Combined Financial Statements and Other Information

New York City Housing Development Corporation

October 31, 2019

NEW YORK CITY
HOUSING DEVELOPMENT
CORPORATION

New York City Housing Development Corporation

Combined Financial Statements and Additional Information

Year Ended October 31, 2019

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Ernst & Young LLP
5 Times Square
New York, NY 10036-6530

Tel: +1 212 773 3000
Fax: +1 212 773 6350
ey.com

Report of Independent Auditors

Management and the Members of the
New York City Housing Development Corporation

Report on the Financial Statements

We have audited the accompanying financial statements of the New York City Housing Development Corporation (the "Corporation"), a component unit of the City of New York, as of and for the year ended October 31, 2019, and the related notes to the financial statements, which collectively comprise the Corporation's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

Auditor's Responsibility

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

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

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Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Corporation as of October 31, 2019 and the changes in financial position and its cash flows for the year then ended in conformity with U.S. generally accepted accounting principles.

Other Matters

Report on Summarized Comparative Information

We have previously audited the Corporation's 2018 financial statements, and we expressed an unmodified audit opinion on those audited financial statements in our report dated January 30, 2019. In our opinion, the summarized comparative information presented herein as of and for the year ended October 31, 2018 is consistent, in all material respects, with the audited financial statements from which it has been derived.

Required Supplementary Information

U.S. generally accepted accounting principles require that Management's Discussion and Analysis, the Schedule of Changes in the Net 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, as listed in the table of contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board which considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the Corporation's basic financial statements. The accompanying Schedules of Net Position for the Housing Revenue Bond Program and Multi-Family Secured Mortgage Revenue Bond Program as of October 31, 2019 and 2018 and the Schedules of Revenue, Expenses and Changes in Net Position for the years then ended, as listed in the table of contents, are presented for purposes of additional analysis and are not a required part of the basic financial statements.

Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States. In our opinion, the information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

Ernst & Young LLP

January 29, 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 tax-exempt 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, 2019. This period is also referred to as fiscal year ("FY") 2019. 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

The Corporation had net earnings of $300.5 million in fiscal year 2019, compared to net earnings of $184.2 million in 2018. Total revenues were $738.3 million an increase of $173.9 million or 30.81% from $564.4 million in fiscal year 2018. The increase in total revenues was mainly due to an increase of $86.3 million in operating revenues and $87.6 million in non-operating revenues. Operating revenues which are mainly comprised of interest on loans, loan origination and servicing fees, were $557.6 million up from $471.4 million in fiscal year 2018. The increase in operating revenues was primarily due to a $47.7 million increase in interest on loans, as the mortgage portfolio saw an increase of $1.5 billion from fiscal year end 2018. Fees and charges from loan originations and servicing increased by $18.7 million.

Non-Operating revenues which are primarily investment earnings and grant revenues saw a significant increase from a year ago. Total investment earnings, including the fair market valuation increased from $53.6 million to $139.5 million, a 160.56% increase from fiscal year 2018. This increase was due to the growth in the investment portfolio from $5.2 billion to $5.9 billion as a result of bond issuances and receipts in HPD Section 661 Grant Funds as well as a higher rate of return on the portfolio compared to a year ago. The Corporation also recorded grant revenues of $41.7 million from funds received from The Battery Park City Authority ("BPCA").

Operating expenses in fiscal year 2019 were $437.8 million, a $57.6 million or 15.15% increase from a year ago. Operating expenses in fiscal year 2018 were $380.2 million. Interest on bonds and other debt obligations increased by a net of $53.1 million, due to the higher debt level. Fiscal year 2019 was a record year for HDC's bond issuances. In its continuing commitment to the *Mayor's Housing New York Plan*, HDC's bond issuances totaled $2.2 billion.

The new bond proceeds were allocated to finance twenty-three new construction projects with loan commitments in excess of $1.1 billion. New bond proceeds were also used for the recycling of prepayments as well as the securitization of loans previously funded from corporate reserves. The Corporation also committed $360.5 million to the refinancing or the rehabilitation of nine developments which included four Mitchell-Lama projects, as part of its Mitchell-Lama restructuring program ("MLRP"). Two new funding loan agreements were closed to fund the mortgages of two developments for $129.9 million. In addition, the Corporation committed $229.1 million of subsidy from its corporate reserves.

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, 2019 and 2018. The following table represents the changes in the Corporation's net position between October 31, 2019 and 2018 and should be read in conjunction with the financial statements. *(Dollar amounts are in thousands):*

	2019	2018	Change	Percent Change
Assets				
Cash and Investments	$5,910,569	$5,264,290	$646,279	12.28%
Mortgage Loans	13,790,266	12,253,404	1,536,862	12.54
Loan Participation Receivable	1,075,529	1,092,274	(16,745)	(1.53)
Notes Receivable	552,461	589,991	(37,530)	(6.36)
Accrued Interest	112,935	80,588	32,347	40.14
Other Receivables	28,106	34,240	(6,134)	(17.91)
Capital Assets	1,874	2,165	(291)	(13.44)
Interest Rate Swaps	-	32,012	(32,012)	(100.00)
Other Assets	619	2,386	(1,767)	(74.06)
Total Assets	**21,472,359**	**19,351,350**	**2,121,009**	**10.96**
Deferred Outflows of Resources	**112,330**	**10,189**	**102,141**	**1002.46**
Liabilities				
Bonds Payable & Debt Obligations, net	12,710,039	11,974,779	735,260	6.14
Interest Payable	135,926	121,416	14,510	11.95
Payable to The City of New York:				
Loan Participation Agreements	1,075,529	1,092,274	(16,745)	(1.53)
Housing Finance Fund Section 661	2,523,338	1,647,918	875,420	53.12
Other	833,420	636,759	196,661	30.88
Payable to Mortgagors	855,422	849,311	6,111	0.72
Restricted Earnings on Investments	23,265	20,728	2,537	12.24
Accounts and Other Payables	49,635	25,348	24,287	95.81
Net Pension Liability	10,049	9,325	724	7.76
Net OPEB Liability	7,154	13,822	(6,668)	(48.24)
Interest Rate Swaps	102,907	-	102,907	100.00
Unearned Revenues and Other Liabilities	115,565	104,258	11,307	10.85
Total Liabilities	**18,442,249**	**16,495,938**	**1,946,311**	**11.80**
Deferred Inflows of Resources	**10,522**	**34,133**	**(23,611)**	**(69.17)**
Net Position				
Net Investments in Capital Assets	1,874	2,165	(291)	(13.44)
Restricted for Insurance Requirements	85,918	79,378	6,540	8.24
Restricted for Bond Obligations	2,236,470	1,904,075	332,395	17.46
Unrestricted	807,656	845,850	(38,194)	(4.52)
Total Net Position	**$3,131,918**	**$2,831,468**	**$300,450**	**10.61%**

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, 2019, HDC's total assets were $21.5 billion, an increase of $2.1 billion or 10.96% from fiscal year 2018. The increase was primarily a result of the Corporation's mortgage lending and bond financing activities. In fiscal year 2018, total assets were $19.4 billion.

Cash and Investments: The Corporation ended the fiscal year with $5.9 billion in cash and investments. Other than collateralized and purpose investments, investments were recorded at fair value. Approximately $3.5 billion of that balance was un-advanced construction loan monies already committed to fund mortgage loans that have already closed. Net cash provided by operating and financing activities were a combined $484.8 million. Investment interest collected during the year totaled $116.0 million, as the cash balance and the investment portfolio increased by a net of $646.3 million from a year ago.

Mortgage Loans: Mortgage loans comprised 64.22% of the Corporation's total assets. The mortgage loan portfolio at the end of the fiscal year was $13.8 billion, an increase of $1.5 billion or 12.54% from the previous year. At October 31, 2018, the mortgage loan portfolio was $12.3 billion. During fiscal year 2019, mortgage loan activities included advances of approximately $2.0 billion and principal loan repayments of $751.7 million. Mortgage loans assigned to the Corporation via purchase and sale agreements totaled $190.0 million.

Loan Participation Receivable: Loan participation receivable at October 31, 2019 was $1.1 billion, a $16.7 million decrease from a year ago. The decrease was primarily the result of the payoff and refinancing by the Corporation of one development in the amount of $16.0 million. Additionally, there were some principal repayments in the Mitchell-Lama second mortgages in the loan participation portfolio.

Notes Receivable: Notes receivable was $552.5 million, down from $590.0 million in 2018. 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 the New York City Housing Authority ("NYCHA"), with outstanding balances of $43.5 million and $508.9 million, respectively. In fiscal year 2019, there were $37.5 million in notes repayments. The Military Housing notes are secured by pledged revenues of the development and the NYCHA Capital Fund notes are secured by payments from the United States Department of Housing and Urban Development ("HUD").

Accrued Interest: Interest receivable increased from $80.6 million at October 31, 2018 to $112.9 million at October 31, 2019. This is a $32.3 million or 40.14% increase from fiscal year 2018. Interest receivable has increased comparable to the loan portfolio, in addition to deferred interest accrued to maturity on some subsidy loans.

Other Receivables: Other receivables were $28.1 million at October 31, 2019, a net decrease of $6.1 million from October 31, 2018. The net change was comprised of the repayment of a loan in the amount of $10.9 million under a participating agreement with the Community Preservation

Corporation Special Purpose Enterprise. In fiscal year 2019, HDC made a new loan of $2.2 million into the Down Payment Assistant Fund ("DPAF") as part of an initiative to assist non-profit entities. Additionally, there was an increase of $2.6 million of interest and servicing fees billed on loans serviced for other entities.

Interest Rate Swaps: The Corporation entered into various interest rates swap contracts as a means of mitigating its exposure to its variable rate debt. In fiscal year 2019, the Corporation entered into three additional forward interest rate swap agreements. As interest rates continue to trend lower, the fair market value of the Corporation's swap portfolio changed from an asset position with a fair market value of $32.0 million at October 31, 2018, to a liability position of $102.9 million at October 31, 2019, this amount was offset by a deferred outflow of resources.

Capital and Other Assets: Other assets decreased $2.1 million. This decrease was mainly due to a $1.8 million decrease relating to the amortization on the 2011 participation interest cash flow and a $0.3 million decrease in capital assets. Under the 2011 Participation Agreement, the Corporation holds a 100% participation interest in the second mortgages and related Section 236 contracts on some properties. There was a payoff of one of the three loans that remained in the portfolio. The unamortized value of the 2011 Participation Interest was $0.6 million at October 31, 2019.

Deferred Outflows of Resources

Deferred outflows of resources (deferred outflows) were $112.3 million at October 31, 2019, an increase of $102.1 million from October 31, 2018 when deferred outflows were $10.2 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 fiscal year 2019, the market value of the Corporation's derivative portfolio changed to a liability position offset by a deferred outflow of $101.2 million. In fiscal year 2019, the amount amortized on the deferred loss on early debt retirement was $0.7 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 pensions increased by $1.7 million. In fiscal year 2017, HDC adopted GASB Statement No. 75, "*Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*." There was a slight decrease in deferred outflows related to OPEB in fiscal year 2019.

Liabilities of the Corporation

Total liabilities were $18.4 billion at October 31, 2019, an increase of $1.9 billion or 11.80%. At October 31, 2018, total liabilities were $16.5 billion. Liabilities are grouped into three main categories. The largest are HDC Bonds Payable and Debt Obligations, net, which were approximately $12.7 billion, and accounted for approximately 68.92% 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"). Other payables to the City include loans administered on behalf of HPD and other loans, which will ultimately revert to the City pursuant to various loan participation and other agreements. These include loan assets, which are currently held by HDC and pledged to pay HDC bonds. These loans are transferred back to the City when the related bonds are retired. The last category of liabilities includes Payable to Mortgagors, Accounts and Other Payables, and Unearned Revenues. The Payable to Mortgagors' funds are held and administered by HDC but are the property of others, such as escrows held by HDC in the course of its loan servicing functions.

Bonds Payable and Debt Obligations: Bonds and outstanding debt obligations were $12.7 billion at October 31, 2019, an increase of $735.3 million. At October 31, 2018, bonds and outstanding debt obligations were $12.0 billion. In fiscal year 2019, HDC issued 27 new bond series for a total of $2.2 billion. Government debt obligation draws during fiscal year 2019 totaled $40.0 million. Bond principal repayments this fiscal year amounted to $1.4 billion. The Corporation's scheduled debt service principal payments this fiscal year were $409.0 million and there was a total of $947.3 million in redemptions. There were $158.4 million in debt obligation repayments which were primarily refunded by bond issuances. Pursuant to the forward bond purchase agreement, the Corporation issued bonds in the Open Resolution and refunded the debt obligations. Additionally, there were $2.8 million of principal repayments to the Federal Financing Bank ("FFB") and $4.0 million in bond premium amortization. (See Note 10: "Bonds Payable and Debt Obligations")

Interest Payable: Accrued interest payable increased by $14.5 million to $135.9 million at October 31, 2019 from $121.4 million in 2018. 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, 2019 was $4.4 billion, a net increase of $1.0 billion from 2018. 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 Mitchell-Lama and City loan participation program had an outstanding balance of $1.0 billion, a net decrease of $16.7 million due to the payoff and refinancing of one mortgage and the partial repayments of others in the portfolio. The second category, HPD Section 661 Grant Funds had an outstanding balance of $2.5 billion, a net increase of $875.4 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 it. The Other Payable to The City of New York had a net increase of $196.7 million. Changes in this category include a net increase of $203.4 million in loan assignments, additionally there was an increase of $3.0 million on loans serviced on behalf of the City. 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 related to one development.

Payable to Mortgagors: Payable to mortgagors was $855.4 million at October 31, 2019, an increase of $6.1 million from $849.3 million in 2018. There was a net increase in escrows and reserve for replacement funds of $52.6 million, resulting from funds held in the course of the Corporation's loan servicing function. Community Development Block Grants ("CDBG") funds held on behalf of mortgagors decreased by $48.6 million, as a result of fund expenditures and loan evaporations pursuant to the program requirements. Prepaid debt service, and equity funds held, increased by $2.1 million.

Accounts Payable: Accounts payable at fiscal year-end was $49.6 million, up from $25.3 million at October 31, 2018. The net increase of $24.3 million was primarily attributable to $18.7 million of grants and collateral funds received on behalf of some developments. There was also an increase of $4.8 million in bond issuance costs and mortgage insurance premiums payable. Additionally, there was an increase of deferred interest billed and payable to other entities, and accrued salaries payable.

Restricted Earnings on Investments: Restricted earnings on investments represents cumulative amounts by which pass-through revenues exceed expenses. They represent accumulated investment earnings that are credited to the mortgagors. This amount increased by $2.5 million, from $20.7 million in fiscal year 2018 to $23.2 million in fiscal year 2019.

Net Pension and OPEB Liabilities: The accumulated amount of the Corporation's net pension liability as calculated by the NYCOA, amounted to $10.0 million as of October 31, 2019, a net increase of $0.7 million from 2018. The Corporation recorded a net OPEB liability of $7.1 million as of October 31, 2019, a decrease of $6.7 million from $13.8 million in 2018. The decrease was due to updating some of the assumptions to align with the NYCOA 2019 report. The reduction in the Pension and OPEB liabilities were offset by deferred inflows of resources.

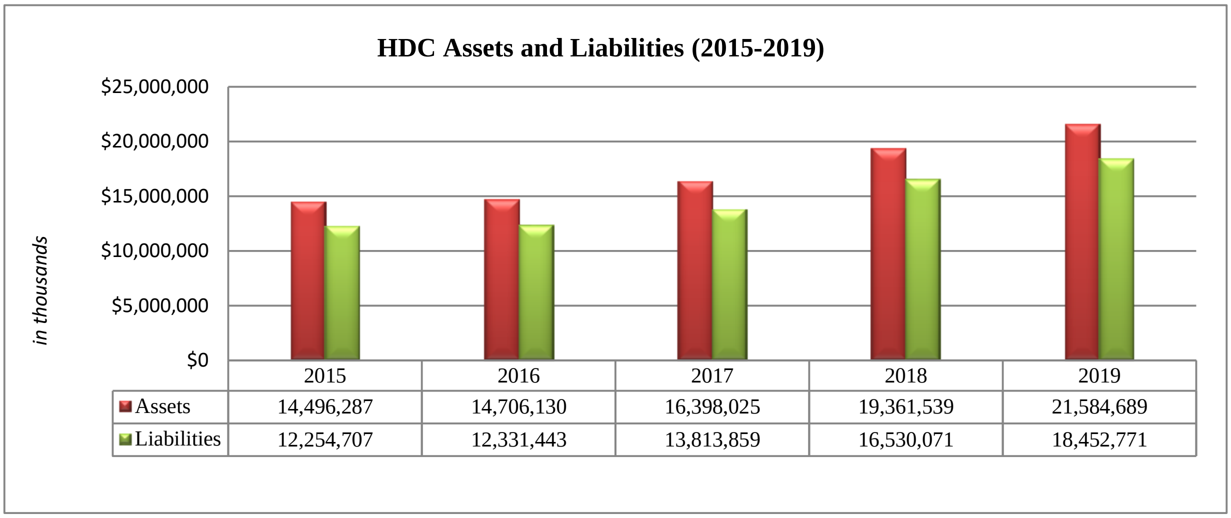
Interest Rate Swaps (Liability): At October 31, 2019 the fair value of the Corporation's interest rate swap portfolio was $102.9 million in a liability position. At October 31, 2018 the portfolio was valued at $32.0 million in an asset position. Three additional agreements were added to the portfolio in fiscal year 2019. As the hedges were deemed to be effective the changes in fair value were offset by deferred outflows of resources.

Unearned Revenues and Other Liabilities: Unearned revenues and other liabilities increased by $11.3 million to $115.6 million at October 31, 2019. There was a net increase of $12.8 million mainly due to the receipt of construction and bond financing fees on mortgage closings, which will be earned over the construction period of the related mortgages. Other unearned revenues, including deferred guaranty and other fees received in advance, decreased by $1.5 million due to amortization.

Deferred Inflows of Resources

Deferred inflows of resources decreased from $34.1 million to $10.5 million at October 31, 2019. The deferred inflows related to interest rate swap agreements was reallocated to a deferred outflows of resources due to changes in the fair value, from $32.0 million in favor of HDC to a $102.9 million in favor of the counterparty. The deferred inflows related to the Corporation's OPEB increased by $8.0 million from changes in assumptions. The deferred inflows related to the pension liability decreased by $0.3 million.

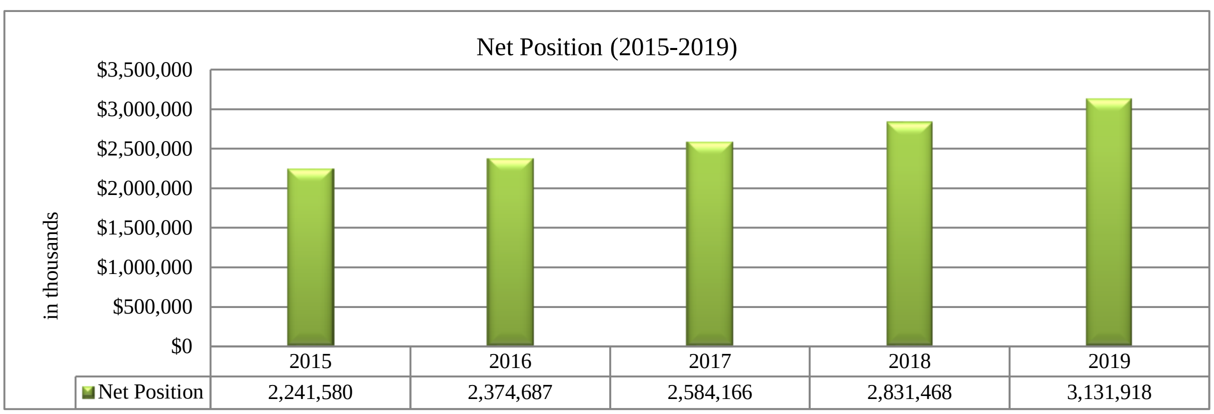
The following chart presents the comparative data of the Corporation's assets including deferred outflows, and liabilities including deferred inflows, over the last five years:



	2015	2016	2017	2018	2019
Assets	14,496,287	14,706,130	16,398,025	19,361,539	21,584,689
Liabilities	12,254,707	12,331,443	13,813,859	16,530,071	18,452,771

Net Position

Net position, the excess of assets and deferred outflows of resources over liabilities and deferred inflows of resources, totaled $3.13 billion as of October 31, 2019. This represents an increase of $300.5 million or 10.61% over the balance from the previous year. In 2018, net position increased by $247.3 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:



	2015	2016	2017	2018	2019
Net Position	2,241,580	2,374,687	2,584,166	2,831,468	3,131,918

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, 2019. 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):*

	2019	2018	Change	Percent Change
Revenues				
Interest on Loans	$446,267	$398,559	$47,708	11.97%
Fees and Charges	85,006	66,294	18,712	28.23
Income on Loan Participation Interests	22,710	4,624	18,086	391.13
Other Income	3,651	1,887	1,764	93.48
Total Operating Revenues	**557,634**	**471,364**	**86,270**	**18.30**
Expenses				
Bond Interest and Amortization	378,494	325,384	53,110	16.32
Salaries and Related Expenses	27,274	26,282	992	3.77
Trustees and Other Fees	9,271	8,981	290	3.23
Bond Issuance Costs	16,644	12,735	3,909	30.69
Corporate Operating Expenses	6,133	6,824	(691)	(10.13)
Total Operating Expenses	**437,816**	**380,206**	**57,610**	**15.15**
Operating Income	**119,818**	**91,158**	**28,660**	**31.44**
Non-Operating Revenues (Expenses)				
Earnings on Investments	114,054	64,434	49,620	77.01
Unrealized Gains (Losses) on Investments	25,490	(10,879)	36,369	(334.30)
Other Non-Operating Revenues	41,088	39,472	1,616	4.09
Total Non-Operating Revenues, net	**180,632**	**93,027**	**87,605**	**94.17**
Income before Special Item	**300,450**	**184,185**	**116,265**	**63.12**
Loan Securitization Proceeds	-	63,117	(63,117)	(100.00)
Change in Net Position	**300,450**	**247,302**	**53,148**	**21.49**
Net Position, Beginning of the Year	2,831,468	2,584,166	247,302	9.57
Net Position, End of the Year	**$3,131,918**	**$2,831,468**	**$300,450**	**10.61%**

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. Investment income 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 appreciation 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 86.45% of operating expenses in fiscal year 2019. 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

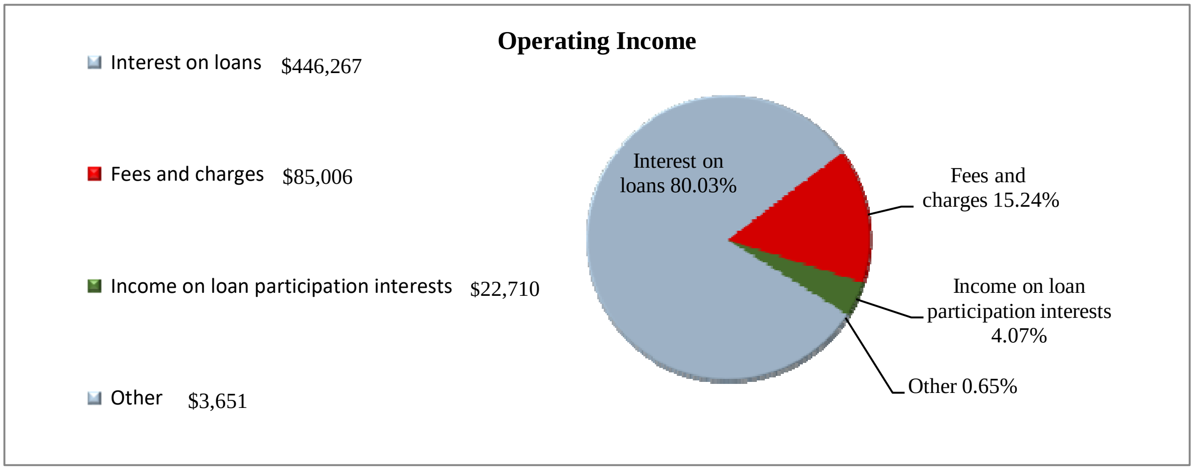
The Corporation had total revenues of $738.3 million, an increase of $173.9 million from a year ago. Operating revenues were $557.6 million in 2019 compared to $471.4 million in fiscal year 2018, an increase of $86.3 million or 18.30%. Operating revenues were approximately 75.53% of total revenues in fiscal year 2019. Net operating income for the fiscal year was $119.8 million. In fiscal year 2019, HDC recorded non-operating revenues of $180.6 million, which included $139.5 million of net investment earnings and $41.7 million from grants offset by $0.6 million of non-operating expenses.

Interest on Loans: Interest on loans, the largest component of operating revenues, was $446.3 million, an increase of $47.7 million or 11.97% from 2018. In fiscal year 2018, interest on loans was $398.6 million. The increase in 2019 was a result of higher mortgage and notes 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 $85.0 million in 2019, an increase of $18.7 million from 2018. Bond financing fees, construction financing and bond servicing fees earned increased by $13.0 million. Commitment fees saw an increase of $5.9 million. The Corporation also saw an increase of $2.5 million in loan restructuring and satisfaction fees. This was offset by lower fees related to construction monitoring and servicing fees on conduit debt.

Income on Loan Participation Interests: Loan participation income in fiscal year 2019 was $22.7 million, compared to $4.6 million the previous year. Loan participation income is driven by prepayments or restructuring of the second mortgage loans in the MLRP. In fiscal year 2019 there was one mortgage payoff in addition to partial repayments of other loans in the portfolio.

Other Income: Other income in fiscal year 2019 was $3.7 million compared to $1.9 million in 2018. 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

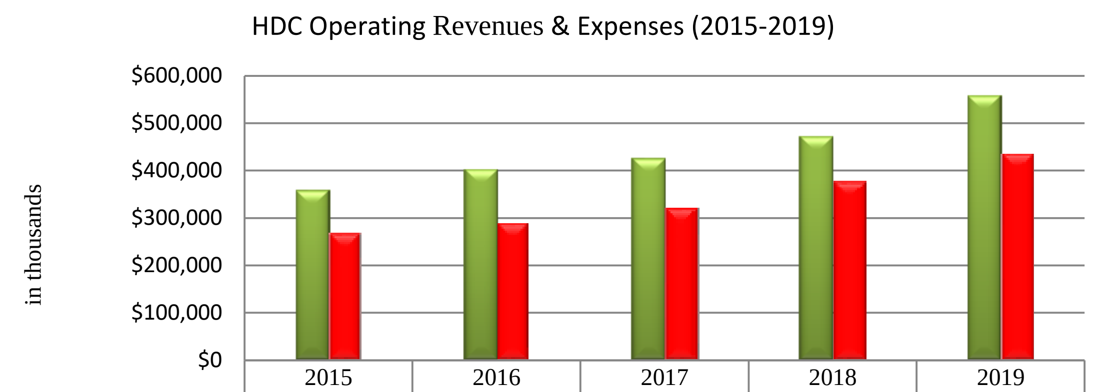
Operating Expenses: Operating expenses in fiscal year 2019 were $437.8 million, an increase of $57.6 million or 15.15% compared to the previous year, when operating expenses amounted to $380.2 million. This increase was mainly attributable to higher bond interest expense from the Corporation's issuances as well as rising interest rates on floating rate debt during the year. Interest on bonds increased by $53.1 million from $325.4 million in fiscal year 2018 to $378.5 million in fiscal year 2019. Debt issuance costs increased by $3.9 million.

Bond Interest and Amortization: Interest expense constituted 86.45% of the total operating expenses. Total interest, net of amortization, was $378.5 million, a 16.32% increase from 2018 when it was $325.4 million. The bonds and other debt obligations portfolio increased $735.3 million from fiscal year end 2018.

Salaries and Related Expenses: Salaries and related expenses were $27.3 million in fiscal year 2019, a net increase of $1.0 million from $26.3 million in fiscal year 2018.

Bond Issuance and Other Expenses: Trustees' and other fees, mortgage insurance premiums, bond issuance costs and corporate operating expenses increased by $3.5 million. Bond issuance costs were $16.6 million this fiscal year compared to $12.7 million in 2018. The $3.9 million increase is directly related to the $2.2 billion in bond issuances this year. Corporate operating expenses decreased by $0.7 million from $6.8 million to $6.1 million this year.

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



	2015	2016	2017	2018	2019
Operating Revenues	357,318	401,573	424,687	471,364	557,634
Operating Expenses	270,780	293,228	321,642	380,206	437,816

Non-Operating Revenues (Expenses)

Earnings on Investments and Unrealized Gains: Earnings on investments are recognized as non-operating income. Investment income, including the fair value adjustment on outstanding investments was $139.5 million in fiscal 2019 compared to $53.6 million in fiscal year 2018. The increase was primarily due to the higher outstanding balance of investments and higher interest rates on such investments, as well as more favorable market conditions. The Corporation ended the fiscal year with $5.9 billion of investments and cash equivalents under management. Additionally, through the first three quarters of the fiscal year as rates were rising the Corporation diligently tried to balance maintaining liquidity and maximizing its return on investments. Realized investment income was $114.1 million, an increase of $49.6 million from a year ago. The Corporation reported a $25.5 million unrealized gain on investments this fiscal year compared to a $10.9 million unrealized loss in fiscal year 2018.

Other Non-Operating Revenues (Expenses): Other non-operating revenues include $41.7 million in 421-A Grant Revenue from the Battery Park City Authority ("BPCA"), $1.2 million in pass-through related revenue on the City loan sale participation programs and $1.8 million of amortization expense 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 fiscal year 2019 was $300.5 million, up from $247.3 million the previous year. The Corporation generated $258.8 million from normal operating activities, and in addition $41.7 million was received from the 421-A Grant Revenue Program with the BPCA.

DEBT ADMINISTRATION

At year-end, the Corporation had approximately $12.7 billion of bond principal and debt obligations outstanding, net of discount and premium, an increase of 6.14% over the prior year. The following table summarizes the changes in bonds payable and debt obligations between October 31, 2018 and October 31, 2019. (Dollar amounts are in thousands):

	2019	2018	Percentage increase FY 2018 to 2019
Bonds Payable & Debt Obligations	$12,710,039	$11,974,779	6.14%

In fiscal year 2019, 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 fiscal year 2019, the Corporation issued 27 new Housing Revenue Bonds series totaling $2.2 billion. Included in this total were 24 series of tax-exempt bonds totaling $2.0 billion and 3 series of taxable bonds totaling $191.9 million. The Corporation also made low interest loans from its net position.

Subsequent to October 31, 2019, bonds issued in the course of the Corporation's normal business activities were $336,630,000. In addition, the Corporation sold $65,630,000 of loan participation interest to FFB as well.

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
Statements of Net Position

At October 31, 2019 (with comparative summarized financial information as of October 31, 2018) ($ in thousands)

	HDC and Component Units				
	New York City Housing Development Corporation	**New York City Housing Assistance Corporation**	**New York City Residential Mortgage Insurance Corporation**	**Total 2019**	**Total 2018**
Assets					
Current Assets:					
Cash and cash equivalents (note 3)	$ 801,401	$ -	$ -	$ 801,401	$ 765,088
Investments (note 3)	202,891	-	-	202,891	135,589
Receivables:					
Mortgage loans (note 4)	330,788	-	-	330,788	294,485
Accrued interest	38,933	-	-	38,933	38,532
Notes (note 5)	38,913	-	-	38,913	37,529
Other (note 7)	5,431	-	-	5,431	13,527
Total Receivables	414,065	-	-	414,065	384,073
Other assets	16	-	-	16	16
Total Current Assets	**1,418,373**	**-**	**-**	**1,418,373**	**1,284,766**
Noncurrent Assets:					
Restricted cash and cash equivalents (note 3)	1,622,298	9,820	24,152	1,656,270	1,817,070
Restricted investments (note 3)	3,101,220	-	120,290	3,221,510	2,517,462
Purpose investments (note 2)	28,497	-	-	28,497	29,081
Mortgage loans (note 4)	274,342	-	-	274,342	340,502
Restricted receivables:					
Mortgage loans (note 4)	12,784,105	122,068	-	12,906,173	11,336,474
Mortgage loan participation - Federal Financing Bank (note 4)	278,963	-	-	278,963	281,943
Loan participation receivable - The City of NY (note 6)	1,075,529	-	-	1,075,529	1,092,274
Accrued interest	74,002	-	-	74,002	42,056
Notes (note 5)	513,548	-	-	513,548	552,462
Other (note 7)	22,675	-	-	22,675	20,713
Total Restricted Receivables	14,748,822	122,068	-	14,870,890	13,325,922
Primary government/component unit receivable (payable)	27	(9)	(18)	-	-
Capital assets	1,874	-	-	1,874	2,165
Interest rate swaps (note 9)	-	-	-	-	32,012
Other assets (note 8)	603	-	-	603	2,370
Total Noncurrent Assets	**19,777,683**	**131,879**	**144,424**	**20,053,986**	**18,066,584**
Total Assets	**21,196,056**	**131,879**	**144,424**	**21,472,359**	**19,351,350**
Deferred Outflows of Resources					
Interest rate caps (note 9)	214	-	-	214	1,880
Deferred loss on early retirement of debt (note 9)	4,920	-	-	4,920	5,660
Deferred outflows related to pensions (note 13)	3,264	-	-	3,264	1,588
Deferred outflows related to interest rate swaps (note 9)	102,907	-	-	102,907	-
Deferred outflows related to OPEB (note 14)	1,025	-	-	1,025	1,061
Total Deferred Outflows of Resources	**$ 112,330**	**$ -**	**$ -**	**$ 112,330**	**$ 10,189**

See accompanying notes to the basic financial statements.

New York City Housing Development Corporation
Statements of Net Position (continued)

At October 31, 2019 (with comparative summarized financial information as of October 31, 2018) ($ in thousands)

	HDC and Component Units				
	New York City Housing Development Corporation	**New York City Housing Assistance Corporation**	**New York City Residential Mortgage Insurance Corporation**	**Total 2019**	**Total 2018**
Liabilities					
Current Liabilities:					
Bonds payable (net) (note 10)	$ 342,849	$ -	$ -	$ 342,849	$ 627,161
Debt obligations payable	93	-	-	93	94
Loan participation payable to Federal Financing Bank	2,980	-	-	2,980	2,826
Accrued interest payable	135,926	-	-	135,926	121,416
Payable to mortgagors	194,650	-	-	194,650	182,299
Restricted earnings on investments	23,265	-	-	23,265	20,728
Accounts and other payables	49,635	-	-	49,635	25,348
Total Current Liabilities	**749,398**	**-**	**-**	**749,398**	**979,872**
Noncurrent Liabilities:					
Bonds and debt obligations payable:					
Bonds payable (net) (note 10)	11,788,584	-	-	11,788,584	10,647,712
Debt obligations payable	296,570	-	-	296,570	415,043
Loan participation payable to Federal Financing Bank	278,963	-	-	278,963	281,943
Payable to The City of New York:					
Loan participation agreements (note 12)	1,075,529	-	-	1,075,529	1,092,274
Housing finance fund (Section 661)	2,523,338	-	-	2,523,338	1,647,918
Other	701,541	131,879	-	833,420	636,759
Payable to mortgagors	660,772	-	-	660,772	667,012
Net pension liabilities (note 13)	10,049	-	-	10,049	9,325
OPEB liability (note 14)	7,154	-	-	7,154	13,822
Derivative instrument - interest rate swaps	102,907			102,907	-
Unearned revenues and other liabilities	115,565	-	-	115,565	104,258
Total Noncurrent Liabilities	**17,560,972**	**131,879**	**-**	**17,692,851**	**15,516,066**
Total Liabilities	**18,310,370**	**131,879**	**-**	**18,442,249**	**16,495,938**
Deferred Inflows of Resources					
Deferred inflows related to pensions (note 13)	1,737	-	-	1,737	1,356
Deferred inflows related to OPEB (note 14)	8,785	-	-	8,785	765
Interest rate swaps fair value (note 9)	-	-	-	-	32,012
Total Deferred Inflows of Resources	**10,522**	**-**	**-**	**10,522**	**34,133**
Net Position					
Net investment in capital assets	1,874	-	-	1,874	2,165
Restricted for bond obligations (note 19)	2,236,470	-	-	2,236,470	1,904,075
Restricted for insurance requirement and others	-	-	85,918	85,918	79,378
Unrestricted (note 19)	749,150	-	58,506	807,656	845,850
Total Net Position	**$ 2,987,494**	**$ -**	**$ 144,424**	**$ 3,131,918**	**$ 2,831,468**

See accompanying notes to the basic financial statements.

New York City Housing Development Corporation
Statements of Revenues, Expenses and Changes in Net Position

Year ended October 31, 2019 (with comparative summarized financial information for the year ended October 31, 2018) ($ in thousands)

	HDC and Component Units				
	New York City Housing Development Corporation	New York City Housing Assistance Corporation	New York City Residential Mortgage Insurance Corporation	Total 2019	Total 2018
Operating Revenues					
Interest on loans (note 4)	$ 446,259	$ 8	$ -	$ 446,267	$ 398,559
Fees and charges (note 7)	81,215	-	3,791	85,006	66,294
Income on loan participation interests (note 6)	22,710	-	-	22,710	4,624
Other	3,651	-	-	3,651	1,887
Total Operating Revenues	**553,835**	**8**	**3,791**	**557,634**	**471,364**
Operating Expenses					
Interest and amortization of bond premium and discount (note 10)	378,494	-	-	378,494	325,384
Salaries and related expenses	27,274	-	-	27,274	26,282
Trustees' and other fees	9,271	-	-	9,271	8,981
Bond issuance costs	16,644	-	-	16,644	12,735
Corporate operating expenses (note 11)	6,133	-	-	6,133	6,824
Total Operating Expenses	**437,816**	**-**	**-**	**437,816**	**380,206**
Operating Income	**116,019**	**8**	**3,791**	**119,818**	**91,158**
Non-operating Revenues (Expenses)					
Earnings on investments (note 3)	110,564	1	3,489	114,054	64,434
Unrealized gains (losses) on investments (note 3)	25,490	-	-	25,490	(10,879)
(Loss) on early retirement of debt, net	-	-	-	-	(129)
Other non-operating revenues, net (note 7)	31,088	-	10,000	41,088	39,601
Payments from REMIC subsidiary to HDC	566	-	(566)	-	-
Other	9	(9)	-	-	-
Total Non-operating Revenues, net	**167,717**	**(8)**	**12,923**	**180,632**	**93,027**
Income (Loss) before Special Item	**283,736**	**-**	**16,714**	**300,450**	**184,185**
Loan participation agreement securitization 2018 Series B-1 and B-2	-	-	-	-	63,117
Changes in Net Position	**283,736**	**-**	**16,714**	**300,450**	**247,302**
Total net position - beginning of year	2,703,758	-	127,710	2,831,468	2,584,166
Total Net Position - End of Year	**$ 2,987,494**	**$ -**	**$ 144,424**	**$ 3,131,918**	**$ 2,831,468**

See accompanying notes to the basic financial statements.

New York City Housing Development Corporation
Statements of Cash Flows

Year ended October 31, 2019 (with comparative summarized financial information for the year ended October 31, 2018) ($ in thousands)

	HDC and Component Units			Total	
	New York City Housing Development Corporation	**New York City Housing Assistance Corporation**	**New York City Residential Mortgage Insurance Corporation**	**2019**	**2018**
Cash Flows From Operating Activities					
Mortgage loan repayments	$ 1,138,648	$ -	$ -	$ 1,138,648	$ 949,784
Note repayments	62,805	-	-	62,805	62,790
Receipts from fees and charges	91,053	-	80	91,133	70,069
Mortgage escrow receipts	214,945	-	-	214,945	214,604
Reserve for replacement receipts	72,962	-	-	72,962	81,934
Mortgage loan advances	(2,077,011)	(101)	-	(2,077,112)	(1,746,361)
Escrow disbursements	(175,855)	-	-	(175,855)	(173,354)
Reserve for replacement disbursements	(55,896)	-	-	(55,896)	(62,649)
Payments to employees	(26,292)	-	-	(26,292)	(24,614)
Payments to suppliers for corporate operating expenses	(5,471)	-	-	(5,471)	(6,208)
Project contributions and funds received from NYC	930,040	-	-	930,040	956,679
Advances and other payments for NYC	(116,018)	-	-	(116,018)	(214,247)
Bond cost of issuance	(17,047)	-	-	(17,047)	(12,233)
Other receipts	170,691	-	-	170,691	127,766
Other payments	(135,831)	(2,527)	-	(138,358)	(60,075)
Net Cash Provided by (Used in) Operating Activities	**71,723**	**(2,628)**	**80**	**69,175**	**163,885**
Cash Flows From Non Capital Financing Activities					
Proceeds from sale of bonds	2,216,745	-	-	2,216,745	1,655,994
Proceeds from loan participation - FFB	-	-	-	-	85,025
Proceeds from debt obligations	40,021	-	-	40,021	190,382
Retirement of bonds	(1,517,547)	-	-	(1,517,547)	(834,101)
Interest paid	(365,279)	-	-	(365,279)	(313,323)
Grant proceeds from BPCA	41,668	-	-	41,668	41,964
Payments to component units	(13,144)	(2)	13,146	-	-
Net Cash Provided by (Used in) Non Capital Financing Activities	**402,464**	**(2)**	**13,146**	**415,608**	**825,941**
Cash Flows From Capital and Related Financing Activities					
Purchase of capital assets	(372)	-	-	(372)	(442)
Net Cash (Used in) Capital and Related Financing Activities	**(372)**	**-**	**-**	**(372)**	**(442)**
Cash Flows From Investing Activities					
Sale of investments	18,427,804	2,733	255,800	18,686,337	17,661,276
Purchase of investments	(19,154,861)	(2,737)	(253,652)	(19,411,250)	(17,941,151)
Interest and dividends collected	112,413	259	3,343	116,015	68,435
Net Cash (Used in) Provided by Investing Activities	**(614,644)**	**255**	**5,491**	**(608,898)**	**(211,440)**
(Decrease) increase in cash and cash equivalents	(140,829)	(2,375)	18,717	(124,487)	777,944
Cash and cash equivalents at beginning of year	2,564,528	12,195	5,435	2,582,158	1,804,214
Cash and Cash Equivalents at End of Year	**$ 2,423,699**	**$ 9,820**	**$ 24,152**	**$ 2,457,671**	**$ 2,582,158**

See accompanying notes to the basic financial statements.

New York City Housing Development Corporation
Statements of Cash Flows (continued)

Year ended October 31, 2019 (with comparative summarized financial information for the year ended October 31, 2018) ($ in thousands)

	HDC and Component Units				
	New York City Housing Development Corporation	**New York City Housing Assistance Corporation**	**New York City Residential Mortgage Insurance Corporation**	**Total 2019**	**Total 2018**
Reconciliation of Operating Income to Net Cash Provided by Operating Activities:					
Operating Income	**$ 116,019**	**$ 8**	**$ 3,791**	**$ 119,818**	**$ 91,158**
Adjustments to reconcile Operating Income to Net Cash Provided by (used in) Operating Activities:					
Depreciation expense	662	-	-	662	616
Amortization of bond discount and premium	(3,959)	-	-	(3,959)	(3,978)
Amortization of deferred loss on early retirement of debt	740	-	-	740	706
Non-operating bond interest payment	365,279	-	-	365,279	313,194
Changes in Assets & Liabilities:					
Mortgage loans	(1,535,765)	7,054	-	(1,528,711)	(1,912,400)
Loan participation receivable - NYC	3,172	-	-	3,172	11,227
Accrued interest receivable	(26,922)	-	-	(26,922)	(18,396)
Notes receivable	37,529	-	-	37,529	36,208
Other receivables	6,134	-	-	6,134	(1,073)
Primary government/component unit receivable (payable)	3,711	-	(3,711)	-	-
Other assets	(70,869)	-	-	(70,869)	(23,456)
Payable to The City of New York	1,064,382	(9,690)	-	1,054,692	1,529,576
Payable to mortgagors	(10,477)	-	-	(10,477)	87,685
Accounts and other payables	127,895	-	-	127,895	264
Restricted earnings on investments	(1,355)	-	-	(1,355)	(1,183)
Unearned revenues and other liabilities	(18,965)	-	-	(18,965)	37,238
Accrued interest payable	14,512	-	-	14,512	16,499
Net Cash Provided by (Used in) Operating Activities	**$ 71,723**	**$ (2,628)**	**$ 80**	**$ 69,175**	**$ 163,885**
Non Cash Investing Activities:					
Increase (decrease) in fair value of investments	$ 25,490	$ -	$ -	$ 25,490	$ (10,879)

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"). 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 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, 2019 is $85,918,000.

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 $58,506,000 at October 31, 2019. 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 fiscal year 2019 and did not have any assets or liabilities at October 31, 2019. 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 654-c 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 of 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 investment income 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 non-current 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 $614,534,000 at October 31, 2019, 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 investment income.

It is the Corporation’s policy to record GNMA certificates at amortized cost, which amounted to $28,497,000 and $29,081,000 at October 31, 2019 and October 31, 2018, respectively. The fair value of these purpose investments amounted to $30,488,000 and $29,067,000 at October 31, 2019 and at October 31, 2018, respectively.

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. Earnings on Investments

Investment earnings on monies held for the City, project reserves for replacement and certain other project escrows are not reported as revenues; rather, they are reported as payable to the City or payable to mortgagors, respectively.

F. 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.

G. Summarized Financial Information

The basic financial statements include summarized comparative information as of and for the year ended October 31, 2018 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, 2018, from which the summarized information was derived (which are available from the Corporation and on its website).

H. Recent and Upcoming Accounting Pronouncements

<u>Accounting Standards Issued and Adopted</u>

GASB Statement No. 83, *Certain Asset Retirement Obligations*, was issued in March 2016. The primary objective of this statement is to provide financial statement users with information about asset retirement obligations (ARO's) that were not addressed in GASB standards by establishing uniform accounting and financial reporting requirements for those obligations. The requirements of this statement apply to financial statements of all state and local governments. For purposes of applying this statement, an ARO is a legally enforceable liability associated with the retirement of a tangible capital asset (that is, the tangible capital asset is permanently removed from service). The retirement of a tangible capital asset encompasses its sale, abandonment, recycling, or disposal in some other manner; however, it does not encompass the temporary idling of a tangible capital asset. This statement also applies to legally enforceable liabilities of a lessor in connection with the retirement of its leased property if those liabilities meet the definition of an ARO.

The requirements of this statement are effective for reporting periods beginning after June 15, 2018. The Corporation adopted this statement in fiscal year 2019 and there was no significant impact on the Corporation's financial statements.

GASB Statement No. 88, *Certain Disclosures Related to Debt, Including Direct Borrowings and Direct Placements*, was issued in April 2018. The primary objective of this statement is to improve the information that is disclosed in notes to government financial statements related to debt, including direct borrowings and direct placements. It also clarifies which liabilities governments should include when disclosing information related to debt.

This statement defines debt for purposes of disclosure in notes to financial statements as a liability that arises from a contractual obligation to pay cash (or other assets that may be used in lieu of cash) in one or more payments to settle an amount that is fixed at the date the contractual obligation is established.

This statement requires that additional essential information related to debt be disclosed in notes to financial statements, including unused lines of credit; assets pledged as collateral for the debt; and terms specified in debt agreements related to significant events of default with finance-related consequences, significant termination events with finance-related consequences, and significant subjective acceleration clauses.

For notes to financial statements related to debt, this statement also requires that existing and additional information be provided for direct borrowings and direct placements of debt separately from other debt.

The requirements of this statement are effective for reporting periods beginning after June 15, 2018. The Corporation adopted this statement in fiscal year 2019 and there was no significant impact on the Corporation's financial statements.

Accounting Standards Issued and Not Yet Adopted

GASB Statement No. 84, *Fiduciary Activities*, was issued in January 2017. The primary objective of this statement is to improve guidance regarding the identification of fiduciary activities for accounting and financial reporting purposes and how those activities should be reported. This statement 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.

This statement 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 statement is effective for fiscal years beginning after December 15, 2018. The Corporation is in the process of evaluating the impact of its adoption on the financial statements.

GASB Statement No. 87, *Leases*, was issued in June 2017. The primary objective of this statement is to better meet the information needs of financial statement users by improving accounting and financial reporting for leases by governments. This statement 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 this statement, 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.

The statement is effective for fiscal years beginning after December 15, 2019. The Corporation is in the process of evaluating the impact of its adoption on the financial statements.

GASB Statement No. 89, *Accounting for Interest Cost Incurred before the End of a Construction Period*, was issued in June 2018. The objectives of this statement 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.

This statement 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 this statement. This statement 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.

This statement 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 this statement are effective for reporting periods beginning after December 15, 2019. The Corporation is in the process of evaluating the impact of its adoption on the financial statements.

GASB Statement No. 90, *Majority Equity Interests* – an amendment of GASB Statements No. 14 and No. 61, was issued in August 2018. The primary objectives of this statement 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. This statement 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.

This statement 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 this statement are effective for reporting periods beginning after December 15, 2018. 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 percent equity interest. Those provisions should be applied on a prospective basis. The Corporation is in the process of evaluating the impact of its adoption on the financial statements.

GASB Statement No. 91, *Conduit Debt Obligations*, was issued in May 2019. The primary objectives of this Statement 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. This Statement 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.

The statement is effective for fiscal years beginning after December 15, 2020. 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, and repurchase agreements. In fiscal year 2019, 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, 2019. 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, 2019, were as follows:

	Investment Maturities at October 31, 2019 (in Years)				
Investment Type	2019	Less than 1	1-5	6-10	More than 10
(in thousands)					
Money Market and NOW Accounts	$2,256,393	$2,256,393	$ —	$ —	$ —
FHLB	820,134	412,935	120,160	287,039	—
Federal Farm Credit Bond	528,553	33,701	83,623	411,229	—
FHLMC Bonds	434,202	52,600	331,137	40,899	9,566
U.S. Treasury (Bonds, Notes, Bills)	316,147	312,552	3,595	—	—
NYS/NYC Municipal Bonds *	222,690	51,759	118,839	—	52,092
Fixed Repurchase Agreements	165,652	165,652	—	—	—
FNMA Bonds	112,656	44,254	68,402	—	—
Total	4,856,427	3,329,846	725,756	739,167	61,658
Less amounts classified as cash equivalents	(2,422,045)	(2,422,045)	—	—	—
Total investments	$2,434,382	$907,801	$725,756	$739,167	$61,658

**Note: Primarily taxable VRDO instruments which can be put weekly.*

Total investments recorded on the Statement of Net Position at October 31, 2019 of $3,427,343,000 is made up the following: (a) investments recorded at fair value of $2,434,382,000, (b) certificates of deposits in the amount of $581,579,000 and (c) OTDs in the amount of $411,382,000.

As required by GASB No. 31, the Corporation has recorded a fair value adjustment in its investment portfolio. HDC recorded a net appreciation of $25,490,000 for the year ended October 31, 2019.

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 has the following recurring fair value measurements as of October 31, 2019:

- NYC/NYS Municipal securities of $222,690,000 are valued using quoted market prices. (Level 1 inputs)
- U.S. Treasury securities of $316,147,000 are valued based on models using observable inputs. (Level 2 inputs)
- U.S. Agency securities of $1,895,545,000 are valued based on models using observable inputs. (Level 2 inputs)

Money Market and Now accounts of $2,256,393,000 are valued at cost. In addition to the investments identified above, as of October 31, 2019 and 2018, the Corporation held $32,684,000 and $16,995,000, respectively, 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, 2019, 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 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 A; Moody's ranged from Aaa to A1 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, 2019, open time deposits in the amount of $30,093,000, repurchase agreements in the amount of $165,652,000, certificates of deposits in the amount of $581,579,000 and demand accounts in the amount of $2,123,304,000 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 $39,967,000 at October 31, 2019, of which $39,147,000 was uninsured by the Federal Deposit Insurance Corporation ("FDIC") and uncollateralized. Correspondingly, $31,121,000 was secured in trust accounts, which are protected under state law and $8,846,000 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 of 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 table shows issuers that represent 5% or more of total investments at October 31, 2019 *(in thousands)*:

Issuer	Dollar Amount	Percentage
NY Community Bank (*)	$968,028	16.55%
Signature Bank (*)	732,636	12.52
FHLB	596,921	10.20
Customers Bank (*)	483,465	8.27
FHLMC	409,061	6.99
Sterling National Bank (*)	311,294	5.32
FFCB	306,555	5.24
Toronto-Dominion Bank (TD)	292,217	5.00

**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 $13,790,266,000 and $12,253,404,000 as of October 31, 2019 and 2018, respectively. These amounts represent the portion of mortgage loans for which the Corporation has advanced monies. Of the total loans outstanding above, $274,801,000 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 $3,473,030,000 and $2,781,199,000 at October 31, 2019 and October 31, 2018, respectively (see Note 16: "Commitments").

Changes in Mortgage Loans

The changes in Mortgage Loans are as follows:			
(in thousands)	Total Mortgage Loans	Loan Participation Receivable – The City of New York	Mortgage Loans (net)
Mortgage loans outstanding at October 31, 2018	$13,300,654	$1,047,250	$12,253,404
Mortgage Advances	2,077,112	-	2,077,112
Other Additions*	203,263	6,804	196,459
Principal Collections	(751,668)	(14,953)	(736,715)
Discount/Premium Amortized	6	-	6
Mortgage loans outstanding at October 31, 2019	14,829,367	1,039,101	13,790,266
NYC Loan Participation Interest Receivable	36,428	36,428	-
Total	$14,865,795	$1,075,529	$13,790,266

**Loan assignments and capitalized interest.*

(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 1.00% 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, 2019, 64% are first mortgages and 36% 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 $281,943,000 and $284,769,000 at October 31, 2019 and October 31, 2018, respectively. 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 sufficient to continue to provide funds for the RY Subsidy Program through 2022.

In fiscal year 2016, The City of New York 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 1/20th per annum over its 20-year term. HDC will be reimbursed for this transaction pursuant to a memorandum of understanding with the City. In fiscal year 2019, $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, 2019, the outstanding mortgage loan balance was $121,750,000 and HDC has received a total of $112,576,000 in Stuyvesant Town fund reimbursements from the City to date.

In fiscal year 2017, a construction loan was closed for a project named BEC Continuum Resyndication. One building at 145 Hart Street, Brooklyn, New York, with a loan commitment in the amount of $335,000 was financed by HAC. The mortgage loan had a balance of $317,000 as of October 31, 2019.

The total loan outstanding balance in HAC was $122,068,000 and $129,121,000 at October 31, 2019 and October 31, 2018, respectively.

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, 2019, the outstanding Military Housing notes receivable was $43,530,000.

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, 2019, the outstanding NYCHA notes receivable relating to the 2013 Series A Bonds was $111,950,000.

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, 2019, the outstanding NYCHA notes receivable relating to the 2013 Series B Bonds was $396,981,000.

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 covered all of the City's cash flows 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.

As of October 31, 2019, the balance in the Sheridan Trust II was $14,401,000. This balance is included under "Loan Participation Receivable – The City of New York" which totaled $1,075,529,000 at October 31, 2019. In each case, the "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").

Note 7: Other Receivables

Other Receivables of $28,106,000 represent mortgage related fees, servicing fees receivable, Corporate Services Fund loans not secured by mortgages on the properties, bond interest receivable from HUD, and interest and servicing fees receivable on Department of Housing Preservation and Development ("HPD") loans serviced (but not owned) by HDC.

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 $41,668,000 during this past fiscal year. As of October 31, 2019, the Corporation received a total of $172,989,000 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 fiscal year 2019, $1,767,000 was amortized and was recorded as a non-operating expense. The unamortized value of the 2011 Participation Interest was $603,000 at October 31, 2019.

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.

At October 31, 2019, the fair values of all the interest rate caps were:

Trade Date	Bonds	Current Notional Amount	Counterparty	Effective Date	Termination Date	Cap Strike	Cap Ceiling	Fair Value at 10/31/19
11/29/2005	2008 Series K, as well as similar outstanding variable rate bonds	$138,715,000	Goldman Sachs	12/2/2005	11/1/2032	7.35%	14.85%	$27,000
10/23/2014	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%	170,000
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%	17,000
Total Caps		$378,540,000						$214,000

(B) Interest Rate Swaps

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

As of October 31, 2019, 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. The fair value recorded was derived from a third-party source as listed below as of October 31, 2019.

Description	Classification	Fair Value Amount	Classification	Notional Amount
Cash flow hedges:				
Pay-Fixed interest rate swap	Deferred Outflow	($2,401,000)	Debt	$65,630,000
Pay-Fixed interest rate swap	Deferred Outflow	(3,982,000)	Debt	85,000,000
Pay-Fixed interest rate swap	Deferred Outflow	(21,000)	Debt	50,000,000
Pay-Fixed interest rate swap	Deferred Outflow	(6,432,000)	Debt	54,126,000
Pay-Fixed interest rate swap	Deferred Outflow	(15,756,000)	Debt	100,000,000
Pay-Fixed interest rate swap	Deferred Outflow	(11,098,000)	Debt	75,000,000
Pay-Fixed interest rate swap	Deferred Outflow	(8,356,000)	Debt	75,000,000
Pay-Fixed interest rate swap	Deferred Outflow	(20,244,000)	Debt	184,000,000
Pay-Fixed interest rate swap	Deferred Outflow	(14,291,000)	Debt	98,895,000
Pay-Fixed interest rate swap	Deferred Outflow	(20,326,000)	Debt	135,460,000
Total Swaps		($102,907,000)		$923,111,000

At October 31, 2019, the total fair value of the interest rate swaps amounted to ($102,907,000) 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, 2019.

Trade Date	Type	Objective	Notional Amount	Counter-party	Term	Effective Date	Termination Date	Counter-party Rating Moody's /S&P
7/26/2016	Pay-Fixed interest rate swap	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	$65,630,000	Wells Fargo	Pay 2.24%; receive 100% 3M LIBOR; CXL-8/1/2031	8/1/2019	5/1/2047	Aa2/A+
11/2/2016	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	Pay 2.029%; receive 100% 3M LIBOR; 7.50% Ceiling	5/1/2018	11/1/2035	A2/A
4/4/2017	Pay-Fixed interest rate swap	Hedge of changes in cash flows for 2017 Series A-3 bonds	50,000,000	PNC Bank	Pay 1.2028%; receive 70% 1M LIBOR	6/1/2017	8/1/2020	A2/A
7/5/2017	Pay-Fixed interest rate swap	Hedge of changes in cash flows for 2017 Series C-4 bonds (FFB Lexington Gardens)	54,126,000	Wells Fargo	Pay 2.984%; receive 100% 3M LIBOR; CXL-2/1/2033	2/1/2021	5/1/2048	Aa2/A+
4/5/2018	Pay-Fixed interest rate swap	Hedge of changes in cash flows for 2018 Series B-2 bonds	100,000,000	PNC Bank	Pay 3.0949%; receive 100% 3M LIBOR; CXL-2/1/2034	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	75,000,000	Wells Fargo	Pay 3.022%; receive 100% 3M LIBOR	2/1/2019	2/1/2036	Aa2/A+

Trade Date	Type	Objective	Notional Amount	Counter-party	Term	Effective Date	Termination Date	Counter-party Rating Moody's /S&P
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	8/1/2019	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	Pay 2.538%; receive 77.5% 1M LIBOR CXL-12/1/2038	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 2.5017%; receive 77.5% 1M LIBOR CXL-12/1/2038	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			$923,111,000					

Credit Risk: HDC is exposed to credit risk on hedging derivative instruments. To mitigate the risk, HDC requires the swap be collateralized by the counterparty if the counterparty's credit rating falls below Baa1/BBB+. At October 31, 2019, the counterparty ratings 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 Aa1 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.

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, 2019, the balance of the unamortized deferred loss on early retirement of debt was $4,920,000. This loss was covered by NYCHA as a part of this transaction.

(D) Pension

At October 31, 2019, the Corporation's pension contribution after the measurement date was $2,128,000. The Corporation recorded a net increase in Deferred Outflows of Resources in the amount of $1,676,000 (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 $3,264,000 and $1,588,000 at October 31, 2019 and at October 31, 2018, respectively. The Corporation recorded a net increase in Deferred Inflows of Resources in the amount of $381,000. 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 $1,737,000 and $1,356,000 at October 31, 2019 and at October 31, 2018, respectively.

(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 $1,025,000 and Deferred Inflows of Resources of $8,785,000 related to OPEB as of October 31, 2019 (see Note 14 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 $14.5 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, 2019, the limit on the aggregate principal amount outstanding was increased from $13.5 billion to $14.5 billion.

<u>Bond Programs</u>

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, 2019, the Corporation had bonds outstanding in the aggregate principal amount of $12,109,829,000. All of 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*", "*D. Liberty Bond Program*", "*E. Capital Fund Revenue Bond Program*" and, "*F. Pass-Through Revenue Bond Program*" provide security under the General Resolution, and none of the bonds under these programs are secured by the General Resolution.

A. Multi-Family Mortgage Revenue Bond Program. 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.

B. Military Housing Revenue Bond Program. 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.

C. Housing Revenue Bond Program. 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.

D. Liberty Bond Program. 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".

E. Capital Fund Revenue Bond Program. 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.

F. Pass-Through Revenue Bond Program. 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.

Changes in Bonds Payable:
(in thousands)

The summary of changes in Bonds Payable was as follows:

Bonds Payable outstanding at October 31, 2018	$11,274,873
Bonds Issued	2,216,745
Bond Principal Retired	(1,356,226)
Net Premium/Discount on Bonds Payable	(3,959)
Bonds Payable outstanding at October 31, 2019	$12,131,433

Details of changes in HDC bonds payable for the year ended October 31, 2019 were as follows:

Description of Bonds as Issued	Balance at Oct. 31, 2018	Issued	Retired	Balance at Oct. 31, 2019
(in thousands)				
MULTI-FAMILY MORTGAGE REVENUE BOND PROGRAM:				
Multi-Family Rental Housing Revenue Bonds – Rental Projects; Fannie Mae or Freddie Mac Enhanced				
1999 Series A (AMT) Brittany Development Project – 1.14% to 2.44% Variable Rate Bonds due upon demand through 2029	$49,300	$ —	($700)	$48,600
2000 Series A (AMT) Related-West 89th Street Development – 1.16% to 2.21% Variable Rate Bonds due upon demand through 2029	53,000	—	—	53,000
2001 Series A Queenswood Refunding – 1.12% to 2.39% Variable Rate Bonds due upon demand through 2031	10,600	—	(400)	10,200
2001 Series A (AMT) Related-Lyric Development – 1.14% to 2.44% Variable Rate Bonds due upon demand through 2031	85,000	—	—	85,000

Description of Bonds as Issued	Balance at Oct. 31, 2018	Issued	Retired	Balance at Oct. 31, 2019
(in thousands)				
2001 Series B (Federally Taxable) Related-Lyric Development – 1.83% to 2.45% Variable Rate Bonds due upon demand through 2031	3,700	—	(300)	3,400
2002 Series A (AMT) The Foundry – 1.14% to 2.44% Variable Rate Bonds due upon demand through 2032	55,100	—	—	55,100
2003 Series A (AMT) Related-Sierra Development – 1.14% to 2.44% Variable Rate Bonds due upon demand through 2033	56,000	—	—	56,000
2004 Series A (AMT) Related-Westport Development – 1.14% to 2.44% Variable Rate Bonds due upon demand through 2034	110,000	—	—	110,000
2004 Series B (Federally Taxable) Related-Westport Development – 1.83% to 2.45% Variable Rate Bonds due upon demand through 2034	10,800	—	(1,000)	9,800
2005 Series A Royal Charter Properties – 1.12% to 2.39% Variable Rate Bonds due upon demand through 2035	89,200	—	(1,000)	88,200
2005 Series A (AMT) Atlantic Court Apartments – 1.14% to 2.44% Variable Rate Bonds due upon demand through 2035	83,700	—	—	83,700
2005 Series B (Federally Taxable) Atlantic Court Apartments – 1.83% to 2.45% Variable Rate Bonds due upon demand through 2035	6,500	—	(2,000)	4,500
2005 Series A The Nicole Development – Variable Rate Bonds remarketed to 3.42% Fixed Rate Term Bonds due 2035	54,600	—	—	54,600
2005 Series B (Federally Taxable) The Nicole Development – 2.22% to 2.45% Variable Rate Bonds due upon demand through 2035	1,600	—	(1,600)	—
2006 Series A (AMT) Rivereast Apartments – 1.15% to 2.42% 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	14,675	—	(680)	13,995

Description of Bonds as Issued	Balance at Oct. 31, 2018	Issued	Retired	Balance at Oct. 31, 2019
(in thousands)				
2007 Series A (AMT) Ocean Gate Development – 1.14% to 2.45% 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	8,210	—	(965)	7,245
2007 Series A (AMT) 155 West 21st Street Apartments – 1.16% to 2.21% Variable Rate Bonds due upon demand through 2037	37,900	—	—	37,900
2007 Series B (Federally Taxable) 155 West 21st Street Apartments – 1.88% to 2.47% Variable Rate Bonds due upon demand through 2037	9,100	—	(900)	8,200
2008 Series A (AMT) Linden Plaza – 1.14% to 2.45% Variable Rate Bonds due upon demand through 2043	58,235	—	(1,995)	56,240
2009 Series A Gateway Apartments – 2.65% to 4.50% Fixed Rate Term Bonds due 2025	20,025	—	(325)	19,700
2009 Series A The Balton – 1.08% to 2.42% Variable Rate Bonds due upon demand through 2049	29,750	—	—	29,750
2009 Series A Lexington Courts – 1.07% to 2.37% Variable Rate Bonds due upon demand through 2039	17,600	—	(1,000)	16,600
2014 Series A-1 NYCHA Triborough Preservation Development – 0.55% to 3.95% Fixed Rate Serial and Term Bonds due 2044	223,775	—	(3,435)	220,340
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 – 1.14% to 2.44% Variable Rate Bonds due upon demand through 2034	19,100	—	(500)	18,600
2004 Series A (AMT) Aldus Street Apartments – 1.15% to 2.42% Variable Rate Bonds due upon demand through 2037	8,100	—	—	8,100
2004 Series A (AMT) 941 Hoe Avenue Apartments – 1.15% to 2.42% Variable Rate Bonds due upon demand through 2037	6,660	—	—	6,660

Description of Bonds as Issued	Balance at Oct. 31, 2018	Issued	Retired	Balance at Oct. 31, 2019
(in thousands)				
2004 Series A (AMT) Peter Cintron Apartments – 1.15% to 2.42% Variable Rate Bonds due upon demand through 2037	7,840	—	—	7,840
2004 Series A (AMT) State Renaissance Court – 1.15% to 2.42% Variable Rate Bonds due upon demand through 2037	35,200	—	—	35,200
2004 Series A (AMT) Louis Nine Boulevard Apartments – 1.16% to 2.21% Variable Rate Bonds due upon demand through 2037	7,300	—	—	7,300
2004 Series A (AMT) Courtlandt Avenue Apartments – 1.20% to 2.21% Variable Rate Bonds due upon demand through 2037	7,905	—	—	7,905
2004 Series A (AMT) Ogden Avenue Apartments – 1.16% to 2.43% Variable Rate Bonds due upon demand through 2038	4,760	—	—	4,760
2004 Series A (AMT) Nagle Courtyard Apartments – 1.16% to 2.43% Variable Rate Bonds due upon demand through 2038	4,200	—	—	4,200
2005 Series A (AMT) Morris Avenue Apartments – 1.15% to 2.42% Variable Rate Bonds due upon demand through 2038	14,700	—	—	14,700
2005 Series A (AMT) Vyse Avenue Apartments – 1.16% to 2.43% Variable Rate Bonds due upon demand through 2038	4,335	—	—	4,335
2005 Series A (AMT) 33 West Tremont Avenue Apartments – 1.16% to 2.43% Variable Rate Bonds due upon demand through 2038	3,490	—	—	3,490
2005 Series A (AMT) Ogden Avenue Apartments II – 1.14% to 2.45% Variable Rate Bonds due upon demand through 2038	2,500	—	—	2,500
2005 Series A (AMT) White Plains Courtyard Apartments – 1.14% to 2.45% Variable Rate Bonds due upon demand through 2038	4,900	—	—	4,900
2005 Series A (AMT) Highbridge Apartments – 1.24% to 1.81% Variable Rate Bonds due upon demand through 2039	13,600	—	(13,600)	—

Description of Bonds as Issued	Balance at Oct. 31, 2018	Issued	Retired	Balance at Oct. 31, 2019
(in thousands)				
2005 Series A (AMT) 89 Murray Street Development – 1.14% to 2.44% Variable Rate Bonds due upon demand through 2039	49,800	—	—	49,800
2005 Series A (AMT) 270 East Burnside Avenue Apartments – 1.16% to 2.21% Variable Rate Bonds due upon demand through 2039	6,400	—	—	6,400
2006 Series A (AMT) Reverend Ruben Diaz Gardens Apartments – 1.15% to 2.42% Variable Rate Bonds due upon demand through 2038	6,400	—	—	6,400
2006 Series A (AMT) Villa Avenue Apartments – 1.15% to 2.42% Variable Rate Bonds due upon demand through 2039	5,990	—	—	5,990
2006 Series A (AMT) Bathgate Avenue Apartments – 1.16% to 2.43% Variable Rate Bonds due upon demand through 2039	4,435	—	—	4,435
2006 Series A (AMT) Spring Creek Apartments I & II – 1.14% to 2.44% 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	11,735	—	(315)	11,420
2006 Series A (AMT) Markham Garden Apartments – 1.14% to 2.44% Variable Rate Bonds due upon demand through 2040	16,000	—	—	16,000
2008 Series A 245 East 124th Street – Variable Rate Bonds remarketed to 2.10% Fixed Rate Term Bonds due 2046	35,400	—	—	35,400
2008 Series A Bruckner by the Bridge – 1.10% to 2.38% Variable Rate Bonds due upon demand through 2048	36,800	—	—	36,800
2008 Series A Hewitt House Apartments – 1.13% to 2.25% Variable Rate Bonds due upon demand through 2048	4,100	—	—	4,100
2010 Series A Eliot Chelsea Development – 1.07% to 2.37% Variable Rate Bonds due upon demand through 2043	40,750	—	—	40,750

Description of Bonds as Issued	Balance at Oct. 31, 2018	Issued	Retired	Balance at Oct. 31, 2019
(in thousands)				
2011 Series A (AMT) West 26th Street Development – 1.13% to 2.40% Variable Rate Bonds due upon demand through 2041	28,700	—	—	28,700
2011 Series B West 26th Street Development – 1.09% to 2.35% Variable Rate Bonds due upon demand through 2045	8,470	—	—	8,470
2012 Series A West 26th Street Development – 1.09% to 2.35% 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 – 1.20% to 2.17% Variable Rate Bonds due upon demand through 2036	67,000	—	—	67,000
2003 Series B (Federally Taxable) Related-Upper East – 1.95% to 2.55% Variable Rate Bonds due upon demand through 2036	3,000	—	—	3,000
2004 Series A (AMT) Manhattan Court Development – 1.15% to 2.41% Variable Rate Bonds due upon demand through 2036	17,500	—	—	17,500
2004 Series A (AMT) East 165th Street Development – 1.15% to 2.41% Variable Rate Bonds due upon demand through 2036	7,665	—	—	7,665
2004 Series A (AMT) Parkview Apartments – 1.17% to 2.22% Variable Rate Bonds due upon demand through 2036	5,935	—	—	5,935
2005 Series A (AMT) 2007 LaFontaine Avenue Apartments – 1.20% to 2.42% Variable Rate Bonds due upon demand through 2037	3,825	—	—	3,825
2005 Series A (AMT) La Casa del Sol Apartments – 1.15% to 2.45% Variable Rate Bonds due upon demand through 2037	4,250	—	(100)	4,150
2005 Series A (AMT) 15 East Clarke Place Apartments – 1.16% to 2.21% Variable Rate Bonds due upon demand through 2037	5,330	—	(100)	5,230

Description of Bonds as Issued	Balance at Oct. 31, 2018	Issued	Retired	Balance at Oct. 31, 2019
(in thousands)				
2005 Series A (AMT) Urban Horizons II Development – 1.15% to 2.45% Variable Rate Bonds due upon demand through 2038	4,965	—	(100)	4,865
2005 Series A (AMT) 1090 Franklin Avenue Apartments – 1.15% to 2.45% Variable Rate Bonds due upon demand through 2037	2,320	—	—	2,320
2005 Series A (AMT) Parkview II Apartments – 1.15% to 2.45% Variable Rate Bonds due upon demand through 2037	4,255	—	—	4,255
2006 Series A (AMT) Granville Payne Apartments – 1.15% to 2.41% Variable Rate Bonds due upon demand through 2039	5,560	—	—	5,560
2006 Series A (AMT) Beacon Mews Development – 1.16% to 2.21% Variable Rate Bonds due upon demand through 2039	23,500	—	—	23,500
2006 Series A (AMT) Granite Terrace Apartments – 1.16% to 2.42% Variable Rate Bonds due upon demand through 2038	4,060	—	—	4,060
2006 Series A (AMT) Intervale Gardens Apartments – 1.16% to 2.42% Variable Rate Bonds due upon demand through 2038	3,115	—	—	3,115
2006 Series A (AMT) 500 East 165th Street Apartments – 1.15% to 2.44% Variable Rate Bonds due upon demand through 2039	7,255	—	—	7,255
2006 Series A (AMT) 1405 Fifth Avenue Apartments – 1.15% to 2.41% Variable Rate Bonds due upon demand through 2039	14,190	—	—	14,190
2007 Series A (AMT) 550 East 170th Street Apartments – 1.19% to 2.41% Variable Rate Bonds due upon demand through 2042	5,500	—	—	5,500
2007 Series A (AMT) Susan's Court – 1.15% to 2.45% Variable Rate Bonds due upon demand through 2039	24,000	—	—	24,000
2007 Series A (AMT) The Dorado Apartments – 1.15% to 2.45% Variable Rate Bonds due upon demand through 2040	3,470	—	—	3,470

Description of Bonds as Issued	Balance at Oct. 31, 2018	Issued	Retired	Balance at Oct. 31, 2019
(in thousands)				
2007 Series A (AMT) Boricua Village Apartments Site A-2 – 1.17% to 2.22% Variable Rate Bonds due upon demand through 2042	4,250	—	—	4,250
2007 Series A (AMT) Boricua Village Apartments Site C – 1.16% to 2.21% Variable Rate Bonds due upon demand through 2042	6,665	—	—	6,665
2007 Series A (AMT) Cook Street Apartments – 1.15% to 2.45% Variable Rate Bonds due upon demand through 2040	4,180	—	(100)	4,080
2008 Series A (AMT) Las Casas Development – 1.13% to 2.47% Variable Rate Bonds due upon demand through 2040	19,200	—	—	19,200
2010 Series A 101 Avenue D Apartments – 2.57% to 3.75% 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	64,340	—	(800)	63,540
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 – 3.40% to 3.91% 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
2019 Series A 535 Carlton Avenue – 4.08% to 6.35% Term Rate Term Bonds due 2027	—	73,000	—	73,000
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

Description of Bonds as Issued	Balance at Oct. 31, 2018	Issued	Retired	Balance at Oct. 31, 2019
(in thousands)				
Total Multi-Family Mortgage Revenue Bonds	2,373,175	77,400	(31,915)	2,418,660
<u>MILITARY HOUSING REVENUE BOND PROGRAM:</u>				
2004 Series A (Federally Taxable) Class I & II Fort Hamilton Housing LLC Project – 5.60% to 6.72% Fixed Rate Term Bonds due 2049	43,995	—	(465)	43,530
Total Military Housing Revenue Bond Program	43,995	—	(465)	43,530
<u>HOUSING REVENUE BOND PROGRAM:</u>				
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	5,185	—	(1,200)	3,985
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
2002 Series C (Federally Taxable) – 2.45% to 2.77% Index Floating Rate Term Bonds due 2034	38,180	—	(1,325)	36,855
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 – Index Floating Rate Term Bonds remarketed to 3.50% Term Rate Term Bonds due 2046	100,000	—	—	100,000
2007 Series A (Federally Taxable) – 5.26% to 5.52% Fixed Rate Term Bonds due 2041	23,060	—	(475)	22,585

Description of Bonds as Issued	Balance at Oct. 31, 2018	Issued	Retired	Balance at Oct. 31, 2019
(in thousands)				
2008 Series C-2 (Federally Taxable) – 3.55% to 5.69% Fixed Rate Serial and Term Bonds due 2018	330	—	(330)	—
2008 Series E (Federally Taxable) – 2.45% to 2.77% Index Floating Rate Term Bonds due 2037	86,430	—	(2,065)	84,365
2008 Series F (Federally Taxable) – 2.45% to 2.77% Index Floating Rate Term Bonds due 2041	71,630	—	(1,325)	70,305
2008 Series J (Federally Taxable) – 2.86% to 3.35% Index Floating Rate Term Bonds due 2043	29,120	—	(520)	28,600
2008 Series K (Federally Taxable) – 2.86% to 3.35% Index Floating Rate Term Bonds due 2043	69,470	—	(2,915)	66,555
2008 Series M – 3.15% to 6.88% Fixed Rate Serial and Term Bonds due 2038	25,830	—	(25,830)	—
2009 Series A – 2.00% to 4.20% Fixed Rate Serial Bonds due 2019	870	—	(575)	295
2009 Series C-1 – 2.50% to 5.70% Fixed Rate Serial and Term Bonds due 2046	105,415	—	(105,415)	—
2009 Series F – 1.95% to 4.85% Fixed Rate Serial and Term Bonds due 2041	5,300	—	(5,300)	—
2009 Series I-1 (Federally Taxable) – 5.63% to 6.42% Fixed Rate Term Bonds due 2039	50,000	—	(50,000)	—
2009 Series I-2 (Federally Taxable) – 2.73% to 3.22% Index Floating Rate Term Bonds due 2039	25,000	—	(2,985)	22,015
2009 Series J – 0.70% to 4.80% Fixed Rate Serial and Term Bonds due 2036	18,835	—	(18,835)	—
2009 Series K – 1.95% to 4.95% Fixed Rate Serial and Term Bonds due 2039	67,515	—	(67,515)	—
2009 Series L-1 – 1.65% to 4.95% Fixed Rate Serial and Term Bonds due 2043	21,895	—	(415)	21,480
2009 Series M – 1.85% to 5.15% Fixed Rate Serial and Term Bonds due 2045	30,060	—	(30,060)	—
2010 Series A-1 – 3.35% to 4.90% Fixed Rate Serial and Term Bonds due 2041	25,325	—	—	25,325

Description of Bonds as Issued	Balance at Oct. 31, 2018	Issued	Retired	Balance at Oct. 31, 2019
(in thousands)				
2010 Series A-2 (Federally Taxable) – 3.67% to 4.97% Fixed Rate Term Bonds due 2019	600	—	(600)	—
2010 Series C – 1.50% to 4.95% Fixed Rate Serial and Term Bonds due 2047	13,700	—	(215)	13,485
2010 Series D-1-A – 1.60% to 5.00% Fixed Rate Serial and Term Bonds due 2042	29,695	—	(610)	29,085
2010 Series E – 0.80% to 3.85% Fixed Rate Serial and Term Bonds due 2019	1,305	—	(860)	445
2010 Series F – 1.70% to 4.75% Fixed Rate Serial and Term Bonds due 2030	3,130	—	(200)	2,930
2010 Series G – 0.40% to 4.75% Fixed Rate Serial and Term Bonds due 2041	33,960	—	(2,115)	31,845
2010 Series H (Federally Taxable) – 2.79% to 3.28% Index Floating Rate Term Bonds due 2040	28,695	—	(6,125)	22,570
2010 Series J-1 – 0.75% to 5.00% Fixed Rate Serial Bonds due 2022	10,215	—	(2,080)	8,135
2010 Series K-1 – 2.05% to 5.25% Fixed Rate Serial and Term Bonds due 2032	4,560	—	(170)	4,390
2010 Series L-1 – 2.35% to 5.00% Fixed Rate Serial and Term Bonds due 2026	9,990	—	(950)	9,040
2010 Series N – 0.60% to 4.25% Fixed Rate Serial Bonds due 2021	1,580	—	(560)	1,020
2011 Series B-1 – 0.50% to 3.65% Fixed Rate Serial and Term Bonds due 2018	315	—	(315)	—
2011 Series C – 2.25% to 4.50% Fixed Rate Serial and Term Bonds due 2022	1,190	—	(250)	940
2011 Series D – 0.28% to 3.37% Fixed Rate Serial and Term Bonds due 2020	1,555	—	(605)	950
2011 Series E – 1.40% to 4.93% Fixed Rate Serial and Term Bonds due 2036	15,145	—	(600)	14,545
2011 Series F-1 (Federally Taxable) – 0.29% to 3.47% Fixed Rate Serial Bonds due 2018	2,250	—	(2,250)	—

Description of Bonds as Issued	Balance at Oct. 31, 2018	Issued	Retired	Balance at Oct. 31, 2019
(in thousands)				
2011 Series F-2 (Federally Taxable) – 2.73% to 3.22% Index Floating Rate Term Bonds due 2040	48,355	—	(15,810)	32,545
2011 Series F-3 (Federally Taxable) – 2.73% to 3.22% Index Floating Rate Term Bonds due 2040	12,540	—	(1,635)	10,905
2011 Series G-2-A – 0.35% to 3.10% Fixed Rate Serial and Term Bonds due 2021	12,650	—	(3,540)	9,110
2011 Series H-2-A – 1.10% to 4.40% Fixed Rate Serial and Term Bonds due 2031	18,235	—	(1,275)	16,960
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	6,340	—	(1,320)	5,020
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	4,115	—	(860)	3,255
2012 Series B (Federally Taxable) – 0.66% to 3.93% Fixed Rate Serial Bonds due 2025	25,590	—	(3,075)	22,515
2012 Series D-1-A – 0.80% to 4.30% Fixed Rate Serial and Term Bonds due 2045	47,960	—	(255)	47,705
2012 Series D-1-B – 0.35% to 4.30% Fixed Rate Serial and Term Bonds due 2045	76,375	—	(2,055)	74,320
2012 Series E (Federally Taxable) – 0.34% to 4.40% Fixed Rate Serial and Term Bonds due 2032	55,875	—	(3,135)	52,740
2012 Series F – 0.80% to 3.90% Fixed Rate Serial and Term Bonds due 2045	37,300	—	(825)	36,475
2012 Series G – 0.95% to 3.90% Fixed Rate Serial and Term Bonds due 2045	30,435	—	(700)	29,735
2012 Series H – 0.25% to 1.60% Fixed Rate Serial Bonds due 2018	390	—	(390)	—
2012 Series I (Federally Taxable) – 0.40% to 4.49% Fixed Rate Serial and Term Bonds due 2044	53,145	—	(6,205)	46,940

Description of Bonds as Issued	Balance at Oct. 31, 2018	Issued	Retired	Balance at Oct. 31, 2019
(in thousands)				
2012 Series K-1-A – 0.45% to 4.00% Fixed Rate Serial and Term Bonds due 2045	90,175	—	(1,965)	88,210
2012 Series L-1 – 1.80% to 3.90% Fixed Rate Serial and Term Bonds due 2042	12,390	—	(85)	12,305
2012 Series L-2-A – 0.30% to 4.00% Fixed Rate Serial and Term Bonds due 2044	100,170	—	(570)	99,600
2012 Series L-2-B (AMT) – 2.30% to 3.60% Fixed Rate Serial and Term Bonds due 2026	2,060	—	(130)	1,930
2012 Series M-2 – 1.10% to 4.00% Fixed Rate Serial and Term Bonds due 2047	9,475	—	(190)	9,285
2012 Series M-3 – 1.40% to 4.65% Fixed Rate Serial and Term Bonds due 2047	10,225	—	(200)	10,025
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 Serial and Term Bonds due 2045	46,255	—	(2,100)	44,155
2013 Series D-1 (Federally Taxable) – 0.70% to 3.78% Fixed Rate Serial and Term Bonds due 2028	31,035	—	(2,525)	28,510
2013 Series D-2 (Federally Taxable) – 2.90% to 3.39% 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	38,070	—	(1,705)	36,365
2013 Series E-1-B – 0.75% to 4.95% Fixed Rate Term Bonds due 2043	14,060	—	—	14,060
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	28,830	—	(440)	28,390
2014 Series A – 0.20% to 4.35% Fixed Rate Serial and Term Bonds due 2044	6,655	—	(110)	6,545
2014 Series B-1 (Federally Taxable) – 0.25% to 3.69% Fixed Rate Serial Bonds due 2024	34,675	—	(8,850)	25,825

Description of Bonds as Issued	Balance at Oct. 31, 2018	Issued	Retired	Balance at Oct. 31, 2019
(in thousands)				
2014 Series B-2 (Federally Taxable) – 2.74% to 3.23% 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	96,595	—	(1,830)	94,765
2014 Series C-1-C – 1.10% to 4.00% Fixed Rate Serial and Term Bonds due 2047	12,425	—	(240)	12,185
2014 Series D-1 (Federally Taxable) – 0.40% to 4.10% Fixed Rate Serial and Term Bonds due 2027	24,030	—	(2,865)	21,165
2014 Series D-2 (Federally Taxable) – 2.74% to 3.23% Index Floating Rate Term Bonds due 2037	38,000	—	—	38,000
2014 Series E – 2.90% to 3.75% Fixed Rate Serial 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	252,030	—	(44,750)	207,280
2014 Series G-2 – 0.25% to 4.00% Fixed Rate Serial and Term Bonds due 2048	3,355	—	(65)	3,290
2014 Series H-1 (Federally Taxable) – 0.76% to 4.32% Fixed Rate Serial and Term Bonds due 2035	69,195	—	(2,925)	66,270
2014 Series H-2 (Federally Taxable) – 2.72% to 3.21% Index Floating Rate Term Bonds due 2044	50,000	—	—	50,000
2014 Series I – 1.45% Fixed Rate Term Bonds due 2018	3,260	—	(3,260)	—
2015 Series A-1 – 0.70% to 4.00% Fixed Rate Serial and Term Bonds due 2048	9,535	—	(95)	9,440
2015 Series A-2 – 2.25% to 3.75% Fixed Rate Serial and Term Bonds due 2035	6,150	—	—	6,150
2015 Series B-1 (Federally Taxable) – 0.60% to 3.53% Fixed Rate Serial Bonds due 2027	23,530	—	(3,315)	20,215
2015 Series B-2 (Federally Taxable) – 2.65% to 3.14% 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	113,245	—	(50,105)	63,140

Description of Bonds as Issued	Balance at Oct. 31, 2018	Issued	Retired	Balance at Oct. 31, 2019
(in thousands)				
2015 Series D-1-B – 0.85% to 4.35% Fixed Rate Serial and Term Bonds due 2048	267,750	—	(131,860)	135,890
2015 Series D-2 – 0.45% to 4.00% Fixed Rate Serial and Term Bonds due 2035	56,555	—	(6,520)	50,035
2015 Series D-3 – 1.21% to 2.25% Variable Rate Term Bonds due 2020	15,000	—	(15,000)	—
2015 Series D-4 – 1.21% to 1.70% Variable Rate Term Bonds due 2020	13,500	—	(13,500)	—
2015 Series E-1 – 0.30% to 4.05% Fixed Rate Serial and Term Bonds due 2047	36,150	—	(965)	35,185
2015 Series E-2 – 0.30% to 3.75% Fixed Rate Serial and Term Bonds due 2035	5,920	—	(720)	5,200
2015 Series G-1 (SNB) – 0.30% to 3.95% Fixed Rate Serial and Term Bonds due 2049	129,100	—	(58,085)	71,015
2015 Series G-2 (SNB) – 1.45% to 3.95% Fixed Rate Serial and Term Bonds due 2049	47,160	—	(14,440)	32,720
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
2015 Series K (SNB) – 1.15% Fixed Rate Term Bonds due 2019	3,755	—	(3,755)	—
2016 Series A (SNB) – 0.35% to 3.75% Fixed Rate Serial and Term Bonds due 2047	62,355	—	(25,555)	36,800
2016 Series D (SNB) – 0.50% to 3.75% Fixed Rate Serial and Term Bonds due 2047	52,320	—	(1,465)	50,855
2016 Series C-1-A (SNB) – 1.20% to 3.45% Fixed Rate Serial and Term Bonds due 2050	119,330	—	—	119,330
2016 Series C-1-B (SNB) – 1.38% to 3.40% Fixed Rate Term Bonds due 2047	61,020	—	—	61,020
2016 Series C-2 (SNB) – 1.45% Term Rate Term Bonds due 2020	32,820	—	(6,445)	26,375

Description of Bonds as Issued	Balance at Oct. 31, 2018	Issued	Retired	Balance at Oct. 31, 2019
(in thousands)				
2016 Series E-1-A (SNB) – 0.40% to 5.00% Fixed Rate Serial and Term Bonds due 2047	80,810	—	(28,070)	52,740
2016 Series E-1-B (SNB) – 1.30% to 3.40% Fixed Rate Term Bonds due 2047	81,340	—	(43,485)	37,855
2016 Series E-2 (SNB) – 1.25% Fixed Rate Term Bonds due 2019	48,235	—	(48,235)	—
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	8,120	—	(45)	8,075
2016 Series G-1(Federally Taxable) (SNB) – 0.85% to 2.82% Fixed Rate Serial Bonds due 2027	19,965	—	(3,775)	16,190
2016 Series G-2 (Federally Taxable) (SNB) – 2.76% to 3.25% 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	—	—	111,095
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	—	—	25,185
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	—	—	65,320
2016 Series J-1 (Federally Taxable) (SNB) – 2.93% to 3.42% Index Floating Rate Term Bonds due 2052	161,500	—	—	161,500
2016 Series J-2 (SNB) – 2.93% to 3.42% 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	—	—	51,610

Description of Bonds as Issued	Balance at Oct. 31, 2018	Issued	Retired	Balance at Oct. 31, 2019
(in thousands)				
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	—	—	48,880
2017 Series A-2-B (SNB) – 1.90% Fixed Rate Term Bonds due 2021	11,285	—	—	11,285
2017 Series A-3 (SNB) – 1.96% to 2.30% Index Floating Rate Term Bonds due 2021	50,000	—	—	50,000
2017 Series B-1 (Federally Taxable) (SNB) – 1.60% to 3.81% Fixed Rate Serial and Term Bonds due 2029	24,500	—	(2,215)	22,285
2017 Series B-2 (Federally Taxable) (SNB) – 2.68% to 3.17% 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	—	—	40,000
2017 Series C-3-B (SNB) – 1.70% Fixed Rate Term Bonds due 2021	40,000	—	—	40,000
2017 Series C-4 (SNB) – 1.11% to 2.25% 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	—	—	3,535
2017 Series G-1 (SNB) – 1.15% to 3.85% Fixed Rate Serial and Term Bonds due 2057	197,140	—	(1,610)	195,530
2017 Series G-2 (SNB) – 2.00% Fixed Rate Term Bonds due 2057	101,330	—	—	101,330
2017 Series G-3 (SNB) – 1.09% to 2.35% Variable Rate Term Bonds due 2057	85,950	—	—	85,950

Description of Bonds as Issued	Balance at Oct. 31, 2018	Issued	Retired	Balance at Oct. 31, 2019
(in thousands)				
2018 Series A-1 (SNB) – 1.55% to 3.90% Fixed Rate Serial and Term Bonds due 2048	50,730	—	(375)	50,355
2018 Series A-2 (SNB) – 1.70% Fixed Rate Term Bonds due 2047	15,920	—	(15,920)	—
2018 Series B-1 (Federally Taxable) (SNB) – 2.32% to 3.65% Fixed Rate Serial Bonds due 2028	65,475	—	(65)	65,410
2018 Series B-2 (Federally Taxable) (SNB) – 2.70% to 3.19% Index Floating Rate Term Bonds due 2046	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
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 Term Bonds due 2022	8,615	—	—	8,615
2018 Series D (Federally Taxable) (SNB) – 3.26% to 4.10% Fixed Rate Serial and Term Bonds due 2038	75,000	—	—	75,000
2018 Series E-1 (Draper Hall) – 1.25% to 4.00% Fixed Rate Serial and Term Bonds due 2048	18,230	—	(670)	17,560
2018 Series F (SNB) – 3.20% to 3.80% Fixed Rate Serial and Term Bonds due 2047	25,425	—	—	25,425
2018 Series G – 1.50% Term Rate Term Bonds due 2019	65,325	—	(65,325)	—
2018 Series E-2 (Stanley Commons) – 1.25% to 4.00% Fixed Rate Serial and Term Bonds due 2048	9,495	—	(345)	9,150
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
2018 Series J – 1.80% Term Rate Term Bonds due 2048	42,795	—	(42,795)	—

Description of Bonds as Issued	Balance at Oct. 31, 2018	Issued	Retired	Balance at Oct. 31, 2019
(in thousands)				
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	—	5,760	(50)	5,710
2018 Series E-4 (MHANY) – 1.30% to 4.05% Fixed Rate Serial and Term Bonds due 2049	—	5,000	—	5,000
2018 Series K (SNB) – 1.75% to 4.20% Fixed Rate Serial and Term Bonds due 2058	—	271,585	—	271,585
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	—	114,670
2019 Series A-3-B (SNB) – 3.90% to 4.05% Fixed Rate Term Bonds due 2054	—	35,100	—	35,100
2019 Series A-4 (SNB) – 1.07% to 2.38% 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	—	112,635
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 C – 1.63% Term Rate Term Bonds due 2049	—	105,435	(105,435)	—

Description of Bonds as Issued	Balance at Oct. 31, 2018	Issued	Retired	Balance at Oct. 31, 2019
(in thousands)				
2019 Series D-1 (Prospect Plaza III) – 1.30% to 3.80% Fixed Rate Serial and Term Bonds due 2049	—	7,390	—	7,390
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) – 1.07% to 1.94% Variable Rate Term Bonds due 2059	—	45,000	—	45,000
2019 Series F (Federally Taxable) (SNB) – 2.02% to 3.77% Fixed Rate Serial and Term Bonds due 2044	—	175,000	—	175,000
2019 Series G-1-A (SNB) – 1.10% to 2.25% Fixed Rate Serial Bonds due 2031	—	79,380	—	79,380
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 – 1.69% Index Floating Rate Term Bonds due 2052	—	42,910	—	42,910
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	30,730	—	(3,580)	27,150
2013 Series A (Federally Taxable) Secured Mortgage Revenue Bonds – 0.48% to 5.34% Fixed Rate Serial and Term Bonds due 2035	33,730	—	(1,845)	31,885
2017 Series A-1 (Federally Taxable) (SNB) Secured Mortgage Revenue Bonds – 1.37% to 3.48% Fixed Rate Serial Bonds due 2029	24,600	—	(2,180)	22,420
2017 Series A-2 (Federally Taxable) (SNB) Secured Mortgage Revenue Bonds – 2.66% to 3.15% Index Floating Rate Term Bonds due 2041	39,825	—	—	39,825

Description of Bonds as Issued	Balance at Oct. 31, 2018	Issued	Retired	Balance at Oct. 31, 2019
(in thousands)				
Federal New Issue Bond Program (NIBP)				
2009 Series 1-2 HRB (NIBP) – 3.16% Fixed Rate Term Bonds due 2043	62,230	—	(62,230)	—
2009 Series 1-5-A HRB (NIBP) – 2.47% Fixed Rate Term Bonds due 2048	158,800	—	(46,230)	112,570
2009 Series 1-5-B HRB (NIBP) (AMT) – 2.47% Fixed Rate Term Bonds due 2041	30,290	—	(10,180)	20,110
2009 Series 2-5 HRB (NIBP) – 2.47% Fixed Rate Term Bonds due 2048	32,500	—	(16,750)	15,750
Total Housing Revenue Bond Program	7,575,105	2,139,345	(1,284,710)	8,429,740
<u>LIBERTY BOND PROGRAM:</u>				
Multi-Family Mortgage Revenue Bonds				
2005 Series A 90 Washington Street – 1.10% to 2.38% Variable Rate Bonds due upon demand through 2035	74,800	—	—	74,800
2006 Series A 90 West Street – 1.13% to 2.18% Variable Rate Bonds due upon demand through 2036	104,000	—	—	104,000
2006 Series B (Federally Taxable) 90 West Street – 1.88% to 2.45% Variable Rate Bonds due upon demand through 2036	7,200	—	(500)	6,700
2006 Series A - 2 Gold Street – 1.13% to 2.18% Variable Rate Bonds due upon demand through 2036	162,000	—	—	162,000
2006 Series B (Federally Taxable) - 2 Gold Street – 1.88% to 2.47% Variable Rate Bonds due upon demand through 2036	34,200	—	(3,500)	30,700
2006 Series A 201 Pearl Street – 1.13% to 2.18% Variable Rate Bonds due upon demand through 2041	65,000	—	—	65,000
2006 Series B (Federally Taxable) 201 Pearl Street – 1.88% to 2.47% Variable Rate Bonds due upon demand through 2041	21,800	—	(700)	21,100
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	672,900	—	(4,700)	668,200

Description of Bonds as Issued	Balance at Oct. 31, 2018	Issued	Retired	Balance at Oct. 31, 2019
(in thousands)				
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	122,400	—	(15,095)	107,305
2013 Series B-1 Capital Fund Program – 2.00% to 5.25% Fixed Rate Serial Bonds due 2033	276,070	—	(18,345)	257,725
2013 Series B-2 Capital Fund Program – 5.00% to 5.25% Fixed Rate Serial Bonds due 2032	122,170	—	—	122,170
Total Capital Fund Program Revenue Bonds	520,640	—	(33,440)	487,200
Pass-Through Revenue Bond Program				
2014 Series A (Federally Taxable) – 3.05% Fixed Rate Term Bonds due 2036	4,348	—	(129)	4,219
2017 Series A (Federally Taxable) (SNB) – 3.10% Fixed Rate Term Bonds due 2046	59,147	—	(867)	58,280
Total Pass-Through Revenue Bond Program	63,495	—	(996)	62,499
Total Bonds Payable Prior to Net Premium Unamortized (Discount) on Bonds Payables	11,249,310	2,216,745	(1,356,226)	12,109,829
Net Premium (Discount) on Bonds Payables	25,563	—	(3,959)	21,604
Total Bonds Payable (Net)	$11,274,873	$2,216,745	($1,360,185)	$12,131,433

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 2019

On December 19, 2018, the variable rate Multi-Family Housing Revenue Bonds, 2006 Series J-1 (Avalon Morningside Apartments) which were remarketed previously on September 15, 2010 and July 13, 2012 and had bonds outstanding in the amount of $100,000,000, were again remarketed. In connection with the remarketing, the term rate Multi-Family Housing Revenue Bonds, 2018 Series N (Federally Taxable) (Avalon Morningside Apartments) were issued in the amount of $12,500,000. The funds were used to reimburse the project's equity investors and to pay for certain other related costs.

On December 26, 2018, the fixed rate Multi-Family Housing Revenue Bonds, 2018 Series E-3, were issued in the amount of $5,760,000 to refund the Multi-Family Mortgage Revenue Debt Obligations (La Casa Del Mundo Portfolio) as the project converted to permanent status in December 2018.

On December 26, 2018, the fixed rate Multi-Family Housing Revenue Bonds, 2018 Series E-4, were issued in the amount of $5,000,000 to refund the Multi-Family Mortgage Revenue Debt Obligations (MHANY Portfolio) as the project converted to permanent status in December 2018.

On December 26, 2018, three Multi-Family Housing Revenue Bonds series were issued in an amount totaling $455,585,000. The fixed rate 2018 Series K Bonds were issued in the amount of $271,585,000, the term rate 2018 Series L-1 Bonds were issued in the amount of $125,000,000, and the term rate 2018 Series L-2 Bonds were issued in the amount of $59,000,000. The 2018 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 January 10, 2019, the variable rate Multi-Family Rental Housing Revenue Bonds, 2005 Series A (The Nicole) which had bonds outstanding in the amount of $54,600,000 were remarketed. In connection with the remarketing, the fixed rate Multi-Family Rental Housing Revenue Bonds, 2019 Series A (The Nicole), (Federally Taxable) were issued in the amount of $4,400,000. The funds were used to reimburse the project's equity investors and to pay for certain other related costs.

On February 6, 2019, the fixed rate Multi-Family Housing Revenue Bonds, 2019 Series A-2, were issued in the amount of $25,000,000 to refund certain outstanding bonds of the Corporation. In addition, the fixed rate 2019 Series A-1 Bonds in the amount of $85,000,000, which were sold on October 11, 2018 as forward delivery were delivered on February 6, 2019.

On March 13, 2019, two Multi-Family Housing Revenue Bonds series were issued in the amount totaling $149,770,000. The fixed rate 2019 Series A-3-A Bonds were issued in the amount of $114,670,000, and the fixed rate 2019 Series A-3-B Bonds were issued in the amount of $35,100,000. The 2019 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 April 18, 2019, five Multi-Family Housing Revenue Bonds series were issued in the amount totaling $312,315,000. The variable rate 2019 Series A-4 Bonds were issued in the amount of $30,000,000, the fixed rate 2019 Series B-1-A Bonds were issued in the amount of $112,635,000, the fixed rate 2019 Series B-1-B Bonds were issued in the amount of $36,435,000, the fixed rate 2019 Series B-2 Bonds were issued in the amount of $27,810,000, and the term rate 2019 Series C Bonds were issued in the amount of $105,435,000. The 2019 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 April 18, 2019, the fixed rate Multi-Family Housing Revenue Bonds, 2019 Series D-1, were issued in the amount of $7,390,000 to refund the Multi-Family Mortgage Revenue Debt Obligations (Prospect Plaza III) as the project converted to permanent status in February 2019.

On June 18, 2019, the term rate Multi-Family Mortgage Revenue Bonds, 2019 Series A, were issued in the amount of $73,000,000 to refund the Multi-Family Mortgage Revenue Debt Obligations (535 Carlton Avenue) as the project converted to permanent status in June 2019.

On June 25, 2019, the variable rate Multi-Family Housing Revenue Bonds, 2019 Series E-3, were issued in the amount of $45,000,000 to finance construction and permanent mortgage loans for certain developments and to finance other corporate purposes of the Corporation.

On June 27, 2019, three Multi-Family Housing Revenue Bonds series were issued in the amount totaling $665,595,000. The fixed rate 2019 Series E-1 Bonds were issued in the amount of $359,640,000, the fixed rate 2019 Series E-2 Bonds were issued in the amount of $130,955,000, and the fixed rate 2019 Series F (Federally Taxable) Bonds were issued in the amount of $175,000,000. The 2019 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 September 26, 2019, four Multi-Family Housing Revenue Bonds series were issued in the amount totaling $327,520,000. The fixed rate 2019 Series G-1-A Bonds were issued in the amount of $79,380,000, the fixed rate 2019 Series G-1-B Bonds were issued in the amount of $126,505,000, the fixed rate 2019 Series G-2 Bonds were issued in the amount of $8,460,000 and the term rate 2019 Series H Bonds were issued in the amount of $113,175,000. The 2019 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 October 29, 2019, the index floating rate Multi-Family Housing Revenue Bonds, 2019 Series I, were issued in the amount of $42,910,000 to finance construction and permanent mortgage loans for certain developments and to finance other corporate purposes of the Corporation.

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, as part of the Housing Finance Agency ("HFA") initiative using authority provided to the U.S. Treasury 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, the Corporation was allocated $500,000,000 by the U.S. Treasury to issue bonds under the New Issue Bond Program ("NIBP"). HDC has 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, 2019, portions of the NIBP Converted Bonds in the amount of $351,570,000 were redeemed and $148,430,000 remain outstanding.

Debt Obligations Program

In fiscal year 2019, the Corporation closed two new funding loan agreements with Citibank to finance mortgage loans under its Multi-Family Mortgage Revenue Debt Obligations Program. Under the agreements, Citibank 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". This debt obligation is subject to private activity bond volume cap.

At October 31, 2019, the aggregate principal amount outstanding under the Debt Obligations program was $296,663,000.

Changes in Debt Obligations Payable:
(in thousands)

Debt Obligation Payable outstanding at October 31, 2018	$415,137
Debt Obligation Issued	40,021
Debt Obligation Principal Retired	(158,495)
Debt Obligation Payable outstanding at October 31, 2019	$296,663

Details of changes in HDC debt obligations for the year ended October 31, 2019 were as follows:

Description of Debt Obligations as Issued	Balance at Oct. 31, 2018	Issued	Retired	Balance at Oct. 31, 2019
(in thousands)				
(variable rates cover fiscal year 2019)				
MFMR Debt Obligations (Harlem Dowling Residential) – 2.49% to 5.21% Fixed Rate due 2047	$5,084	$—	($94)	$4,990
MFMR Debt Obligations (535 Carlton Avenue) – 2.85% to 4.30% Variable Rate due 2058	67,739	5,261	(73,000)	—
MFMR Debt Obligations (38 Sixth Avenue) – 3.12% to 4.30% Variable Rate due 2059	83,240	—	—	83,240
MFMR Debt Obligations (La Casa del Mundo) – 4.62% Fixed Rate due 2048	18,898	312	(19,210)	—
MFMR Debt Obligations (MHANY Portfolio) – 5.21% Fixed Rate due 2049	31,954	596	(32,550)	—
MFMR Debt Obligations (MHANY Portfolio) (Federally Taxable) – 5.21% Fixed Rate due 2049	450	—	(450)	—

Description of Debt Obligations as Issued	Balance at Oct. 31, 2018	Issued	Retired	Balance at Oct. 31, 2019
(in thousands)				
(variable rates cover fiscal year 2019)				
MFMR Debt Obligations (Prospect Plaza Phase III) – 4.48% Fixed Rate due 2049	31,557	1,634	(33,191)	—
MFMR Debt Obligations (One Flushing) – 4.14% Fixed Rate due 2055	42,785	11,732	—	54,517
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) – 4.78% to 5.26% Variable Rate due 2052	—	20,486	—	20,486
Total Debt Obligations Payable	$415,137	$40,021	($158,495)	$296,663

On December 26, 2018, the Corporation entered into a Funding Loan Agreement with Citibank (the "Multi-Family Mortgage Revenue Debt Obligations – Caton Flats"). The proceeds in the amount of $55,920,000 were committed to finance the construction and to pay certain other related costs of a multi-family rental housing development located in the borough of Brooklyn, New York. There has been no advance made to the project as of October 31, 2019.

On December 31, 2019, the Corporation entered into a Funding Loan Agreement with Citibank (the "Multi-Family Mortgage Revenue Debt Obligations – MEC 125th Street Parcel B West"). The proceeds in the amount of $74,000,000 were committed to finance the construction and to pay certain other related costs of a multi-family rental housing development located in the borough of Manhattan, New York. The funding is on a draw down basis. The total obligation outstanding as of October 31, 2019 was $20,486,000.

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, 2019 was $281,943,000 (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 October 31, 2018	$284,769
FFB Loan Participation Proceeds	—
Repayments to FFB	(2,826)
FFB Loan Participation Certificates payable outstanding at October 31, 2019	$281,943

Details of changes in FFB loan participation certificates payable for the year ended October 31, 2019 were as follows:

Description of FFB Loan Participation as Issued	Balance at Oct. 31, 2018	Issued	Retired	Balance at Oct. 31, 2019
(in thousands)				
(variable rates cover fiscal year 2019)				
FFB Loan Participation - Arverne View Apt – 3.32% Fixed Rate Certificate Pass-Through due 2049	$69,349	$—	($788)	$68,561
FFB Loan Participation - 2629 Sedgwick Avenue – 3.28% Fixed Rate Certificate Pass-Through due 2051	2,814	—	(41)	2,773
FFB Loan Participation - Marseilles Apartments – 2.85% Fixed Rate Certificate Pass-Through due 2051	17,688	—	(273)	17,415
FFB Loan Participation - Sons of Italy Apartments – 2.76% Fixed Rate Certificate Pass-Through due 2051	8,050	—	(120)	7,930

Description of FFB Loan Participation as Issued	Balance at Oct. 31, 2018	Issued	Retired	Balance at Oct. 31, 2019
(in thousands)				
(variable rates cover fiscal year 2019)				
FFB Loan Participation - Stevenson Commons – 2.96% Fixed Rate Certificate Pass-Through due 2057	102,107	—	(836)	101,271
FFB Loan Participation - Independence House – 3.04% Fixed Rate Certificate Pass-Through due 2057	7,204	—	(71)	7,133
FFB Loan Participation - Carol Gardens – 3.02% Fixed Rate Certificate Pass-Through due 2058	21,731	—	(174)	21,557
FFB Loan Participation - La Cabana Houses – 3.35% Fixed Rate Certificate Pass-Through due 2053	55,826	—	(523)	55,303
Total FFB Loan Participation Certificates Payables	$284,769	$—	($2,826)	$281,943

The Corporation regularly defeases or retires bonds through in-substance defeasances whereby assets are placed in an irrevocable trust that is used exclusively to service the future debt requirement. During fiscal year 2018, the Corporation retired the 2008 Series L Multi-Family Housing Revenue Bonds through an in-substance defeasance. The remaining outstanding bonds of the 2008 Series L Multi-Family Housing Revenue Bonds in the amount of $3,025,000 were called and fully redeemed by the escrow agent on November 1, 2018. There was no defeased bonds outstanding as of October 31, 2019.

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)			
2020…………………...	$342,849	$351,982	$694,831
2021…………………...	595,909	348,032	943,941
2022…………………...	342,039	336,098	678,137
2023…………………...	234,877	325,797	560,674
2024…………………...	236,143	318,378	554,521
2025 – 2029……….….	1,290,200	1,472,705	2,762,905
2030 – 2034…………...	1,644,119	1,230,412	2,874,531
2035 – 2039…………...	2,345,048	950,965	3,296,013
2040 – 2044…………...	1,600,965	678,620	2,279,585
2045 – 2049……….…..	1,987,875	368,930	2,356,805
2050 – 2054…………...	895,495	119,096	1,014,591
2055 – 2059…………...	594,310	39,978	634,288
Total	$12,109,829	$6,540,993	$18,650,822

Changes in Long Term Liabilities:

Long term liability activities for the year ended October 31, 2019, are as follows:

Descriptions	Balance at Oct. 31, 2018	Additions	Deductions	Balance at Oct. 31, 2019	Due Within 1 Year
(*in thousands)*					
Bonds Payable, (net)	$11,274,873	$2,216,745	($1,360,185)	$12,131,433	$342,849
Debt Obligations	415,137	40,021	(158,495)	296,663	93
Payable to FFB – Loan Participation	284,769	—	(2,826)	281,943	2,980
Payable to The City of New York	3,376,951	1,310,224	(254,888)	4,432,287	—
Payable to Mortgagors & Restricted Earnings on Investments	870,039	543,551	(534,903)	878,687	217,915
Others	274,169	651,098	(504,031)	421,236	185,561
Total Long-Term Liabilities	$16,495,938	$4,761,639	($2,815,328)	$18,442,249	$749,398

Note 11: Consultants' Fees

The fees paid by the Corporation for legal, accounting and consulting services in fiscal year 2019 for HDC include: $15,142 to Hawkins, Delafield & Wood; $7,381 to Epstein, Becker & Green, P.C.; and $6,435 to Seyfarth Shaw LLP. Auditing fees of $242,000 were paid to Ernst & Young LLP.

The Corporation paid other consulting fees in the amount of $75,000 to National Strategies Group, LLC; $58,250 to R Square, Inc.; $35,375 to Cristo Rey NY High School; $16,605 to Bharat Shah, $16,250 to Metropolitan Valuation Services Inc; $8,000 to Buck Global, LLC; $2,400 to Insurance Advisors; and $1,215 to Lincoln Tyler Management Services, LLC. The Corporation also paid $27,000 to Bartley & Dick Advertising/Design for concept, design and layout of the 2018 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. Fees of $1,433,211 to Hawkins, Delafield & Wood; $708,841 to Jefferies LLC; $64,700 to Chapman and Cutler LLP; $50,000 to Mohanty Gargiulo, LLC; $40,000 to Caine Mitter & Associates, Inc.; and $9,500 to Paparone Law, PLLC.

Note 12: Payable to The City of New York

(A) New York City Housing Development Corporation

The Corporation has 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. Additionally, starting from fiscal year 2005 and 2006 and onward, HDC originated second mortgage loans in which it sold a residual interest to the City. Cash flow derived from these loan interests is pledged to the repayment of the related HDC bonds. At such time as these HDC bonds are retired, ownership of the associated loan interests transfers to the City. The excess of such interest over the amount of the related bonds totaled $1,075,529,000 as of October 31, 2019 and is reported in the Corporation's statement of net position as "Loan participation receivable - The City of NY" in the Noncurrent Assets section and

"Payable to The City of New York: Loan participation agreements" in the Noncurrent Liabilities section. The related details are described in the following paragraphs.

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"). As of October 31, 2019, the Corporation's payable to the City relating to the 2014 Series B Bonds was $93,444,000.

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. As of October 31, 2019, the Corporation's payable to the City relating to the 2018 Series B Bonds was $496,330,000.

The Corporation has completed numerous transactions as part of its 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, 2019, the Corporation's payable to the City under the MLRP was $485,755,000.

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, 2019, the total payable to the City relating to this MOU was $2,523,338,000.

Since fiscal Year 2013, the Corporation entered into several loan participation agreements with the City through HPD. In each case the Corporation made available to the mortgagor's new mortgage loans, the proceeds of which were used for the acquisition or rehabilitation of existing properties, with the HDC mortgage holding the first position lien on the properties. The existing HPD loans were assigned to the Corporation, via a Purchase and Sale agreement, where the Corporation purchased the existing loans from the City and the City purchased a residual interest in the HDC Loans. As of October 31, 2019, the participation mortgage loans underlying the Participation Interest had an aggregate outstanding principal balance of $630,344,000.

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 due to the City in the Corporation's financial statements. At October 31, 2019, the total related payable to the City was $101,856,000.

On December 18, 2015, at the request of The City of New York, 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. During fiscal year 2019, the City reimbursed the Corporation by funding various subordinate loans originated by HDC totaling $15,000,000. As of October 31, 2019, the remaining balance of the receivable from The City of New York was $30,659,000.

(B) Housing Assistance Corporation

Funding for HAC was received through the City in 1985. All of HAC's assets, after repayment of HDC advances to HAC and if unused for HAC purposes, will revert back to the City. At October 31, 2019, total resources payable to the City amounted to $131,879,000, of which $121,750,000 was related to the funding of Stuyvesant Town-Peter Cooper Village. The remaining $10,129,000 payable to the City was held to fund the RY Subsidy Program, which is expected to cover the subsidy until 2022 (see Note 4: "Mortgage Loans" for a detailed explanation).

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 154,000 pensioners through $68.5 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 6.0% 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 (www.nycers.org).

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, 2019, and 2018, the Corporation reported a liability of $10,049,000 and $9,325,000, respectively, for its proportionate share of NYCERS' net pension liability. The net pension liability was measured as of June 30, 2019 and June 30, 2018 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, 2019, the Corporation's proportion was 0.054%.

At October 31, 2019, the Corporation reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Net difference between projected and actual investment earnings on pension plan investments	$ -	$624,000
Differences between expected and actual experience	840,000	698,000
Changes in proportion and differences between Corporation's contributions and proportionate share of contributions	290,000	(6,000)
Changes in assumptions	6,000	421,000
Corporation contributions subsequent to the measurement date	2,128,000	-
Total	$3,264,000	$1,737,000

Of the deferred outflows of resources related to pensions, $2,128,000 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, 2020. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

2020	$ 120,000
2021	120,000
2022	120,000
2023	120,000
2024	121,000
Total	$ 601,000

At October 31, 2018, the Corporation reported $504,000 as deferred inflow of resources from the accumulated net difference between projected and actual earnings on NYCERS investments.

Deferred outflows of resources amounted to $1,588,000 at October 31, 2018. A decrease of $233,000 is related to the change in proportionate share and changes in assumptions. $1,821,000 is related to the Corporation's contributions subsequent to the measurement date and was recognized as a reduction of the net pension liability in the year ended October 31, 2018.

The Corporation recorded pension expense for fiscal years ending October 31, 2019 and 2018 in the amounts of $1,738,000 and $1,421,000, respectively.

Actuarial assumptions

The total pension liability in the June 30, 2018 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 increases 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:

Asset Class	Target Allocation	Long Term Expected Real Rate of Return	Weighted Average Rate of Return
U.S. Public Market Equities	29.00%	7.00%	2.03%
International Public Market Equities	13.00%	7.10%	.92%
Emerging Public Market Equities	7.00%	9.40%	.66%
Private Market Equities	7.00%	10.50%	.74%
U.S. Fixed Income	33.00%	2.20%	.73%
Alternatives	11.00%	5.70%	.63%

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 5.70% 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, 2019, 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	$15,501,000	$10,049,000	$5,446,000

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 (www.nycers.org).

(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 and prescription drug 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. The Corporation does not issue a publicly available financial report for the plan.

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 $17,487,000 and the ratio of the net OPEB liability to the covered-employee payroll was 40.91%.

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, 2018	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

HDC's net OPEB liability was measured as of October 31, 2018, and the total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation as of that date. The total OPEB liability was $15,572,000 and the net OPEB liability was $7,154,000. The actual benefit payments made during fiscal year 2019 amounted to $140,000.

Changes in the Net OPEB Liability

	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability
Net OPEB liability at beginning of the year	$22,224,000	$8,402,000	$13,822,000
Changes for the year:			
Service cost	1,500,000	—	1,500,000
Interest	803,000	—	803,000
Difference between expected and actual experience	(1,285,000)	—	(1,285,000)
Changes of assumptions	(7,568,000)	—	(7,568,000)
Net investment income	—	122,000	(122,000)
Benefit payments	(102,000)	(102,000)	—
Administrative expense	—	(4,000)	4,000
Net changes	(6,652,000)	16,000	(6,668,000)
Net OPEB liability at end of the year	$15,572,000	$8,418,000	$7,154,000

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 years ending October 31, 2019 and 2018, the fair value of OPEB trust investments were $8,550,000 and $8,270,000, respectively.

		Investment Maturities at October 31, 2019 (in Years)			
Investment Type	2019	Less than 1	1-5	6-10	More than 10
(in thousands)					
FHLB Bonds	$8,550	—	8,550	—	—
Total	$8,550	—	8,550	—	—

The Corporation has the following recurring fair value measurements as of October 31, 2019:

- FHLB securities of $8,550,000 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, 2019, 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, 2019:

Issuer	Dollar Amount	Percentage
FHLB	$8,550,000	100.00%

For the year ended October 31, 2019, 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 actually invested.

For the year ended October 31, 2019, HDC recognized an OPEB expense of $1,388,000. At October 31, 2019, 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, 2018	$1,061,000	$765,000
Changes for the year		
Difference between expected and actual experience	—	1,285,000
Change in assumptions	—	7,568,000
Difference between projected and actual investment earnings	212,000	—
Recognition of deferred outflows/inflows in FY 2019	(248,000)	(833,000)
Deferred Outflows/Inflows as of October 31, 2019	$1,025,000	$8,785,000

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 2020	$(585,000)
FY 2021	(585,000)
FY 2022	(629,000)
FY 2023	(670,000)
FY 2024	(712,000)
Thereafter	$(4,579,000)

Actuarial assumptions. The total OPEB liability at October 31, 2019 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, 2019 valuation were based on the results of an actuarial experience study from 2006 to 2016.

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:

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

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 3.91% in 2019, up from 3.39% in 2018. 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 2032. 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 changes in the discount rate	1% Decrease (2.91%)	Discount Rate (3.91%)	1% Increase (4.91%)
Net OPEB liability	$9,728,000	$7,154,000	$5,049,000

Sensitivity of the net OPEB liability to changes in the healthcare cost trend rate	1% Decrease Net OPEB Liability	Healthcare Cost Trend Rate	1% Increase Net OPEB Liability
Net OPEB liability	$3,498,000	$7,154,000	$13,259,000

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, 2019, HDC had set aside funds in the amount of $139,000 to make future rebate payments when due.

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 for the next five years as follows:

Year Ending October 31, 2019	
2020…………………………………………	$2,143,000
2021…………………………………………	2,153,000
2022…………………………………………	2,156,000
2023…………………………………………	180,000
2024 ……...……………………………………	0
Total	$6,632,000

For fiscal year 2019, the Corporation's rental expense including escalation, taxes and operating costs amounted to $2,292,000 and utility expense amounted to $75,000.

(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, 2019 is as follows: *(in thousands)*

Programs:	
Multi-Family Bond Programs	
Housing Revenue	$1,909,555
Corporate Services Fund Loans	198,144
HPD Grant Funds	1,360,122
Department of Justice ("DOJ") Settlement Funds	5,209
Unadvanced Construction Loans (closed loans)	$3,473,030

As of October 31, 2019, the Corporation has executed nine 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, 2019 was $3,593,000.

(B) New York City Residential Mortgage Insurance Corporation

As of October 31, 2019, REMIC insured loans with coverage amounts totaling $287,213,000 and had outstanding commitments to insure loans with a maximum insurance coverage amount of $142,375,000.

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, 2019, the unamortized guarantee fee was $12,556,000 and the Corporation has designated this amount for the financial guaranty reserve (see Note 18: "Contingencies"). The likelihood that HDC has to 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, 2019, the Corporation has designated $15,000,000 as a financial guaranty reserve (see Note 18: "Contingencies").

(C) Community Preservation Corporation Guaranty

On November 18, 2013, the Corporation's Members authorized the purchase of a subordinate participation in the two or more of Citibank Revolving Credit Facilities (each a "Revolving Credit Facility" and collectively "the Revolver") to Special Purpose Entities (each an "SPE") to be created by the Community Preservation Corporation ("CPC") in an amount not to exceed $20 million. HDC's exposure will be limited to 10% of each mortgage loan, and $20 million overall. The purpose of this agreement is to provide financing for the CPC SPEs to facilitate the origination, or acquisition of, or participation in mortgage loans for the construction, rehabilitation, and refinancing of multi-family rental properties located in the City's low- and moderate-income communities. In addition, this subordinate participation replaced the Limited Guaranty to CPC Funding SPE 1, LLC and the Corporation will not participate in a separate Citibank arranged working capital facility for CPC, which was approved by the Corporation's Members on April 9, 2012.

On May 17, 2016, HDC's loan participation agreement was amended and the Corporation's commitment increased, from $20 million to $25 million, with a new maturity date of May 17, 2022. The total amount advanced was $33,052,000 and has been fully repaid to date. Since the funding is on a revolving basis, the Corporation has designated $2,500,000 as a loan participation reserve (see Note 18: "Contingencies").

(D) Federal Housing Administration Risk Sharing Program

In November 2011, the Corporation entered into 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, 2019, HDC has designated a total of $8,135,000 as a financial guaranty reserve under the FHA risk-sharing mortgage insurance program for sixteen 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 litigations 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:

Financial Guaranties	At October 31, 2019 Reserve Amounts
NYCHA Tax Credit Guaranty	$12,556,000
Co-op City Guaranty	15,000,000
Community Preservation Corporation Guaranty	2,500,000
FHA Risk Sharing	8,135,000
Total	$38,191,000

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:

- Restricted Net Position 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).

- Unrestricted Net Position 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)

	Restricted	Unrestricted	Total
Net position at October 31, 2017	$1,608,799	$975,367	$2,584,166
Income	157,608	26,577	184,185
Loan participation agreement securitization 2018 B-1& B-2	—	63,117	63,117
Transfers	217,046	(217,046)	—
Net position at October 31, 2018	1,983,453	848,015	2,831,468
Income	219,423	81,027	300,450
Transfers	119,512	(119,512)	—
Net position at October 31, 2019	$2,322,388	$809,530	$3,131,918

Summary of Restricted Net Position *(in thousands)*	2019	2018
Multi-Family Bond Programs	$1,926,087	$1,626,419
421-A Housing Trust Fund	298,284	265,112
Corporate Debt Service Reserve 2014 Series B and 2018 Series B	12,062	12,507
Claim Payment Fund for 223(f) Program	37	37
REMIC Insurance Reserve	85,918	79,378
Total Restricted Net Position	$2,322,388	$1,983,453

Of the total Unrestricted Net Position listed below, $274,801,000 is for existing mortgages and other loans. An additional $277,045,000 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 $1,874,000 in capital assets.

Summary of Unrestricted Net Position *(in thousands)*	2019	2018
Designated Position:		
Existing Mortgages	$274,801	$341,117
Housing Programs and Commitments	277,045	294,781
Working Capital	24,113	23,579
Rating Agency Reserve	135,000	96,000
Financial Guaranty Reserves (Notes 17 and 18)	38,191	42,041
REMIC Insurance Reserves	58,506	48,332
Total Designated Net Position	807,656	845,850

Net Investment in Capital Assets:		
Capital Assets, net	1,874	2,165
Total Net Investment in Capital Assets	$1,874	$2,165

In fiscal year 2019, net position transferred from unrestricted to restricted was a net amount of $119,512,000. The amount represents excess in the Open Resolution, transfer of mortgage loans originated with corporate reserves into the Open Resolution as a result of securitizations, as well as transfer of amounts exceeding REMIC reserve requirement. In fiscal year 2018, a net amount of $217,046,000 was transferred from unrestricted to restricted as noted above.

Note 20: Subsequent Events

Subsequent to October 31, 2019, bonds issued in the course of the Corporation's normal business activities were $336,630,000. In addition, the Corporation sold $65,630,000 of loan participation interest to FFB as well.

New York City Housing Development Corporation
Required Supplementary Information

October 31, 2019

Schedule 1a:

Schedule of Changes in the Net OPEB Liability and Related Ratios
($ in thousands)

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

Notes to Schedule:

Changes of assumptions:

In fiscal year 2018, 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 2019, the termination, disability, and retirement rates were updated to be consistent with those in the 2019 NYCERS Assumptions and Methods Report.

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

Schedule 1b:

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

	2019	2018	2017	2016	2015
Actuarially determined contribution	$ 1,555	$ 1,607	$ 1,617	$ 2,132	$ 1,723
Contributions in relation to the actuarially determined contribution (funded from trust assets)	1,555	1,607	1,617	2,132	1,723
Contribution deficiency (excess)	$ -	$ -	$ -	$ -	$ -
HDC covered payroll	$ 17,487	$ 16,535	$ 15,517	$ 16,165	$ 14,967
Contributions as a percentage of covered payroll	9%	10%	10%	13%	12%

	2014	2013	2012	2011	2010
Actuarially determined contribution	$ 1,657	$ 1,747	$ 2,033	$ 2,033	$ 1,643
Contributions in relation to the actuarially determined contribution	1,657	1,747	2,033	2,033	1,643
Contribution deficiency (excess)	$ -	$ -	$ -	$ -	$ -
HDC covered employee payroll	$ 14,595	$ 14,122	$ 13,259	$ 12,863	$ 12,244
Contributions as a percentage of covered payroll	11%	12%	15%	16%	13%

Notes to Schedule:

Changes in benefit terms: None

Changes in assumptions: Yes

In 2018 the healthcare cost trend rates changed to "6.5% grading down to a rate of 4.5%" from previous year of "8% grading down to a rate of 5%".

In the 2019 actuarial valuation, assumed life expectancies were adjusted based on the actual experience of the NYCERS population and the application of the MP-2018 mortality improvement scale. In prior years, those assumptions were based on the application of the MP-2017 mortality improvement scale.

Valuation date:

Actuarially determined contributions rates are calculated as of October 31, one year prior to the end of the fiscal year in which contributions are reported.

Actuarial cost method	Entry age normal
Amortization method	Level percentage of payroll closed
Amortization period	30 years
Asset valuation method	5-year amortization market
Inflation	2.5 percent
Salary increases	3%, average, including inflation
Investment rate of return	4%, net of OPEB plan investment expense
Retirement age	In the 2019 actuarial valuation, expected retirement ages of general employees were updated to be consistent with those in the 2019 NYCERS Assumptions and Methods Report.

This schedule is intended to show information for 10 years.

New York City Housing Development Corporation
Required Supplementary Information

October 31, 2019

Schedule 2:

The following schedules 2a & 2b are being presented to provide information on the Corporation's proportionate share of the Net Pension Liability and the Corporation's contributions.

(2a) Schedule of the Corporation's Proportionate Share of the Net Pension Liability

	2019	2018	2017	2016	2015	2014	2013
HDC's proportion of the net pension liability	0.054%	0.051%	0.053%	0.053%	0.053%	0.054%	0.054%
HDC's proportionate share of the net pension liability	$ 10,048,926	$ 9,325,396	$ 10,991,263	$ 12,877,315	$ 10,907,802	$ 9,730,403	$ 12,459,533
HDC's covered payroll	9,696,963	9,283,052	10,244,624	10,045,598	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	104%	100%	107%	128%	107%	98%	114%
Plan fiduciary net position as a percentage of the total pension liability	78.84%	78.87%	74.84%	69.67%	73.16%	75.32%	67.22%

(2b) Schedule of the Corporation's Pension Contributions ($ in thousands)

	2019	2018	2017	2016	2015	2014	2013
Contractually required contribution	$ 2,003	$ 1,724	$ 1,779	$ 1,784	$ 1,675	$ 1,682	$ 1,645
Contributions in relation to the contractually required contribution	2,003	1,724	1,779	1,784	1,675	1,682	1,645
Contribution deficiency (excess)	$ -	$ -	$ -	$ -	$ -	$ -	$ -
HDC covered payroll	$ 9,697	$ 9,283	$ 10,245	$ 10,046	$ 10,158	$ 9,938	$ 10,920
Contributions as a percentage of covered payroll	21%	19%	17%	18%	16%	17%	15%

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.

New York City Housing Development Corporation
Supplementary Information

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, 2019 and 2018 ($ in thousands)

	2019	2018
Assets		
Current Assets:		
Cash and cash equivalents	$ 442,488	$ 430,281
Investments	5,943	6,755
Receivables:		
Mortgage loans	316,263	277,980
Accrued interest	20,095	19,147
Other	101	128
Total Receivables	336,459	297,255
Total Current Assets	**784,890**	**734,291**
Noncurrent Assets:		
Restricted cash and cash equivalents	1,006,516	1,159,388
Restricted investments	1,145,883	857,560
Purpose investments (note 2)	28,497	29,081
Restricted receivables:		
Mortgage loans	7,317,755	6,411,592
Loan participation receivable - The City of NY	1,075,529	1,092,274
Accrued interest	19,664	10,600
Total Restricted Receivables	8,412,948	7,514,466
Primary government/component unit receivable (payable)	15,245	(37,321)
Interest rate swaps	-	19,673
Other assets	603	5,675
Total Noncurrent Assets	**10,609,692**	**9,548,522**
Total Assets	**11,394,582**	**10,282,813**
Deferred Outflows of Resources		
Interest rate caps (note 9)	197	1,368
Deferred outflows related to interest rate swaps (note 9)	100,507	-
Total Deferred Outflows of Resources	**$ 100,704**	**$ 1,368**

Schedule 3 (cont'd):

Housing Revenue Bond Program
Schedule of Net Position
October 31, 2019 and 2018 ($ in thousands)

	2019	2018
Liabilities		
Current Liabilities:		
Bonds payable (net)	$ 290,900	$ 576,135
Accrued interest payable	114,328	98,481
Payable to mortgagors	1,696	1,376
Restricted earnings on investments	49	75
Accounts and other payables	248	48
Total Current Liabilities	**407,221**	**676,115**
Noncurrent Liabilities:		
Bonds payable (net)	8,018,551	6,871,518
Payable to The City of New York:		
Loan participation agreements	1,075,529	1,092,274
Others	27	129
Payable to mortgagors	9,831	10,139
Derivative instrument - interest rate swaps	100,507	-
Unearned revenues and other liabilities	82,854	75,426
Total Noncurrent Liabilities	**9,287,299**	**8,049,486**
Total Liabilities	**9,694,520**	**8,725,601**
Deferred Inflows of Resources		
Interest rate swaps fair value	-	22,978
Total Deferred Inflows of Resources	**-**	**22,978**
Net Position		
Restricted for bond obligations	1,800,766	1,535,602
Total Net Position	**$ 1,800,766**	**$ 1,535,602**

New York City Housing Development Corporation
Supplementary Information

Schedule 3 (cont'd):

Housing Revenue Bond Program
Schedule of Revenues, Expenses and Changes in Net Position
Fiscal Years ended October 31, 2019 and 2018 ($ in thousands)

	2019	2018
Operating Revenues		
Interest on loans	$ 261,307	$ 226,482
Fees and charges	47,220	34,810
Income on loan participation interests	22,710	4,406
Other	2,135	575
Total Operating Revenues	**333,372**	**266,273**
Operating Expenses		
Interest and amortization of bond premium and discount	251,287	202,995
Trustees' and other fees	485	509
Bond issuance costs	15,225	11,560
Total Operating Expenses	**266,997**	**215,064**
Operating Income	**66,375**	**51,209**
Non-operating Revenues (Expenses)		
Earnings on investments	64,944	40,396
Unrealized gains on investments	4,879	3,894
Loss on early retirement of debt	-	(129)
Other non-operating revenues (expenses), net	(580)	(2,363)
Total Non-operating Revenues	**69,243**	**41,798**
Income	**135,618**	**93,007**
Operating transfers to Corporate Services Fund	(15,284)	(8,891)
Capital transfers	144,830	268,522
Changes in Net Position	**265,164**	**352,638**
Total net position - beginning of year	1,535,602	1,182,964
Total Net Position - End of Year	**$ 1,800,766**	**$ 1,535,602**

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, 2019 and 2018 ($ in thousands)

	2019	2018
Assets		
Current Assets:		
Cash and cash equivalents	$ 17,543	$ 8,919
Receivables:		
Mortgage loans	4,631	4,763
Accrued interest	610	1,800
Total Receivables	5,241	6,563
Total Current Assets	**22,784**	**15,482**
Noncurrent Assets:		
Restricted cash and cash equivalents	5,696	5,768
Restricted receivables:		
Mortgage loans	148,698	161,084
Accrued interest	937	-
Total Restricted Receivables	149,635	161,084
Primary government/component unit receivable (payable)	(259)	(4,037)
Total Noncurrent Assets	**155,072**	**162,815**
Total Assets	**177,856**	**178,297**
Deferred Outflows of Resources		
Interest rate cap (note 9)	16	512
Total Deferred Outflows of Resources	**$ 16**	**$ 512**

New York City Housing Development Corporation
Supplementary Information

Schedule 4 (cont'd):

Multi-Family Secured Mortgage Revenue Bonds
Schedule of Net Position
October 31, 2019 and 2018 ($ in thousands)

	2019	2018
Liabilities		
Current Liabilities:		
Bonds payable (net)	$ 7,260	$ 7,605
Accrued interest payable	1,102	1,161
Total Current Liabilities	**8,362**	**8,766**
Noncurrent Liabilities:		
Bonds payable (net)	114,020	121,280
Total Noncurrent Liabilities	**114,020**	**121,280**
Total Liabilities	**122,382**	**130,046**
Net Position		
Restricted for bond obligations	55,490	48,763
Total Net Position	**$ 55,490**	**$ 48,763**

New York City Housing Development Corporation
Supplementary Information
October 31, 2019

Schedule 4 (cont'd):

Multi-Family Secured Mortgage Revenue Bonds
Schedule of Revenues, Expenses and Changes in Net Position
Fiscal Years ended October 31, 2019 and 2018 ($ in thousands)

	2019	2018
Operating Revenues		
Interest on loans	$ 7,562	$ 8,123
Total Operating Revenues	**7,562**	**8,123**
Operating Expenses		
Interest and amortization of bond premium and discount	5,108	4,350
Bond issuance costs	-	161
Total Operating Expenses	**5,108**	**4,511**
Operating Income	**2,454**	**3,612**
Non-operating Revenues (Expenses)		
Earnings on investments	495	262
Total Non-operating Revenues	**495**	**262**
Income	**2,949**	**3,874**
Capital transfers	3,778	3,312
Change in Net Position	**6,727**	**7,186**
Total net position - beginning of year	48,763	41,577
Total Net Position - End of Year	**$ 55,490**	**$ 48,763**