(\$138,810)	\$ 175,005

Federal Financing Bank Loan Participation Certificates Payable

In fiscal year 2014, the Corporation entered into a new financing agreement with the FFB for selling beneficial ownership interests in mortgage loans originated by housing finance agencies and insured with FHA/HFA Risk Sharing mortgage insurance. The Corporation was selected to be the first housing finance agency to participate in this new federal initiative to reduce costs of capital for affordable housing, whereby, the Corporation will sell beneficial ownership interest in its mortgages to the FFB. Beneficial ownership interest in mortgage loans that the Corporation sells to the FFB will be evidenced by certificates of participation from the Corporation. The participation proceeds were recorded as payable to the FFB. The monthly mortgage payments from the borrower will be used to repay the interest to the FFB and principal payments will reflect the scheduled mortgage principal payments.

The aggregate FFB Loan Participation Certificates Payable balance as of October 31, 2020 was \$344,136,000 (see Note 4: "Mortgage Loans").

Changes in FFB Loan Participation Certificates Payable:

The summary of changes in FFB Loan Participation Certificates Payable was as follows: *(in thousands)*

FFB Loan Participation Certificates payable outstanding at beginning of the year	\$281,943
FFB Loan Participation Proceeds	65,630
Repayments to FFB	(3,437)
FFB Loan Participation Certificates payable outstanding at end of the year	\$344,136

Details of changes in FFB loan participation certificates payable for the year ended October 31, 2020 were as follows:

Description of FFB Loan Participation as Issued	Balance at beginning of the year	Issued	Retired	Balance at end of the year
((in thousands)				
FFB Loan Participation - Arverne View Apt – 3.32% Fixed Rate Certificate Pass-Through due 2049	\$68,561		(\$837)	\$67,724
FFB Loan Participation - 2629 Sedgwick Avenue – 3.28% Fixed Rate Certificate Pass-Through due 2051	2,773		(44)	2,729
FFB Loan Participation - Marseilles Apartments – 2.85% Fixed Rate Certificate Pass-Through due 2051	17,415		(284)	17,131
FFB Loan Participation - Sons of Italy Apartments – 2.76% Fixed Rate Certificate Pass-Through due 2051	7,930		(115)	7,815
FFB Loan Participation - Stevenson Commons – 2.96% Fixed Rate Certificate Pass-Through due 2057	101,271		(881)	100,390
Description of FFB Loan Participation as Issued	Balance at beginning of the year	Issued	Retired	Balance at end of the year
---	--	----------	-----------	-------------------------------
((in thousands)				
FFB Loan Participation - Independence House – 3.04% Fixed Rate Certificate Pass-Through due 2057	7,133	_	(73)	7,060
FFB Loan Participation - Carol Gardens – 3.02% Fixed Rate Certificate Pass-Through due 2058	21,557		(183)	21,374
FFB Loan Participation - La Cabana Houses – 3.35% Fixed Rate Certificate Pass-Through due 2053	55,303		(553)	54,750
FFB Loan Participation - Alvista Towers – 2.57% Fixed Rate Certificate Pass-Through due 2059		65,630	(467)	65,163
Total FFB Loan Participation Certificates Payables	\$281,943	\$65,630	(\$3,437)	\$344,136

On November 26, 2019, the Corporation sold a beneficial ownership interest in a mortgage for the development named Alvista Towers in the amount of \$65,630,000. The FFB Loan Participation Certificates Payable as of October 31, 2020 was \$65,163,000.

Future Debt Service:

Required debt payments for bonds payable by the Corporation for the next five years and thereafter are as follows:

Year Ending October 31,	Principal	Interest	Total
(in thousands)	6.		
2021	\$455,099	\$327,735	\$782,834
2022	337,734	320,599	658,333
2023	239,401	310,901	550,302
2024	245,949	303,621	549,570
2025	260,796	297,527	558,323
2026 - 2030	1,448,482	1,359,835	2,808,317
2031 – 2035	1,786,744	1,142,491	2,929,235
2036 - 2040	2,334,545	924,423	3,258,968
$2041 - 2045 \dots$	1,725,776	696,120	2,421,896
2046 - 2050	2,258,796	362,644	2,621,440
2051 – 2055	851,865	135,035	986,900
2056 - 2060	922,475	58,628	981,103
2061 – 2065	31,995	3,361	35,356
2066 - 2070	2,560	43	2,603
Total	\$12,902,217	\$6,242,963	\$19,145,180

Changes in Long Term Liabilities:

Long term liability activities for the year ended October 31, 2020, are as follows:

Balance at Balance at Due Within Beginning of End of the Descriptions the Year Additions Deductions Year 1 Year (in thousands) Bonds Payable, (net) \$11,788,584 \$1,824,724 (\$1,144,668) \$12,468,640 **Debt Obligations** 174,280 296,570 17,152 (139,442)Payable to FFB – Loan Participation 278,963 65,630 (4, 185)340,408 Payable to The City of New York 3,714,114 502,716 (634, 574)3,582,256 Payable to Mortgagors & Restricted Earnings on Investments 161,684 353.879 (115.919)399.646 Others 235,676 822,810 (161, 428)897,056 Total Long-Term Liabilities \$16,475,591 \$3,586,911 (\$2,200,216) \$17,862,286

\$455,099

725

3,728

22.632

201,285

\$683,469

Enterprise Fund - HDC and Component Units

Note 11: Consultants' Fees

The fees paid by the Corporation for legal, accounting and consulting services in FY 2020 for HDC include: \$23,584 to Hawkins, Delafield & Wood; \$8,910 to Epstein, Becker & Green, P.C.; and \$4,309 to Seyfarth Shaw LLP. Auditing fees of \$249,000 were paid to Ernst & Young LLP.

The Corporation paid other consulting fees in the amount of \$190,000 to Marathon Strategies, LLC; \$75,000 to National Strategies Group, LLC; \$33,750 to Buck Global, LLC; \$19,000 to Cristo Rey NY High School; \$15,944 to NYSTEC; \$10,080 to Brandon Stoneham; \$2,430 to Lincoln Tyler Management Services, LLC and \$2,400 to Insurance Advisors, LLC. The Corporation also paid \$18,000 to Bartley & Dick Advertising/Design for concept, design and layout of the 2019 HDC Annual Report.

In addition, the Corporation paid legal, accounting and consulting fees for services provided in connection with bond financings, which have been reimbursed either from bond proceeds or from project developers: \$404,090 to Hawkins, Delafield & Wood; \$150,000 to Orrick, Herrington & Sutcliffe; \$16,250 to Metropolitan Valuation Services, Inc.; \$6,000 to Paparone Law, PLLC and \$5,594 to Jefferies, LLC.

Note 12: Payable to The City of New York and Mortgagors

(A) New York City Housing Development Corporation

In 2009, HPD and HDC entered into a Memorandum of Understanding ("MOU"), which provides for the granting of funds by HPD to HDC pursuant to Section 661 of the PHFL, to make subordinate loans for affordable housing. At October 31, 2020, the total payable to the City relating to this MOU was \$3,011,639,000.

In May 2014, the 2006 Series A bonds were fully redeemed. Simultaneously, the Corporation issued the Multi-Family Housing Revenue Bonds, 2014 Series B-1 and 2014 Series B-2 collectively, the ("2014 Series B Bonds") to re-securitize the remaining underlying loan portfolio previously financed by 2006 Series A (see Note 6: "Loan Participation Receivable for The City of New York"). In April 2018, the Corporation issued its Multi-Family Housing Revenue Bonds, 2018 Series B Bonds. The proceeds were used to purchase and securitize a 100% participation interest in various pools of City mortgage loans totaling \$671,611,000.

In October 2020, at the request of the City, the Corporation purchased the residual interest in the 2014 Series B and 2018 Series B Bonds Loan Participation Interest, for a purchase price of \$40,000,000. This amount represented the discounted value of the residual interest at the final bond maturity date of November 1, 2046. As of the purchase date, the residual amount of loan assets net of the underlying bonds payable liability was \$586,357,000. The payable to the City and the Loan Participation Interest were reduced by \$589,774,000 which included program expenses. All cash flows generated from the mortgage loans remain fully pledged to pay the debt service on the outstanding bonds payable in the two bond series. As of October 31, 2020, the Corporation's payable to the City relating to the 2014 Series B and the 2018 Series B bonds was extinguished.

The Corporation has completed numerous transactions as part of its Mitchell-Lama Restructuring Program ("MLRP"), an affordable housing preservation program. Under this program, the Corporation has funded various new first and second mortgage loans as well as the acquisition of participation interests in City-owned second mortgages and associated cash flows. As long as any Mitchell-Lama Restructuring Bonds are outstanding, all cash flows from the purchased interests must be applied to debt service on such bonds. Once all such bonds are retired, HDC's participation interests in City-owned second mortgages revert to the City. HDC also has sold to the City a residual interest in the second mortgage loans the Corporation originated. These loans also transfer to the City when the Mitchell-Lama Restructuring Bonds are retired. As of October 31, 2020, the Corporation's payable to the City under the MLRP was \$464,890,000.

On December 18, 2015, at the request of the City, the Corporation funded a \$143,236,000 subordinate loan to the purchasers of Stuyvesant Town-Peter Cooper Village to assist the preservation of the affordability of this project. As of October 31, 2020, the remaining balance of the receivable from the City was \$29,954,000 which includes a receivable related to Stuy-town transactions. The Corporation also has and outstanding payable of \$13,331,000 related to other loan funding agreements with the City.

(B) Housing Assistance Corporation

Funding for HAC was received through the City in 1985. All HAC's assets, after repayment of HDC advances to HAC and if unused for HAC purposes, will revert to the City. At October 31, 2020, total resources payable to the City amounted to \$122,350,000, of which \$114,589,000 was related to the funding of Stuyvesant Town-Peter Cooper Village. The remaining \$7,762,000 payable to the City is primarily related funds held for the RY Subsidy Program, which is expected to cover the subsidy until 2023 (see Note 4: "Mortgage Loans" for a detailed explanation).

(C) Fiduciary Funds

Under normal HDC underwriting guidelines all subordinate loans must be coterminous to the senior loan in order to avoid scenarios where the payment of subordinate loan is made before the senior loan. Due to HPD statutory authority limits, HPD cannot make a loan longer than a thirty-year term. Thus, when HDC and HPD co-lend on a project and HDC intends to make a 35-year loan, HPD assigns HDC its loan in the form of a Purchase and Sale Agreement. HDC then makes the subordinate loan in its name for a 35-year term to which ultimately returns to HPD at HDC's loan maturity. As of October 31, 2020, the assets that HDC held on behalf of HPD consisted of cash & investments and mortgage receivables in the amounts of \$3,231,000 and \$650,631,000 respectively.

The Corporation also administers construction and permanent loans on behalf of HPD, using funds provided by HPD. All such funds are the property of HPD and thus are reported as restricted net position for the City in the Fiduciary Funds financial statements. At October 31, 2020, the assets held and restricted for the City amounted to \$82,609,000.

Under HDC's normal loan servicing function, the Corporation is in possession of escrow and reserve funds held on behalf of its mortgagors. The funds are used to pay taxes on the underlying mortgage property, held as reserve for replacements, or for other contingencies. The funds received from the mortgagors are invested in accordance with HDC's investment guidelines and the assets are offset by a corresponding restricted net position for mortgagors. The balance as of October 31, 2020 was \$745,086,000.

Note 13: Retirement Programs

(A) NYCERS

The Corporation is a participating employer in NYCERS, a cost sharing multi-employer plan, of which 94 current employees of the Corporation are members. NYCERS provides defined benefit pension benefits to 191,000 active municipal employees and 157,000 pensioners through \$69.9 billion in assets. City employees who receive permanent appointment to a competitive position and have completed six months of service are required to participate in NYCERS, and all other employees such as HDC employees are eligible, but not required, to participate in NYCERS. NYCERS provides three main types of retirement benefits: service retirements, ordinary disability retirements (non-job-related disabilities) and accident disability retirements (job-related disabilities) to members who are in different "tiers." The members' tier is determined by the date of membership. Subject to certain conditions, members generally become fully vested as to benefits upon completion of five years of service. Employees may be required to contribute a percentage of their salary to the pension plan based on their tier. Annual pension benefit is calculated as a percentage of final average salary times the number of years of membership service.

Contribution requirements of the active employees and the participating New York City agencies are established and may be amended by the NYCERS Board. Employees' contributions are determined by their tier and number of years of service. They may range between 3.00% and 6.00% of their annual pay. Statutorily required contributions to NYCERS, determined by the New York City Office of the Actuary

in accordance with State statutes and City laws, are funded by the employer within the appropriate fiscal year.

Copies of NYCERS' financial statements can be obtained by writing to NYCERS at 335 Adams Street, Suite 2300, Brooklyn, NY 11201-3751 or its website (<u>www.nycers.org</u>).

For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of NYCERS and additions to/deductions from NYCERS' fiduciary net position have been determined on the same basis as they are reported by NYCERS. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit term. Investments are recorded at fair value.

As of October 31, 2020, the Corporation reported a liability of \$11,922,000 for its proportionate share of NYCERS' net pension liability. The net pension liability was measured as of June 30, 2020 and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of those dates. The Corporation's proportion of the net pension liability was based on a projection of the Corporation's long-term share of contributions to the pension plan relative to the projected contributions of all participating employees, actuarially determined. At June 30, 2020, the Corporation's proportion was 0.057%.

At October 31, 2020, the Corporation reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

C.	Deferred Outflows of Resources	Deferred Inflows of Resources
Net difference between projected and actual investment earnings on pension plan investments	\$566,000	\$ —
Differences between expected and actual experience	1,201,000	538,000
Changes in proportion and differences between Corporation's contributions and proportionate		
share of contributions	667,000	26,000
Changes in assumptions	5,000	353,000
Corporation contributions subsequent to the		
measurement date	2,400,000	
Total	\$4,839,000	\$917,000

Of the deferred outflows of resources related to pensions, \$2,400,000 was a contribution that the Corporation made subsequent to the measurement date and it will be recognized as a reduction of the net pension liability in fiscal year ending October 31, 2021.

Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

2021	\$ 304,000
2022	304,000
2023	304,000
2024	304,000
2025	306,000
Total	\$ 1,522,000

The Corporation recorded pension expense for fiscal years ending October 31, 2020 in the amount of \$1,859,000.

Actuarial assumptions

The total pension liability in the June 30, 2019 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement:

Investment Rate of Return	7% per annum, net of investment expenses
Salary Increases	In general, merit and promotion increase plus assumed general wage increases of 3.0% per annum.
Cost-of-Living Adjustments	1.5% and 2.5% for certain tiers

Mortality tables for service and disability pensioners were developed from an experience study of NYCERS. The mortality tables for beneficiaries were developed from an experience review. For more detail see the reports entitled "Proposed Changes in Actuarial Assumptions and Methods for Determining Employer Contributions for Fiscal Years Beginning on or After July 1, 2011," also known as "Silver Books." Electronic versions of the Silver Books are available on the New York City Office of the Actuary website (www.nyc.gov/actuary) under Pension Information.

Pursuant to Section 96 of the New York City Charter, studies of the actuarial assumptions used to value liabilities of the five actuarially funded New York City Retirement Systems ("NYCRS") are conducted every two years.

Expected Rate of Return on Investments

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

The target allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

		Long Term	Weighted
		Expected Real	Average Rate of
Asset Class	Target Allocation	Rate of Return	Return
Public Markets:			
U.S. Public Market Equities	27.00%	7.60%	2.05%
Developed Public Market Equities	12.00%	7.70%	0.92%
Emerging Public Market Equities	5.00%	10.60%	0.53%
Fixed Income	30.50%	3.10%	0.95%
Public Markets (Alternative Investme	nts):		
Private Equities	8.00%	11.20%	0.90%
Private Real Estate	7.50%	7.00%	0.53%
Infrastructure	4.00%	6.80%	0.27%
Opportunistic Fixed Income	6.00%	6.50%	0.39%

Management of the pension plan has determined its expected rate of return on investments to be 7%. This is based upon the weighted average rate of return from investments of 6.53% and a long-term Consumer Price Inflation assumption of 2.5% per year, which is offset by investment related expenses.

Discount Rate

The discount rate used to measure the total pension liability as of June 30, 2020, was 7.00% per annum. The projection of cash flows used to determine the discount rate assumed that employee contributions will be made at the rates applicable to the current tier for each member and that employer contributions will be made based on rates determined by the Actuary. Based on those assumptions, the NYCERS fiduciary net position is projected to be available to make all projected future benefit payments of current active and non-active NYCERS members. Therefore, the long-term expected rate of return on NYCERS investments was applied to all periods of projected benefit payments to determine the total pension liability.

The following presents the Corporation's proportionate share of the net pension liability calculated using the discount rate of 7%, as well as what the Corporation's proportionate share of the net pension liability would be if it were calculated using a discount rate that is one-percentage point lower (6%) or one percentage-point higher (8%) than the current rate.

Sensitivity Analysis				
1% decrease (6%) Discount rate (7%) 1% increase (8%)				
HDC's proportionate share				
of the net pension liability \$17,823,000 \$11,922,000 \$6,941,000				

Pension Plan Fiduciary Net Position

Detailed information about the pension plan's fiduciary net position is available in the separately issued NYCERS' report, which is available on their website (<u>www.nycers.org</u>).

(B) Tax Sheltered Annuity Plan

The Corporation also offers its employees the option of participating in a Tax-Sheltered Annuity Plan managed by Wells Fargo Bank, N.A. as an alternate or supplemental retirement plan under Section 403(b) of the Internal Revenue Code. The Internal Revenue Service has approved the Corporation as an entity, which can provide this type of plan to its employees. The majority of the Corporation's employees participate in this plan.

Note 14: Postemployment Benefits Other Than Pensions

Plan description. The Corporation sponsors a single employer postemployment defined benefit health care plan for eligible retirees and their spouses. Eligible retirees generally are classified into two groups as either NYCERS members or Non-NYCERS members. NYCERS members are those who have service ranging from 5 to 15 years at the time of their retirement. Non-NYCERS members are those who have service ranging from 10 to 15 years and retired at age 59 1/2. For NYCERS members, the Corporation provides retiree health care coverage and prescription drug coverage through the New York City Health Benefit Program ("NYCHBP"). For Non-NYCERS members, the Corporation provides retiree health care coverage through the Empire Plan offered by the New York State Health Insurance Program ("NYSHIP").

Benefits provided. The Corporation provides comprehensive health care and prescription drug coverage for its eligible retirees and their spouses. No other benefits are provided. Benefit provisions for the plan are established and amended by actions taken by the Corporation's Members and there is no statutory requirement for HDC to continue this plan for future HDC employees. The plan is currently a non-contributory plan with all payments for plan benefits being funded by HDC on a pay-as-you-go-basis.

HDC's annual OPEB cost for the plan is calculated based on the Entry Age Normal level percentage cost method, an amount actuarially determined in accordance with the parameters of GASB Statement No. 75. The covered-employee payroll (annual payroll of active employees covered by the plan) was \$18,572,000 and the ratio of the net OPEB liability to the covered-employee payroll was 46.10%.

Projections of benefits are based on the substantive plan (the plan as understood by the employer and plan members) and include the types of benefits in force at the valuation date and the pattern of sharing benefit costs between HDC and the plan members to that point.

Employees covered by benefit terms. At October 31, 2019, the measurement date, the following employees were covered by the benefit terms:

Membership Status as of November 1, 2019	Count
Inactive employees or beneficiaries currently receiving benefit	
payments	31
Inactive employees entitled to but not yet receiving benefit	
payments	11
Active plan employees	171
Total	213

Net OPEB Liability

As of the reporting date, October 31, 2020, HDC's total OPEB liability was \$17,307,000 and the net OPEB liability was \$8,562,000. The measurement date of October 31, 2019 was used to calculate the net OPEB liability and which was determined by an actuarial valuation as of that date. The actual benefit payments made during FY 2020 amounted to \$140,000.

Changes in the Net OPEB Liability

	Total OPEB	Plan Fiduciary	Net OPEB
	Liability	Net Position	Liability
Net OPEB liability at beginning of the year	\$15,572,000	\$8,418,000	\$7,154,000
Changes for the year:			
Service cost	1,308,000		1,308,000
Interest	657,000		657,000
Difference between expected and actual			
experience	(255,000)	—	(255,000)
Changes of assumptions	165,000		165,000
Net investment income		471,000	(471,000)
Benefit payments	(140,000)	(140,000)	
Administrative expense		(4,000)	4,000
Net changes	1,735,000	327,000	1,408,000
Net OPEB liability at end of the year	\$17,307,000	\$8,745,000	\$8,562,000

OPEB Plan Fiduciary Net Position

Since establishing an irrevocable OPEB trust in fiscal year 2012, the Corporation has funded a total of \$8,000,000 to date. All OPEB plan assets are held in a separate trust account for the exclusive purpose of paying OPEB obligations.

Investment policy. The Corporation's investment policy is set by the HDC Act and the guidelines are established and adopted by HDC's Board Members on an annual basis.

All investment transactions are recorded on the trade date. For fiscal year ending October 31, 2020, the fair value of OPEB trust investments were \$8,463,000.

	II	nvestment Maturi	ties at October	r 31, 2020 (in ye	ars)
Investment Type	2020	1-5	5 6-10 More than		
(in thousands)					
FHLB Bonds	\$8,463	-	8,463		
Total	\$8,463		8,463		

The Corporation has the following recurring fair value measurements as of October 31, 2020:

• FHLB securities of \$8,463,000 are valued based on models using observable inputs. (Level 2 inputs)

As a means of limiting its exposure to fair value losses arising from rising interest rates, the Corporation's Investment Guidelines charge the Investment Committee with "...determining appropriate investment instruments...based on...length of time funds are available for investment purposes..." among other factors. Thus, maturities are matched to the Corporation's liquidity needs. As part of the Corporation's investment policies, it looks to invest its bond and corporate related reserves in long-term securities that carry a higher yield, with the intent to hold the investments to maturity.

The Corporation's investment guidelines and policies are designed to protect principal by limiting credit risk. This is accomplished by making decisions based on a review of ratings, collateral, and diversification requirements that vary according to the type of investment.

As of October 31, 2020, investments in Federal Home Loan Bank ("FHLB") were rated by Standard & Poor's (FHLB is referred to as "Agency"). The ratings were AA+ and A-1+ by Standard & Poor's for long-term and short-term instruments. Investment in FHLB is implicitly guaranteed by the U.S. government. They carry ratings equivalent to the credit ratings for the U.S. government.

The Corporation follows its annually adopted investment guidelines in accordance with concentration limits and reviews its credit concentration monthly. The Corporation's Credit Risk unit monitors concentration risk amongst issuers and reports regularly to the Members of the Corporation's Audit Committee.

The following table shows issuers that represent 5% or more of total investments at October 31, 2020:

Issuer	Dollar Amount	Percentage
FHLB	\$8,463,000	100.00%

For the year ended October 31, 2020, the annual money-weighted rate of return on investments, net of investment expense, was 2.19%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts invested.

For the year ended October 31, 2020, HDC recognized an OPEB expense of \$1,016,000.

At October 31, 2020, HDC reported OPEB related deferred outflows of resources and deferred inflows of resources from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Deferred Outflows/Inflows as of November 1, 2019	\$1,025,000	\$8,785,000
Changes for the year		
Difference between expected and actual experience	_	255,000
Change in assumptions	165,000	
Difference between projected and actual investment		
earnings	- · · ·	137,000
Recognition of deferred outflows/inflows in FY 2020	(262,000)	(881,000)
Deferred Outflows/Inflows as of October 31, 2020	\$928,000	\$8,296,000

Amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in OPEB expense in future years as follows:

FY 2021	(\$619,000)
FY 2022	(663,000)
FY 2023	(704,000)
FY 2024	(747,000)
FY 2025	(802,000)
Thereafter	(\$3,833,000)

Actuarial assumptions. The total OPEB liability at October 31, 2020 used the Entry Age Normal level percent cost method and the actuarial valuation was determined using the following actuarial assumptions.

Inflation	2.5%
Salary increases	3.0% average, including inflation
Investment rate of return	4.0%
Healthcare cost trend rates	6.5% grading down to a rate of 4.5%

Mortality. The post-retirement mortality rates were based on the actual experience of the NYCERS population and the application of the mortality improvement scale (MP-2018). The mortality improvement scale was updated to MP-2018 based on the latest data released by the Society of Actuaries. The actuarial assumptions used in the October 31, 2020 valuation were based on the results of an actuarial experience study from 2006 to 2018.

Long-Term Expected Rate of Return. The long-term expected rate of return on OPEB plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of returns (expected returns, net of OPEB plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

The target allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

		Real Return
Asset Class	Target Allocation	Arithmetic Basis
U.S. Fixed Income	100.00%	2.20%
	1201	•

Discount Rate. The long term expected rate of return on plan assets is 4.00% per year, net of investment expenses. The weighted average discount rate is 3.69% in 2020. The projection of cash flows used to determine the discount rate assumed that the Corporation would continue to make payments for future benefits payments based on currently available assets and investment returns and will not make any additional contributions to the Trust. Based on those assumptions, the OPEB plan's fiduciary net position was projected to be available to make all projected OPEB payments for current active and inactive employees until 2033. Therefore, the long-term expected rate of return on OPEB plan investments was applied until 2032 and the 20-year S&P bond index rate was applied for all years after 2032.

Sensitivity of the net OPEB liability to changes in the discount rate and healthcare cost trend rates. The following presents the net OPEB liability and what it would be if it were calculated using a rate that is 1-percentage-point lower or 1-percentage-point higher than the current discount rate and healthcare cost trend rate.

Sensitivity of the net OPEB liability to	1% Decrease	Discount Rate	1% Increase
changes in the discount rate	(2.69%)	(3.69%)	(4.69%)
Net OPEB liability	\$11,394,000	\$8,562,000	\$6,225,000

	1% Decrease	Healthcare Cost	1% Increase
Sensitivity of the net OPEB liability to	Net OPEB	Trend Rate	Net OPEB
changes in the healthcare cost trend rate	Liability		Liability
Net OPEB liability	\$4,467,000	\$8,562,000	\$15,022,000

Note 15: Due to the United States Government – Non-Current Liabilities

In order to maintain the exemption from federal income tax of interest on bonds issued subsequent to January 1, 1986, the Corporation established a separate fund, the Rebate Fund, into which amounts required to be rebated to the Federal Government pursuant to Section 148 of the Code are deposited. In general, the Code requires the payment to the U.S. Treasury of the excess of the amount earned on all non-purpose obligations over the amount that would have been earned if the gross proceeds of the issue were invested at a rate equal to the yield on the issue. Project or construction funds, debt service funds or any other funds or accounts funded with proceeds of such bonds, including earnings, or pledged to or expected to be used to pay interest on such bonds are subject to this requirement. Issues with respect to which all gross proceeds are expended for the governmental purpose of the issue within the required time period after the date of issue and debt service funds with annual gross earnings of less than \$100,000 are exempt from this requirement. Payment is to be made after the end of the fifth bond year and after every fifth bond year thereafter, and within 60 days after retirement of the bonds. As of October 31, 2020, the Corporation had an accrued rebate liability of \$316,355.

Note 16: Commitments

- (A) New York City Housing Development Corporation
- (i) The Corporation is committed under one operating lease for office space for minimum annual rentals as follows:

Year Ending October 31,	
2021	\$2,153,000
2022	2,156,000
2023	180,000
Total	\$4,489,000

For FY 2020, the Corporation's rental expense including escalation, taxes and operating costs amounted to \$2,339,000 and utility expense amounted to \$72,000. HDC's current rental lease will end in fiscal year 2023.

(ii) The Corporation's practice is to close loans only when all the funds committed to be advanced have been made available through bond proceeds or a reservation of corporate funds. Funds are invested prior to being advanced, as described in Note 3: "Investments and Deposits" and are reported as restricted assets.

(iii) The portion of closed construction loans that had not yet been advanced as of October 31, 2020 is as follows: *(in thousands)*

Programs:	
Multi-Family Bond Programs	
Housing Revenue	\$1,628,047
Corporate Services Fund Loans	204,405
HPD Grant Funds	928,610
Department of Justice ("DOJ") Settlement Funds	1,083
Unadvanced Construction Loans (closed loans)	\$2,762,145

As of October 31, 2020, the Corporation has executed three participation loans which HDC has committed to repurchase at permanent conversion. The timing and amount will be determined at the time of conversion.

(iv) The Corporation has made a programmatic funding commitment in support of the City's housing initiatives. HDC has reserved funds to fulfill these commitments, but the timing and amount of remaining loan closings cannot be determined. The programmatic commitment is as follows:

• On June 6, 2016, the Corporation entered into a Memorandum of Understanding ("MOU") with HPD, which was subsequently amended on December 15, 2016, that outlines the Corporation's obligations to use corporate reserves to fund construction loans for projects eligible under the Green Housing Preservation Program ("GHPP"). Under the GHPP, HPD extends construction and permanent loans to projects specifically to finance energy efficiency and water conservation improvements, as well as moderate rehabilitation to improve building conditions, reduce greenhouse gas emissions, and preserve affordability. HDC has set aside \$13,361,000 of its reserves for this purpose. The total amount advanced as of October 31, 2020 was \$3,982,000.

(B) New York City Residential Mortgage Insurance Corporation

As of October 31, 2020, REMIC insured loans with coverage amounts totaling \$307,653,000 and had outstanding commitments to insure loans with a maximum insurance coverage amount of \$183,896,000.

Note 17: Financial Guaranties

(A) NYCHA Tax Credit Guaranty

On April 2, 2012, the Corporation entered into a Guaranty Agreement with Citibank to guaranty the yield on Citibank's investment in the Low-Income Housing Tax Credit ("LIHTC") created pursuant to the NYCHA Tax Credit Transaction. In return, the Corporation received \$16.0 million as a guaranty fee from Citibank, less fees and expenses of \$929,000 incurred under this agreement.

On July 15, 2013, Citibank transferred 100% of its rights under the Guaranty Agreement to Wells Fargo Holdings ("Wells Fargo"). As of that date, the Guaranty Agreement between Citibank and HDC was

terminated and a new agreement was signed between HDC and Wells Fargo. As a condition of Citibank selling its rights under the Guaranty Agreement, the Corporation received an additional \$8.0 million of guaranty fee from Wells Fargo, less fees and expenses of \$320,000 incurred under this agreement.

Under the Guaranty Agreement between HDC and Wells Fargo, the Corporation agreed to guaranty a minimum rate of return on Wells Fargo's tax credit investment in the NYCHA I Housing Development Fund Corporation through a 15-year compliance period. The minimum rate of return is equal to an annual effective rate of 4.50% on an after-tax basis return on its tax credit investment over the 15-year compliance period. During the compliance period, from time to time NYCHA LLC-I will determine if the total benefits allocated or paid to Wells Fargo through such date, together with the tax benefits projected to be received by Wells Fargo thereafter through the coverage period termination date, are sufficient to keep Wells Fargo on track to achieve the minimum return. If it is determined that Wells Fargo is not on track to achieve the minimum return through the coverage period termination date, the Corporation shall have the option, but not the obligation, subject to a cap amount of \$96,000,000, to make a payment to Wells Fargo under the Guaranty Agreement in an amount equal to the optional minimum return deficiency amount.

The NYCHA Tax Credit transaction required the establishment and funding of several project reserves and guaranties in order to ensure timely completion of rehabilitation, which has in fact proceeded on time and within budget. As of October 31, 2020, the unamortized guarantee fee was \$10,956,000 and the Corporation has designated \$10,956,000 for the financial guaranty reserve (see Note 18: "Contingencies"). The likelihood that HDC must pay out under this guaranty decreases with the passage of time. HDC will recognize the guaranty fee on a straight-line basis over the covered period, which is 15 years.

(B) Co-op City Guaranty

On November 28, 2012, the Corporation entered into a Credit Support Agreement with Wells Fargo Bank National Association ("Wells Fargo Bank"), HUD and SONYMA. Wells Fargo Bank agreed to make a mortgage in the amount of \$621,500,000 to a Mitchell-Lama cooperative housing development named Co-op City in the Bronx, New York. As a precondition of endorsing the loan for insurance, HUD acting through FHA required SONYMA and HDC each to provide a portion of top–loss guaranty on the loan.

Pursuant to the agreement between HDC and HUD, HDC agreed to provide \$15,000,000 as a guaranteed amount to Wells Fargo Bank in the event of a default by the cooperative. The Corporation agreed to fund the full amount of the top-loss guaranty in a segregated designated account for the duration of the HDC top-loss guaranty. As of October 31, 2020, the Corporation has designated \$15,000,000 as a financial guaranty reserve (see Note 18: "Contingencies").

(C) Federal Housing Administration Risk Sharing Program

In November 2011, the Corporation entered an amended risk sharing agreement with HUD. HDC participates in the Risk Sharing Program to obtain 100% insurance on certain loans made by HDC for affordable multifamily housing. The risk sharing allocation between HDC and HUD will be on a project-by-project basis and take effect when the loan converts to permanent financing.

In fiscal year 2014, the Corporation entered into a second risk-sharing agreement with HUD, which largely mirrors the terms of the existing amended Risk-Sharing Agreement. HDC has established a guaranty reserve for risk sharing obligations to FHA if there is a loss on a mortgage loan.

As of October 31, 2020, HDC has designated a total of \$8,135,000 as a financial guaranty reserve under the FHA risk-sharing mortgage insurance program for fifty-three participating projects and future participating projects (see Note 18: "Contingencies").

Note 18: Contingencies

In the normal conduct of business, the Corporation is involved in litigation matters. In the opinion of management and the Corporation's legal counsel, the ultimate disposition of such litigation should not have a material adverse effect on the financial position of the Corporation.

As discussed in Note 17 above, the Corporation entered into several guaranty agreements with various entities in order to finance certain projects. To meet its obligations in the event that payments are required, the Corporation set aside various reserves to cover these guaranties. These reserves are held as Designated under Unrestricted Net Position (see Note 19: "Net Position").

The reserves are summarized in the chart below:

		At October 31, 2020
Financial Guaranties		Reserve Amounts
NYCHA Tax Credit Guaranty		\$10,956,000
Co-op City Guaranty		15,000,000
FHA Risk Sharing	G	8,135,000
Total	U'	\$34,091,000

Note 19: Net Position

The Corporation's Net Position represents the excess of assets and deferred outflows of resources over liabilities and deferred inflows of resources and consists largely of mortgage loans and investments. HDC's net position is categorized as follows:

- <u>Restricted Net Position</u> is net position that has been restricted in use in accordance with the terms of an award, agreement or by State law. This includes net position restricted by bond resolutions, contractual obligations with HPD and HUD, and REMIC reserves that are required by statute, among other items (see chart below).
- <u>Unrestricted Net Position</u> is the remaining net position, which can be further categorized as Designated or Undesignated. Designated Net Position is not governed by statute or contract but is committed for specific purposes pursuant to HDC policy and/or Member directives. Designated Net Position includes funds and assets committed to various housing initiatives, reserves to maintain HDC's credit ratings, and working capital.

Changes in Net Position

The changes in Net Position are as follows: *(in thousands)*

HDC and Component Units

	Restricted	Unrestricted	Total
Net position at beginning of the year	\$2,322,388	\$809,530	\$3,131,918
Fiduciary Activities*	(34)		(34)
Income	237,034	49,020	286,054
Transfers	141,495	(141,495)	
Net position at end of the year	\$2,700,883	\$717,055	\$3,417,938
* The effect of GASB 84 adoption.			
Summary of Restricted Net Position (in thousands)		2020	
Multi-Family Bond Programs	\$2,	285,384	
421-A Housing Trust Fund		305,803	
Corporate Debt Service Reserve 2014 Series B	and		
2018 Series B		11,386	
REMIC Insurance Reserve		98,310	
Total Restricted Net Position	\$2,	700,883	

Of the total Unrestricted Net Position listed below, \$321,318,000 is for existing mortgages and other loans. An additional \$142,138,000 has been designated by senior management of the Corporation for future mortgage advances pursuant to housing programs established by the Corporation. The Corporation also has \$1,003,000 in capital assets.

Summary of Unrestricted Net Position	
(in thousands)	2020
Designated Position:	
Existing Mortgages	\$321,318
Housing Programs and Commitments	142,138
Working Capital	25,531
Rating Agency Reserve	140,000
Financial Guaranty Reserves (Notes 17 and 18)	34,091
REMIC Insurance Reserves	52,974
Total Designated Net Position	716,052
Net Investige Consider Associate	
Net Investment in Capital Assets:	
Capital Assets, net	1,003
Total Net Investment in Capital Assets	\$1,003

In FY 2020, net position transferred from unrestricted to restricted was a net amount of \$141,495,000. The amount represents transfer of mortgage loans originated with corporate reserves into the Open Resolution as a result of securitizations, net of transfers of excess in the Open Resolution, as well as transfer of amounts exceeding REMIC reserve requirement.

Note 20: Subsequent Events

Subsequent to October 31, 2020, bonds issued in the course of the Corporation's normal business activities were \$822,015,000. This amount includes \$532,950,000 in the Open Resolution program and \$289,065,000 in the Housing Impact Resolution Bond program.

As the Coronavirus pandemic continues into the new year, forecasts imply both good and bad news are upon the horizon. The economic downturn is projected to continue well into the second quarter of fiscal year 2021. As infection rates continue to rise to record levels, the threat of government restrictions on some economic activities remains a risk to economic recovery. However, as vaccines become more readily available, there is hope that the widespread disruption in the economy could subside towards the summer of 2021. The recent passage of another Coronavirus relief bill from the U.S. Federal Government, is expected to alleviate some of the current hardship. Due to the fluid nature of the current landscape management will continue to evaluate economic indicators and the potential outcomes it may have on the Corporation's financial position.

October 31, 2020

Schedule 1a:

Schedule of Changes in the Net OPEB Liability and Related Ratios

(\$ in thousands)

	2020	2019	<u>2018</u>	2017
Total OPEB liability				
Service cost	\$ 1,308	\$ 1,500 \$	1,389 \$	1,346
Interest	657	803	759	683
Changes of benefit terms	-	-	-	-
Difference between expected and actual experience	(255)	(1,285)	(154)	-
Changes of assumptions	165	(7,568)	(716)	1,007
Benefit payments	 (140)	(102)	(107)	(95)
Net change in total OPEB liability	1,735	(6,652)	1,171	2,941
Total OPEB liability - beginning	 15,572	22,224	21,053	18,112
Total OPEB liability - ending (a)	\$ 17,307	\$ 15,572 \$	22,224 \$	21,053
Plan fiduciary net position Contribution - employer			_	
Net investment income	471	122	131	113
Benefit payment	(140)	(102)	(107)	(95)
Administrative expense	(4)	(4)	(4)	-
Net change in plan fiduciary net position	327	16	20	18
Plan fiduciary net position - beginning	8,418	8,402	8,382	8,364
Plan fiduciary net position - ending (b)	\$ 8,745	\$ 8,418 \$	8,402 \$	8,382
Net OPEB liability - ending (a) - (b)	\$ 8,562	\$ 7,154 \$	13,822 \$	12,671
Plan fiduciary net position as a percentage of the total OPEB liability	50.53%	54.06%	37.81%	39.81%
Covered payroll	\$18,572	\$17,487	\$16,535	\$15,517
Net OPEB liability as a percentage of covered payroll	46.10%	40.91%	83.59%	81.66%

Notes to Schedule:

Changes of assumptions:

In fiscal year 2019, the projection of cash flows used to determine the discount assumed that HDC will continue to make payments for future benefits payments based on currently available assets and investment returns and will not make any additional contributions to the Trust.

In fiscal year 2020, the termination, disability, and retirement rates were updated to be consistent with those in the 2020 NYCERS Assumptions and Methods Report.

This schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

October 31, 2020

Schedule 1b:

Schedule of the Corporation's OPEB Contributions (\$ in thousands)

		2020		2019		2018		2017		2016
Actuarially determined contribution	\$	1,560	\$	1,555	\$	1,607	\$	1,617	\$	2,132
Contributions in relation to the actuarially determined										
contributions in relation to the detail fully determined		1,560		1,555		1,607		1,617		2,132
Contribution deficiency (excess)	\$	-	\$	-	\$	-	\$	-	\$	-
HDC covered payroll	\$	18,572	\$	17,487	\$	16,535	\$	15,517	\$	16,165
Contributions as a percentage of covered payroll		8%		9%		10%		10%		13%
		2015		2014		2013		2012		2011
Actuarially determined contribution	\$	1,723	\$	1,657	\$	1,747	\$	2,033	\$	2,033
Contributions in relation to the actuarially determined										
contributions in relation to the detual any determined		1,723		1,657		1,747		2,033		2,033
Contribution deficiency (excess)	\$		\$	-	\$	-	\$	-	\$	-
HDC covered employee payroll	\$	14,967	\$	14,595	\$	14,122	\$	13,259	\$	12,863
Contributions as a percentage of covered payroll		12%		11%		12%		15%		16%
Notes to Schedule:										
Changes in benefit terms: None										
								nged to "6		
Changes in assumptions: Yes		wn to a ra			om	previous	yea	r of "8% g	grad	ing down
					atior	n, assumed	l lif	e expecta	ncie	s were
								the NYCE		
				~ ~				018 morta	-	
				_				sumptions		
	on	the applic	catio	on of the N	/IP-2	2017 mort	ant	y improve	mer	it scale.
Valuation date:										
Actuarially determined contributions rates are calculated as of	f Octo	ober 31, o	ne y	ear prior	to th	ne end of t	he	fiscal year	in v	which
contributions are reported.	_									
Actuarial cost method Amortization method		try age no		l e of payro	11 -1	agad				
Amortization neurod		years	nage	e of paylo	II CI	oseu				
Asset valuation method		•	izat	ion marke	t					
Inflation	2.5 percent									
Salary increases				luding inf						
Investment rate of return						nent exper		tirement a		of
Retirement age						· •		sistent with	0	
						and Metho				sse in the
				1						

This schedule is intended to show information for 10 years.

October 31, 2020

Schedule 1c:

Schedule of the Corporation's OPEB Investment return (\$ in thousands)

	2020	2019	2018	2017	2016
Annual money-weighted rate of return,					
net of investment expense	2.19%	2.19%	2.32%	1.17%	1.71%

This schedule is presented to illustrate the requirement to show information for 10 years. However, until a full 10-year trend is compiled, OPEB plans should present information for those years for which information is available.

October 31, 2020

Schedule 2a:

The following schedule 2a is being presented to provide information on the Corporation's proportionate share of the Net Pension Liability.

Schedule of the Corporation's Proportionate Share of the Net Pension Liability

	2020	2019	2018	2017	2016
HDC's proportion of the net pension liability	0.0579	6 0.054%	0.051%	0.053%	0.053%
HDC's proportionate share of the net pension					
liability	\$ 11,921,719	\$ 10,048,926	\$ 9,325,396	\$ 10,991,263	\$ 12,877,315
HDC's covered payroll	9,582,832	9,696,963	9,283,052	10,244,624	10,045,598
HDC's proportionate share of the net pension					
liability as a percentage of its covered payroll	1249	6 104%	b 100%	107%	128%
Plan fiduciary net position as a percentage of the					
total pension liability	76.93%	6 78.84%	78.87%	74.84%	69.67%

	2015	2014	2013
HDC's proportion of the net pension liability	0.053%	0.054%	0.054%
HDC's proportionate share of the net pension			
liability	\$ 10,907,802	\$ 9,730,403	\$ 12,459,533
HDC's covered payroll	10,158,437	9,938,413	10,919,865
HDC's proportionate share of the net pension liability as a percentage of its covered payroll	107%	98%	114%
Plan fiduciary net position as a percentage of the			
total pension liability	73.16%	75.32%	67.22%

Notes to Schedule

Changes in benefit terms: None Changes in assumptions: Yes

The current fiscal year post-retirement mortality tables used were adopted by the Board of Trustees during fiscal year 2019.

This schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

October 31, 2020

Schedule 2b:

The following schedule 2b is being presented to provide information on the Corporation's Pension Contributions

Schedule of the Corporation's Pension Contributions (\$ in thousands)

	2020	2019	2018	2017	2016
Contractually required contribution Contributions in relation to the contractually	\$ 2,108	\$ 2,003	\$ 1,724	\$ 1,779	\$ 1,784
required contribution	 2,108	2,003	1,724	1,779	1,784
Contribution deficiency (excess)	\$ -	\$ -	\$ -	\$ -	\$ -
HDC covered payroll Contributions as a percentage of covered payroll	\$ 9,583 22%	\$ 9,697 21%	\$ 9,283 19%	\$ 10,245 17%	\$ 10,046 18%

	 2015		2014	2013
Contractually required contribution	\$ 1,67	5\$	1,682	\$ 1,645
Contributions in relation to the contractually				
required contribution	1,67	5	1,682	1,645
Contribution deficiency (excess)	\$ ·	\$		\$ -
HDC covered payroll	\$ 10,15	8 \$	9,938	\$ 10,920
Contributions as a percentage of covered payroll	16	%	17%	15%

This schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

Schedule 3:

The following schedule is being presented to provide detail information on a program basis for the owners of the Housing Revenue Bond program's obligations

Housing Revenue Bond Program Schedule of Net Position October 31, 2020 and 2019 (\$ in thousands)

	2020	2019
Assets		
Current Assets:		
Cash and cash equivalents	\$ 410,734	\$ 442,488
Investments	6,497	5,943
Receivables:		
Mortgage loans	608,307	316,263
Accrued interest	24,850	20,095
Other	31	101
Total Receivables	633,188	336,459
Total Current Assets	1,050,419	784,890
Noncurrent Assets:		
Restricted cash and cash equivalents	954,404	1,006,516
Restricted investments	1,028,118	1,145,883
Purpose investments (note 2)	27,937	28,497
Restricted receivables:		
Mortgage loans	8,660,510	7,317,755
Loan participation receivable - The City of NY	464,890	1,075,529
Accrued interest	30,326	19,664
Total Restricted Receivables	9,155,726	8,412,948
Primary government/component unit receivable (payable)	12,061	15,245
Other assets	377	603
Total Noncurrent Assets	11,178,623	10,609,692
Fotal Assets	12,229,042	11,394,582
Deferred Outflows of Resources		
	125	107

Interest rate caps (note 9)	135	197
Deferred outflows related to interest rate swaps (note 9)	173,054	100,507
Total Deferred Outflows of Resources	\$ 173,189	\$ 100,704

Schedule 3 (cont'd):

Housing Revenue Bond Program Schedule of Net Position October 31, 2020 and 2019 (\$ in thousands)

	2(020	2019
Liabilities			
Current Liabilities:			
Bonds payable (net)	\$ 401,4	30	\$ 290,900
Accrued interest payable	117,3		114,328
Payable to mortgagors		-	1,696
Restricted earnings on investments		47	49
Accounts and other payables	9,6	24	248
Total Current Liabilities	528,4	22	407,221
Noncurrent Liabilities:			
Bonds payable (net)	8,442,4	18	8,018,551
Payable to The City of New York:			
Loan participation agreements	464,8	90	1,075,529
Others		35	27
Payable to mortgagors	5,1	10	9,831
Derivative instrument - interest rate swaps	173,0	54	100,507
Unearned revenues and other liabilities	670,3	87	82,854
Due to the United States Government (note 15)	3	16	-
Total Noncurrent Liabilities	9,756,2	10	9,287,299
Total Liabilities	10,284,6	32	9,694,520
Net Position			
Restricted for bond obligations	2,117,5	99	1,800,766
Total Net Position	\$ 2,117,5	99	\$ 1,800,766

Schedule 3 (cont'd):

Housing Revenue Bond Program Schedule of Revenues, Expenses and Changes in Net Position Fiscal Years ended October 31, 2020 and 2019 (\$ in thousands)

	2020	2019
	2020	201
Operating Revenues		
Interest on loans	\$ 293,084	\$ 261,307
Fees and charges	32,381	47,220
Income on loan participation interests	21,709	22,710
Other	366	2,135
Total Operating Revenues	347,540	333,372
Operating Expenses		
Interest and amortization of bond premium and discount	254,682	251,287
Trustees' and other fees	486	485
Bond issuance costs	8,858	15,225
Total Operating Expenses	264,026	266,997
Operating Income	83,514	66,375
Non-operating Revenues (Expenses)		
Earnings on investments	49,436	64,944
Unrealized gains on investments	(2,840)	4,879
Other non-operating revenues (expenses), net	56	(580)
Total Non-operating Revenues	46,652	69,243
Income before Operating transfers to Corporate Services Fund	130,166	135,618
Operating transfers to Corporate Services Fund	(9,806)	(15,284
Net Income	120,360	120,334
Capital transfers	 196,473	 144,830
Changes in Net Position	316,833	265,164
Total net position - beginning of year	1,800,766	1,535,602
Total Net Position - End of Year	\$ 2,117,599	\$ 1,800,766

Schedule 4:

The following schedule is being presented to provide detail information on a program basis for the owners of the Multi-Family Secured Mortgage Revenue Bonds

Multi-Family Secured Mortgage Revenue Bonds Schedule of Net Position October 31, 2020 and 2019 (\$ in thousands)

	2020	2019
Assets		
Current Assets:		
Cash and cash equivalents	\$ 23,631	\$ 17,543
Receivables:		
Mortgage loans	4,602	4,631
Accrued interest	598	610
Total Receivables	5,200	5,241
Total Current Assets	28,831	22,784
Noncurrent Assets:		
Restricted cash and cash equivalents	9	5,696
Restricted investments	5,714	-
Restricted receivables:		
Mortgage loans	138,375	148,698
Accrued interest	938	937
Total Restricted Receivables	139,313	149,635
Primary government/component unit receivable (payable)	(259)	(259)
Total Noncurrent Assets	144,777	155,072
Total Assets	173,608	177,856
Deferred Outflows of Resources		
Interest rate cap	-	16

Interest face cap	-	
Total Deferred Outflows of Resources	\$ -	\$

16

Schedule 4 (cont'd):

Multi-Family Secured Mortgage Revenue Bonds Schedule of Net Position October 31, 2020 and 2019 (\$ in thousands)

		2020	2019
Liabilities			
Current Liabilities:			
Bonds payable (net)	\$	6,955	\$ 7,260
Accrued interest payable		844	1,102
Total Current Liabilities		7,799	8,362
Noncurrent Liabilities:			
Bonds payable (net)		107,065	114,020
Total Noncurrent Liabilities		107,065	114,020
Total Liabilities		114,864	122,382
Net Position			
Restricted for bond obligations		58,744	55,490
Total Net Position	\$	58,744	\$ 55,490

Schedule 4 (cont'd):

Multi-Family Secured Mortgage Revenue Bonds Schedule of Revenues, Expenses and Changes in Net Position Fiscal Years ended October 31, 2020 and 2019 (\$ in thousands)

2020	2019
\$ 7,075	\$ 7,562
7,075	7,562
3,865	5,108
3,865	5,108
3,210	2,454
414	495
414	495
3,624	2,949
(370)	3,778
3,254	6,727
55,490	48,763
	\$ 7,075 7,075 3,865 3,865 3,210 414 414 414 3,624 (370) 3,254