

MEMORANDUM

TO:

Members of the Audit Committee

FROM:

Richard Froehlich

SUBJECT:

Material for Audit Committee Meeting

March 29, at 10:30 a.m.

DATE:

March 22, 2018

Attached please find the following materials for the Audit Committee meeting:

- Proposed Agenda
- Minutes of January 26, 2018 Meeting
- First Quarter Financial Report
- Debt Report
- Investment Report
- Credit Risk Update
- HDC's Purchasing Guidelines
- Approval of the Annual Audit Committee Report of HDC for 2017
- Internal Audit Reports



MEMORANDUM

TO:

Members of the Audit Committee

FROM:

Richard Froehlich

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SUBJECT:

Agenda for Audit Committee Meeting

DATE:

March 22, 2018

For the Audit Committee Meeting, which will take place on Thursday, March 29th, at 10:30 a.m., I propose the following agenda:

- 1. Roll Call
- 2. Approval of Minutes of the Meeting held on January 26, 2018
- 3. First Quarter Financial Report (Unaudited)
- 4. Debt Report
- 5. Investment Report
- 6. Credit Risk Update
- 7. Approval of HDC's Purchasing Guidelines
- 8. Approval of the Annual Audit Committee Report of HDC for 2017
- 9. Internal Audit Reports
- 10. Other Business

MINUTES OF THE MEETING OF THE NEW YORK CITY HOUSING DEVELOPMENT CORPORATION AUDIT COMMITTEE

January 26th, 2018

A meeting of the Members of the Audit Committee of the New York City Housing Development Corporation (the "Corporation") was held on Friday January 26th, 2018 at the offices of the Corporation, 110 William Street, 10th Floor, New York, New York.

The meeting was called to order at 11:30 am by Mr. Harry Gould, Board Member, who noted the presence of a quorum. Mr. Gould called for approval of the minutes from the November 27, 2017 meeting. The minutes were approved.

Mr. Gould turned to Mr. Richard Froehlich, Chief Operating Officer and General Counsel of the Corporation to provide an overview of the agenda.

Mr. Gould then turned the Committee's attention to Ms. Cathleen Baumann, Senior Vice President and Treasurer of the Corporation, to provide a summary of the Fiscal Year 2017 Financial Statements. Please note that the draft financials sent to you originally last week have been updated to reflect a slight change due to the new OPEB GASB, which I will explain in further detail in a few minutes. HDC expects that the financial statements in front of you will be the final version. Ms. Baumann reported that 2017 was another exceptional year for the Corporation. HDC has maintained its position as one of the nation's leading housing finance agencies and has continued to play a central role in the Mayor's Housing Plan. Ms. Baumann noted that the financials of the Corporation, as well as the strong leadership and hard work of a dedicated staff, are a strong gauge of that continued success: During FY 2017, the Corporation issued 26 bond series totaling \$1.5 billion. In addition proceeds from debt obligations issued during the fiscal year amounted to \$160.8 million, and one new certificate of participation with the FFB totaled \$103 million for a total of \$1.7 billion in proceeds for the fiscal year. Total HDC assets were \$16.1 billion, an increase of \$1.7 billion or 11.85% from fiscal year end 2016 due to the Corporation's robust mortgage lending and bond financing activities. Total liabilities were \$13.7 billion, an increase of \$1.5 billion or 12.3% from 2016 as a result of the Corporation's ongoing debt and lending activities. HDC's Total Net Position at fiscal year-end was \$2.5 billion, an increase of \$204.8 million or 9.07% from 2016 due to normal operating activities and non-operating revenue of grant income. The increase to net position will allow the Corporation to continue to play a critical role in the Mayor's Housing Plan and provide subsidies to the affordable housing developments that we finance. Ms. Baumann further noted that as Ernst & Young mentioned at the last meeting, this year the Corporation early adopted GASB No. 75 "Accounting and Financial Reporting for Postemployment Benefits Other than Pensions", otherwise known as OPEB. This new GASB statement replaces the requirements of GASB No. 45 and GASB No. 57 for OPEB. The implementation of GASB 75 resulted in an adjustment to salaries and related expenses on the 2017 financials in the amount of \$1.3 million. which is reflected in the updated financial statement package that you now have. E&Y will walk you through the details of the impact of GASB 75 on our financials, which wasn't material. Ms. Baumann concluded her report by recognizing Mary John, HDC's

Controller, as well as the senior managers in the department and the rest of the HDC Accounting staff for all of their hard work and dedication in producing the financial statements. Mary has successfully run many audits over the years as HDC's Deputy Controller, but this was the first audit under her steady leadership and I'd like to thank her for a smooth transition throughout this year. Ms. Baumann ended by noting that Lou Roberts and Samantha Culloo of Ernst & Young will walk the Members through the audit results.

Mr. Gould then turned to Mr. Lou Roberts of Ernst & Young to provide an overview of the audit results. Mr. Roberts provided an overview of the summary of services. Mr. Roberts then noted that the scope was consistent with what was communicated to the Members back in November. Mr. Roberts reported that Ernst & Young will provide an unmodified opinion and all controls were operating effectively. Mr. Roberts then turned to Ms. Samantha Culloo of Ernst & Young, to provide the area of emphasis. Ms. Culloo reported that Ernst & Young will issue a clean opinion, and that there were no issues during testing and no material weaknesses. Ms. Culloo noted that HDC's early adoption of GASB 75 required recording of the OPEB liability and additional disclosure on the financial statements. Ms. Culloo indicated that Ernst & Young's internal actuaries were provided the GASB report, and reviewed all assumptions to make sure that they were in line with market trends. No findings were noted in the review. Ms. Culloo concluded her report by making note of another year of strong financial performance for HDC. Mr. Froehlich noted that the audit results demonstrate a trend of continued strong performance by the Corporation. Mr. Gould then requested approval of the Corporation's Financial Statements and the Members approved the 2017 Financial Statements.

Mr. Gould turned to Ms. Ellen Duffy, Senior Vice President of Debt Issuance and Finance to present the Annual Investment Report. Ms. Duffy noted that The New York State Public Authorities Law (PAL) requires HDC to provide an annual investment report and it details the required contents of the report. The New York State Public Authorities Law (PAL) requires HDC to provide an annual investment report and it details the required contents of the report. These requirements are met by the 2017 Annual Investment Report presented, which includes: Data on investments made: Investment earnings and fees paid; Draft Copies of the Corporation's audited financial statements: The Investment Guidelines as approved by the Members on September 19, 2017; and a Draft Report of Independent Auditors on Compliance with Investment Guidelines. The Report also includes descriptive information about the Corporation, the funds it has under management, and the various types of oversight and controls on the Corporation's investment practices. Ms. Duffy stated that the major points in the report includes: 1). Earnings on investments totaled \$3.7.8 million in fiscal year 2017, an increase of \$11.7 million from fiscal year 2016, which can be attributed to an increase in short term interest rates and an increase in investment proceeds during FY 2017. The potential rising interest rate environment across the shorter term maturities is a factor to consider in the Corporation's ongoing investment strategy. 2). Because of the Corporation's commitments, the majority of investments must be held for the short term, which provides sufficient liquidity for the Corporation. In response to the current interest rate environment, the Corporation continued to invest primarily in collateralized demand deposits and direct purchases of U.S. Treasury and Agency obligations in order to optimize yield. 3). As required by GASB No. 31 the Corporation has recorded a fair

value adjustment in its investment portfolio. The Corporation recorded a net depreciation of \$10.8 million for fiscal year 2017. As part of the Corporation's investment policies, it looks to invest its bond and corporate related reserves in securities with the intent to hold the investment to maturity. As a result, any unrealized appreciation or depreciation is only reported as an accounting gain or loss at this time. 4). HDC funds under management increased about 22.2% from fiscal year-end 2016 to fiscal year-end 2017, from \$3.44 billion to \$4.21 billion. The Corporation had an 8.8% growth in net position over the last year. 5). Since our fiscal year end in October 2017, short term rates have trended higher. 6). HDC did not incur or pay any fees, commissions or charges for investment services. Treasury operations are conducted by the Corporation's Cash Management Division, which uses electronic and telephone bidding processes to competitively purchase securities that meet the Corporation's Investment Guidelines and funding needs. 7). Oversight is provided internally by an Investment Committee and by various reviews by HDC's Credit Risk and Internal Audit units. There are also investment and credit risk reports presented at each meeting of the Corporation's Audit Committee, and an annual examination by our external auditors, Ernst & Young. 8). The Corporation's Investment Guidelines were approved by the Members on September 19, 2017 with no changes at this time. Ms. Duffy further stated that upon approval by the Audit Committee and ratification by the Board, the Report will be submitted to the Mayor and to both the City and State Comptrollers, as required by the Public Authorities Law. Ms. Duffy then said the Corporation requests that the Members approve the 2017 Annual Investment Report and readopt the Investment Guidelines without any changes at this time. The Members approved the 2017 Annual Investment Guidelines.

Mr. Gould then turned to present HDC's Debt Report as of December 31, 2017. Ms. Duffy noted that the last debt report presented to the Audit Committee was as of September 30, 2017. During this time, the Corporation issued six series of Open Resolution bonds totaling \$518.3 million, two series of Multi Family Secured Resolution bonds totaling \$65.3 million, one series of Pass Through bonds in the amount of \$59.9 million, and two series of debt obligations in the amount of \$61.2 million. There were bond redemptions in five series of the Open Resolution bonds totaling \$121.0 million and four stand-alone series totaling \$140.6 million. The Corporation's debt outstanding as of December 31, 2017 is approximately \$10.98 billion. The Corporation's statutory debt capacity stands at \$12.5 billion.

Mr. Gould then turned again to Ms. Duffy again to provide the Corporation's Investment report as of January 17, 2018 and a report on the Ratings Agency Reserve. Ms. Duffy noted that funds under management totaled approximately \$4.19 billion. This report reflects routine investment activity.

Ms. Duffy continued her report stating that on a semi-annual basis, the Rating Agency Reserve amount needs to be reviewed and approved by the Committee. Ms. Duffy noted after debt service on the Open Resolution was paid on November 1, 2017 and certain redemptions made in November, the amount of long term bonds outstanding in the Open Resolution is approximately \$4.27 billion. Based on this balance, a 2.25% reserve would amount to \$96.1 million, a 2.5% reserve would be \$106.8 million, and a 2.75% reserve would amount to \$117.4 million. During FY 2017, the Reserve was funded in the amount of \$92.5 million. Due to the higher amount of bonds outstanding, HDC Staff

recommends that the Reserve should be increased to \$96 million at this time. Ms. Duffy then proceeded to request that the Members approve the Rating Agency Reserve to \$96 million. The Members approved the reserve increase.

Mr. Gould then recognized Ms. Mary Hom, Chief Credit Officer, for the counterparty credit risk exposure report. Ms. Hom reported that one new counterparty was added to the list of approved counterparties - Bank of the Ozarks, a small regional bank headquartered in Arkansas with a strong presence in New York. Although not rated by either Moody's or S&P, Bank of the Ozarks has an A- rating from Kroll Bond Rating Agency. All investments with Bank of the Ozarks are fully collateralized by U.S. Government and Agency securities. Ms. Hom continued her report by noting that there was one rating agency action of significance since the last report - in December, Moody's upgraded Bank of America to Aa3 from A1 citing the Bank's improved profitability and conservative risk profile. Ms. Hom continued her report by noting that the Corporation's counterparty exposure remained pretty well-diversified with the largest exposures continuing to be with Fannie Mae and Freddie Mac. Investments rated double-A or higher were 50% of total investments, versus 49% at the last report, and the weighted average maturity of the investment portfolio was 1.7 years, versus 1.8 years at the last report. Ms. Hom concluded her report by noting that the Corporation's exposure to liquidity providers declined to \$28.5 million from \$41.5 million due to the redemption of the 2014 C-3 bonds in November. Ms. Scott asked about Bank of the Ozarks and whether there was a shortage of available banks. Mr. Froehlich responded that the Corporation is always looking to diversify investment opportunities, and that Bank of the Ozarks represented an attractive yield with minimal risk in the current environment. Ms. Scott then asked if there was any concern regarding Deutsche Bank. Ms. Hom responded that the Corporation's exposure to Deutsche Bank was relatively small and manageable, currently consisting of permanent credit enhancement on one of the Corporation's mortgage loans and an investment in repurchase agreements, and that there are no concerns at this time.

Mr. Gould then turned the Committee's attention to Ms. Shirley Jarvis, Vice President of Internal Audit to present the results on the final report of the Quality Assessment Review (QAR) performed by the BDO USA last August. Ms. Jarvis noted that the primary objectives of the assessment were to: A) Assess the IA conformance to 'the Standards' (The International Standards for the Professional Practice of Internal Auditing); B) Evaluate IA efficiency and effectiveness in carrying out its' mission; and C) Identify opportunities to enhance it's' management and work processes, as well as its value to HDC. Internal Audit ((IA) received an overall opinion of 'Generally Conforms' with 'the Standards', the definition of internal auditing and Code of Ethics'. Generally Conforms is the highest rating and means the IA has a charter and policies and processes that were judged in conformance to the Standards with opportunities for improvement. The QAR team made recommendations to improve the audit activity and to improve the audit process as follows: 1) IA has addressed their recommendation to update the language in the IA charter to incorporate the revised standards effective January 1, 2017. Upon legal review and senior management's approval, the revised charter will be submitted to the Members for approval at the next Audit Committee meeting. 2) IA has implemented executive sessions with the Audit Committee, to occur at least annually; and scheduled one on one quarterly meetings with the President. 3) Improving the timeliness of audit

engagements has been one of Audits' biggest challenges. Il A is working to address this. 4) IA will update and strengthen the quality assurance improvement program (QAIP) to include internal periodic assessments of the Audit activity; ongoing measurement and analysis of performance (such as; accomplishment of Audit Plan, audit cycle time, recommendations accepted, and customer satisfaction surveys). And under this QAIP, develop and implement customer surveys to solicit feedback from stakeholders for greater impact and efficiency. 5). IA will use the Teammate, Audit Management software, Issue tracking module, to monitor audit results to ensure that managements' agreed upon actions have been implemented or that senior management has accepted the risk of not implementing those actions. 6) To enhance stakeholder relations and significance of IAD within HDC: IA will perform skills gap assessment; strengthen staff training and development and refresh the approach to stakeholder relationship management. 7) The QAR recommendation to incorporate complete coverage of high, medium, low risk areas over defined period is addressed in the 2018 audit plan which includes audit projects from the three risks areas. IA has also adjusted the audit schedule to indicate the level of risk for each project. 8) Strengthening periodic reporting to the Audit Committee and senior management will improve as IA strengthens the ongoing analysis, performance measurements and monitoring activities and report on them. The remaining recommendations will be considered and addressed over time including strengthening IA support of HDC governance process and pursuing data analytics to improve efficiency. Going forward, Internal Audit will periodically report to the Members on the progress in addressing the recommendations.

Mr. Gould then turned to Ms. Jarvis again, to provide the Internal Audit reports. Ms. Jarvis noted since the last Audit committee meeting, the audit Staff has completed and/or is finalizing the remaining five audit projects from the 2017 Audit Schedule. Ms. Jarvis proceeded to report on three of the Audits; the required annual reviews of Employee Expenses, President's Office Expenses and Petty cash. Ms. Jarvis briefly summarize the outcome of each review. Ms. Jarvis noted in both the required Employee Expenses and the President's Office expenses reviews, the primary objectives were to: 1) Evaluate the effectiveness of the controls over the employee expense reimbursements and related expenses; and 2) Verify compliance with the Corporation's policy and procedures relating to these types of expenses. The scope of the Employee Expense Audit covered payments made for employee expenses in twelve selected expense categories from November 1, 2016 through July 31, 2017. Internal Audit determined that the controls were effective in ensuring that employee reimbursements and vendor payments are authorized, appropriate, and properly recorded. Internal Audit found that the Corporation's employees generally complied with the policies and procedures for processing employee reimbursements and the payment of vendor invoices for these expenses. For the President's Office Expenses, the scope of the review covered all expenditures charged to the President's Office for selected expense categories from October 1, 2016 to September 30, 2017. Internal Audit found that expenses for the selected categories were processed correctly according to the travel and business expense policies in the Employee Handbook and that all expenses included the proper documentation and authorization. For the Petty Cash Audit, the audit objectives were to determine whether: 1) The cash asset is safeguarded and maintained in the proper amount; 2) Petty cash disbursements are in compliance with the Corporation's policies and procedures and; 3) The Imprest fund disbursements were properly authorized and

processed in the General Ledger. The audit period covered petty cash disbursements and transactions occurring in the Imprest Fund from December 23, 2016 through December 19, 2017. Internal Audit found the Corporation's guidelines to be effective and found no matters regarding internal controls that were considered to be a material weakness. With respect to the specific audit results, Internal Audit established that the petty cash disbursements were in compliance with policies and procedures; the cash on hand was kept in a secured lockbox and maintained in the proper amount; and all expenditures were properly authorized and processed in the GL.

Mr. Gould then turned the committee's attention to Madhavi Kulkarni, Chief Information Officer of the corporation to provide a follow up report on Cyber Security. Ms. Kulkarni noted that this presentation and report are intentionally kept general, with respect to areas that IT is currently or will be working on, so as to protect HDC, since this report and meeting are open to the public. Cybersecurity continues to be a top concern for HDC. We have seen yet another eventful year with several attacks making the news. I have a more detailed memo enclosed in your package; Ms. Kulkarni detailed the highlights since her last report. Under Executive Order 28, The Mayor of New York has created the New York City Cyber Command (NYC3) unit, effective July 11th 2017, to protect the City of New York's information infrastructure and the ability of agencies and personnel to serve the residents of the City of New York. Ms. Kulkarni noted that she is closely in touch with this unit, and as they expand their duties and responsibilities HDC will further develop our security policies as needed. As an ongoing training plan, IT continues educating employees on the best security practices. Last year, IT sent 4 separate mandatory training campaigns to employees, so they stay informed of latest trends in cyber and phishing attacks and their user responsibilities. Earlier this year, IT sent a training campaign for mobile security. Also, IT continues publishing quarterly newsletters on HDC's internal portal. IT completed several major system upgrades including virtualization platform, firewall, server operating systems, backup software. application software's, Anti-virus and Anti-malware. Cloud based email and web filters are setup to have signatures automatically updated. As discussed in our last report, each of our security systems has a different security dashboard and with the introduction of Security Information and Event Management (SIEM) services, this task is simplified. Managed services performs continuous network monitoring to quickly detect and address ongoing cyber threats, with the capability of automatically blocking, quarantining and receiving alerts on events. Initiatives IT is working on for 2018; Billions of devices are currently affected by two major security flaws revealed by cyber-security researchers earlier this year. The flaws, dubbed Meltdown and Spectre, affect processing chips made by Intel, AMD and ARM Holdings. As a countermeasure to these flaws, software companies such as Microsoft and Apple have rolled out patches to protect against sidechannel attacks and prevent kernel space and physical memory mapping available in user space, and we are in the process of patching our systems. IT have done firewall penetration tests in the past, and currently are in the process of conducting a more comprehensive vulnerability assessment including searching the dark web for any leaked corporate data and internally trying to break systems. The results of this test are due early next month. Based on the results of the penetration test, we will take steps to improve areas of deficiency. Also, IT is setting up a pilot test for a data leakage prevention (DLP) This is designed to prevent sensitive corporate information leaving the corporation via in-secured ways, handheld devices, personal email addresses, non-work

related application portals. Another pilot test is being setup for mobile security, to mitigate mobile device based malware attacks. Malware unintentionally released into our environment via smartphones can cause us a great deal of harm to our network. This helps monitor the use of iPhones and Android devices that are connected to the network. This year, IT plans to do a desktop migration to Windows10 to take advantage of new security features; it's a two year project. As HDC continues increasing our cloud usage footprint, IT is reviewing cloud vendors for Exchange and the back end Data Center infrastructure. There could be a significant cost savings with this initiative and also changes to security practices. In closing, there are no breaches to report. Ms. Kulkarni concluded her report by thanking all of the IT team members who are helping with these efforts.

At 12:15 pm, with no further business, Mr. Gould moved to dismiss and the meeting was adjourned.

Respectfully submitted,

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Horace Greene

MINUTES OF THE MEETING OF THE NEW YORK CITY HOUSING DEVELOPMENT CORPORATION AUDIT COMMITTEE

January 26th, 2018

ATTENDANCE LIST

NAME	AFFILIATION	
Denise Scott	Audit Committee Member	
Harry Gould	Audit Committee Member	
Louis Roberts	Ernst & Young	
Samantha Culloo	Ernst & Young	
Eric Enderlin	NYC Housing Development Corp.	
Richard Froehlich	NYC Housing Development Corp.	
Paula Roy Carethers	NYC Housing Development Corp.	
Jim Quinlivan	NYC Housing Development Corp.	
Ellen Duffy	NYC Housing Development Corp.	
Cathy Baumann	NYC Housing Development Corp.	
Terry Gigliello	NYC Housing Development Corp.	
Shirley Jarvis	NYC Housing Development Corp.	
Mary Hom	NYC Housing Development Corp.	
Mary John	NYC Housing Development Corp.	
Uyen Luu	NYC Housing Development Corp.	
Cheuk Yu	NYC Housing Development Corp.	
Catherine Foody	NYC Housing Development Corp.	
Horace Greene	NYC Housing Development Corp.	
Madhavi Kulkarni	NYC Housing Development Corp.	
Trisha Ostergaard	NYC Housing Development Corp.	
Patrick Ogoke	NYC Housing Development Corp.	
Carol Micalizzi	NYC Housing Development Corp.	



MEMORANDUM

TO:

Members of the Audit Committee

FROM:

Cathleen Baumann

SUBJECT:

First Quarter (Unaudited) Financial Information as of January 31, 2018

DATE:

March 22, 2018

Attached for the Members review is the Corporation's first quarter financial statements (unaudited), with a summary memo from Controller Mary John. These financial schedules cover the Corporation's first three months of fiscal year 2018, which is November 1, 2017 through July 31, 2018. The combined Net Position (Balance Sheet) and Revenue and Expense Statements for the Corporation and its subsidiaries are attached. In addition, the individual Net Position (Balance Sheet) and Revenue and Expense Statements have also been included for HDC, HAC, REMIC, the Open Resolution (HRB), the New Issue Bond Program (NIBP), and the Mini Open Resolution.



INTEROFFICE MEMORANDUM

To:

Cathleen Baumann

From:

Mary John

Subject:

Financial Information as of January 31, 2018

Date:

February 22, 2018

The Accounting Division has prepared financial schedules (unaudited) covering the Corporation's first three months of fiscal year 2018, which is November 1, 2017 through January 31, 2018. The combined Net Position (Balance Sheet) and Revenue and Expense Statements for the Corporation and its subsidiaries are attached. In addition, the individual Net Position (Balance Sheet) and Revenue and Expense Statements have also been included for HDC, HAC, REMIC, Open Resolution (HRB), New Issue Bond Program (NIBP) and the Mini Open Resolution. Preceding the statements are Financial Highlights and an Overview that summarize the major components of the financial statements.

cc: Richard Froehlich

NEW YORK CITY HOUSING DEVELOPMENT CORPORATION Financial Highlights and Overview of the Financial Statements First Quarter as of 01/31/2018 (unaudited)

Financial Highlights

- HDC's Net Assets increased by \$33.2 million or 1.28% from fiscal year end 2017 ("FYE 2017") to a total of \$2.62 billion. The growth in net assets was mainly driven from the Corporation's financial lending and servicing activities during this period.
- The Corporation had total revenues of \$122.0 million at the end of the first quarter of the fiscal year. Operating revenue for the first three months of the fiscal year was \$115.4 million, an increase of \$10.7 million from a year ago. Operating expenses were \$88.8 million, an increase of \$13.2 million. As a result, the Corporation had net operating income of \$26.5 million, a decrease of \$2.6 million from a year ago. Non-operating income which includes investment earnings was \$6.6 million.
- In the first three months of fiscal year 2018, HDC closed on seven new bonded senior mortgages with loan commitments in excess of \$309.4 million and one debt obligation mortgage of \$61.2 million. In addition, the Corporation committed \$120.5 million of subsidy loans, \$67.6 million will be funded from corporate reserves and \$52.9 million will be funded from bond proceeds. Two Mitchell-Lama mortgages were restructured with a combination of new senior and subordinate mortgages of \$29.1 million in total. The Corporation also financed one new Mixed Middle Income ("M2") project for \$14.6 million from corporate reserves.
- At the end of the first quarter of the fiscal year, HDC had issued 3 new bond series for a total of \$384.4 million. In addition, \$9.9 million of bond proceeds were drawn on a previously issued series. In December 2017, the Corporation participated in a new financing structure, the Targeted Affordable Housing ("TAH") program with Freddie Mac. Under this program, HDC issued \$61.2 million in taxable and tax exempt debt obligations to finance a new loan to the 1133 Manhattan Avenue Development project. The draws on this project were \$61.2 million and along with \$36.7 million in draws from other previously issued debt obligations, the combined total draws so far this year were \$97.9 million. HDC also closed on two new certificates of participation agreements with the Federal Financing Bank ("FFB") for the Independence House and Carol Gardens projects for a total of \$29.1 million.
- Total Assets (including Deferred Outflows) of \$16.95 billion, increased by \$550.8 million or 3.36% from FYE 2017.
 - o Cash and investments totaled \$4.33 billion.
 - o Mortgages, notes, loan participation interest receivable, and purpose investments totaled \$12.5 billion.
 - Other assets (including \$56.6 million of Accrued Interest Receivable) totaled \$109.5 million.
 - Deferred Outflows of unamortized interest rate caps, loss on early debt retirement,
 OPEB and pension related liabilities totaled \$9.0 million.
- Total Liabilities (including Deferred Inflows) of \$14.33 billion, increased by \$517.6 million or 3.75% from FYE 2017.
 - o Bonds and Debt Obligations payable (net) totaled \$11.1 billion.

- o Payable to the City of New York totaled \$2.2 billion, including \$1.1 billion related to the Section 661 HPD Grant Program and \$595.7 million related to the City Loan Participation program.
- o Payable to Mortgagors totaled \$804.5 million.
- Other Liabilities (including \$58.2 million of Accrued Interest Payable) totaled \$220.2 million.
- Deferred Inflows of Resources related to pension liability and interest rate swaps were \$9.3 million.
- Total net position of \$2.62 billion increased by \$33.2 million or 1.28% from FYE 2017. Net income of \$33.2 million for the first three months of FY 2018, increased by \$5.7 million or 20.7% over the same period in FY 2017.

Overview of Assets and Liabilities and Net Position

- The increase in total assets by a net of \$550.8 million including deferred outflows as a result of the following:
 - o Cash and investments increased by \$151.3 million. The increase was primarily due to new money raised from bond and other debt obligations issued.
 - Mortgages, notes, loan participation interest receivable, and purpose investments increased by a net of \$399.0 million from FYE 2017 as a result of the Corporation's ongoing financing activities.
 - Other assets increased by a net of \$2.3 million from FYE 2017. This included a decrease of \$1.5 million of accrued mortgage and loan interest receivable. Other receivables which are mainly comprised of principal and interest billed on loans serviced for other entities, loans financed through HDC's participation in the CPC special purpose enterprise, servicing fees and low income housing tax credit monitoring fees increased by a net of \$4.1 million. Capital assets and deferred charges decreased by a net of \$0.3 million due to amortization.
 - Deferred outflow of resources decreased by a net of \$1.9 million. The decrease was mainly due to the recognition of \$1.7 million pension expense for a payment made subsequent to the pension liability valuation at FYE 2017. The loss of early debt retirement due to an in-substance defeasance decreased by \$0.2 million due to amortization.
- Total liabilities increased by a net of \$517.6 million, or 3.75%, primarily due to the following:
 - O Bonds and Debt Obligations payable increased by a net of \$218.0 million. The Corporation issued 3 new bond series and closed one new debt obligation funding loan agreement as of the end of the first quarter. New money raised, including draws on previously issued series, totaled \$521.4 million for the period of November 1, 2017 to January 31, 2018. During this same period, \$301.9 million of bond principal and debt obligations payments were made which included scheduled principal payments of \$81.8 million and redemptions of \$220.1 million. Additionally, bond premium of \$1.0 million was amortized and \$0.5 million of principal payments were made to the Federal Financing Bank during the first quarter.

- A net increase of \$290.5 million in the Payable to New York City was mainly due to the following:
 - An increase of \$291.4 million related to HPD grant funds received for mortgage loans under Section 661 of the Private Housing Finance Law.
 - An increase of \$1.3 million related mainly to mortgage loan assignments to the Corporation pursuant to Purchase and Sale agreements between HPD and HDC.
 - A net decrease of \$7.8 million in the Housing Assistance Corporation as a result of the evaporation of the loan principal for Stuyvesant Town Peter Cooper Village of \$7.2 million and the Tenant Assistant Contract ("TAC") payment of \$0.6 million for Ruppert Yorkville.
 - There was minimal change in the City loan sale and Mitchell Lama loan participation programs ("MLRP") in this period.
 - A decrease of \$0.9 million in administering the construction and permanent loans on behalf of HPD.
 - A reduction of \$6.4 million in the receivable from the City related to the reimbursement of the Stuyvesant Town Peter Cooper Village mortgage loan funding from the Corporate Services Fund. As of January 31, 2018, the reimbursement from the City was \$97.6 million, and \$45.6 million is still due to HDC.
- o There was a net increase of \$51.7 million in the Payable to Mortgagors as a result of the following:
 - Mortgage escrows and reserve for replacement funds held by the Corporation in its normal loan servicing function increased by a net of \$16.5 million.
 - Prepaid mortgage principal and bond sinking funds held on behalf of mortgagors increased by a net of \$0.4 million. This included a net increase of \$1.0 million on principal reserve funds and a decrease of \$0.6 million of debt service funds held on behalf of mortgagors.
 - Community Development Block Grant ("CDBG") funds payable increased by \$33.9 million. This was mainly due to the receipt of \$54.7 million of additional funds during this period which was offset by \$21.1 million of funds advanced to the projects. Also, during this period \$0.3 million in investment earnings were distributed.
 - Developer's equity funds increased by \$0.9 million.
- o Other liabilities decreased by a net of \$42.6 million mainly due to the following:
 - Accrued Interest Payable decreased by \$46.8 million from FYE 2017 primarily due to the timing of the semi-annual debt service payments in the Open Resolution.
 - Accounts and Other Payables increased slightly by \$0.3 million. Payable to New York State Bonds Issuance Fee decreased by a net of \$0.2 million and other related payables had a net increase of \$0.5 million.
 - Deferred Fees increased by a net of \$3.8 million mainly due to a net increase of \$4.2 million related to bond financing fees and deferred construction financing fees collected. Other fees including guaranty fee and earnings related to mortgagors decreased by a net of \$0.4 million.
 - Restricted earnings due to mortgagors increased by \$0.1 million.

• The total net position (net assets) increased by \$33.2 million which is comprised of operating revenues of \$115.4 million, non-operating revenues of \$6.6 million (including investment income and amortization of participation interest expense), and operating expenses of \$88.8 million.

Overview of Revenues and Expenses - Comparison of first 3-months of FY 2018 & FY 2017

Excess of revenues over expenses was \$33.2 million for the period November 1, 2017 through January 31, 2018 compared to the same period in FY 2017 when it was \$27.5 million. The increase was largely due to investment earnings during this period.

- Total operating revenues were \$115.4 million, an increase of \$10.7 million, or 10.17% from the same period in fiscal year 2017 as a result of the following:
 - o Interest on loans increased from \$81.4 million to \$94.1 million compared to the same period last year. This was an increase of \$12.7 million or 15.62% as a result of ongoing financing activities.
 - o Fees and charges were \$20.9 million, down from \$22.6 million a year ago, a decrease of \$1.7 million or 7.59%. This decrease was mainly due to lower fees collected on loans closed during the period. Commitment Fees earned this period were \$3.1 million compared to \$5.3 million a year ago. Loan servicing and other fees increased slightly by a total of \$0.5 million compared to the same period last year.
 - o Bond financing fees decreased by \$1 million, and mortgage satisfaction fees were lower by \$0.7 million. Those were offset by increases in deferred construction financing fees, standby letter of credit fees, and housing tax credit monitoring fees.
 - Other income decreased by \$0.4 million, resulting from a lower accrual due from HUD to cover debt service expenses on the NYCHA related bonds.
- Operating expenses increased by \$13.2 million, compared to the same period in FY 2017 as a result of the following:
 - o Bond and debt obligation interest and amortization for the first three months of fiscal year 2018 was \$75.0 million, an increase of \$10.8 million from a year ago. The increase was mainly due to the issuance of new bonds, in addition to higher interest rates on the variable rate demand obligation bonds ("VRDO").
 - O Debt issuance costs at the end of the first quarter were \$3.3 million, an increase of \$0.4 million from a year ago.
 - O Trustee and other fees at the end of the first quarter were \$2.5 million, an increase of \$0.3 million from a year ago.
 - o Corporate operating expenses were \$1.2 million, a slight increase of \$0.2 million from a year ago.
 - O Salaries and related expenses were \$6.8 million, an increase of \$1.6 million or 30.23% compared to the same period last year. This includes an increase of \$0.9 million in salary related expenses and a \$0.7 million increase in the NYCERS appropriation expense.
- Total non-operating revenues were \$6.6 million, compared to \$1.6 million non-operating expenses a year ago as a result of the change in the fair market valuation of the investment portfolio.

- Realized investment earnings were \$11.4 million, an increase of \$5.1 million over the same period last year.
- O There was a decline in the fair market value on the investment portfolio of \$4.7 million (including \$0.5 million of distributions) compared to a decrease of \$7.7 million for the same period a year ago.
- o Amortization of the 2011 participation interest purchased cashflow and income distributed to HPD for the City Loan Sale Program increased by \$0.2 million.

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Program=Total All

(364)(117) (4,900)(67,527)(2,042)(104,443)39,053 3,244 37,280 3,486 252,619 (172) \equiv (152) (105)(1,724)(139,013)3,393 (174) 28,391 620,195 552,668 472,934 857 503,532 Change 411 \$ 16,387,094 722,955 120,215 36,208 33,666 11,977 202,066 925,449 13,571 29,783 476,779 199,988 595,743 24,476 589,990 21,190 2,338 8,519 995'9 10,931 3,438,470 10,055,830 4,968 15,461,645 1,262 2,241 11,487,217 1,062 October 31, 2017 S January 31, 2018 47 618,512 159,268 28,766 239,346 36,091 587,948 8,519 15,221 17 17,057 3,691,089 29,611 337,766 228,379 595,742 27,869 22,047 2,186 4,863 16,939,762 6,192 9,033 857,922 16,081,840 1,262 10,528,764 11,990,749 1,062 69 Mortgage Ioan participation - Federal Financing Bank Loan participation receivable - The City of NY Derivative instrument interest rate swaps Deferred loss on early retirement of debt Deferred outflows related to OPEB plan Total deferred outflows of resources Deferred outflows pension related Total restricted receivables Deferred outflows of resources **Total Noncurrent Assets** Restricted investments **Total Current Assets** Restricted receivables: Total receivables Purpose investment Accrued interest Accrued interest Mortgage loans Mortgage loans Noncurrent Assets: Interest rate caps Mortgage loans Restricted cash Current Assets: Capital assets Receivables: Investments Other assets Other assets (in thousands) Notes Other Notes Other Assets Total Assets Cash

(1,898)

₹	
Total	(Spu
am≕	esno
Progr	in th

(in mousands)				
	Januar	January 31, 2018	October 31, 2017	Change
Liabilities and Net Position				
Current Liabilities:				
Bonds payable (net)	69	404,901	\$ 296.575	\$ 108.326
Debt obligations payable		. 06		
Loan participation payable to Federal Financing Bank		2,215	1,954	261
Accrued interest payable		58,151	104,916	(46.765)
Payable to mortgagors		162,267	162,992	(725)
Restricted earnings on investments		17,880	17,783	, 26
Accounts and other payables		23,685	23,401	284
Due to the United States Government			•	'
Total Current Liabilities		669,189	607,687	61,502
Noncurrent Liabilities:				
Bonds and debt obligations payable:				
Bonds payable (net)		10,058,222	10,075,122	(16,900)
Debt obligations payable		405,627	307,730	768'26
Loan participation payable to Federal Financing Bank		228,379	200,010	28,369
Payable to The City of New York:				
Loan participation due to The City of New York		595,742	595,743	(1)
HPD Grant Fund		1,094,548	803,119	291,429
Others		507,703	508,640	(937)
Payable to mortgagors		642,270	589,842	52,428
Net pension liability		10,991	10,991	,
Post employment benefits payable		12,671	12,671	•
Unearned revenues and other liabilities		96,831	93,033	3,798
Due to the United States Government		6	6	•
Total Noncurrent Liabilities		13,652,993	13,196,910	456,083
Total Liabilities		14,322,182	13,804,597	517,585
Deferred inflows from pension		743	743	
Interest rate swap fair value		8,519	8,519	,
Total Deferred Inflows of Resources		9,262	9,262	
Net Position:				
Restricted for bond obligations		1,922,151	1,537,607	384,544
Restricted for insurance requirement and others		70,914	71,192	(278)
Unrestricted		624,286	975,367	(351,081)
Total Net Position		2,617,351	2,584,166	33,185
Total Liabilities, Deferred Inflows of Resources and Net Position	89	16,948,795 \$	16,398,025 \$	550,770

> Program≂Total All (in thousands)

	G	Q1 FY 2018	Ò	Q1 FY 2017		
	117	(11/01/17-01/31/18)	(11/0	(11/01/16-01/31/17)	Change	
Operating Revenues				-		
Interest on loans	€4	94,105	64	81,394 \$	12,711	
Fees and charges	,	20,883		22,598	(1,715)	
Income on loan participation interests		149		26	93	
Other		240		229	(437)	
Total Operating Revenues		115,377		104,725	10,652	
Operating Expenses						
Interest and amortization of bond premium and discount		74,978		64,222	10.756	
Salaries and related expenses		6,835		5,248	1,587	
Trustees' and other fees		2,457		2,152	305	
Amortization of debt issuance costs		3,323		2,941	382	
Corporate operating expenses		1,237		1,021	216	
Total Operating Expenses		88,830		75,584	13,246	
Operating Income (Loss)		26,547		29,141	(2,594)	
Non-operating Revenues (Expenses)			•			
Earnings on investments		11,416		6,329	5,087.	
Unrealized gain (loss) on investment FMV		(4,655)	_	(2,660)	3,005	
Other non-operating revenues (expenses), net		(123)	_	(317)	194	
Operating transfers to (HDC) Corporate Services Fund		137		129	8	
Operating transfers from REMIC Subsidiary		(137)		(129)	(8)	
Total Non-operating Revenues (Expenses)		6,638		(1,648)	8,286	
Income (Loss)	:	33,185		27,493	5,692	
Capital transfers						
Loan participation agreement resecuritization proceeds		•		1	•	
Extinguishment of debt		•		•	•	
Change in Net Position		33,185		27,493	5,692	
Total net position - beginning of year		2,584,166		2,374,687	209,479	
Total Net Position - End of Year	89	2,617,351	69	2,402,180 \$	215,171	

Program=Total HDC (in thousands)

	Janı	January 31, 2018	October 31, 2017	2017	Change
Assets					
Current Assets:					
Cash	∽	47	∽	411 \$	(364)
Investments		618,512	72	722,955	(104,443)
Receivables:					
Mortgage loans		159,268	12	120,215	39,053
Accrued interest		28,911	9	33,811	(4,900)
Notes		36,091	9	36,208	(117)
Other		15,221		11,977	3,244
Total receivables		239,491	20	202,211	37,280
Other assets		17		17	•
Total Current Assets		858,067	92	925,594	(67,527)
Noncurrent Assets:			-		
Restricted cash		17,051	1	13,571	3,480
Restricted investments		3,553,392	3,30	3,301,202	252,190
Purpose investment		29,611	2	29,783	(172)
Mortgage loans		337,766	47	476,779	(139,013)
Restricted receivables:					
Mortgage loans		10,399,842	16'6	9,919,747	480,095
Mortgage Ioan participation - Federal Financing Bank		228,379	. 19	199,988	28,391
Loan participation receivable - The City of NY		595,742	59	595,743	(1)
Accrued interest		27,871	2	24,476	3,395
Notes		587,948	58	589,990	(2,042)
Other		22,046	2	21,190	856
Total restricted receivables		11,861,828	11,35	11,351,134	510,694
Unamortized issuance costs		•			•
Primary government/component unit receivable (payable)		(117)		19	(136)
Capital assets		2,186		2,338	(152)
Derivative instrument interest rate swaps		8,519		8,519	•
Other assets		4,863	7	4,968	(105)
Total Noncurrent Assets		15,815,099	15,188,313	8,313	626,786
Total Assets	9	16,673,166	\$ 16,11.	16,113,907 \$	559,259
Deferred outflows of resources					
Interest rate caps		1,262		1,262	
Deferred loss on early retirement of debt		6,192		99£'9	(174)
Deferred outflows pension related		517		2,241	(1,724)
Deferred outflows related to OPEB plan		1,062		1,062	•
Total deferred outflows of resources	S	9,033	\$ 10	10,931 \$	(1,898)

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(46,765)(725) 261 284 (16,900)28,369 61,501 768,76 52,430 6,831 463,852 291,429 3,797 384,544 (352,536)32,008 525,353 557,361 Change 296,575 104,916 1,954 17,740 162,992 200,010 23,401 10,075,122 307,730 607,644 589,698 93,033 October 31, 2017 595,743 803,119 357,937 10,991 12,671 8,519 9,262 16,124,838 13,653,707 13,046,063 1,537,607 2,461,869 924,262 16,682,199 \$ 2,215 162,267 17,836 23,685 404,901 8 58,151 405,627 228,379 669,145 595,742 364,768 642,128 96,830 10,991 12,671 January 31, 2018 10,058,222 14,179,060 743 8,519 9,262 1,094,548 13,509,915 1,922,151 571,726 2,493,877 69 Total Liabilities, Deferred Inflows of Resources and Net Position Loan participation payable to Federal Financing Bank Loan participation payable to Federal Financing Bank Loan participation due to The City of New York Restricted for insurance requirement and others Liabilities and Net Position Unearned revenues and other liabilities Total Deferred Inflows of Resources Due to the United States Government Bonds and debt obligations payable. Due to the United States Government Restricted earnings on investments Payable to The City of New York Payable to The City of New York: Post employment benefits payable Deferred inflows from pension Restricted for bond obligations Total Noncurrent Liabilities Accounts and other payables Debt obligations payable Interest rate swap fair value Total Current Liabilities Debt obligations payable Accrued interest payable Payable to mortgagors Noncurrent Liabilities: Payable to mortgagors Bonds payable (net) Net pension liabilities Bonds payable (net) Current Liabilities: HPD Grant Fund Program=Total HDC Total Net Position Total Liabilities (in thousands) Unrestricted Net Position:

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NYC Housing Development Corporation Statement of Revenue and Expenses Summary	Current Period JAN-18	Unaudited
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Program=Total HDC (in thousands)

	G	Q1 FY 2018	Q1 FY 2017	17	J
	(11/	(11/01/17-01/31/18)	(11/01/16-01/31/17)	<u>(71/1</u>	Change
Operating Revenues					
Interest on loans	69	94,106	& &	81,394 \$	12,712
Fees and charges		20,099		21,974	(1,875)
Income on loan participation interests		149		56	93
Other		240		229	(437)
Total Operating Revenues		114,594	10	104,101	10,493
Operating Expenses					
Interest and amortization of bond premium and discount		74,978	9	64,222	10,756
Salaries and related expenses		6,835		5,248	1,587
Trustees' and other fees		2,457		2,152	305
Amortization of debt issuance costs		3,324		2,941	383
Corporate operating expenses		1,237		1,021	216
Total Operating Expenses		88,831	7	75,584	13,247
Operating Income (Loss)		25,763	2	28,517	(2,754)
Non-operating Revenues (Expenses)					
Earnings on investments		10,886		5,988	4,898
Unrealized gain (loss) on investment FMV		(4,655))	(6,839)	2,184
Loss on early retirement of debt		•			ı
Other non-operating revenues (expenses), net		(123)		(317)	194
Operating transfers to (HDC) Corporate Services Fund		137		129	∞
Operating transfers from REMIC Subsidiary				1	•
Total Non-operating Revenues (Expenses)		6,245)	(1,039)	7,284
Income (Loss)		32,008	2.	27,478	4,530
Capital transfers		r		•	•
Loan participation agreement resecuritization proceeds					•
Extinguishment of debt		•			•
Change in Net Position		32,008	2.	27,478	4,530
Total net position - beginning of year		2,461,869	2,25	2,257,114	204,755
Total Net Position - End of Year	€ >	2,493,877 \$		2,284,592 \$	209,285
				110000	

Program=Total HRB	Unaudited			,
(in monograph)	<u>lue</u>	January 34 2018	October 34 2047	2000
Assets		21, 2010	Octobel 31, 2017	Cilange
Current Assets:				
Cash	69		·	•
Investments		203,116	327,886	(124,770)
Receivables:			•	
Mortgage loans		140,814	105,344	35,470
Accrued interest		16,627	15,616	1,011
Notes		1		•
Other	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	33	82	(49)
Total receivables		157,474	121,042	36,432
Other assets		-	•	•
Total Current Assets		360,590	448,928	(88,338)
Noncurrent Assets:				
Restricted cash		8,233	9,565	(1.332)
Restricted investments		1,753,242	1,672,566	80,676
Purpose investment		29,611	29,783	(172)
Mortgage loans		•	•	•
Restricted receivables:				
Mortgage loans		5,898,184	5,612,745	285,439
Mortgage Ioan participation - Federal Financing Bank		•	•	•
Loan participation receivable - The City of NY		595,742	595,743	(1)
Accrued interest		6,332	4,468	1,864
Notes		•	•	•
Other		•	1	•
Total restricted receivables		6,500,258	6,212,956	287,302
Unamortized issuance costs			•	•
Primary government/component unit receivable (payable)		(16,703)	(11,879)	(4,824)
Capital assets			•	•
Derivative instrument interest rate swaps		4,288	4,288	
Other assets		4,862	4,969	(107)
Total Noncurrent Assets		8,283,791	7,922,248	361,543
Total Assets	S	8,644,381	\$ 8,371,176 \$	273,205
Deferred outflows of resources				
Interest rate cap		1,018	1,018	•
Deferred loss on early retirement of debt		•	1	•
Deferred outflows pension related			•	•
Deferred outflows related to OPEB plan	ļ	- 1		1
Total deferred outflows of resources	S	1,018	S 1,018 S	ı

Program=Total HRB (in thousands)

	Jan	January 31, 2018	October 31, 2017	17	Change
Liabilities and Net Position					•
Current Liabilities:					
Bonds payable (net)	69	352.780	\$ 247.485	3 587	105 205
Debt obligations payable		1			
Loan participation payable to Federal Financing Bank		•			•
Accrued interest payable		45,049	83.	83.394	(38 345)
Payable to The City of New York					(5+5,55)
Payable to mortgagors		1,464		1.373	91
Restricted earnings on investments		, 49	ŕ	41	· «
Accounts and other payables		48		48	י כ
Due to the United States Government		•		2 '	•
Total Current Liabilities		399,390	332,341	341	67,049
Noncurrent Liabilities:					
Bonds and debt obligations payable:					
Bonds payable (net)		6.218.627	6 186 107	201	32 520
Debt obligations payable			(0)		040,40
Loan participation payable to Federal Financing Bank		•		,	•
Payable to The City of New York:					
Loan participation due to The City of New York		595,742	595.743	743	Ξ
Others		173		173	} '
Payable to mortgagors		10,608	0.6	9.063	1.545
Post employment benefits payable		ı	•		
Unearned revenues and other liabilities		64,787	61,506	90:	3.281
Due to the United States Government		6		6	'
Total Noncurrent Liabilities		6,889,946	6,852,601	101	37,345
Total Liabilities		7,289,336	7,184,942	42	104,394
Deferred inflows from pension		•			
Interest rate swap fair value		4,287	4,288	88	(1)
Total Deferred Inflows of Resources		4,287	4,288	88	(1)
Net Position:					
Restricted for bond obligations		1.351.776	1.182.964	4	168 812
Restricted for insurance requirement and others				·	100,012
Unrestricted		į			•
Total Net Position		1,351,776	1,182,964	49	168,812
Total Liabilities and Net Position	s	8,645,399	\$ 8,372,194	94 S	273.205
				Į	

Housing Revenue Bond Program Statement of Revenue and Expenses Summary Current Period JAN-18 Unaudited

02/20/18 Page: 1

Program=Total HRB (in thousands)

	64	Q1 FY 2018	Q1 FY 2017		Change
Operating Revenues					
Interest on loans	69	53,367	\$ 49,535	35 \$	3,832
Fees and charges		11,286	12,679	62	(1,393)
Income on loan participation interests		149		56	`
Other		09		34	26
Total Operating Revenues		64,862	62,304	4	2,558
Operating Expenses		·			
Interest and amortization of bond premium and discount		45 778	40.010	٥	010
Salaries and related expenses		97/64	- to;0+	<u>.</u>	3,710
Trustees' and other fees		410	106	90	304
Amortization of debt issuance costs		2,813	2,605	55	208
Corporate operating expenses		1,			} '
Total Operating Expenses		48,951	42,729	85	6,222
Operating Income (Loss)		15,911	19,575	55	(3,664)
Non-operating Revenues (Expenses)					·
Earnings on investments		6,844	3,974	4	2.870
Unrealized gain (loss) on investment FMV		(2,362)	(3,927)	E	1,565
Loss on early retirement of debt			,	` •	
Other non-operating revenues (expenses), net		(123)	(317)	()	194
Operating transfers to (HDC) Corporate Services Fund		(2,667)	(4,946)	· (c)	2,279
Operating transfers from REMIC Subsidiary		•			1
Total Non-operating Revenues (Expenses)		1,692	(5,216)	(9	806'9
Income (Loss)		17,603	14,359	6	3,244
Capital transfers		151,209	24,020	.0	127,189
Loan participation agreement resecuritization proceeds		•		,	•
Extinguishment of debt		•		,	1
Change in Net Position		168,812	38,379	6	130,433
Total net position - beginning of year		1,182,964	1,091,987	7	90,977
Total Net Position - End of Year	· 69	1,351,776 \$	1,130,366	\$ 9	221,410

Housing Assistance Corporation Net Position Summary Current Period JAN-18 Unaudited

02/20/18 Page: 1

Program=Total HAC (in thousands)

(iii dibusarius)	circo.	24 2040	October 24	3	
	Janua	Janualy 31, 2010	October 51, 2017	3	Change
Assets					
Current Assets:					
Cash	€9	•	69	5	•
Investments		Ī			
Receivables:		,			
Mortgage loans		•			
Accrued interest		(145)		(145)	•
Notes		•		• •	•
Other				. .	•
Total receivables		(145)		(145)	'
Other assets				•	1.
Total Current Assets		(145)		(145)	
Noncurrent Assets:					
Restricted cash		9		•	9
Restricted investments		14,340	14	14,952	(612)
Purpose investment		•			•
Mortgage loans		•		•	Ī
Restricted receivables:					
Mortgage loans		128,922	136	136,083	(7,161)
Mortgage loan participation - Federal Financing Bank					
Loan participation receivable - The City of NY		ı		•	1
Accrued interest		1			•
Notes		1			
Other		.1		•	•
Total restricted receivables		128,922	136	136,083	(7,161)
Unamortized issuance costs		1			•
Primary government/component unit receivable (payable)		Ξ			Ξ
Capital assets		Ì		•	•
Other assets		•			
Total Noncurrent Assets		143,267	151	151,035	(7,768)
Total Assets	S	143,122	S 150	\$ 068'051	(7,768)
Deferred outflows of resources					
Interest rate cap		•		ı	1
Deferred loss on early retirement of debt		•			•
Deferred outflows pension related		•		,	
Deferred outflows related to OPEB pian		•			1
Total deferred outflows of resources	S	1	\$	\$	•

Program=Total HAC (in thousands)

	Janua	January 31, 2018	October 31, 2017	31, 2017	Change	
Liabilities and Net Position						
Current Liabilities:						
Bonds payable (net)	ss.	ı	. ·	•	69	•
Debt obligations payable						
Loan participation payable to Federal Financing Bank						
Accrued interest payable				•		•
Payable to The City of New York		ı		•		•
Payable to mortgagors		1		•		•
Restricted earnings on investments		44		43		
Accounts and other payables		1		٠		•
Due to the United States Government				•		•
Total Current Liabilities		4		43		-
Noncurrent Liabilities:						
Bonds and debt obligations payable:						
Bonds payable (net)		•		•		٠
Debt obligations payable		1		•		•
Loan participation payable to Federal Financing Bank		•	4	•		1
Payable to The City of New York:						
Loan participation due to The City of New York		•		•		•
Others		142,934		150,703	7,7)	(691,7)
Payable to mortgagors	i	144		144		1
Post employment benefits payable						
Unearned revenues and other liabilities				•		•
Due to the United States Government		t		•		
Total Noncurrent Liabilities		143,078	`	150,847	7,7)	(692,7)
Total Liabilities		143,122		150,890	7,7)	(2,768)
Deferred inflows from pension		•		•		,
Interest rate swap fair value		•		٠		1
Total Deferred Inflows of Resources		t		•		•
Net Position:						
Restricted for bond obligations		•		•		
Restricted for insurance requirement and others		•		•		
Unrestricted				-		•
Total Net Position		•		,		,
Total Liabilities and Net Position	s	143,122	59	150,890 \$		(7,768)

Housing Assistance Corporation Statement of Revenue and Expenses Summary Current Period, IAN-18	Unaudited
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Program=Total HAC (in thousands)

(in thousands)			
	Q1 FY 2018 (11/01/17-01/31/18)	Q1 FY 2017 (11/01/16-01/31/17)	Change
Operating Revenues			
Interest on loans	5	⇔	•
Fees and charges	•		ŧ
Income on loan participation interests	•		•
Other	•	•	•
Total Operating Revenues	•		•
Occupation Constitution			(,
Operating Expenses			
Interest and amortization of bond premium and discount	1	•	•
Salaries and related expenses			•
Trustees' and other fees	•	•	•
Amortization of debt issuance costs		•	•
Corporate operating expenses		•	•
Total Operating Expenses	•	1	
Operating Income (Loss)	•	ı	
Non-operating Revenues (Expenses)			
Earnings on investments	1	•	_
Unrealized gain (loss) on investment FMV		(I) (I)	1
Loss on early retirement of debt	•		•
Other non-operating revenues (expenses), net	•	•	•
Operating transfers to (HDC) Corporate Services Fund	•	•	•
Operating transfers from HAC Subsidiary	(1)	•	(1)
Total Non-operating Revenues (Expenses)	1	(1)	. 1
Income (Loss)	•	(1)	. 1
Capital transfers	•	•	•
Loan participation agreement resecuritization proceeds	•	•	•
Extinguishment of debt	•		1
Change in Net Position	•	(I)	1
Total net position - beginning of year	•	1	(1)
Total Net Position - End of Year	S	S .	

Residential Mortgage Insurance Corporation Net Position Summary Current Period JAN-18 Unaudited

02/20/18 Page: 1

Program=Total REMIC (in thousands)

Assets	January 31, 2018	October 31, 2017	7 Change	a)
Current Assets:				
Cash	5-9	€ 5	6- 5	•
Investments		,	·	, .
Receivables:				
Mortgage loans			•	•
Accrued interest				•
Notes				•
Other				
Total receivables				'
Other assets				•
Total Current Assets				'
Noncurrent Assets:				
Restricted cash			1	•
Restricted investments	123,356	5 122,316	16	1.040
Purpose investment				· •
Mortgage loans			•	ı
Restricted receivables:				
Mortgage loans		•		•
Mortgage loan participation - Federal Financing Bank		, .		,
Loan participation receivable - The City of NY			·	ī
Accrued interest			•	1
Notes				,
Other			,	•
Total restricted receivables				
Unamortized issuance costs		·		•
Primary government/component unit receivable (payable)	118		(19)	137
Capital assets	•	-		•
Other assets	•			I.
Total Noncurrent Assets	123,474	122,297	7.	1,177
Total Assets	\$ 123,474	\$ 122,297	7 \$	1,177
Deferred outflows of resources				
Interest rate cap	'			
Deferred loss on early retirement of debt	•		•	
Deferred outflows pension related			• .	٠.
Deferred outflows related to OPEB plan	•			
Total deferred outflows of resources	S	5	5	
		,	•	· [

Residential Mortgage Insurance Corporation Net Position Summary Current Period JAN-18 Unaudited

02/20/18 Page: 2

Program=Total REMIC (in thousands)

(January 31, 2018		October 31, 2017	Change	
Liabilities and Net Position					
Current Liabilities:			,		
Bonds payable (net)	69	69	€ ?	•	
Debt obligations payable					
Loan participation payable to Federal Financing Bank					
Accrued interest payable		•			,
Payable to The City of New York		1	•		
Payable to mortgagors		1	•		
Restricted earnings on investments		1	•		.,
Accounts and other payables		i	•		
Due to the United States Government		•	•	-	
Total Current Liabilities		•	•		.
Noncurrent Liabilities:					l
Bonds and debt obligations payable:		•	•	·	
Bonds payable (net)		•	•		
Debt obligations payable		•	•	•	
Loan participation payable to Federal Financing Bank		1	•		
Payable to The City of New York:		•			
Loan participation due to The City of New York		,			
Others		•	•		
Payable to mortgagors		,	•		,
Post employment benefits payable			7.1		
Unearned revenues and other liabilities			•	•	
Due to the United States Government		-	•	•	
Total Noncurrent Liabilities	·		•		١.
Total Liabilities		•	-	•	.
Deferred inflows from pension		•	1	•	
Interest rate swap fair value		1	•	•	
Total Deferred Inflows of Resources		•	•		 d
Net Position:					
Restricted for bond obligations			•	'	,
Restricted for insurance requirement and others	0/ 10	70,914	71,192	(278)	⊛
Unrestricted	52	52,560	51,105	1,455	1
Total Net Position	123	123,474	122,297	1,177	_
Total Liabilities and Net Position	\$ 123	123,474 S	122,297 \$	1,177	٦,
					ı

Residential Mortgage Insurance Corporation Statement of Revenue and Expenses Summary	Current Period JAN-18	Unaudited
Residential Mo Statement of Re	Cur	

Program=Total REMIC (in thousands)

(in thousands)		2	2000	24 57 2041	
		(11/01/17	(11/01/17-01/31/18)	(11/01/16-01/31/17)	Change
Operating Revenues					
Interest on loans	\$			· &	↔
Fees and charges			784	624	160
Income on loan participation interests			•	•	•
Other			•	•	•
Total Operating Revenues			784	624	160
Operating Expenses	-	,			
Interest and amortization of bond premium and discount			•	1	•
Salaries and related expenses			•	•	
Trustees' and other fees			•	•	
Amortization of debt issuance costs				•	•
Corporate operating expenses			•	E	
Total Operating Expenses			ι		1
Operating Income (Loss)			784	624	160
Non-operating Revenues (Expenses)					
Earnings on investments	I		530	342	188
Unrealized gain (loss) on investment FMV			•	(820)	820
Loss on early retirement of debt			•	•	1
Other non-operating revenues (expenses), net			•	•	
Operating transfers to (HDC) Corporate Services Fund			•	•	•
Operating transfers from REMIC Subsidiary			(136)	(129)	(7)
Total Non-operating Revenues (Expenses)			394	(209)	1,001
Income (Loss)			1,178	17	1,161
Capital transfers				•	•
Loan participation agreement resecuritization proceeds		/	•	•	•
Extinguishment of debt	-		٠		
Change in Net Position			1,178	17	191'1
Total net position - beginning of year			122,296	117,572	4,724
Total Net Position - End of Year	9	€.	123,474	\$ 117,589	\$ 5,885

Program=Total NIBP (in thousands)

Assets	Januar	January 31, 2018	October 31, 2017	2017	Change
Current Assets:					
Cash	69	•	€*	•	
Investments	,	7,378		10.110	(2 732)
Receivables:				,	(4,126)
Mortgage loans	•	1,928		1,904	24
Accrued interest		571		572	;
Notes	,				
Omer				-	•
Total receivables		2,499		2,476	23
Other assets		•		•	
Total Current Assets		7.186		12,586	(2,709)
Noncurrent Assets:					
Restricted cash		225		325	
Restricted investments		4,729		4.707	· <i>cc</i>
Purpose investment		10,494		10.570	3 (2)
Mortgage loans			•	2	(91)
Restricted receivables:					ı
Mortgage loans		267,017	26	267.508	(491)
Mortgage loan participation - Federal Financing Bank)	(172)
Loan participation receivable - The City of NY		•			
Accrued interest		•		,	
Notes		•			
Other		•			• _! •
Total restricted receivables		267.017	26	267 508	(401)
Unamortized issuance costs				·	(1/1)
Primary government/component unit receivable (payable)		(1,200)		(1,200)	
Capital assets		•	•	` •	1
Other assets					•
Total Noncurrent Assets		281,265	28	281,810	(545)
Total Assets	s	291,142	\$ 29	294,396 S	(3,254)
Deferred outflows of resources					
Interest rate cap					
Deferred loss on early retirement of debt		•		۱ ۱	•
Deferred outflows pension related		,		۱ ۱	• 1
Deferred outflows related to OPEB plan		•			
Total deferred outflows of resources	S	-	9	s -	

Program=Total NIBP (in thousands)

(in thousands)	Janus	January 31, 2018	October 31, 2017	2017	Change
Liabilities and Net Position					
Current Liabilities:					
Bonds payable (net)	€?	3,470	₩.	3,390 \$	80
Debt obligations payable		•			
Loan participation payable to Federal Financing Bank					
Accrued interest payable		1,870		3,762	(1,892)
Payable to The City of New York		•		•	•
Payable to mortgagors		•			•
Restricted earnings on investments		1			•
Accounts and other payables		1		•	•
Due to the United States Government		•			
Total Current Liabilities		5,340		7,152	(1,812)
Noncurrent Liabilities:					
Bonds and debt obligations payable:					
Bonds payable (net)		282,080	28	283,820	(1,740)
Debt obligations payable		•		1	•
Loan participation payable to Federal Financing Bank		ı		•	•
Payable to The City of New York:		•			
Loan participation due to The City of New York		1		•	•
Others		ı		ı	•
Payable to mortgagors		•		•	1
Post employment benefits payable		•	•	•	1
Unearned revenues and other liabilities		•		•	•
Due to the United States Government		•		•	•
Total Noncurrent Liabilities		282,080	. 28	283,820	(1,740)
Total Liabilities		287,420	29	290,972	(3,552)
Deferred inflows from pension				ı	
Interest rate swap fair value		•		•	
Total Deferred Inflows of Resources		•		1	4
Net Position:				-	
Restricted for bond obligations		3,722		3,424	298
Total Net Position		3,722		3,424	298
Total Liabilities and Net Position	s	291,142	\$ 29	294,396 \$	(3,254)
				١	((-)

New Issue Bond Program	Statement of Revenue and Expenses Summary	Current Period JAN-18	Unaudited
Ne	Statement of F	ರ	•

Q1 FY 2017

Q1 FY 2018

02/20/18 Page: 1

Program=Total NIBP (in thousands)

		İ			
Operating Revenues					
Interest on loans	.	2,898 \$	2,921	€9	(23)
Fees and charges		•	1		` •
Income on loan participation interests		٠			
Other		1			•
Total Operating Revenues		2,898	2,921		(23)
Operating Expenses					
Interest and amortization of bond premium and discount		1,871	1.886	,	(15)
Salaries and related expenses					<u>'</u>
Trustees' and other fees		•			t
Amortization of debt issuance costs		•			1
Corporate operating expenses		•	•		1
Total Operating Expenses		1,871	1,886		(15)
Operating Income (Loss)		1,027	1,035		€
Non-operating Revenues (Expenses)		•			
Earnings on investments		185	184		
Unrealized gain (loss) on investment FMV		ı	•		1
Loss on early retirement of debt		•	•		•
Other non-operating revenues (expenses), net		•	•		. •
Operating transfers to (HDC) Corporate Services Fund		•	4		'
Total Non-operating Revenues (Expenses)		185	184		1
Income (Loss)		1,212	1,219	-	3
Capital transfers		(914)	(2,614)	1	1,700
Loan participation agreement resecuritization proceeds					•
Extinguishment of debt				,	•
Change in Net Position		298	(1,395)		1,693
Total net position - beginning of year		3,424	6,021	(2	(2,597)
Total Net Position - End of Year	9	2 777 €	3 7671		

Open	
Ζ	
Total	nds)
ram=	ousa
õ	in th

	Janu	January 31, 2018	October 31, 2017	Change
Assets			ı	
Current Assets:				
Cash	69	•	· ·	· •
Investments		10,574	7,314	3,260
Receivables:				
Mortgage loans		4,566	3,443	1,123
Accrued interest		758	. 602	156
Notes		i	•	
Other		•	,	1
Total receivables		5,324	4,045	1,279
Other assets		•	•	
Total Current Assets		15,898	11,359	4,539
Noncurrent Assets:			-	
Restricted cash		•		•
Restricted investments		8,680	54,216	(45,536)
Purpose investment		1	•	
Mortgage loans		•	•	•
Restricted receivables:				
Mortgage loans		164,875	119,553	45,322
Mortgage loan participation - Federal Financing Bank		•	•	•
Loan participation receivable - The City of NY		•	•	•
Accrued interest		938	•	938
Notes		•	•	
Other		•	•	•
Total restricted receivables		165,813	119,553	46,260
Unamortized issuance costs		1	•	•
Primary government/component unit receivable (payable)		(4,037)	(4,038)	1
Capital assets		.1	•	
Other assets		-	•	•
Total Noncurrent Assets		170,456	169,731	725
Total Assets	s	186,354	\$ 181,090	\$ 5,264
Deferred outflows of resources				
Interest rate cap		244	244	•
Deferred loss on early retirement of debt		•	•	•
Deferred outflows pension related		•	•	•
Deferred outflows related to OPEB plan		•	•	
Total deferred outflows of resources	s9	244	\$ 244	•

Program=Total MINI Open (in thousands)

(in thousands)	January 31, 2018	October 31, 2017	Change
Liabilities and Net Position			
Current Liabilities:			
Bonds payable (net)	\$ 10,010	\$ 7,095 \$	2.915
Debt obligations payable		•	
Loan participation payable to Federal Financing Bank			
Accrued interest payable	2,007	862	1,145
Payable to The City of New York			
Payable to mortgagors	•	•	•
Restricted earnings on investments	•	•	
Accounts and other payables	•	•	
Due to the United States Government	1	•	•
Total Current Liabilities	12,017	7,957	4,060
Noncurrent Liabilities:			
Bonds and debt obligations payable:			
Bonds payable (net)	128,885	131.800	(2.915)
Debt obligations payable			(21.62)
Loan participation payable to Federal Financing Bank	•	•	•
Payable to The City of New York:	•		
Loan participation due to The City of New York	•	•	•
Others		•	•
Payable to mortgagors		•	•
Post employment benefits payable	•	•	
Unearned revenues and other liabilities	•		•
Due to the United States Government		•	1
Total Noncurrent Liabilities	128,885	131,800	(2,915)
Total Liabilities	140,902	139,757	1,145
Deferred inflows from pension	1	•	•
Interest rate swap fair value		•	•
Total Deferred Inflows of Resources		4	•
Net Position:			
Restricted for bond obligations	45,696	41.577	4.119
Restricted for insurance requirement and others			\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
Unrestricted	1.		, ,
Total Net Position	45,696	41,577	4,119
Total Liabilities, Deferred Inflows of Resources and Net Position	8 186.598	3 722 181 3	5764
	100,070	101,534	107°C

Mini Housing Revenue Bond Program Statement of Revenue and Expenses Summary Current Period JAN-18 Unaudited

02/20/18 Page: 1

Program=Total MINI Open (in thousands)

502 502 Change 1,551 1,551 (11/01/16-01/31/17) Q1 FY 2017 2,053 \$ 2,053 (11/01/17-01/31/18) Q1 FY 2018 Income on loan participation interests Operating Revenues Operating Expenses Total Operating Revenues Fees and charges Interest on loans Other

Interest and amortization of bond premium and discount	1,145	880	265
Salaries and related expenses		•	•
Trustees' and other fees		•	•
Amortization of debt issuance costs	161		161
Corporate operating expenses		•	•
Total Operating Expenses	1,306	880	426
Operating Income (Loss)	747	671	92
Non-operating Revenues (Expenses)			

Idoll-operating Idevertuces (Experises)					
Earnings on investments		09		20	40
Unrealized gain (loss) on investment FMV		•		1	•
Loss on early retirement of debt		•		•	•
Other non-operating revenues (expenses), net		•			
Operating transfers to (HDC) Corporate Services Fund		•		1	
Total Non-operating Revenues (Expenses)		09		20	40
Income (Loss)		807		691	116
Capital transfers		3,312		(6)	3,321
Loan participation agreement resecuritization proceeds		ı	,	•	•
Extinguishment of debt		1			•
Change in Net Position		4,119		682	3,437
Total net position - beginning of year		41,577		53,490	(11,913)
Total Net Position - End of Year	€9	45,696 \$	69	54,172 \$	(8,476)



MEMORANDUM

TO:

Members of the Audit Committee

FROM:

Ellen Duffy

SUBJECT:

Debt Report for January 31, 2018

DATE:

MARCH 22, 2018

Attached please find the Corporation's Debt Report as of January 31, 2018.

The last debt report presented to the Audit Committee was as of December 31, 2017. During this time, the Corporation did not issue any new bonds.

There were bond redemptions in one series of the Open Resolution bonds totaling \$69.9 million.

The Corporation's debt outstanding as of January 31, 2018 is approximately \$10.9 billion. The Corporation's statutory debt capacity stands at \$12.5 billion.

	Percent	63.86% 2.92% 12.93%	100.00%						,											-			-								
Total HDC Ronde		180.84 000.00 114.49	I																		1.65	5 62.1	1.00						6.469.385.79		
MF Pass-Thru Resolution		237		Debt Service 1121	Coverage Ratio (13)	36.1751% (8,9) 52.7634% (8,9) 88.1341% (6)	158.7864% 69.9771%	311.7602%	114.2217% 241.5222%	355.5197%	134.2126%	127.1328% (9)	162.4/5/%	149.9801% (9)	72.7107% (9)				Rates of the Index Floating Bonds:		ap Rate		7 D SIFMA - current (02/15/2018)					Debt Issuance / Key Events	Debt Issuance in Jan:		
MF Secured Resolution	Percent	71% 0% 29%	100%	Weighted Avg. (12)	Spread (13)	5.9411% 1.8108% 3.5449%	3.2990% -0.5689%	-0.7444% 1.0873%	3.1615%	-0.0882%	1.4145%	2.5618%	1 9906%	3.2534%	4.2393%	%0000 D	0.0000%	0.0000% 0.00000	0.0000%	0.5626%	0.0000%	0,000,0									
MF Sec	Amount	39.070,000	138,895,000	Weighted Avg. V	•	7.40% 3.27% 5.00%	5.29% 1.42%	3.00%	5.02%	1.94%	3.28%	4.41%	3.88%	5.06%	2.96%	2.15%	1.23%	1.23%	2.06%	2.20%	123%	B/05'1	900 000	2.240%	8/1/2019	85,000,000	2.029% 5/1/2018	11/1/2035	50,000,000 1.203%	6/1/2017	8/1/2020 54,126,321 2.984%
	•		1	Average		1.46%	1.99%	1.86%	1.86%	2.03%	1.87%	1.85%	1.89%	1.81%	1.72%	2.15%	1.23%	1.23%	2.06%	1.64%	1.23%		(44)	Ē		(11)			(11)		£
	Percent	43.35% 0.00% 4.68%	100.00%	Bond Tax	Status	Taxable Taxable	Taxable	Taxable	Taxable Taxable	Taxable	Taxable	Taxable	Taxable	Taxable	Taxable	Tax-Exempt	Tax-Exempt	Tax-Exempt Taxable	Tax-Exempt	Tax-Exempt	Tax-Exempt		,								
Stand-Alone Bonds	Amount	1.763.350.544 (1) 190.317.114 (3) 2.113.715.000	4,067,382,658	Rate Reset	Period/ Index	Quarterly/ 3 M FHLB Swap Rate + 30 bps Quarterly/ 3 M FHLB Swap Rate + 30 bps Quarterly/ 3 M FHLB Swap Rate + 30 bps	Quarterly/ 3 M LIBOR + 61 bps Quarterly/ 3 M LIBOR + 61 bps	Quarteny 5 M LIBOR + 48 bps Quarteny 3 M LIBOR + 54 bps	Quarterly/ 3 M LIBOR + 48 bps Quarterly/ 3 M LIBOR + 48 bps	Quarterly/ 3 M LIBOR + 65 bps Quarterly/ 3 M LIBOR + 49 bps	Quarterly/ 3 M LIBOR + 49 bps	Quarterly/ 3 M LIBOR + 47 bps	Quarterly/ 3 M LIBOR + 51 bps	Quarterly/ 3 M LIBOR + 43 bps	Quarterly/ 3 M LIBOR + 41 bps	Monthly/(LIBOR + 110bps)75%	VRDO (Citibank Liquidity)	VRDO (Wells Fargo Liquidity) Quarterly/ 3 M LIBOR + 68 bps	Quarterly/ 3 M LIBOR + 68 bps	Monthly/LIBOR*70% +54bps	VRDO (Wells Fargo Liquidity)		Outstanding Interest Rate SWAPs Outstanding Notional Amount With Wells Force	Swap Rate	Forward Start Date Maturity Date	Outstanding Notional Amount With PNC	Swap Kate Forward Start Date	Maturity Date	Outstanding Notional Amount With PNC Swap Rate	Forward Start Date	Maturity Date Outstanding Notional Amount With Wells Fargo Swap Rate
ogram	Percent	100% 0% 0%	100%																												
New Issue Bond Program	Amount Pe	285,550,000 1	285,550,000 1	Bond	Maturty	2034 2037 2041	2043 2043	2040	2040 2040	2038	2037	2044	2045	2021	2041	2046	2020	2020	2052	2021	2021			166,130,000	7.35%	50,000,000	4.50%-7.50%	150,000,000	3.50%	39,825,000	3.25% 2/1/2023
Z			1			9			€	9		3				(10)	9				9			£		5		3		Ξ	
olution	Percent	74.95% 5.03% 18.65% 1.37%		Mortgage	Loan Balance	13,683,746 43,702,149,36 18,237,839	53,082,286	73,296,032	30,286,881	72,784,311	51,000,776	57,698,886	129,274,751.80	66,840,696.54	27,636,490.78 1,089,070,662	100,000,000	10,661,427	13,499,800 42,298,168	7,726,291	19,162,236	7,136,797	208,151,374		Iman Sachs				lays		3ank	
Open Resolution	Amount	4.710.110.000 316,100,000 1.171.750.000 86.330.000	Total 6,284,290,000 Draw Down Bond Allocations Government Debt Obligation Allocation Statutory Limit Remaining Capacity	ø _		39,110,000 87,405,000 72,255,000	33,430,000	53,360,000	12,540,000	50,000,000	38,000,000	33,000,000	78,000,000	61,500,000	39,825,000 870,575,000	ass-Through 100,000,000	15,000,000	13,500,000	29,500,000	50,000,000	57,830,000 85,950,000	513,280,000	ect Rate CAPe	Outstanding Notional Amount With Goldman Sachs		Outstanding Notional Amount With PNC		Outstanding Notional Amount With Barclays		Outstanding Notional Amount With US Bank	
Total HDC Debt	Outstanding Principal	Fixed Rate Var-Term Var-Index (2) VRD0	Total 6,284,28 Draw Down Bond Allocations Government Debt Obligation , Statutory Limit Remaining Capacity	Open/Mini Variab	Var-Index	2002 C 2008 E 2008 F	2008 J 2008 K	2010 H	2011 2011 2011 2013 2013 2013 2013 2013	2014 B-2	2014 D-2	2014 H-2 2015 R-2	2016 G-2	2017 B-2	ZU1 / A-Z-(Mini) Total	Var-Index/VRDO Pass-Through 2006 J-1	2015 D-3	2015 D-4 2016 J-1	2016 J-2	2017 A-3	2017 C-4 2017 G-3	Total	Outstanding Interest Rate CAPs	Outstanding Notion	Strike Rate Maturity Date	Outstanding Notion	Strike Kate Maturity Date	Outstanding Notion	Strike Rate Maturity Date	Outstanding Notion	Surke Kate Maturity Date

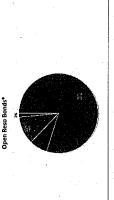
Debt Issuance / Key Events Debt Issuance in Jan:		Remarketing in Jan:	Draw Down Advances in Jan: 38.ch Ave #2 La Gasa de Mundo MHANY Prospect Paza Drapa de Manaica Drapa Hall Stanley Commons 535 Canton #2 Redemption in Jan: 2017 F (COB)	
° 0 %	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00			
11/1/2035 (11) 50,000,000 1,203%	6/1/2017 8/1/2020 (11) 54,126,321 2,284% 2/1/2021 5/1/2048		••••	_
	5			

Forward Start Date
Maturity Date
Outstanding Notional Amount With Wells Fargo
Swap Rate
Swap Rate
Maturity Date
Maturity Date

(12) 227,215,060 27.11%

HDC Short-Term Assets Hedge Ratio: Short-Term Assets/Variable Debt

2018 Volume Cap



1,342,077,16 220,582,00

69,915,000,00 69,915,000.00

0.00

6,469,385.79 1,328,411.50 3,578,315.13

Used up to 1/31 Balance Available 1/31/18

(1) Includes Debt Obligation issued pursuant to a Funding Loan Agreement. A) Harlem Dowling: \$12.85mm VC Allocated; \$12.85mm of 8 B) Stanley Commons: \$40.2mm VC Allocated; \$12.92.85,128 ols C) Transle Allocated; \$40.2mm VC Allocated; \$10.910 Old Volument of \$10.85mm VC Allocated; \$10.910 Old Volument of \$10.85mm VC Allocated; \$10.910 Old Volument of \$10.910 Old Vo

s currently advancing.
The object (2000,000 outstanding)(fixed) and i.2 (variable).
The object (2000,000 outstanding)(fixed) and i.2 (variable).
The object (2000,000 outstanding)(fixed) and i.2 (variable).
The object (2000,000 outstanding) are securing both as a safety of the outstanding are securing both as a safety of the outstanding of the outstanding outstandi

d the borrower is responsible for the bond interest, which is fully capitalized. associated bond series, therefore provides a hedge to the full Open Resolution variable rate portfolio, spe the earnings.



MEMORANDUM

TO:

Members of the Audit Committee

FROM:

Ellen Duffy

SUBJECT:

Investment Report for March 20, 2018

DATE:

MARCH 22, 2018

Attached please find HDC's investment report for March 20, 2018. Funds under management totaled approximately \$4.4 billion. This report reflects routine investment activity.

Investments by Pool: Open Resolution Revenue Project-Related GNMAs Open Resolution DSR Open Resolution DSR Open Resolution Bond Proceeds Open Resolution Brepayment Open Resolution Prepayment Debt Paydown Reserve Fund Non Bonded Proceeds Mitchell-Lama Prepayment NYCHA (Stand Alone, All Funds) HDC Pass Through HPD Participating Loan (Schermerhorn) HPD Grart Funds (Harp Proceeds) Bond Proceeds Non-OR	255,690,392 29,384,894 1,339,807,546 1,339,807,546 93,067,461 340,182 105,763 37,666,494 3,354,201 13,544,982 3,556,547 37,234,590 151,762,687	224, 194, 875 224, 194, 875 29, 442, 826 130, 762, 203 1,374, 817, 851 44, 392, 321 44, 392, 321 339, 804 105, 658 37, 658, 394 3,174, 713 13, 540, 327 3, 540, 22	80,233,794 31,495,517 (57,932) 71,331 (35,010,305) - 48,675,140 - 378 105 8,100 179,488 4,655 12,518 (3,029,213) 2,076,801 44,426,582	269,248,862 29,672,230 124,554,856 1,484,466,277 38,330,000 26,631,775 147,422 338,374 105,267 37,228,914 2,385,194 13,489,684 3,495,993	(13,558,470) (287,337) 6,278,678 (144,658,731) (38,630,000) 66,435,686 (147,422) 4,808
od: MAs SR and Proceeds ademption epayment arve Fund avs ayment ie, All Funds) oan (Schermentorn)	255,690,392 29,384,894 130,833,534 1,339,807,546 93,067,461 340,182 105,763 37,666,494 3,354,590 15,742,647 3,354,590 15,742,647 3,556,547 37,234,590	224,194,875 224,194,875 29,442,826 130,762,203 1,374,817,851 44,392,321 44,392,321 339,804 105,658 37,658,394 3,144,713 13,540,327 3,544,029 40,263,802 149,685,886 2,051,922,689	80,235,794 31,496,517 (57,932) 71,331 (35,010,305) - 48,675,140 - 378 105 8,100 179,488 4,655 12,518 (3,029,213) 2,076,801 44,426,582	269,248,862 29,672,230 124,554,856 1,484,466,277 38,330,000 26,631,775 147,422 338,374 105,267 37,228,914 2,385,194 13,489,684 3,495,993	(13,558,470) (287,337) 6,278,678 (144,658,731) (38,630,000) 66,435,686 (147,422) 4,808
erhorn) S)	255,690,392 29,384,894 13,89,807,546 93,067,461 340,182 105,763 37,666,494 3,354,590 13,544,982 3,556,547 37,234,590 15,762,687	224,194,875 29,442,826 130,762,203 1,374,817,851 44,392,321 339,804 105,658 37,658,394 3,174,713 13,540,227 3,540,227 3,540,227 3,540,227 3,540,229 40,263,802 149,685,886 2,051,922,689	31,495,517 (57,932) 71,331 (35,010,305) - 48,675,140 - 378 105 8,100 179,488 4,655 12,518 (3,029,213) 2,076,801	269,248,862 29,672,230 124,554,866 1,484,466,277 38,630,000 26,631,775 147,422 338,374 105,267 37,228,914 2,385,194 13,489,664 3,495,993	(13,558,470) (287,337) 6,278,678 (144,658,731) (38,630,000) 66,435,686 (147,422) 4,808
erhorn) S)	255,690,392 29,384,894 1,339,807,546 93,067,461 340,182 105,763 37,666,494 3,354,201 13,544,982 3,556,547 37,234,590 151,762,687	224, 194, 875 29, 442, 826 130, 762, 203 1,374, 817, 851 44, 392, 321 44, 392, 321 339, 804 105, 658 37, 658, 394 3,174, 713 13, 540, 327 3, 540, 227 3, 540, 225 40, 263, 802 149, 685, 886 2, 051, 922, 689	31,495,517 (57,932) 71,331 (35,010,305) - 48,675,140 - 378 105 8,100 179,488 4,655 12,518 (3,029,213) 2,076,801 44,426,582	269,248,862 29,672,230 124,554,866 1,484,466,277 38,630,000 26,631,775 147,422 338,374 37,228,914 2,385,194 13,489,664 3,495,993	(13,558,470) (287,337) 6,278,678 (144,658,731) (38,630,000) 66,435,686 (147,422) 4,808
erhorn) S)	29,384,894 130,833,534 1,339,807,546 93,067,461 105,763 37,666,494 3,354,201 13,544,982 3,556,547 37,234,590 151,762,687	29,442,826 130,762,203 1,374,817,851 44,392,321 339,804 105,658 37,658,394 3,174,713 13,540,327 3,540,227 3,544,029 40,263,806 149,685,886 2,051,922,689	(57,932) 71,331 (35,010,305) - 48,675,140 - 378 105 8,100 179,488 4,65 12,518 (3,029,213) 2,076,801 44,426,582	29,672,230 124,554,866 1,484,466,277 38,630,000 26,630,775 147,422 338,374 105,267 37,228,914 2,385,194 13,489,664 3,495,993	(287,337) 6,278,678 (144,658,731) (38,630,000) 66,435,686 (147,422) 7,808
ertocn) s)	130,833,534 1,339,807,546 93,067,461 340,182 105,763 37,666,494 3,354,201 13,544,982 3,556,547 37,234,590 151,762,687	130,762,203 1,374,817,851 44,392,321 339,804 105,658 37,658,394 3,174,713 13,540,327 3,544,029 40,263,808 149,685,886 2,051,922,689	77,331 (35,010,305) - 48,675,140 - 378 105 8,100 179,488 4,655 12,518 (3,029,213) 2,076,801 44,426,582	124,554,856 1,484,466,277 38,630,000 26,631,775 147,422 338,374 105,267 37,228,914 2,385,194 13,489,684 3,495,993	6,278,678 (144,658,731) (38,630,000) 66,435,686 (147,422) 7,808
ertoorn) S)	1,339,807,546 93,067,461 340,182 105,763 37,666,494 3,354,201 13,544,982 3,556,547 37,234,590 151,762,687	1,374,817,851 44,392,321 339,804 105,658 37,658,394 3,174,713 13,540,327 3,544,029 40,263,802 149,665,806 2,051,922,689	(35,010,305) - 48,675,140 - 378 105 8,100 179,48 4,655 12,518 (3,029,213) 2,076,801 44,426,582	1,484,466,277 38,630,000 26,631,775 147,422 338,374 105,267 37,228,914 2,385,194 13,489,684 3,495,993	(144,658,731) (38,630,000) (66,435,686 (147,422) 1,808
erhorn) S)	93,067,461 340,182 105,763 37,666,494 3,354,201 13,544,982 3,556,547 37,234,590 151,762,687	44,392,321 339,804 105,658 37,668,394 3,174,713 13,540,327 3,544,029 40,263,802 149,665,886 2,051,922,689	48,675,140 378 105 8,100 179,488 4,655 12,518 (3,029,213) 2,076,801 44,426,582	38,630,000 26,631,775 147,422 338,374 105,267 37,228,914 2,385,194 13,489,684 3,495,993	(38,630,000) (66,435,686 (147,422) 1,808
Open Resolution Prepayment Debt Paydown Reserve Fund Non Bonded Proceeds Mitchel-Lama Prepayment NYCHA (Stand Alone, All Funds) HDC Pass Through HPD Participating Loan (Schermerhorn) HPD Grant Funds (Harp Proceeds) Bond Proceeds Non-OR	93.067,461 340,182 105,763 37,666,494 3,354,201 13,544,982 3,556,547 37,234,590 151,762,687	44,392,321 339,804 105,658 37,668,394 3,174,713 13,540,327 3,544,029 40,263,802 149,665,886 2,051,922,689	48,675,140 378 105 8,100 179,488 4,655 12,518 (3,029,213) 2,076,801 44,426,582	26,631,775 147,422 338,374 105,267 37,228,914 2,385,194 13,489,684 3,495,993	66,435,686 (147,422) 4,808
Debt Paydown Reserve Fund Non Bonded Proceeds Mitchell-Lama Prepayment NYCHA (Stand Alone, Ali Funds) HDC Pass Through HPD Participating Loan (Schermerhorn) HPD Grant Funds (Harp Proceeds) Bond Proceeds, Non-OR	340,182 105,763 37,666,494 3,354,201 13,544,982 3,556,547 37,234,590 151,762,687	339,804 105,658 37,658,394 3,174,713 13,540,22 40,263,802 149,685,886 2,051,922,689	378 105 8,100 179,488 4,655 12,518 (3,029,213) 2,076,801 44,426,582	147,422 338,374 105,267 37,228,914 2,385,194 13,489,684 3,495,993	(147,422) 1,808
Non Bonded Proceeds Mitchell-Lama Prepayment NYCHA (Stand Alone, Ali Funds) HDC Pass Through HPD Participating Loan (Schermerhorn) HPD Grant Funds (Harp Proceeds) Bond Proceeds, Non-OR	340,182 105,763 37,666,494 3,354,201 13,544,982 3,556,547 37,234,590 151,762,680	339,804 105,658 37,68,394 3,174,713 13,540,327 3,544,029 40,263,802 149,685,886 2,051,922,689	378 105 8,100 179,488 4,65 12,518 (3,029,213) 2,076,801 44,426,582	338,374 105,267 37,228,914 2,385,194 13,489,684 3,495,993	1,808
Mitchell-Lama Prepayment NYCHA (Stand Alone, All Funds) HDC Pass Through HPD Participating Loan (Schermerhorn) HPD Grant Funds (Harp Proceeds) Bond Proceeds Non-OR	105,763 37,666,494 3,354,201 13,544,982 3,556,547 37,234,590 151,762,687	105,658 37,658,394 3,174,713 13,540,327 3,544,029 40,263,802 149,685,886 2,051,922,689	105 8,100 179,488 4,655 12,518 (3,029,213) 2,076,801 44,426,582	105,267 37,228,914 2,385,194 13,489,684 3,495,993	301
NYCHA (Stand Alone, All Funds) HDC Pass Through HPD Participating Loan (Schermerhorn) HPD Grant Funds (Harp Proceeds) Rond Proceeds Non-OR	37,666,494 3,354,201 13,544,982 3,556,547 37,234,590 151,762,687	37,658,394 3,174,713 13,540,327 3,544,029 40,263,802 149,668,886 2,051,922,689	8,100 179,488 4,655 12,518 (3,029,213) 2,076,801 44,426,582	37,228,914 2,385,194 13,489,684 3,495,993	201
HDC Pass Through HDD Participating Loan (Schermerhorn) HPD Grant Funds (Harp Proceeds) Bond Proceeds Non-OR	3,354,201 13,544,982 3,556,547 37,234,590 151,762,687	3,174,713 13,540,327 3,544,029 40,263,802 149,665,886 2,051,922,689	179,488 4,655 12,518 (3,029,213) 2,076,801 44,426,582	2,385,194 13,489,684 3,495,993	437,580
HPD Participating Loan (Schermerhorn) HPD Grant Funds (Harp Proceeds) Bond Proceeds, Non-OR	13,544,982 3,556,547 37,234,590 151,762,6340	13,540,327 3,544,029 40,263,802 149,685,886 2,051,922,689 217,521,942	4,655 12,518 (3,029,213) 2,076,801 44,426,582	13,489,684 3,495,993	200,696
HPD Grant Funds (Harp Proceeds) Bond Proceeds, Non-OR	3,556,547 37,234,590 151,762,687	3,544,029 40,263,802 149,685,886 2,051,922,689 217,521,942	12,518 (3,029,213) 2,076,801 44,426,582	3,495,993	55,297
Bond Proceeds, Non-OR	37,234,590 151,762,687	40,263,802 149,685,886 2,051,922,689 217,521,942	(3,029,213) 2,076,801 44,426,582		60,554
	151,762,687	2,051,922,689 2,051,922,689 217,521,942	2,076,801	39,081,718	(1,847,128)
on-OR	2 000 240 274	2,051,922,689	44,426,582	125,476,547	26,286,139
Subtotal, Bond-Related 2,0	4,030,343,411	217,521,942		2,194,953,112	(98,603,841)
HPD Funds	215.291.606	602 405 477	(2,230,336)	215,184,390	107.217
Funds (Section 661)	715 095 865	7	21 910 688	516 028 252	199 067 613
	59,107,305	53.028.419	6 078 886	48 194 848	10 912 457
rows	339,861,793	329,523,188	10,338,605	322,500,312	17,361,481
.	1,329,356,569	1,293,258,727	36,097,843	1,101,907,801	227,448,768
Housing Assistance Corp.	13,920,317	14,122,124	(201,807)	14,943,835	(1,023,518)
,	124,687,565	124,283,564	404,001	122,139,173	2.548,393
Mitchell-Lama Claim Payment Fund	83,000	83,000	•	131,000	(48,000)
Construction Loan Mortgagor Equity	5,403,237	5.232.160	171,078	4.566,485	836,753
+	109,460,263	109,750,969	(290,706)	79,577,200	29,883,063
•	133,090,283	132,865,596	224,687	132,866,169	224,114
Corporate Services - DOJ	9,934,808	9,924,519	10,289	10,423,674	(488,866)
	36,660,614	38,002,106	(1,341,491)	64,594,284	(27,933,670)
ben Res	158,395,619	154,752,106	3,643,512	107,329,383	51,066,236
General/Operating***	161,363,016	164,385,025	(3,022,009)	143,812,849	17,550,166
Corporate Services — Revolving/Warehousing	189,437	189,227	211	188,431	1,007
Corporate Services - Future Mitchell Lama Loan Fund	45,624,228	45,623,172	1,056	45,583,075	41,152
Corporate Services – Mitchell Lama Repair Fund	8,001,868	7,998,427	3,440	7,984,093	17,774
Corporate Services HPD 2004 M.O.U.	34,655	22,949	11,706	27,366	7,288
	4,100,223	4,080,974	19,249	4,356,074	(255,851)
	74,521	74,085	436	942,247	(867,725)
	8,435,000	8,435,000	•	8,435,000	•
Corporate Services - NYCEEC	989,280	988,180	1,100	986,738	2,542
Þ					i
	163,665,903	163,591,286	74,617	163,846,618	(180,715)
Subtotal, HDC Non-Bond Programs	984,113,836	984,404,467	(290,632)	912,733,692	71,380,144
Total All Boole	4 409 819 676	4 329 585 882	80 233 794	4 209 594 605	200 225 071
	4,403,613,010	4,043,000,004	10,755,100	4,403,534,003	100,277,007

^{*} This amount represents the 2nd mortgage payoffs from the Mitchell Lama closing held by HDC prior to transfer to REMIC trustee
** 96,000,000 Rating Agency Reserve

** 4,845,250 2014 B DSR

** 15M HDC Risk Sharing Reserves Co-oP City (139)

** 2,750,575 HDC HDC Financial Guaranty Reserves NYCHA Tax credit (140)

** 2,500,000 PCR Risk Sharing Reserve (139)

** 2,500,000 PCR Risk Sharing Reserve (139)

** 3,135,200 FHA Risk Sharing Reserve (139)

** 3,135,200 FHA Risk Sharing Reserve (139)

** 3,135,200 FHA Risk Sharing Reserve (139)

** 4,135,200 FHA Risk Sharing Reserve (139)

weeny myesunem Report Monday, March 19, 2018

188 004,000 188 004,000			3/19/2018 Percentage of				
Security: 160,004,000 3,81% 166,946,001 1,806,946,001 1,806,046,046,046,046,046,046,046,046,046,0		3/19/2018	Securities Held	2/28/2018	Weekly Change	10/31/2017	Change 10/31/2017 to Current
## See Agreement (NYCHA DSR) 158,004,000 3,81% 156,948,000 1,056,000 ## Deposit (Interest Bearing) 1,52,27,333 3,50% 159,069,617,233 3,50% 170% 159,069,617,233 3,50% 170% 159,069,617,233 3,50% 170% 159,069,617,233 3,50% 170% 159,069,617,233 3,50% 170% 159,069,617,233 3,50% 170% 159,069,617,233 3,50% 170% 159,069,617,233 3,50% 170% 159,069,617,233 3,50% 170% 159,069,617,233 3,50% 170% 159,069,617,233 3,50% 170% 159,069,617,233 3,50% 1,50	Total Investments	4,409,819,676		4,329,585,882	80,233,794	4,209,594,605	200,225,071
165,004,000 235% 169,069,000 1055,000 1055,000	Investments by Security:	,					
Particle	Repurchase Agreements	168,004,000	3.81%	166,948,000	1,056,000	196.184.000	(28,180,000)
1,536,077,244 771% 1,536,075 58,756 75,765 70	Guaranteed Investment Contracts	154,221,303		159,069,046	(4,847,743)	128,846,085	25,375,218
Second Purchase Agreement (NVCHA DSR) 297,786 227 67 78 297,786 373 527,467	Demand Deposit (Interest Bearing)	1,636,057,234		1,599,817,233	36,240,001	1,675,716,136	(39,658,902)
15-00545,0000 23,824,534 0.68% 239,824,334 0.68% 239,824,334 0.68% 239,824,334 0.68% 239,824,334 0.68% 239,424,265 0.000 0.000	Certificate of Deposit	297,786,202		297,558,735	227,467	296,571,059	1,215,142
Paycovars Paycovars Paycovars	Citibank Forward Purchase Agreement (NYCHA USK)	29,824,394	0.68%	29,824,394	1 (29,824,394	
Bonds Bond	Agencies Freddio Daydawns	1,540,545,000	34.93%	1,490,545,000	20,000,000	1,240,545,000	300,000,000
17,650,000 3,12% 145,700,000 5,000,000 5,000,000 145,700,000	Friedule Faydowns Project-Related GNMA	96,324,649	7.18%	90,324,649	, (CC) (CS)	102,153,700	(5,829,051)
Subject Subj	*Municipal Bonds	137 655 000	3 12%	145 700 000	(36,432)	23,672,230	(281,331)
Amount	Treasuries	320,017,000	7.26%	314 356 000	(6,043,000)	374 067 000	1,640,000
Amount cation Details: Outstanding Freeds State Stat	Total	4,409,819,676	100.00%	4,329,585,882	80,233,794	4,209,594,605	200.225.071
Contract	*VRDB \$52 Million		-	Freddie Paydowns, Proj	Fri-Related SylMA7 non 7%	Repurchase Agreements,	
ceurities becurities in contracts Outstanding and procession and proces	:	Amount	*Municipal Bonds	96,324,649 , 2%	9,384,894,1%	168,004,000 Gliffranteed Investment	
Contracts Cont	Diversification Details:	Outstanding	137,655,000, 3%				
Particle	Chase Securities Inc						
Particular Par	Citiatorus Citiatorus	• •		4.2			
America Securities Total 168,004,000	Daiwa Securities	000 009 06	-				AMAGA PROPERTY.
Park	Banc Of America Securities	000,000,00	Age	ncies, 1,540,545,000, / 35% Citibank Forward		Demand Deposit (Interest Bearing), 1,636,057,234, 37%	-
Total 156,004,000 Confiderational Page	Mizuho Securities Usa. Inc.	77,404,000			HADSRIT /		
Authorities Collateralized % Collateralized				29,824,394 Certificate of De 297,786,202	, 1% posit, 7%		
America Bank Ag New York Calyon 1,161,046 1,116,046	Guaranteed Investment Contracts	Uncollateralized	%	Collateralized	%	Total	
10.887,523 10.41%	Bank Of America		0.00%	•	0.00%		
ricole CIB NEW YORK (Calyon Fank Ag New York Calyon 1,161,046 Fank Ag New York Calic PROVIDER 1,161,046 Fank Ag New Ag New York Calic PROVIDER 1,162,04 Fank Ag New York Ca	Bayerische Landesbank	10,887,523	10.41%	•	•	10,887,523	
Bank Ag New York -GIC PROVIDER 5,366,655 5,13% 1,00,00% 1,11% 1,100,00% 1,11% 1,100,00% 1,11% 1,100,00% 1,11% 1,100,00% 1,11% 1,100,00% 1,11% 1,100,00% 1,11% 1,100,00% 1,11% 1,100,00	Credit Agricole CIB NEW YORK \Calyon	•	0.00%		•	1	
Neighting Side See	Deutsche Bank Ag New York -GIC PROVIDER		0.00%	49,615,977	100.00%	49,615,977	
1,161,046	Rabobank International PBC Conital Markete Composition	5,366,865	5.13%	,	•	5,366,865	
State Stat	Societe Generale Gic	1 161 046	0.00%	1 4		1 161 046	
tsche Landesbank Total 104,605,327 100.00% 49,615,977 100.00% 154,227 Deposit (Interest Bearing) Total 104,605,327 100.00% 49,615,977 100.00% 154,227 Deposit (Interest Bearing) - 0.000% - 0.000% Interest Rate Weighted Average R r Bank Lash - 0.000% 0.000% 1.60% 1.60% c Commercial Bank ICS 39,706,745 2.43% 0.000% 1.45% 1.45% Commercial Bank Non-ICS 39,706,745 2.43% 0.000% 1.45% 1.45% Annunity Bank Annunity Bank 321,822,916 1.967% 7.29% *1.47% *1.25% As Dank Albert As Dank As Dank As Dank As Dank *1.25% *1.25% Bank As Dank As Dank As Dank As Dank *1.47% *1.47% As Dank As Dank As Dank *1.47% *1.47% *1.45% As Dank As Dank	Toronto-Dominion Bank c/o TD Security-GIC	87,189,892	83.35%	ı	•	87,189,892	
Deposit (Interest Bearing) Total 104,605,327 100.00% 49,615,977 100.00% 154,22 Deposit (Interest Bearing) - 0.00% 0.000% Interest Rate Weighted Average R relack - 0.00% 0.000% 1.60% Weighted Average R relack - 0.00% 0.000% 1.60% 1.60% commercial Bank ICS 39,706,745 2.43% 0.900% 1.45% Commercial Bank Non-ICS - 0.00% 1.45% 1.45% commercial Bank Non-ICS - 0.00% 1.45% 1.45% nmunity Bank 27,992,074 1.71% 0.637% 1.25% 1.25% sampton National Bank 27,992,074 1.71% 0.637% 1.60% 1.60% sampton National Bank 28,082,571 1.72% 1.61% 1.60% 1.45% sampton National Bank 28,082,571 1.72% 0.637% 1.45% 1.45% be Ozarks 1.60% 0.637% 1.45%<			0.00%	1	0.00%	•	
Deposit (Interest Bearing) Title rest Rate Weighted Average R very connent and N1 cbs atted - 0.000% 1.60% 1.60% r Bank rational Bank ron-lcs 204,597,270 12.51% 4.640% 1.60% Commercial Bank ron-lcs - 0.00% 0.000% 1.457% 1.35% Commercial Bank ron-lcs 39,706,745 2.43% 0.900% 1.45% 1.45% Commercial Bank ron-lcs - 0.00% 0.000% 1.45% 1.45% SAN CHASE BANK ron-lcs - 0.00% 0.000% 1.45% 1.25% ampton National Bank ron-lcs 27,992,074 1.71% 1.25% 1.25% ar Bank ron-lcs 28,082,574 1.72% 1.61% 1.60% be Ozarks 28,082,571 1.72% 1.020% 1.20% 11,020% 1.00% 1.00% 1.00% 1.00%	F		100.00%		100.00%		
rated r Bank legional Bank locammercial Bank Non-ICS Commercial Bank Non-ICS Say 7,06,745 Commercial Bank Non-ICS Commercial Bank Non-ICS Say 7,06,745 Commercial Bank Non-ICS Commercial Bank Non-I	Demand Deposit (Interest Bearing)				-weignted Avg for Custol Interest Rate	ners and NYCB Weighted Average Return	
r Bank legy 204,597,270 12.51% 4.640% 1.60% 1.60% 1.60% 1.60% 1.35% 1.457% 1.35% 1.457% 1.35% 1.35% 1.457% 1.35% 1.35% 1.457% 1.35% 1.35% 1.457% 1.35% 1.35% 1.457% 1.35% 1.457% 1.35% 1.457% 1	Amalgamated	•		0.000%			
lational Bank lcs 3.93% 1.457% 1.35% 1.35% 1.457% 1.35% 1.35% 1.457% 1.35% 1.35% 1.457% 1.35% 1.457% 1.35% 1.457% 1.35% 1.457% 1.457% 1.35% 1.457% 1.	Customer Bank	204,597,270	Υ-	4.640%	1.60%	0.20%	
Commercial Bank ICS 39,706,745 2.43% 0.000% 1.45% Commercial Bank Non-ICS - 0.000% 1.45% 1.45% CAN CHASE BANK - 0.000% 0.000% - 1.47% ASAN CHASE BANK - 0.000% 0.000% - - ampton National Bank 27,992,074 1.71% 0.635% 1.25% ar Bank 712,666,330 43.56% 16.161% 1.60% Bank 28,082,571 1.72% 0.637% 1.35% A5,000,000 2.75% 1.020% 1.45% A5,000,000 2.75% 1.20% 1.20%	Empire National Bank	64,263,180		1.457%	1.35%	0.05%	
Commercial Bank ICS 39,706,745 2.43% 0.900% 1.45% Commercial Bank Non-ICS 0.000% 0.000% 1.45% 0.000% 0.000% 0.000% 0.000% 1.47% 1.25% 1.25% 1.25% 1.25% 1.25% 1.25% 1.25% 1.25% 1.25% 1.35% 1.35% 1.35% 1.35% 1.45% 1.45% 1.45% 1.20% 1.020% 1.020% 1.		1	0.00%	%000.0			
- 0.000% 0.000% 0.000% 0.000% 0.000% 0.000% 0.000% 0.000% 0.000% 0.000% 0.000% 0.000% 0.000% 0.000% 0.000% 0.000% 0.000% 0.000% 1.25% 1.25% 1.25% 1.25% 1.20% 0.637% 1.35% 1.55% 1.60% 0.637% 1.35% 1.50% 0.637% 1.35% 1.50% 1.020% 1.020% 1.20% 1.20% 1.20%		39,706,745	2.43%	0.900%	1.45%	0.04%	
Amunity Bank 321,822,916 19.67% 7.298% *1.47% 1.25% 1.20% 1.		•	0.00%	0.000%			
ampton National Bank 27,992,074 1.71% 0.635% 1.25% 1.25% 1.25% 1.25% 1.25% 1.25% 1.25% 1.25% 1.25% 1.25% 1.25% 1.25% 1.021% 1.25% 1.25% 1.021% 1.25% 1.25% 1.021% 1.25% 1.25% 1.25% 1.25% 1.25% 1.20%	JP WORGAN CHASE BAINN	310 000 100	•	0.000%	*4 470	300	
Frank	Bridge Hampton National Bank	27 992 074	_	0.635%	1.47%	0.23%	
Bank 28,082,571 1.72% 16.161% 1.60% 1.60% 1.00% 1.35% 1.35% 1.35% 1.35% 1.020% 1.45% 1.45% 1.020% 1.45% 1.20	Santander Bank	45.036.818		1.021%	1.25%	0.02%	
Bank 28,082,571 1.72% 0.637% 1.35% 1.35% 1.600,000 2.75% 1.020% 1.45% 1.46,889,330 8.98% 3.331% 1.20%	Signature	712,666,330		16.161%	1.60%	%02.0	
ne Ozarks 45,000,000 2.75% 1.020% 1.45% 1.46,889,330 8.98% 3.331% 1.20%	Lakeland Bank	28,082,571		0.637%	1.35%	0.02%	
146,889,330 8.98% 3.331% 1.20%	Bank of the Ozarks	45,000,000		1.020%	1.45%	0.04%	
1 000 001 001	US Bank	146,889,330		3.331%	1.20%	0.11%	
100.00% 37.100%	F .	1,	100.00%	37.100%		1.50%	
	Note: Does not include DDA accounts that reconcile to zero.		,				9/22:-



MEMORANDUM

To:

Members of the Audit Committee

From:

Mary Hom

Date:

March 19, 2018

Re:

Counterparty Credit Risk Exposure

I have attached an unaudited report detailing the Corporation's counterparty exposure as of February 28, 2018.

Please let me know if you have any questions.

NEW YORK CITY HOUSING DEVELOPMENT CORPORATION Counterparty Credit Risk Exposure Report as of February 28, 2018 (UNAUDITED)

		-		Permanent			COUNTERDANDE	Countainont
Counterparty	Moody's	S&P	Construction LOC	Enhancement	Investment	Liauidity Providers	EXPOSTIRE	Exposure
Bank of America NA	Aa3	A+	\$312,150,000	\$26,455,000			\$338,605,000	2 89%
Bank of New York Mellon NA	Aal	AA-	\$314,480,000				\$314,480,000	2.68%
Bank of the Ozarks	NR	NR			\$45,000,000		\$45,000,000	0.38%
Bayerische Landesbank	Aaa	NR			\$10,434,728		\$10,434,728	0.09%
Bridgehampton National Bank	NR	NR			\$27,782,037		\$27,782,037	0.24%
Capital One Bank	A1	BBB+		\$22,700,000			\$22,700,000	0.19%
Citibank NA	A1	A +	\$675,340,000	\$206,225,628	\$29,824,394	\$15,000,000	\$926,390,022	7.89%
Customers Bank	NR	NR			\$143,409,805		\$143,409,805	1.22%
Daiwa Securities	A3	A			\$106,561,000		\$106,561,000	0.91%
Deutsche Bank	A3	A-		\$55,000,000	\$55,155,103		\$110,155,103	0.94%
Dormitory Authority of the State of New York	Aal	AAA			\$8,045,000		\$8,045,000	0.01%
Empire National Bank	NR	NR			\$65,398,191		\$65,398,191	0.56%
Goldman Sachs Bank	A1	A+	\$191,000,000				\$191,000,000	1.63%
HDC	Aa2	AA	\$89,170,000				\$89,170,000	0.76%
JPMorgan Chase Bank NA	Aa2	A+	\$324,693,983	\$15,210,000			\$339,903,983	2.90%
Lakeland Bank	NR	NR			\$24,856,830		\$24,856,830	0.21%
Landesbank Baden-Wuerttemberg	Aa3	NR		\$70,000,000			\$70,000,000	0.60%
Mizuho Corporate Bank/Mizuho Securities	A1	Α			\$60,387,000		\$60,387,000	0.51%
NYC GO	Aa2	ΑA			\$19,800,000		\$19,800,000	0.17%
NYC Transitional Finance Authority	Aal	AAA	7		\$55,580,000		\$55,580,000	0.47%
NY Community Bank	A2	BBB			\$683,465,636		\$683,465,636	5.82%
NYS HFA	NR R	Ą			\$62,000,000		\$62,000,000	0.53%
Promontory (FDIC-insured)	Aaa	AA+			\$54,282,146		\$54,282,146	0.46%
Rabobank	Aa2	A +			\$5,281,998		\$5,281,998	0.05%
REMIC	NR.	ΑA		\$251,961,135			\$251,961,135	2.15%
Santander Bank NA	A2	BBB+			\$53,485,530		\$53,485,530	0.46%
Signature Bank	NR	NR.			\$646,800,693		\$646,800,693	5.51%
Societe Generale	A2	Ą			\$1,007,325		\$1,007,325	0.01%
SONYMA	Aaa/Aa1	NR		\$479,849,078	\$275,000		\$480,124,078	4.09%
SunTrust Bank	A1	Α-		\$100,000,000			\$100,000,000	0.85%
TD Bank NA	Aa2	AA-	\$88,910,000		\$87,189,892		\$176,099,892	1.50%
US Bank	Aal	AA-			\$150,209,070		\$150,209,070	1.28%
US Agency:	Aaa	44+	\$408,230,000	\$3,185,707,739	\$1,616,312,475		\$5,210,250,214	44.40%
FHA/HUD			0\$	\$237,177,378			\$237,177,378	2.02%
FHLB			\$345,885,000		\$321,915,000		\$667,800,000	2.69%
FHLMC			80	\$977,027,295	\$1,127,724,649		\$2,104,751,944	17.93%
FNMA			\$62,345,000	\$1,971,503,066	\$137,230,000		\$2,171,078,066	18.50%
GNMA		,			\$29,442,826		\$29,442,826	0.25%
US Treasury	Aaa	AA+			\$314,356,000		\$314,356,000	2.68%
Wells Fargo Bank NA	Aa1	A+	\$563,175,000			\$13,500,000	\$576,675,000	4.91%
TOTAL			\$2,967,148,983	\$4,413,108,580	\$4,326,899,853	\$28.500.000	\$11,735,657,416	100.00%
*Counterparty Exposures Above 10% Are Highlighted	rted							
	_	_	_	_				



NEW YORK CITY HOUSING DEVELOPMENT CORPORATION Counterparty Credit Risk Exposure Report as of February 28, 2018 (UNAUDITED)

State December State S						
Amount S8,045,000						
Amount S. 0.45,000						
Second S	Municipal Investments:					
S8,045,000	Issuer		Amount		-	
S19,800,000	Dormitory Authority of the State of New York		\$8,045,000	-		
SS5,580,000	NYC GO		\$19,800,000			
Soc. 100,000	NYC TFA		\$55,580,000			
Sizion S	NYS HFA		\$62,000,000			
S145,700,000 S145,700,000 S145,700,000 S145,700,000 S20,000,000 Money Market S27,782,037 SepoPerm Enhancement S143,409,805 SepoPerm Enhancement S105,501,000 Money Market S63,485,830 Money Market S63,485,830 Money Market S63,485,830 Money Market S63,485,830 Money Market S64,800,693 S100,000,000 S100,000,0	SONYMA		\$275,000			
Type of Exposure State Exposure Expo	Total Municipal Investments		\$145,700,000	, ,		
Type of Exposure E	4-Parish A					
Selow, or Not-Rated: Counite Exposure						
Type of Exposure E						
Type of Amount Examount E						
Type of Amount Counie Exposure Money Market \$245,000,000 Money Market \$245,000,000 Money Market \$227,700,000 Repo/Perm Enhancement \$143,409,805 Repo/Perm Enhancement \$110,155,103 Money Market \$65,398,191 Money Market \$65,398,191 Money Market \$63,485,636 Money Market \$63,485,636 Money Market \$646,800,609 Permanent Enhancement \$100,000,000 Permanent Enhancement \$100,000,300 Permanent Enhancement \$100,000,300 CUS Treasury/Agency securities \$5,002,614,825 COUNIE \$1,007,325 GIC \$2,039,412,576 GIC \$2,039,41	Exposure to Counterparties Rated A-Minus and 1	Below, or Not-Rated:				
Type of Exposure Stood Exposure Stood Exposure Stood Stood Exposure Stood				% Total		
Exposure Amount Ex Money Market \$45,000,000 6 Money Market \$27,782,037 Repo \$104,540,805 Repo/Perm Enhancement \$10,155,103 Money Market \$683,465,636 Money Market \$683,465,636 Money Market \$53,485,830 Money Market \$580,609 Permanent Enhancement \$100,000,000 Permanent Enhancement \$100,000,000 COST Treasury/Agency securities \$46,800,693 COCLiq \$100,003,325 GIC \$1,007,325 GIC/LOC \$190,589,831 RP/LOC \$1,007,325 GIC \$5,281,998 MM \$53,412,576 AMM \$55,341,2576 ASS,411,576 \$593,412,576		Type of		Counterparty		
Money Market \$45,000,000 Money Market \$27,782,037 Permanent Enhancement \$143,409,805 Repo \$106,561,000 Repo/Perm Enhancement \$100,155,103 Money Market \$683,465,636 Money Market \$583,465,636 Money Market \$583,465,636 Money Market \$53,485,330 Money Market \$53,485,530 Permanent Enhancement \$100,000,000 Permanent Enhancement \$1,000,000 Counter \$1,007,325 COULiq \$1,007,325 GIC/LOC \$1,007,325 GIC/LOC \$1,007,325 GIC/LOC \$1,007,325 GIC \$5,485,530 MM \$5,3485,530 MM \$5,348,530 MM \$5,348,530	Counterparty	Exposure	Amount	Exposiire		
Money Market	Bank of the Ozarks*	Money Market	\$45,000,000	0.38%		
Permanent Enhancement	Bridgehamnton National Bank*	Money Market	\$27.782.037	20000		
Money Market	Capital One Bank	Dormonant Enhancement	622,702,027	0.2470		
Money Market	Capital Oile Dails	Tellianent Ellianenten	\$22,100,000	0.1370		
Nepo	Customers bank*	Money Market	\$143,409,805	1.22%		
Money Market	Dalwa Securities*	_	\$106,561,000	0.91%		
Money Market \$65,398,191 Money Market \$63,4856,830 Money Market \$634,485,536 Money Market \$33,485,530 Money Market \$646,800,603 Permanent Enhancement \$100,000,000 Permanent Enhancement \$100,000,000 Counter \$100,000,300 FUS Treasury/Agency securities Counter Inverse Samount Ex COUT.iq \$1,007,325 GIC \$1,007,325 GIC \$1,007,325 GIC \$1,007,325 GIC \$5,281,998 MM \$55,281,998 MM \$553,412,576	Deutsche Bank*	Repo/Perm Enhancement	\$110,155,103	0.94%		
Money Market \$24,856,830 Money Market \$63,465,636 Money Market \$53,485,530 Money Market \$646,800,693 Permanent Enhancement \$100,000,000 Permanent Enhancement \$100,000,000 Counter \$1,000,000,000 Morey Market \$Amount Extraction \$1,000,325 GIC \$1,007,325 GIC/LOC \$1,007,325 GIC/LOC \$1,007,325 GIC \$5,281,998 MM \$53,485,530 MM \$553,485,530	Empire National Bank*	Money Market	\$65,398,191	0.56%		
Money Market \$683,465,636 Money Market \$53,485,530 Money Market \$646,800,693 Permanent Enhancement \$100,000,000 I CUS Treasury/Agency securities \$Amount Ex \$100,035 I COCLiq \$100,325 GIC \$1,007,325 GIC/LOC \$160,589,831 RP/LOC \$160,589,831 GIC \$5,281,998 MM \$53,485,536 SS93,412,576 \$5893,412,576	Lakeland Bank*	Money Market	\$24,856,830	0.21%		
Money Market \$53,485,530 Money Market \$646,800,693 Permanent Enhancement \$100,000,000 Incompany Market \$2,029,614,825 Incompany Market \$2,029,614,825 Incompany Market \$2,029,614,825 Incompany Market \$2,003,614,825 Incompany Market \$2,003,614,825 Incompany Market \$1,007,325 Incompany Market \$2,007,412,576 Incompany Market \$2,003,412,576 Incompany Market \$2,003,412,576	NY Community Bank*	Money Market	\$683,465,636	5.82%		
Money Market	Santander Bank*	Money Market	\$53,485,530	0.46%		
Permanent Enhancement	Signature Bank*	Money Market	\$646,800,693	5.51%		
S2,029,614,825 1	SunTrust Bank	Permanent Enhancement	\$100,000,000	0.85%		
Type S Amount Ex	TOTAL		\$2,029,614,825	17.29%		
Type S Amount Ex	*Fully- or over-collateralized by FHLB LOC and/or					
Type S Amount Ex						
Type S Amount Ex						
Type S Amount Ex	Country Exposure (Ex-U.S.):					
Type				% Total		
Type			-	Counterparty		-
LOCLiq	Country	Type	\$ Amount	Exposure		
GIC	Canada (TD Bank)	LOC/Liq	\$176,099,892	1.50%		
GIC/LOC \$190,589,831 RP/LOC \$166,948,000 GIC \$5,281,998 MM \$53,485,530 \$593,412,576	France (Societe Generale)	GIC	\$1,007,325	0.01%		
RP/LOC \$166,948,000 CIC \$5,281,998 MM \$53,485,530 S593,412,576	Germany (Bayerische Landesbank/Deutsche/LBW)	GIC/LOC	\$190,589,831	1.62%		•
Obank Nederland) GIC \$5,281,998 MM \$53,485,530 \$593,412,576	Japan (Mizuho/Daiwa)	RP/LOC	\$166,948,000	1.42%		
MM \$53,485,530 \$593,412,576	Netherlands (Rabobank Nederland)	GIC	\$5,281,998	0.05%		
\$593,412,576	Spain (Santander)	MM	\$53,485,530	0.46%		
	TOTAL		\$593,412,576	2.06%		



NYC THDC NEW YORK CITY HOUSING DEVELORMENT CORPORATION

NEW YORK CITY HOUSING DEVELOPMENT CORPORATION Credit Enhancement Diversification as of February 28, 2018 (UNAUDITED)

Expected Permanent Enhancement:

Enhancement During Construction:

CONSTRUCTION PROJECTS

			Number of	
Provider	Moody's	S&P	Projects	TOC
Bank of America	Aa3	A+	12	\$312
Bank of New York Mellon	Aa1	AA-	11	\$314
Citibank	Α1	A +	70	\$675
FHA	Aaa	AA+	0	-
FHLB	Aaa	AA+	14	\$345
FHLMC	Aaa	AA+	0	
FINMA	Aaa	AA+	1	\$62
Goldman Sachs Bank	A1	A +	Ħ	\$191
HDC	Aa2	Ą	9	\$89
JPMorgan Chase	Aa2	A +	14	\$324
NONE	NR R	R	80	-
REMIC	NR	₩		
SONYMA*	Aa1	R	0	
TD Bank NA	Aa2	AA-	m	\$88
Wells Fargo	Aa1	A +	15	\$563
TOTAL			105	\$2,967,1

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*Includer 1	T COCCUT

				Expected	:
		% of Total		Permanent	% of Total
Number of		During	Number of	Enhanced or	During
Projects	LOC Amount	Construction	Projects	Insured Amount	Permanent
12	\$312,150,000	10.52%	0	0\$	0.00%
11	\$314,480,000	10.60%	0	0\$	0.00%
20	\$675,340,000	22.76%	7	\$156,240,000	17.54%
0	\$	0.00%	19	\$308,868,500	34.66%
14	\$345,885,000	11.66%	0	0\$	0.00%
0		0.00%	-	\$158,000,000	17.73%
1	\$62,345,000	2.10%	П	\$38,135,000	4.28%
T	\$191,000,000	6.44%	0	9	0.00%
9	\$89,170,000	3.01%	0	9\$	0.00%
14	\$324,693,983	10.94%	0	0\$	0.00%
∞ .	\$	%00.0	m	0\$	0.00%
0	\$	%00.0	29	\$138,939,903	15.59%
0	\$0\$	%00.0	12	\$90,828,500	10.19%
က	\$88,910,000	3.00%	0	0\$	0.00%
15	\$563,175,000	18.98%	0	0\$	00:0
105	\$2,967,148,983	100.00%	105	\$891,011,903	100.00%

 Rating
 % of Total

 AAA
 0.00%

 AA
 30.36%

0.00% 30.36% 69.64% **100.00%**

PERMANENT LOANS WITH ENHANCEMENT

	Enhanced Amount	\$26,455,000	\$22,700,000	\$206,225,628	\$55,000,000	\$237,177,378	\$977,027,295	\$1,971,503,066	\$15,210,000	\$70,000,000	\$251,961,135	\$479,849,078	\$100,000,000	\$4,413,108,580
Number of	Projects	. 2	7	93	-	23	32	20	m		195	69	1	408
	S&P	A+	888+	A+	¥	AA+	A4+	AA+	A +	Ŗ	₹	ĸ	-Ł	
	Moody's	Aa3	A1	A1	A3	Aaa	Aaa	Aaa	Aa2	Aa3	R	Aa1	A 1	
	Provider	Bank of America	Capital One	Citibank	Deutsche Bank	FHA	FHLMC	FNMA	JPMorgan Chase	Landesbank Baden Wuer	REMIC*	SONYMA	SunTrust Bank	TOTAL

million
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		% of Total	0.00%	90.36%	9.13%	0.51%	100.00%							
	In Permanent:	Rating	AAA	*	⋖	BBB	TOTAL							
% of Total Permanent Enhanced	Amount	%09:0	0.51%	4.67%	1.25%	5.37%	22.14%	44.67%	0.34%	1.59%	5.71%	10.87%	2.27%	100.00%

NEW YORK CITY HOUSING DEVELOPMENT CORPORATION Investment Summary as of February 28, 2018 (UNAUDITED)

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	8		NOW MALINE-L'CUI UAL Y	20, 2010.			
Counterparty	Lype	Amount	AAA	AA	A	BBB*	NR*
Bank of the Ozarks	MM	\$45,000,000					\$45,000,000
Bayerische Landesbank (guaranteed)	GIC	\$10,434,728	\$10,434,728				
Bridgehampton National Bank	MM	\$27,782,037		-			\$27,782,037
Citibank NA	FPA	\$29,824,394			\$29,824,394		
Customers Bank	MM	\$143,409,805			•		\$143,409,805
Daiwa Securities	REPO	\$106,561,000			\$106,561,000		
Deutsche Bank	REPO	\$55,155,103			\$55,155,103		
Dormitory Authority of the State of NY	MUNI	\$8,045,000		\$8,045,000			
Empire National Bank	MM	\$65,398,191					\$65,398,191
Lakeland Bank	MM	\$24,856,830					\$24,856,830
Mizuho Securities	REPO	\$60,387,000			\$60,387,000		
NYCGO	MUNI	\$19,800,000		\$19,800,000			
NYC TFA	MUNI	\$55,580,000		\$55,580,000			
NY Community Bank	MM	\$683,465,636				\$683,465,636	
NYS HFA	MUNI	\$62,000,000			\$62,000,000	•	
Promontory	MM	\$54,282,146		\$54,282,146			
Rabobank	GIC	\$5,281,998			\$5,281,998		
Santander Bank NA	MM	\$53,485,530				\$53,485,530	
Signature Bank	MM	\$646,800,693					\$646,800,693
Societe Generale	GIC	\$1,007,325			\$1,007,325		
SONYMA	MUNI	\$275,000	\$275,000				
TD Bank	GIC	\$87,189,892		\$87,189,892			
US Bank	MM	\$150,209,070		\$150,209,070			
US Agency	US Agency	\$1,616,312,475		\$1,616,312,475			
US Treasury	US Treasury	\$314,356,000		\$314,356,000			

INVESTMENT PORTFOLIO (By Type) US Treasury GIC/FPA

\$133,738,337 \$1,894,689,938 \$222,103,103 \$1,616,312,475 \$314,356,000 \$4,326,899,853

% Total 3.09% 43.79% 3.37% 5.13% 37.35% 7.27%

1.83

*BBB and NR exposures are fully-collateralized

% of Total

Weighted Average Maturity (Years):

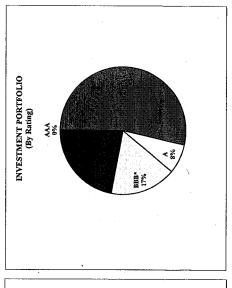
Investment Portfolio-By Type of Investment:

Money Market

Municipal GIC/FPA

Repo

US Agency US Treasury Total



\$953,247,556 22.03%

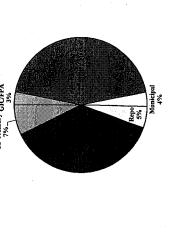
\$736,951,166

\$320,216,820 7.40%

\$2,305,774,583

\$10,709,728

\$4,326,899,853 100.00%





NEW YORK CITY HOUSING DEVELOPMENT CORPORATION Liquidity Providers as of February 28, 2018 (UNAUDITED)

CITIBANK

<u>Issue</u> 2015 D-3

Amount \$15,000,000

WELLS FARGO BANK

2015 D-4 <u>Issue</u>

Amount \$13,500,000

\$13,500,000

\$15,000,000

% Total 52.63% 47.37% 100.00% \$15,000,000 \$13,500,000 **\$28,500,000 Amount Diversification:** Wells Fargo Bank

Citibank

TOTAL





MEMORANDUM

TO:

Members of the Audit Committee

FROM:

Richard Froehlich

RZ

SUBJECT:

Approval of HDC's Purchasing Guidelines

DATE:

March 22, 2018

Pursuant to Sections 2824 (e) and 2879 of the Public Authorities Law, HDC is required to have its Members annually review and approve the procurement guidelines of the Corporation. After approval, the guidelines are submitted to the Office of the State Comptroller, through its Public Authorities Reporting Information System ("PARIS"). The guidelines are also published on the Corporation's website.

This year there are no changes to the guidelines.

Recommendation and Action by Members

Staff recommends that the Members approve the attached purchasing guidelines.

NEW YORK CITY HOUSING DEVELOPMENT CORPORATION

PURCHASING PROCEDURES

Updated as of November 19, 2015 (Reaffirmed on March 10, 2017)

I. ORDERING ITEMS

All requests for purchases are to be coordinated through the Department of Office Services. The employee who requests goods to be purchased must contact the Purchasing Manager by e-mail. All requests for purchases must have a prior approval from the employee's Department or Division Head. The Purchasing Manager and the IT Systems Administrator are the only employees who have the ability to purchase items. However, the IT Systems Administrator does not have authority to purchase items for any department other than the MIS Department. In the event such individual is unavailable, the Vice President of Office Services is deemed to have authority to purchase items.

No item can be purchased without a valid contract. After a Contract Officer from the Legal Department has determined that a contract is valid and all appropriate approvals have been confirmed, the Legal Department is responsible for entering details of the contract into the Oracle Contract Management Module.

For each contract, the following fields are maintained: Contract Number, Contract Description, Begin Date, Department, Contract Expiration Date, Automatic Renewal and Comments. The Legal Department is responsible for generating a contract number.

A Purchase Order cannot be created until a contract number is generated. A contract number can also be generated for vendors used where a contract is not needed or for an item that cannot be competitively bid (hotel, conferences, meals). In such instances a memo from the department requesting the contract number will provide the Legal Department with a written explanation of the vendor chosen and what kind of goods and/or services are being purchased. The Legal Department will add the vendor to its spreadsheet and assign the vendor a contract number. Where possible, categories of vendors (such as books, publications, training and development) will be maintained under one category by subject. In cases where categorization is not possible such vendor will receive its own number.

If the amount of goods or services exceeds our competitive bid threshold, then proper bidding procedures must be adhered to in order to generate a purchase order.

The Legal Department and the Purchasing Manager should monitor the expiration date on a contract before a renewal order can be placed. The Purchasing Manager shall insure that a product received is in accordance with the contract, but if there is a service provided, that service should be monitored by the department or employee that has engaged such service.

Each purchase will go through an electronic email-based hierarchy approval process except for those purchases that are required to flow through a manual signature process through the Chief Operating Officer/Executive Vice President or a Senior Vice President (such as sign off on time sheets for interns and part-time employees). For purchases that flow through the email-based hierarchy system, the following procedures must be completed before a final payment can be generated:

Procedures for Corporate Related Purchases:

After receiving the e-mail request, the Purchasing Manager will create a Purchase Order with the specific contract number that was assigned by the Legal Department, which will be forwarded electronically in Oracle to the Vice President of Office Services for final review and approval.

If a Purchase Order has goods and/or services valued over \$1,500, the Purchase Order requires an additional level of review and will be electronically routed to the Senior Vice President of Asset Management for the final review and approval after the Vice President of Office Services has reviewed and approved it. After the final approval, the Purchasing Manager will be notified electronically and will generate the Purchase Order.

In the event the aforementioned individuals are unavailable for signatures, the following individuals are authorized to review and approve Purchase Orders: Chief Operating Officer/Executive Vice President or a Senior Vice President. In the event the Purchasing Manager is unavailable to generate the Purchase Order, the Vice President of Office Services will create a Purchase Order with the specific contract number that was assigned by the Legal Department, which will be forwarded electronically in Oracle to the Senior Vice President of Asset Management for final review and approval.

If a Purchase Order has goods and/or services valued over \$1,000,000 the Purchase Order requires an additional level of review and will be electronically routed to the Chief Operating Officer/Executive Vice President for the final review and approval after the Senior Vice President of Asset Management has reviewed and approved it.

Procedures for MIS Related Purchases:

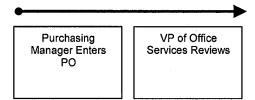
The IT System Administrator or the Purchasing Manager will create a Purchase Order with a specific contract number which will be input into the Oracle database for the Senior Project Manager, MIS review and approval. The Senior Project Manager, MIS will review and approve the Purchase Order and forward it to the Vice President of Office Services. The Vice President of Office Services will review and approve the Purchase Order and forward it to the Chief Information Officer for final review and approval.

If a Purchase Order has goods and/or services valued over \$7,500, the Purchase Order requires an additional level of review and will be electronically routed to the Senior Vice President of Administration for final review and approval after the Chief Information Officer has reviewed and approved it. After the final approval the Purchasing Manager will be notified electronically and will then generate the Purchase Order.

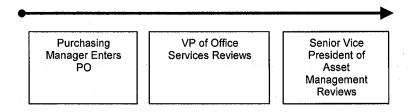
If there is a change on an MIS related Purchase Order after it has gone through all necessary approvals, the IT System Administrator will notify the Purchasing Manager of the change by e-mail. The Purchasing Manager will in turn make the change within the Oracle system and resubmit the Purchase Order for approval.

In the event the aforementioned individuals are unavailable for signatures, the following individuals are authorized to review and approve Purchase Orders: Chief Operating Officer/Executive Vice President or a Senior Vice President. In the event the IT System Administrator is unavailable to generate the Purchase Order, the Senior Project Manager, MIS can begin the Purchase Order process within the IT System.

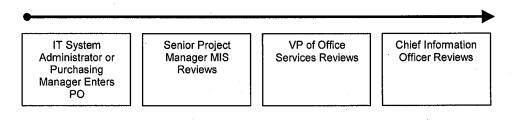
CORPORATE PURCHASES (NON-MIS) UNDER \$1,500



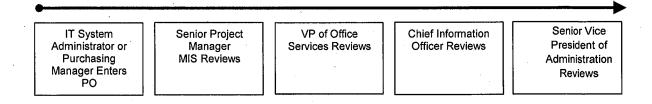
CORPORATE PURCHASES (NON-MIS) OVER \$1,500



MIS PURCHASES UNDER \$7,500



MIS PURCHASES OVER \$7,500



CORPORATE PURCHASES (NON-MIS) OVER \$1,000,000

Purchasing Manager Enters PO VP of Office Services Reviews Senior Vice President of Asset Management Reviews Chief Operating Officer/ Executive Vice President

A. <u>PURCHASES REQUIRING COMPETITIVE BIDDING</u>

If the aggregate total of goods and services is over \$5,000, then a competitive bidding process must be performed prior to the purchase of such goods and services. A Purchase Order will not be generated until such process has been successfully completed. Upon successful completion, the Purchase Order will be generated and forwarded to the Cash Management Department, Accounts Payable Administrator. The following procedures shall be followed:

1. The Purchasing Manager, after receiving the e-mail request for goods will contact at least three vendors for price quotes, including at least one vendor (if available) on a list of approved vendors maintained by the New York State Office of General Services. This solicitation can be done either verbally or in writing. However, written solicitations are required for all purchases that are expected to equal or exceed \$10,000. The written solicitation must contain a description of the item; the date the bid must be received by HDC and the name and telephone number of the Purchasing Manager. Responsive bids must be obtained from at least two vendors.

For office, computer and pantry supplies, printing services, and other similar items ordered frequently, bids should be obtained annually or in some cases every two or three years (such determination shall be made by either the VP of Office Services, Chief Operating Officer/Executive Vice President or a Senior Vice President or Chief Information Officer for MIS related supplies). A summary of received bids should be completed by the Purchasing Manager and/or IT Systems Administrator and submitted to the Chief Information Officer, VP of Office Services, and/or Senior Vice President for approval.

All other items totaling over \$5,000 must be bid at the time of request, unless an emergency purchase must be made. The order is to be awarded based on the most favorable bid or advantageous offer.

If the lowest bidder or the bidder with the most advantageous offer is found to be non-responsive or not responsible, the Purchasing Manager will provide a written determination describing the specific reasons for such findings. This written determination is to be reviewed and approved by the VP of Office Services, Chief Operating Officer/Executive Vice President or a Senior Vice President or Chief Information Officer for MIS related items and retained in the vendor file.

Price quotes for technical items can be obtained by the applicable department. For example: the MIS Department can obtain bids for computer equipment and software purchases. The procedures set forth in the preceding paragraph must be followed and all documentation must be forwarded to the Purchasing Department before a purchase order will be generated.

If there is only one source for the required item, the determination and the basis must be in writing and submitted to the VP of Office Services, Chief Operating Officer/Executive Vice President or a Senior Vice President or Chief Information Officer for MIS related items for review and approval. This documentation is to be retained in the vendor file.

If an emergency purchase has to be made, a written determination of the basis for the emergency procurement is to be made as soon as possible. This is to be approved by the VP of Office Services, Executive Vice President or Senior Vice President or Chief Information Officer for MIS related items and filed in the vendor file.

All goods must be purchased through a valid contract. In instances where common purchases are done and a contract will not be obtained, a memo is written and stored with the Legal Department detailing the purchase and reason for using a specific vendor. This memo will be used as a reference in creating a contract number for use within the Purchase Order system. When contracts are done, the contract must be reviewed and approved by the Legal Department and signed by the President, Chief Operating Officer/Executive Vice President or a Senior Vice President. All approved contracts must be sent to the Scanning Specialist for scanning.

2. The Purchase Order will then be routed to the Purchasing Manager, who will then place the order with the vendor. Under HDC's data management program, an open Purchase Order file can be accessed only by the following people:

Purchasing Manager

Accounts Payable Administrator

Vice President of Office Services

IT System Administrator

- 3. All purchases must be made with the prior approval of the VP of Office Services, Chief Operating Officer/Executive Vice President or Senior Vice President or Chief Information Officer for MIS related purchases. The Corporation will not be responsible for purchases made without an authorized Purchase Order.
- 4. The Purchasing Department is to perform an as needed review of the City's Vendex and Office of General Services list to obtain or review vendors. This list will also serve as the determination of whether the vendor is classified as a minority or women-owned enterprise. Efforts are to be made to include minority and women-owned enterprises.

B. PURCHASES NOT REQUIRING COMPETITIVE BIDDING

Certain items cannot be competitively bid due to their nature. The following is a list of categories to date that cannot be competitively bid:

Books & Publications: A check request form is to be prepared in lieu of a purchase order. The check request shall be approved by the employee's Division Head, Department Head and the Senior Vice President Treasurer and then retained in the vendor file;

<u>Local Transportation:</u> A list of car services utilized by the Corporation and comparison of charges shall be maintained by the VP of Office Services.

<u>Training & Conference</u>: Literature pertaining to the class or conference shall be retained in the vendor file. All requests must be approved by the Division Head, the Department Head and the Senior Vice President Treasurer;

Memberships: Renewal notices and/or literature pertaining to the organization is to be retained in the vendor file. The employee's Division Head, Department Head and the Senior Vice President Treasurer must approve all memberships; and

Employment Agencies: All agencies must agree in writing to HDC's fee policy before applicants can be interviewed. A copy of this agreement is to be retained in the vendor file.

Contract numbers must be received for all items even if such items cannot be bid. The contract number will be used as a reference in creating a contract number for use within the Purchase Order system.

The following procedures shall be followed for those items that cannot be competitively bid:

The department requesting the contract number will provide the Legal Department with a written explanation of the vendor chosen and what kind of goods and/or services are being purchased. The Legal Department will add the vendor to its spreadsheet and assign the vendor a contract number. Where possible categories of vendors (such as books, publications, training and development), will be maintained under one category by subject. In cases where categorization is not possible such vendor will receive its own number.

C. PURCHASES ON THE INTERNET

All requests for purchases on the Internet are to be coordinated through the Department of Office Services. In this case employees shall also send an e-mail to the Purchasing Manager describing the items requested, and follow the procedures previously set forth in either Section IA or IB, whichever is applicable.

D. <u>PURCHASING VERSUS LEASING</u>

In certain circumstances the Corporation may determine to lease products rather than purchasing them. For these items the procedures set forth in the previous paragraphs should also be followed. In addition, an analysis should be performed to compare the costs and benefits of buying versus leasing such item. The terms of the lease should be compared to the terms of purchasing the item outright to determine the best option. The buy versus lease analysis should be submitted to the VP of Office Services, Executive Vice President or Senior Vice President or Chief Information Officer for MIS related items for review and approval and filed in the vendor file.

E. COMPETITIVE PROPOSAL PROCESS

A request for proposal process must be conducted for the selection of:

Legal Counsel

Underwriters

Annual Report Design

Auditing and Accounting Services: The Corporation must follow the City Comptroller's Directive No.22, "Guidelines for Component Unit Audit & Financial Reporting" when selecting a Certified Public Accounting firm:

- Requests for proposals should be sent to at least five firms selected from those on the Comptroller's approved list.
- Contracts should not be awarded for more than four years.
- Firms performing the audit for more than four consecutive years should be required to assign a different senior manager and partner in charge.
- The audit selection process should be completed no later than 60 days after the beginning of the Corporation's fiscal year.

A request for proposals may also be required for the selection of other professional services; such determination shall be made by the Legal Department.

II. <u>RECEIVING ITEMS</u>

Upon receipt of the goods by the Receiving Clerk or designee, the following process shall be followed:

- 1. The Receiving Clerk or designee who receives the goods shall date and initial the packing slips, and then check them in Oracle as received;
- 2. The Purchase Order is compared to the packing slip and the items received to ensure that the order is complete. The Receiving Clerk shall maintain a file for all packing slips;
- 3. Any discrepancy must be noted on the Purchase Order and Packing Slip and brought to the attention of the Purchasing Manager;
- 4. Orders shall not be accepted if a material discrepancy exists or if goods delivered are damaged;
- 5. The Receiving Clerk shall make an entry in Oracle that the item has been received; and
- 6. The Purchasing Manager is responsible for all follows-up with respect to discrepancies and damaged items including if an item has not been received in a reasonable amount of time.

III. PROCESSING INVOICES - ACCOUNTS PAYABLE

In order to process an invoice received, the following procedures shall be followed:

- 1. The Accounts Payable Administrator shall receive and review all Invoices received and such invoices shall be compared to the Purchase Order. If a Purchase Order has not been created, the Accounts Payable Administrator will forward the invoice, along with the appropriate documentation (e.g., accounts payable voucher, personal reimbursement form, or travel expense form, depending upon which is applicable) to the Purchasing Manager who will then create a Purchase Order. The Purchasing Manager will then forward the Purchase Order through Oracle to the Vice President of Office Services for review and approval. The Purchasing Manager will return the invoice and attached documentation to the Accounts Payable Administrator who will then create an invoice batch. Any discrepancies are to be brought to the attention of the Purchasing Manager, and the invoice should not be paid until all discrepancies have been resolved. Invoices that do not require a Purchase Order (e.g. payments for bond programs) are to be referred to the individual who initiated the order for proper authorization;
- 2. The Accounts Payable Administrator will then prepare the Payment Batch. During this stage, the Preliminary Payment Register, Checks, and Final Payment Register are printed.

- 3. Upon receipt of written authorization from the Vice President or Assistant Vice President of the Cash Management division, the Accounts Payable Administrator will forward the checks, invoices, and Final Payment Register to the Senior Vice President Treasurer for review. In the Senior Vice President Treasurer's absence, such documentation shall be sent to the Chief Operating Officer.
- 4. The Final Payment Register must be signed by the President for all checks greater than \$20,000. The President shall not approve any invoices unless and until approval has been obtained by the Senior Vice President Treasurer. Once approved, all documentation shall be returned to the Senior Vice President Treasurer. Once complete, all checks and supporting documents will be forwarded to the Controller for the second signature.
- 5. In the event the aforementioned individuals are unavailable for signatures, the following individuals are authorized to sign checks: President, Chief Operating Officer/Executive Vice President, Executive Vice President of Real Estate, Senior Vice President of Asset Management, and Senior Vice President Capital Markets. The Final Payment Register may be signed by the Chief Operating Officer/Executive Vice President, Executive President of Capital Markets or the Executive Vice President of Real Estate in the absence of the President. During this process, the Accounts Payable Administrator will keep track of the payment registers signed by these authorized individuals.
- 6. The Accounts Payable Administrator shall prepare and submit a disbursement along with the Preliminary Payment Report to Cash Management, who will fund the OTPS bank account;
- 7. Invoices in the Imaging system will be stamped "paid". In terms of the paper vendor files, invoices received from vendors must be stamped "paid" when payment is made. In cases where there are multiple pages of invoices such as telephone bills, the page with the remittance stub should be stamped "paid". If there is no remittance stub page then all pages of the invoice must be stamped. Documents such as check requests and personal reimbursement forms should have all supporting documentation such as receipts, memos and emails attached to it. The check request and the personal reimbursement forms should be stamped "paid";
- 8. The Accounts Payable Administrator shall make the necessary copies and mail the payment and remittance copy to the vendor;
- 9. All voided checks automatically voided by the computer will be sent to the Accounting Department for reference; and
- 10. The Accounts Payable Administrator will file the invoices and the check stubs in the vendor's file and shall maintain a register of such transactions.



Annual Audit Committee Report

New York City Housing

Development Corporation

December 31, 2017



New York City Housing Development Corporation

Audit Committee Report

Year Ended December 31, 2017

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Minutes of the Audit Committee Meeting, September 19, 2017

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MINUTES OF THE MEETING OF THE NEW YORK CITY HOUSING DEVELOPMENT CORPORATION AUDIT COMMITTEE

January 30th, 2017

A meeting of the Members of the Audit Committee of the New York City Housing Development Corporation (the "Corporation") was held on Monday January 30th, 2017 at the offices of the Corporation, 110 William Street, 10th Floor, New York, New York.

The meeting was called to order at 10:35 am by Mr. Harry Gould, Board Member, who noted the presence of a quorum. Mr. Gould called for approval of the minutes from the November 2, 2016 meeting. The minutes were approved.

Mr. Gould turned to Mr. Richard Froehlich, Chief Operating Officer and General Counsel of the Corporation to provide an overview of the agenda.

Mr. Gould then turned the Committee's attention to Ms. Cathleen Baumann, Senior Vice President and Treasurer of the Corporation, to provide a summary of the Fiscal Year 2016 Financial Statements. Ms. Baumann reported that 2016 was another exceptional year for the Corporation. HDC has maintained its position as one of the nation's leading housing finance agencies and has continued to play a central role in the Mayor's Housing New York Plan. Ms. Baumann noted that the financials of the Corporation, as well as the strong leadership and hard work of a dedicated staff, are a strong barometer of that continued success: During FY 2016, the Corporation issued 21 bond series totaling \$1.2 billion. In addition \$120 million of proceeds were drawn down on previously issued series, and three new certificates of participation with the FFB totaled \$29.5 million for a total of \$1.43 billion in proceeds for the fiscal year. Total HDC assets were \$14.4 billion, an increase of \$66 million or 0.46% from fiscal year end 2015 due to the Corporation's ongoing debt issuance and lending activities. This increase is lower than previous years due to large mortgage prepayments during the year. Because of the availability of low cost alternatives, some of our larger mixed income borrowers have paid off their debt. Total liabilities were \$12.2 billion, a decrease of \$62.3 million or 0.51% from 2015 from ongoing lending activities. This decrease was attributable to bond redemptions related to the unscheduled mortgage prepayments. HDC's Total Net Position at fiscal year-end was \$2.26 billion, an increase of \$128.1 million or 6.02% from 2015 due to normal operating activities. The increase to net position will allow the Corporation to continue to play a critical role in the Mayor's Housing Plan and provide subsidies to the affordable housing developments that we finance. Ms. Baumann concluded her report by thanking Bharat Shah, Controller, Mary John, Deputy Controller, and the entire HDC Accounting staff for all of their hard work and dedication in producing the financial statements in such an efficient timeframe once again this year.

Mr. Gould then turned to Mr. Lou Roberts of Ernst & Young to provide an overview of the audit results. Mr. Roberts provided an overview of the summary of services. Mr. Roberts then noted that the scope was consistent with what was communicated to the Members back in November. Mr. Roberts reported that Ernst & Young will provide a clean opinion and all controls were operating effectively. Mr. Froehlich noted that

rotation of Ernst & Young team provides a new set of eyes to look at the Corporation. Mr. Roberts then turned to Mr. Christopher Sullivan of Ernst & Young, to provide the area of emphasis. Mr. Sullivan noted that there were no material weaknesses and Ernst & Young provided an unmodified opinion and noted no issues during testing. Ms. Denise Scott, Board Member asked whether the audit looks at investment policy and makes sure that it is sufficient and whether the policy needs to be revised. Mr. Roberts stated that Ernst & Young does test the investments against the investment policy and makes sure it is in compliance. Mr. Froehlich added that the Corporation's investment guidelines are reviewed and updated annually according to state finance laws. Ernst & Young reviews that the Corporation is in compliance with the policy and if there are ever any issues they are brought to the Audit Committee. Mr. Froehlich again added that HDC has very cautions investment guidelines. Mr. Roberts continued with his report stating that there were no misstatements of fraud and that Ernst & Young used Mitchel & Titus as a third party service provider. Ms. Scott asked whether the Corporation is comfortable with the asset and liability ratio. Mr. Froehlich noted that the agency does well and continues to grow its asset and utilized them in various ways. Mr. Gould then requested approval of the Corporation's Financial Statements and the Members approved the 2016 Financial Statements.

Mr. Gould turned to Ms. Ellen Duffy, Senior Vice President of Debt Issuance and Finance to present the Annual Investment Report. Ms. Duffy noted that The New York State Public Authorities Law (PAL) requires HDC to provide an annual investment report and it details the required contents of the report. These requirements are met by the 2016 Annual Investment Report presented, which includes data on investments made, investment earnings and fees paid, draft copies of the Corporation's audited financial statements, the Investment Guidelines as approved by the Members on September 22, 2016, and a draft report of Independent Auditors on Compliance with Investment Guidelines. The report also includes descriptive information about the Corporation, the funds it has under management, and the various types of oversight and controls on the Corporation's investment practices. Ms. Duffy stated that the major points in the report include: 1) Earnings on investments totaled \$26.1 million in fiscal year 2016, an increase of \$1.7 million from fiscal year 2015, which can be attributed to a slight increase in short term interest rates during FY 2016. The potential rising interest rate environment across the shorter term maturities is a factor to consider in the Corporation's ongoing investment strategy. 2) Because of the Corporation's commitments, the majority of investments must be held for the short term, which provides sufficient liquidity for the Corporation. In response to the current interest rate environment, the Corporation continued to invest primarily in collateralized demand deposits and direct purchases of U.S. Treasury and Agency obligations in order to optimize yield. 3) HDC funds under management decreased about 4.7% from fiscal year-end 2015 to fiscal year-end 2016, from \$3.61 billion to \$3.44 billion. The Corporation has fewer funds under management in part due to a loan made to the purchasers of the Stuyvesant Town-Peter Cooper Village in Manhattan to finance affordable housing. HDC expects to be reimbursed for funding this loan over the next year by the City. 4) Since our fiscal year end in October 2016, overall rates have trended higher. 5) HDC did not incur or pay any fees, commissions or charges for investment services. Treasury operations are conducted by the Corporation's Cash Management Division, which uses electronic and telephone bidding processes to competitively purchase securities that meet the Corporation's Investment Guidelines and

funding needs. 6) Oversight is provided internally by an Investment Committee and by various reviews by HDC's Credit Risk and Internal Audit units. There are also investment and credit risk reports presented at each meeting of the Corporation's Audit Committee, and an annual examination by our external auditors, Ernst & Young. The Corporation's Investment Guidelines were approved by the Members on September 22, 2016 with no changes at this time. Ms. Duffy further stated that upon approval by the Audit Committee, the Report will be submitted to the Mayor and to both the City and State Comptrollers, as required by the Public Authorities Law. Mr. Gould asked whether Stuyvesant Town-Peter Cooper Village will reimburse the agency the fee within the year. Mr. Froehlich stated that HDC is setting the funds back through the deals that the Corporation is doing. The Corporation will get the rest reimbursed in the upcoming March and June deals, at which time we will be made whole. Ms. Duffy concluded her report by requesting that the Members approve the 2016 Annual Investment Report and readopt the Investment Guidelines without any changes at this time. The Members approved the 2016 Annual Investment Guidelines.

Mr. Gould then turned to Ms. Duffy to present the debt report for the month of November 30, 2016. Ms. Duffy noted that the last debt report presented to the Audit Committee was as of September 30, 2016. Since then, the Corporation issued six series of Open Resolution bonds totaling \$201.3 million, three series of stand-alone directly placed bonds in the amount of \$66.6 million. Redemptions in October and November occurred in twenty two series of Open Resolution bonds totaling \$215.6 million. HDC's debt outstanding as of November 30, 2016 is approximately \$9.9 billion. The Corporation's statutory debt capacity was raised in November to \$12.5 billion from \$11.25 billion.

Mr. Gould then turned again to Ms. Duffy to provide the Corporation's Investment report as of January 17, 2017. Funds under management totaled approximately \$3.6 billion. This report reflects routine investment activity.

Ms. Duffy continued her report noting that regarding the Rating Agency Reserve annual review, after debt service on the Open Resolution was paid on November 1, 2016 and certain redemptions made in November, the amount of long term bonds outstanding in the Open Resolution is approximately \$4.1 billion. Based on this balance, a 2.25% reserve would amount to \$92.3 million, a 2.5% reserve would be \$102.6 million, and a 2.75% reserve would amount to \$112.8 million. During FY 2016, the Reserve was in the amount of \$88 million. Due to the higher amount of bonds outstanding, HDC Staff recommends that the Reserve should be increased to \$92.5 million at this time. Ms. Duffy then requested that the Rating Agency Reserve be increased to \$92.5 million at this time. The Members approved the new reserve amount.

Mr. Gould then recognized Ms. Mary Hom, Chief Credit Officer, for the counterparty credit risk exposure report. Ms. Hom reported that there was one new counterparty added since the last report — Customers Bank. Customers Bank is a Pennsylvania-based community bank with approximately \$10 billion in assets, and \$7 billion in deposits. Customers is not rated by either Moody's or S&P because they have no rated debt outstanding. HDC's investment in Customers Bank is collateralized by a Federal Home Loan Bank letter-of-credit. Ms. Hom then reported that the only credit rating agency action of note was the December upgrade by S&P of the issuer credit ratings of

operating subsidiaries of four global banking groups to single-A+ from single-A, including Bank of America, Citibank, and Goldman Sachs Bank. This upgrade was due to a change in the way the Federal Reserve views certain liabilities in its calculation on loss absorption capacity (and nothing specific to each individual bank). Ms. Hom continued by noting that HDC's counterparty exposure remains pretty well-diversified with the largest exposure continuing to be with Fannie Mae, followed by Freddie Mac. Investments rated double-A or higher were 48% of total investments (versus 47% at the last report), and the weighted average maturity was 1.7 years (versus 1.9 years at the last report). Finally, Ms. Hom concluded by reporting that exposure to liquidity providers declined to approximately \$114 million (versus \$154 million at the last report) due to the redemption of the 2013 B-2 and 2013 E-2 bonds in November.

Mr. Gould then turned the Committee's attention to Ms. Shirley Jarvis, Vice President of Internal Audit to present the 2017 Audit Schedule for the Members approval. Ms. Jarvis noted that there were nine audit projects on this year's schedule. They are as follows: The required compliance reviews of Employee expenses, President's office expenses and petty cash; two projects deferred from the 2016 Schedule; Database Administration and Security and a review of the accounts receivable process; and four additional projects, selected based on the results of the risk assessment performed by Internal Audit with input from senior management. Those four projects are: a review of: AM- the Preservation Loan Financing Closing Process; Esc servicing- Real Estate Taxes; Logical System Access-Electronic Banking and a Bond Issuance- annual disclosure compliance review. Ms. Jarvis further noted that the Audit staff review of each area will include 1) Interviewing the key personnel concerning procedures and workflow.; 2) Reviewing written procedures and applicable documentation; 3) Flowcharting the procedures and performing walkthroughs; 4) Performing risk assessment and identifying the inherent risks; 5) Evaluating the adequacy and effectiveness of internal controls to mitigate those risks; 6) Performing a test of controls and a sample basis; 7) Verifying compliance with corporate policies and procedures; applicable laws and regulations and 8) Preparing audit reports to communicate the results of the review to management and the Members. Mr. Jarvis then requested the Members approval of the 2017 Audit Schedule and the Schedule was approved.

Mr. Gould then turned to Ms. Shirley Jarvis again, to provide the Internal Audit reports. Ms. Jarvis noted that since Internal Audit's last report to the Members, Audit issued the final reports for the REMIC Revenue Billing process and the Construction Loan Advances audit projects. Staff was currently finalizing the four remaining audit projects from the 2016 audit schedule: Development, Low Income Housing Tax Credit compliance review, President's Office Expenses and Petty Cash. The draft reports for those reviews were expected to be issued shortly. Ms. Jarvis then proceeded to briefly summarize the results of the REMIC Revenue Billing process and of Construction Loan Advances audit projects. Ms. Jarvis noted that the audit objective of the REMIC Revenue Billing process review was to determine whether the mortgage insurance premiums were accurately billed and collected for REMIC insured loans. The scope of the review covered MIP billed and collected from November 1, 2014 to February 29, 2016. Audit determined that the controls in place to ensure that the billing of the mortgage insurance premiums is accurate and complete are effective and its' review of the selected revenue billing cycles determined that REMIC staff generally complied with

the procedures for the billing of the insurance premiums. Ms. Jarvis continued with a report on the results of the Construction Loan Advances Process review. The objectives of the audit were to determine whether the advances processed in MBS were properly recorded in Accounts Payable and the General Ledger and determine whether the HDC advances were disbursed in accordance with construction loan policies and procedures. The audit scope covered construction loan advances made during the period November 1, 2015 to March 31, 2016. Internal Audit found no significant issues, except for the recommendation to update the construction loan procedures to reflect current practices. The Audit staff determined that advances processed through MBS during the audit period were properly recorded in the GL; the selected advances were authorized; supported by appropriate documentation; and disbursed in accordance with construction loan policies and procedures.

Ms. Scott then asked if there would be an update on cyber security. Mr. Froehlich noted that probably in the next meeting or after, the Corporation will bring back to the Audit Committee some added procedures and recommendations to purchase some software.

At 11:14 am, with no further business, Mr. Gould moved to dismiss and the meeting was adjourned.

Respectfully submitted,

Violine Roberty

MINUTES OF THE MEETING OF THE NEW YORK CITY HOUSING DEVELOPMENT CORPORATION AUDIT COMMITTEE

January 30th, 2017

ATTENDANCE LIST

		•
NAME		<u>AFFILIATION</u>
Denise Scott		Audit Committee Member
Harry Gould		Audit Committee Member
Louis Roberts	•	Ernst & Young
Christopher Sullivan	•	Ernst & Young
Richard Froehlich		NYC Housing Development Corp.
Paula Roy Carethers		NYC Housing Development Corp.
Ellen Duffy	•	NYC Housing Development Corp.
Cathy Baumann	•	NYC Housing Development Corp.
Terry Gigliello		NYC Housing Development Corp.
Shirley Jarvis		NYC Housing Development Corp.
Mary Hom	•	NYC Housing Development Corp.
Mary John	•	NYC Housing Development Corp.
Bharat Shah		NYC Housing Development Corp.
Uyen Luu		NYC Housing Development Corp.
Cheuk Yu	•	NYC Housing Development Corp.
Catherine Foody		NYC Housing Development Corp.
Horace Greene		NYC Housing Development Corp.
Madhavi Kulkarni		NYC Housing Development Corp.
Violine Roberty	•	NYC Housing Development Corp.
Zenaida Bhuiyan		NYC Housing Development Corp.
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MINUTES OF THE MEETING OF THE NEW YORK CITY HOUSING DEVELOPMENT CORPORATION AUDIT COMMITTEE

March 17th, 2017

A meeting of the Members of the Audit Committee of the New York City Housing Development Corporation (the "Corporation") was held on Friday March 17th, 2017 at the offices of the Corporation, 110 William Street, 10th Floor, New York, New York.

The meeting was called to order at 11:30 am by Mr. Harry Gould, Board Member, who noted the presence of a quorum. Mr. Gould called for approval of the minutes from the January 30th, 2017 meeting. The minutes were approved.

Mr. Gould turned to Mr. Richard Froehlich, Chief Operating Officer and General Counsel of the Corporation to provide an overview of the agenda. Mr. Froehlich provided a follow up on the Cyber Security initiative noting that the Corporation has taken measures to protect itself from cyber-attacks and more details will be provided at the next meeting.

Mr. Gould then turned to Mr. Bharat Shah, Controller of the Corporation, to report on the Corporation's financial activities for the first quarter. Mr. Shah noted that the growth in assets, liabilities and net position has continued from last fiscal year through the first quarter of this fiscal year. The Financial highlights include the following: \$564.8 million of bonds and debt obligations were issued by the Corporation. \$563.2 million of senior mortgage loans were closed. Additionally, \$146.2 million of 1% interest rate loans were committed from the corporate reserves. Total assets at first quarter end are \$15.1 billion, an increase of \$424.4 million or 2.9% from Fiscal Year end 2016. Total liabilities are \$12.7 billion, an increase of \$396.9 million or 3.2% from Fiscal Year end 2016. Total net position (assets) are \$2.4 billion, an increase of \$27.5 million or a 1.16% increase from last fiscal year end. Net income thru the first quarter of this fiscal year is \$27.5 million from normal operations, a decrease of \$11.4 million or 29.4% compared to the same period last year. This decrease is mainly due to the change in the Fair market Value in the investments. Mr. Froehlich noted that the change in value is something that the Corporation is conscious of and keeps a close eye on it. The Corporation has a "buy and hold" policy so it's really just a mark to market entry, and the Corporation has never experienced an actual loss.

Mr. Gould turned to Ms. Ellen Duffy, Senior Vice President of Debt Issuance and Finance to present HDC's Debt Report as of January 31, 2017. Ms. Duffy noted that the last debt report presented to the Audit Committee was as of November 30, 2016. Since then, the Corporation issued seven series of Open Resolution bonds totaling \$503.74 million and one series of directly placed tax-exempt debt obligations in the amount of \$55.47 million, which includes both recycled and draw down bonds. Redemptions in December and January occurred in five series of Open Resolution bonds totaling \$97.71 million and one series of stand-alone bonds totaling \$45.02 million. The Corporation's debt outstanding as of January 31, 2017 is approximately \$10.3 billion. The Corporation's statutory debt capacity stands at \$12.5 billion. Mr. Gould asked to explain

the pension liability. Mr. Froehlich answered that it's the estimated portion of HDC's participation in the NYCERS plan.

Mr. Gould then turned again to Ms. Duffy again to provide the Corporation's Investment report as of February 28, 2017. Funds under management totaled approximately \$3.6 billion. This report reflects routine investment activity.

Mr. Gould then recognized Ms. Mary Hom, Chief Credit Officer; for the counterparty credit risk exposure report. Ms. Hom reported that there were no new counterparties added to the list, and there were no rating agency actions of note. The Corporation's counterparty exposure remained well-diversified, with the largest exposure continuing to be with Fannie Mae, followed by Freddie Mac. Investments rated double-A or higher were 46% of total investments versus 48% at the last report, and the weighted average maturity of the investment portfolio was 1.6 years versus 1.7 years at the last report. Ms. Hom concluded her report by noting that exposure to liquidity providers declined to \$97 million versus \$114 million at the last report due to the redemption of the 2013 B-4 bonds in January. Mr. Gould asked Ms. Hom if they were keeping an eye on Deutsche Bank to which Ms. Hom said that they were keeping a close eye.

Mr. Gould then turned to Mr. Froehlich to request the approval of HDC's Purchasing Guidelines. Mr. Froehlich noted that pursuant to Sections 2824 (e) and 2879 of the Public Authorities Law, HDC is required to have its Members annually review and approve the procurement guidelines of the Corporation. After approval, the guidelines are submitted to the Office of the State Comptroller, through its Public Authorities Reporting Information System ("PARIS"). The guidelines are also published on the Corporation's website. Mr. Froehlich stated that this year there are no changes to the guidelines. Mr. Froehlich then asked for approval of the guidelines and the Members approved the Purchasing Guidelines.

Mr. Gould then turned the Committee's attention to Ms. Shirley Jarvis, Vice President of Internal Audit to request the Members approval of the 2016 Audit Committee Report. Per NYC Comptroller's "Directive 22", the Audit Committee (AC) is required to publish an annual report, describing the activities and decisions made by the Members during the prior calendar year. The report is a compilation of the minutes from the Audit Committee meetings that occurred during 2016. Ms. Jarvis further noted that upon the Members approval, a copy of the report will be submitted to the Secretary of the NYC Audit Committee. The Members approved the 2016 Audit Committee Report.

Mr. Gould then turned to Ms. Shirley Jarvis again, to provide the Internal Audit reports. Ms. Jarvis noted that since Internal Audit's last report to the Members the Audit staff had completed the required annual reviews of the President Office Expense; and of Petty Cash and the Development compliance reviews. Ms. Jarvis proceeded to summarize the results of each audit. Ms. Jarvis stated that for the President's Office Expenses the objectives were to: 1) Evaluate the effectiveness of the controls over reimbursements of the travel and related expenses to the Office of the President; And 2) Determine compliance with the Corporation's policy and procedures relating to those expenses. The audit scope covered all expenditures charged to the President's Office in six expense

categories from May 1, 2015 to September 30, 2016. Audit reported that there were no significant issues noted; the corporation's guidelines are effective in ensuring that employee reimbursements for the President's Office are authorized, appropriate and accurately recorded; and generally, found that expenses were processed correctly according to the travel and business expense policies in the Employee Handbook and all expenses included the proper documentation and authorization. Ms. Jarvis continued her report noting that for the Petty Cash Review, the audit objectives were to determine whether adequate internal controls exist to ensure that: 1) The cash asset is safeguarded and maintained in the proper amount; 2) Petty cash disbursements are in compliance with the Corporation's policies and procedures; and 3) The Imprest fund account transactions are properly authorized, processed and the account reconciled. The audit period covered petty cash disbursements and transactions occurring in the Imprest Fund from September 17, 2015 through December 22, 2016. Internal Audit found the Corporation's guidelines to be effective and found no matters regarding internal controls that were considered to be a material weakness. With respect to the specific audit results, Internal Audit established that the petty cash disbursements were in compliance with policies and procedures; the cash on hand was kept in a secured lockbox and maintained in the proper amount; and all expenditures were properly authorized, processed and account reconciled. Ms. Jarvis further noted that for the Development Compliance Review, the audit objectives were to: 1) Determine the accuracy of the loan amount in the various documents as it moved through the closing process; 2) Ensure the accuracy of HDC commitment fees, per the conditions of the term sheets, and that those fees were collected; additionally, verify that the fees were accurately recorded in the General Ledger (GL) and deposited, although this last step is not a function of the Development Department; 3) Review and ensure adherence to the 2016 volume cap allocations; and 4) Verify that the required documentation was filed in each project folder, as per Development procedures. The audit focused on closed projects that occurred from 1/1/16 through 6/30/16. Internal Audit noted they were no significant issues and with respect to the specific audit objectives, Internal Audit found that the loan amount remained consistent throughout the closing process among the various documents; the commitment fees adhered to the term sheets and were properly collected and recorded in the GL and deposited; there was proper adherence to the volume cap; and for the most part, the required documentation was maintained in the electronic file folders for each project. Internal Audit did offer a recommendation to assist management in improving operations. Details of the recommendation and managements' action plan as well as the results of the preceding two audit projects are more fully described in the respective reports. Ms. Scott asked what does "for the most part" mean in the Development Compliance review and Ms. Jarvis replied that the Development Department changed to electronic filing from paper filing so if the documents were not stored electronically, there were paper files instead.

At 11:52 am, with no further business, Mr. Gould moved to dismiss and the meeting was adjourned.

Respectfully submitted,

Violine Roberty

MINUTES OF THE MEETING OF THE NEW YORK CITY HOUSING DEVELOPMENT CORPORATION AUDIT COMMITTEE

March 17th, 2017

ATTENDANCE LIST

•	•
<u>NAME</u>	AFFILIATION
Denise Scott	Audit Committee Member
Harry Gould	Audit Committee Member
Scott Fleming	Ernst & Young
Eric Enderlin	NYC Housing Development Corp.
Richard Froehlich	NYC Housing Development Corp.
Paula Roy Carethers	NYC Housing Development Corp.
Ellen Duffy	NYC Housing Development Corp.
Cathy Baumann	NYC Housing Development Corp.
Terry Gigliello	NYC Housing Development Corp.
Jim Quinlivan	NYC Housing Development Corp.
Shirley Jarvis	NYC Housing Development Corp.
Mary Hom	NYC Housing Development Corp.
Madhavi Kulkarni	NYC Housing Development Corp.
Trisha Ostergaard	NYC Housing Development Corp.
Mary John	NYC Housing Development Corp.
Bharat Shah	NYC Housing Development Corp.
Uyen Luu	NYC Housing Development Corp.
Cheuk Yu	NYC Housing Development Corp.
Catherine Foody	NYC Housing Development Corp.
Horace Greene	NYC Housing Development Corp.
Carol Micalizzi	NYC Housing Development Corp.
Patrick Ogoke	NYC Housing Development Corp.
Violine Roberty	NYC Housing Development Corp.

June 5th, 2017

A meeting of the Members of the Audit Committee of the New York City Housing Development Corporation (the "Corporation") was held on Monday June 5th, 2017 at the offices of the Corporation, 110 William Street, 10th Floor, New York, New York.

The meeting was called to order at 10:30 am by Mr. Harry Gould, Board Member, who noted the presence of a quorum. Mr. Gould called for approval of the minutes from the March 17th, 2017 meeting. The minutes were approved.

Mr. Gould turned to Mr. Richard Froehlich, Chief Operating Officer and General Counsel of the Corporation to provide an overview of the agenda.

Mr. Gould then turned to Ms. Mary John, Controller of the Corporation, to report on the Corporation's unaudited financial statements for the second quarter of fiscal year 2017. Ms. John noted that in the first six months of the fiscal year, HDC closed fourteen new bonded mortgages with loan commitments in excess of \$646.5 million and one debt obligation mortgage of \$55.5 million. In addition, four Mitchell-Lama mortgages were restructured with a combination of new senior and subordinate mortgages of \$30.4 million in total. The Corporation also committed \$121.2 million of subsidy loans funded from corporate reserves. Additionally, \$70.2 million in subsidies will be funded from the City's continued reimbursement to the Corporation for the Stuyvesant Town Peter Cooper Village loan from December 2015 for \$143.2 million. During the same period. 14 bond series were issued for a total of \$762.7 million. Additionally, \$3.4 million of proceeds were drawn on a previously issued series. Debt Obligation draws totaled \$77.3 million so far this fiscal year. Total assets increased \$881.1 Million or 5.99% from FYE 2016 to \$15.6 Billion due to the Corporation's ongoing debt issuance and lending activities. Total liabilities were \$13.2 Billion, an increase of \$828.1 Million or 6.72% from FYE 2016 from ongoing lending activities. HDC's Total Net Position at the end of the second quarter of the fiscal year was \$2.4 Billion, an increase of \$53 Million or 2.23% from FYE 2016 due to normal operating activities. Mr. Gould asked how much the City has reimbursed HDC for Stuyvesant Town. Ms. John responded the City has paid back \$82 million. Mr. Gould asked about the decreased profit and Ms. John responded that the decrease is due to fair market value and also there were no Mitchell Lama prepayments for the quarter. Mr. Froehlich noted that securitization squeezed revenue but provides cash for other projects so there is a balance. Ms. Denise Scott, Board Member asked how HDC predicts deferred outflows. Ms. John responded that deferred outflows consist of early retirement debt which is based on an amortization schedule. It also includes the pension amount which comes directly from NYCERS.

Mr. Gould turned to Ms. Ellen Duffy, Senior Vice President of Debt Issuance and Finance to present the Corporation's Debt Report as of April 30, 2017. Since then, the Corporation issued seven series of Open Resolution bonds totaling \$258.94 million.

There were no bond redemptions in February, March, or April. The Corporation's debt outstanding as of April 30, 2017 is approximately \$10.55 billion. The Corporation's statutory debt capacity stands at \$12.5 billion.

Mr. Gould then turned again to Ms. Duffy again to provide the Corporation's Investment report as of May 3, 2017. Funds under management totaled approximately \$3.75 billion. This report reflects routine investment activity.

Mr. Gould then recognized Ms. Mary Hom, Chief Credit Officer, for the counterparty credit risk exposure report. Ms. Hom reported that there were no new counterparties added to the list, but there were a couple of rating agency actions of note. In late March, S&P upgraded Deutsche Bank to A- from BBB+ citing a change in German law that is deemed favorable to senior creditors; and in early May, Moody's downgraded various Canadian banks, including TD Bank to Aa2 from Aa1, citing a more challenging operating environment for the Canadian banks as a whole. Ms. Hom continued her report by noting that the Corporation's counterparty exposure remains pretty well-diversified with the largest exposure now with Freddie Mac, followed by Fannie Mae. Previously, the relationship had been flipped, with Fannie Mae being the largest exposure, followed by Freddie Mac. Investments rated double-A or higher were 53% of total investments, versus 46% at the last report. The weighted average maturity was virtually unchanged at 1.7 years, versus 1.6 years at the last report. Ms. Hom concluded her report by noting that exposure to liquidity providers was unchanged at approximately \$97 million.

Mr. Gould then turned the Committee's attention to Ms. Shirley Jarvis, Vice President of Internal Audit for other business. Ms. Jarvis noted that in accordance with the International Standards for the Professional Practice of Internal Auditing, the Internal Audit (IA) function is required to undergo an external quality assessment review (QAR) by an independent reviewer at least every five years. IA will go through that assessment this year. Ms. Shirley Jarvis stated that Internal Audit had completed the RFP process (where IA received and evaluated 6 proposals) and are currently going through contract negotiations with the firm selected to perform the engagement. The objectives of the assessment will be to: 1). Determine IA conformance to the 'Standards'; 2). Evaluate IA's efficiency and effectiveness in carrying out its' mission as stated in the Audit Charter and expressed in expectations of management; and 3). Identify opportunities to enhance IA's management of resources, work processes and its' value to the corporation; Ms. Jarvis will communicate the results of QAR to the Members upon completion the review and the issuance of the final report.

Mr. Gould then turned the committee's attention to Madhavi Kulkarni, Chief Information Officer of the Corporation to provide a report on Cyber Security. Ms. Kulkarni noted that this presentation and report are intentionally kept general with respect to areas that the Corporation are currently or will be working on, so as to protect HDC, since this report and meeting are open to the public. Ms. Kulkarni further noted that the reliance on technology has changed and expanded the potential vulnerabilities and increased potential risk to operations. Cybersecurity trends show that attacks will continue and get more sophisticated. The IT Department closely follows the NIST framework (National Institute of Standards and Technology - a measurement standards lab and a non-regulatory agency of the United States Department of Commerce) in managing

cybersecurity, a continuous function to Identify, Protect, Detect, Respond and Recover. Earlier this year, The New York State Dept. of Financial Services published Title 23, Section 500 of New York Codes, Rules & Regulations; which launched a significant initiative to impose detailed cybersecurity requirements on financial institutions. The IT Department is following these developments closely, and will modify the security strategies as needed.

HDC systems hold sensitive and many times confidential information pertaining to our employees, tenants, bank accounts and transactional data related to bonds, mortgages, investments and legal documents. In order to project this information we have implemented multiple layers of security within our network and we constantly monitor, detect and respond to cyber events promptly. Access to systems are issued, managed, verified, revoked and audited. Security software is kept up to date and Databases, software applications and systems are constantly upgraded to keep up with the latest security recommendations. The IT Department follows best practices with network login and passwords and Access to bank accounts is using multi-factor authentication. Ms. Kulkarni stated that last month, 12,000 Firewall Intrusion Prevention events were blocked. These events range from high profile cross-site scripting server attacks to vulnerability exploits within the operating system. Over the last 12 months, 22% of our incoming emails were detected as spam and blocked and 561 malware emails were The IT Department's non-signature based security appliance filtered and quarantined 50 phishing malwares, 21 of which were potentially malicious, 20 that contained executables capable of running commands on local systems, downloading a change to a registry key, wiping out a pc's hard drive, uploading user data to a command and control server, running callbacks to a remote control server, or spreading infections laterally. Desktop end point protection software reported and blocked an additional 30 suspicious callback events from user workstations. 5 instances of malware were downloaded off web sites, 65 viruses were cleaned and blocked in our environment (both servers and desktops) and 51 viruses were quarantined in our environment (both servers and desktops). One virus on HDC's Disaster Recovery site was also contained. All of these potential compromises were prevented by our security measures.

To promptly respond to the events upon detection of any incident, IT communicates with members of the Department, investigate the issue immediately and if necessary consult outside third parties. The recovery process includes automatic containment of malware and antivirus and if that isn't sufficient, we do a complete wipe of user desktops. In the case of a zero day attack that causes major damage, the IT Department has a retainer agreement with a third party to procure remediation services. Various daily data backups are in place, such as, hot online backups using cloud and infrastructure as a service and cold backups of incremental updates to tape for offsite storage. In addition, full system backups are done monthly and stored in-house for up to 2 months. The IT Department does disaster recovery tests at least once a year. The last Disaster Recovery test, completed on May 1st 2017, was successful.

Since data suggests insiders present the biggest cybersecurity risk to organizations, HDC has invested in security training software and regularly conducts mandatory security awareness training for all users. Ms. Kulkarni reported that the targeted security

initiatives include the following: A). Penetration testing; System upgrades including backup software and desktop operating systems; B). Data protection solutions designed to prevent sensitive corporate info leaving the corporation via in-secured ways like handheld devices, personal email addresses and non-work related application portals; C). Security solutions to address smartphone management; D). Managed services for event log monitoring; and Ongoing security awareness training for users and training for the IT team members in areas of malware analysis and prevention. In closing, we have had no breaches that have impacted operations. Ms. Scott asked how much of what IT is finding is consistent with what's happening with the City. Ms. Kulkarni stated that she is not aware of what the City has seen in terms of viruses. Mr. Eric Enderlin, President of the Corporation stated that HDC will look into that further. Mr. Gould also asked whether IT is able to tell which programs are being targeted or if the malware is specific to HDC. Ms. Kulkarni noted that nothing specific at HDC, they were all general attempts.

At 10:49 am, with no further business, Mr. Gould moved to dismiss and the meeting was adjourned.

Respectfully submitted,

Violine Roberty

June 5th, 2017

ATTENDANCE LIST

NAME Denise Scott Harry Gould Lou Roberts Eric Enderlin Richard Froehlich Paula Roy Carethers Ellen Duffy Cathy Baumann Terry Gigliello Shirley Jarvis Mary Hom Madhavi Kulkarni Trisha Ostergaard Mary John Uyen Luu Cheuk Yu Catherine Foody Horace Greene Carol Micalizzi Patrick Ogoke Violine Roberty	AFFILIATION Audit Committee Member Audit Committee Member Ernst & Young NYC Housing Development Corp.

September 19th, 2017

A meeting of the Members of the Audit Committee of the New York City Housing Development Corporation (the "Corporation") was held on Monday September 19th, 2017 at the offices of the Corporation, 110 William Street, 10th Floor, New York, New York.

The meeting was called to order at 12:13 pm by Mr. Harry Gould, Board Member, who noted the presence of a quorum. Mr. Gould called for approval of the minutes from the June 5th, 2017 meeting. The minutes were approved.

Mr. Gould turned to Mr. Richard Froehlich, Chief Operating Officer and General Counsel of the Corporation to provide an overview of the agenda.

Mr. Gould then turned to Mr. Louis Roberts of Ernst & Young to present the firm's audit plan for HDC's Fiscal Year 2017, which ends on October 31st. Mr. Roberts turned the committee's attention to page 3 of the Ernst and Young audit plan booklet to highlight the executive team members that will work on the audit. Mr. Roberts then turned to page 4 to review the audit timetable noting that it is similar to prior years. Mr. Roberts then turned to Samantha Culloo, Senior Manager, Ernst & Young to provide the areas of audit emphasis. Ms. Culloo then reviewed the areas of emphasis and summary of planned audit procedures. Ms. Culloo then turned to Mr. Roberts who continued with the services and deliverables. Mr. Roberts provided the timing of required communications. Mr. Roberts concluded his report noting that the new pronouncement GASB Statement No. 87, Leases; will not affect HDC at this time, but the new rules will be effective for fiscal year 2020. Mr. Roberts further noted that the Corporation will be evaluating the impact this statement will have on its financial statements.

Mr. Gould then turned to Ms. Mary John, Controller of the Corporation, to report on the Corporation's unaudited financial statements for the third quarter of fiscal year 2017, which covers the period November 1, 2016 thru July 31, 2017. Ms. John noted that in the first nine months of the fiscal year, HDC closed twenty five new bonded mortgages with loan commitments in excess of \$1.05 billion, and two debt obligation mortgages of \$82.6 million in total. In addition, eight preservation mortgages were restructured with a combination of new senior and subordinate mortgages of \$63.1 million in total. The Corporation also committed \$325.6 million of subsidy loans of which \$222.7 million will be funded from corporate reserves and \$102.9 million will be funded from the City's continued reimbursement to the Corporation for the Stuyvesant Town Peter Cooper Village loan from December 2015 for \$143.2 million. As of the end of the third quarter, twenty new bond series were issued for a total of \$1,2 billion. Additionally, \$6.6 million of proceeds were drawn on a previously issued series. Debt Obligation draws, on the Corporation's back to back loan funding program with Citibank totaled \$141.0 million so far this fiscal year. HDC also closed on one new certificate of participation agreement with the Federal Financing Bank ("FFB") on the newly restructured Stevenson Commons

mortgage loan for \$103 million. As of the end of the third quarter HDC's total assets had exceeded \$16 billion, an increase of \$1.39 billion or 9.45% from FYE 2016. Total liabilities were \$13.54 billion, an increase of \$1.21 billion or 9.88% from FYE 2016 from ongoing lending activities. HDC's Total Net Position at the end of the third quarter was \$2.54 billion, an increase of \$171.1 million or 7.21% from FYE 2016. Total Net Income of \$171.1 million was due to \$101.5 million from normal operating activities and \$69.6 million from grant revenues.

Mr. Gould turned to Ms. Ellen Duffy, Senior Vice President of Debt Issuance and Finance to present the Corporation's Debt Report as of July 31, 2017. Ms. Duffy noted that the last debt report presented to the Audit Committee was of April 30, 2017. Since then, the Corporation issued six series of Open Resolution bonds totaling \$442.87 million and one series of stand-alone bonds totaling \$27.12 million. During this time there were bond redemptions in seventeen series of the Open Resolution bonds totaling \$264.39 million. The Corporation's debt outstanding as of July 31, 2017 is approximately \$10.67 billion. The Corporation's statutory debt capacity stands at \$12.5 billion. Mr. Gould asked whether there is any need for debt capacity at this time and Mr. Froehlich noted that the Corporation has a good amount of cushion and there is no need for additional debt capacity at this time.

Mr. Gould then turned again to Ms. Duffy to provide the Corporation's Investment report as of August 29, 2017. Funds under management totaled approximately \$4.1 billion. This report reflects routine investment activity.

Mr. Gould then recognized Ms. Mary Hom, Chief Credit Officer, for the counterparty credit risk exposure report. Ms. Hom reported that there were no new counterparties added to the approved list, and there were no new rating agency actions of note. The Corporation's counterparty exposure remains pretty well-diversified with Freddie Mac continuing to be the largest exposure, followed by Fannie Mae. Investments rated double-A or higher were 50% of total investments, versus 53% at the last report, and the weighted average maturity was 1.9 years, versus 1.7 years at the last report. Finally, Ms. Hom noted that the Corporation's exposure to liquidity providers declined to \$41.5 million, versus \$97 million at the last report. This was due to the redemption of the 2014 C-2 bonds in July.

At 12:27 pm, with no further business, Mr. Gould moved to dismiss and the meeting was adjourned.

Respectfully submitted,

Violine Roberty

September 19th, 2017

ATTENDANCE LIST

NAME	<u>AFFILIATION</u>
Kyle Kimball	Audit Committee Member
Harry Gould	Audit Committee Member
Louis Roberts	Ernst & Young
Samantha Culloo	Ernst & Young
Eric Enderlin	NYC Housing Development Corp.
Richard Froehlich	NYC Housing Development Corp.
Paula Roy Carethers	NYC Housing Development Corp.
Jim Quinlivan	NYC Housing Development Corp.
Ellen Duffy	NYC Housing Development Corp.
Terry Gigliello	NYC Housing Development Corp.
Shirley Jarvis	NYC Housing Development Corp.
Mary Hom	NYC Housing Development Corp.
Madhavi Kulkarni	NYC Housing Development Corp.
Mary John	NYC Housing Development Corp.
Uyen Luu	NYC Housing Development Corp.
Cheuk Yu	NYC Housing Development Corp.
Horace Greene	NYC Housing Development Corp.
Carol Micalizzi	NYC Housing Development Corp.
Violine Roberty	NYC Housing Development Corp.
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November 27th, 2017

A meeting of the Members of the Audit Committee of the New York City Housing Development Corporation (the "Corporation") was held on Monday November 27th, 2017 at the offices of the Corporation, 110 William Street, 10th Floor, New York, New York.

The meeting was called to order at 10:30am by Mr. Harry Gould, Board Member, who noted the presence of a quorum. Mr. Gould called for approval of the minutes from the September 19th, 2017 meeting. The minutes were approved.

Mr. Gould turned to Mr. Richard Froehlich, Chief Operating Officer and General Counsel of the Corporation to provide an overview of the agenda.

Mr. Gould turned to Ms. Ellen Duffy, Senior Vice President of Debt Issuance and Finance to present the Corporation's Debt Report as of September 30, 2017. The last debt report presented to the Audit Committee was as of July 31, 2017. During this time, the Corporation did not issue additional bonds. There were bond redemptions in one series of the Open Resolution bonds totaling \$5.8 million and one stand-alone series totaling \$7.7 million. The Corporation's debt outstanding as of September 30, 2017 is approximately \$10.64 billion. The Corporation's statutory debt capacity stands at \$12.5 billion.

Mr. Gould then turned again to Ms. Duffy to provide the Corporation's Investment report as of November 6, 2017. Funds under management totaled approximately \$4.0 billion. This report reflects routine investment activity.

Mr. Gould then recognized Ms. Mary Hom, Chief Credit Officer, for the counterparty credit risk exposure report. Ms. Hom reported that there was one addition to the list of approved counterparties - Lakeland Bank. Lakeland Bank is a small, solid-performing community bank based in New Jersey. Although not rated by Moody's or S&P, Lakeland has a BBB+ rating from Kroll Bond Rating Agency. All investments with Lakeland Bank are fully-collateralized by U.S. Government and Agency securities. Ms. Hom further reported that there was one rating agency action of note - Bank of America Corp. (holding company) was upgraded by S&P to A- from BBB+, while the bank subsidiary, Bank of America N.A., was affirmed at A+. In its upgrade, S&P cited the Bank's improved profitability and reduced exposure to market risk as a result of tighter underwriting standards. Ms. Hom continued by reporting that the Corporation's counterparty exposure remains pretty well-diversified with the largest exposure being with Fannie Mae, followed by Freddie Mac. Investments rated double-A or higher were 49% of total investments (versus 50% at the last report), and the weighted average maturity was 1.8 years (versus 1.9 years at the last report). Ms. Hom concluded by noting that the Corporation's exposure to liquidity providers remained unchanged at \$41.5 million.

Mr. Gould then turned the committee's attention to Ms. Shirley Jarvis, Vice President of Internal Audit to request the Members approval of the 2018 Audit Schedule. Ms. Jarvis noted that there are eleven audit projects on this year's schedule. They are as follows: The required compliance reviews of Employee expenses, President's office expenses and petty cash; one project carried over from the 2017 Schedule, a review of the accounts receivable process; and seven additional projects, selected based on the results of the risk assessment performed by Internal Audit with input from senior management. The seven projects are: a review of: Legal-Developer disclosure process; Escrow servicing-Insurance Payable; IT- Third Party Vendor Management; Cash Management -Investments; IT- Mobile Device Security and a Reserve for Replacement compliance review. Ms. Jarvis further noted that the review of each area will include: Interviewing the key personnel concerning procedures and workflow; Reviewing written procedures and applicable documentation; Flowcharting the procedures and performing walkthroughs; Performing risk assessment and identifying the inherent risks; Evaluating the adequacy and effectiveness of internal controls to mitigate those risks; Performing a test of controls on a sample basis; Verifying compliance with corporate policies and procedures; applicable laws and regulations; and preparing audit reports to communicate the results of the review to management and the Members. Ms. Jarvis requested approval of the Audit Schedule and the Members approved the Audit Schedule.

Ms. Jarvis then continued with the audit reports. Ms. Jarvis noted that since the last report to the Members, Audit issued the final reports for the reviews of Logical Security Access- Electronic Banking; BI-Annual Disclosure compliance review and the AM-Preservation Loan Closing Process review. She noted that the Audit Staff is currently working to complete and finalize five audit projects from the 2017 audit schedule: Escrow Servicing- RE taxes; Database Security Administration; EE expenses, which has been completed and is currently going through the review process, President's Office Expenses and Petty Cash. It is expected that the results of these audit projects will reported to the members at the next AC meeting in January. Ms. Jarvis briefly summarized the results of the aforementioned reviews documented in the reports before the Members. Ms. Jarvis noted that for the Logical Security Access - Electronic Banking Review the objectives of the audit were to determine whether the controls in place to ensure that access to the online banking systems is secure were adequate. Specifically to determine: 1) whether there is an adequate online banking policy; 2) whether access to the online banking systems is appropriately restricted and; 3). Determine if system reports are generated and reviewed to monitor access levels and audit logs. There were no significant issues to report. Internal Audit determined that access to the online banking systems were appropriately restricted based on job function. Audit did offer some recommendations to enhance the controls. Internal Audit recommended that: 1) Dual Authority for Security Administrators - Ensure the dual authority is implemented for security administrators when new electronic banking systems accounts are established; 2) To ensure segregation of duties, remove access from the users that allow them to create as well as approve transactions; and 3) The System Administrator for each system should periodically review and confirm users and their access levels with business management. Management agreed with the Audit Staff's recommendations and were addressed during the course of the audit. In the BI - Annual Disclosure Review; the objectives of the audit were to determine if HDC was in compliance with the annual

continuing disclosure requirements of the Municipal Securities Rulemaking Board (SEC Rule 15C2). For the selected bonds reviewed, Internal Audit determined that HDC was in compliance with the annual disclosure requirements. The specific objectives of the AM- Preservation Financing Closing Process review were to: 1) Ensure adherence to HDC's project transaction approval process by the Credit Committee and the Board; and 2) Determine whether the commitment and the Cost of Issuance (COI) fees were collected, recorded in the General ledger and deposited in the account. The scope of the review focused on loans underwritten and closed by PF from November 1, 2015 to December 31, 2016. Ms. Jarvis noted that there were no significant issues to report. For the selected loans reviewed, Audit found that: All loans underwritten by PF were approved by the Credit Committee; Repair loans above \$10 million were presented to and received Board approval; Where applicable, the commitment and COI fees were properly collected and recorded in the GL and deposited; and generally, the required documentation was maintained in the electronic file folders for each project. Ms. Denise Scott, HDC Board Member asked if the Security Access audit will be a regular audit. Ms. Jarvis replied that yes, they will follow up on recommendations. Mr. Gould asked if Ernst & Young provides another set of eyes, to which Mr. Lou Roberts of Ernst & Young responded that they review the Internal Audit reports and follow up. Ms. Jarvis then concluded her report.

Mr. Gould then moved the meeting into executive session during which no votes or actions were taken.

At 10:45am, with no further business, Mr. Gould moved to dismiss and the meeting was adjourned.

Respectfully submitted,

Violine Roberty

November 27th, 2017

ATTENDANCE LIST

NAME	AFFILIATION
Kyle Kimball	Audit Committee Member
Harry Gould	Audit Committee Member
Denise Scott	Audit Committee Member
Louis Robert	Ernst & Young
Eric Enderlin	NYC Housing Development Corp.
Richard Froehlich	NYC Housing Development Corp.
Paula Roy Carethers	NYC Housing Development Corp.
Cathleen Baumann	NYC Housing Development Corp.
Jim Quinlivan	NYC Housing Development Corp.
Ellen Duffy	NYC Housing Development Corp.
Terry Gigliello	NYC Housing Development Corp.
Shirley Jarvis	NYC Housing Development Corp.
Mary Hom	NYC Housing Development Corp.
Madhavi Kulkarni	NYC Housing Development Corp.
Mary John	NYC Housing Development Corp.
Uyen Luu	NYC Housing Development Corp.
Cheuk Yu	NYC Housing Development Corp.
Carol Micalizzi	NYC Housing Development Corp.
Trisha Ostergaard	NYC Housing Development Corp.
Christina Mun	NYC Housing Development Corp.
Horace Greene	NYC Housing Development Corp.
Violine Roberty	NYC Housing Development Corp.
Zenaida Bhuiyan	NYC Housing Development Corp.
Patrick Ogoke	NYC Housing Development Corp.



INTEROFFICE MEMORANDUM

TO:

KAREN SANTIAGO, VP, LOAN SERVICING

FROM:

SHIRLEY JARVIS, VP, INTERNAL AUDIT

SUBJECT:

2017 REAL ESTATE TAXES AUDIT

DATE:

FEBRUARY 8, 2018

Internal Audit has completed its 2017 Real Estate Taxes Audit.

I. Background

The Loan Servicing (LS) function is responsible for the monthly mortgage loan billing process, including billing for the anticipated real estate (RE) taxes due for all projects serviced by HDC. LS ensures that each month, sufficient funds are collected in escrows to make the next quarterly or semi-annual payment of real estate taxes due to the NYC Department of Finance (DOF). RE taxes due are paid directly to DOF via wire transfers, except taxes due for those properties with schools on them. For those properties, the taxes are paid by check to the NYC Educational Construction Fund.

Real Estate taxes are due July 1st, October 1st, January 1st and April 1st of each year. The tax bills are received from DOF one month prior to the tax due date. After reviewing for accuracy and ensuring that funds in the escrow account are sufficient to pay the tax due, the LS Representative enters the tax amount due for each project, by loan number, into the Escrow tax processing function of the Benedict mortgage system.

The LS representative, who applies the payments to the DOF website, prepares a Payables Transaction report, consisting of the breakdown of wire payments totaling the number of transactions and amounts. The VP of LS reviews and approves all escrows processed for payment, including the current and pending RE taxes due (while all bills are still reviewed by the LS Reps, effective 08/01/2017, only 20% of the bills are reviewed by the VP). After review and approval by the VP of LS, the report is sent with wire instructions to Cash Management (CM) to ensure funds are available from investments to make the payments. The funds transfer request and supporting documentation are reviewed and approved by two authorized HDC officers. CM provides instructions to Bank of NY Mellon to transfer funds to Wells Fargo, payable to DOF. The AVP of CM forwards the bank's payment confirmation to the Sr. LS representative to complete the DOF e-payment process where the RE tax payment amounts are uploaded into the DOF Website by project, Borough, Block, and Lot (BBL) number. LS receives a confirmation of payment once the e-payment process is complete and files it with supporting documentation.

After the VP of Capital Markets posts the disbursement entries for Benedict AP, including RE tax disbursements, the AVP of CM is notified to upload the payment data into SymPro, the cash

management system, from where entries to record the transactions are interfaced into the General Ledger.

II. Audit Objectives

The objectives of the audit were to:

- Determine whether real estate taxes were paid for HDC serviced projects.
- Determine whether real estate tax payments processed through the Benedict mortgage system were accurately recorded in the General Ledger.

III. Audit Scope and Methodology

The audit scope covered real estate taxes paid from June 1, 2016 to October 1, 2017.

We performed the audit by:

- Reviewing and evaluating the effectiveness of Loan Servicing policies and procedures relating to real estate taxes.
- Interviewing key personnel and management to gain an understanding of how payments are processed.
- Reconciled real estate tax disbursements processed in the Benedict Mortgage system to the GL, Real Estate Payable account, by project for four selected months to determine whether the payments were accurately recorded.
- Selected a sample of fifty projects and verified on the DOF website that RE taxes due for each project was paid.

IV. Audit Results:

Upon completion of the audit, we noted no matters involving internal controls that we considered material weaknesses. We determined that real estate taxes due were paid for HDC serviced projects and the tax payments were accurately recorded in the General Ledger.

Cc: Eric Enderlin, President
Richard Froehlich, EVP, COO and General Counsel
Theresa Gigliello, SVP, Portfolio Management
Cathleen Baumann, SVP and Treasurer
Jim Quinlivan, SVP for Administration



INTEROFFICE MEMORANDUM

TO:

MADHAVI KULKARNI, CIO

FROM:

SHIRLEY JARVIS, VP, INTERNAL AUDIT

SUBJECT:

2017 DATABASE ADMINISTRATION & SECURITY

DATE:

FEBRUARY 23, 2018

Internal Audit has completed its 2017 Database Administration and Security Audit Report.

I. Background

HDC maintains multiple databases for HDC, such as Oracle, MS SQL, Exchange, etc. to support Oracle Financials, SharePoint, Imaging, Cash Management, Email, etc. The database is managed and maintained by the Information Systems department. The Database Administrators (DBA's) are responsible for providing support for testing and production environments for all Oracle and SQL server environments, as well as providing database administration and security.

II. Audit Objectives

The objectives of the audit were to determine whether the controls for database maintenance and security were adequate. Specifically:

- To determine if database activities were monitored
- User access was appropriately restricted

III. Audit Scope and Methodology

We performed this audit by:

- Reviewing and evaluating the effectiveness of IT policies and procedures relating to database administration and security.
- Interviewing key personnel and management to gain an understanding of how access to databases is granted and monitored.
- Reviewing whether the Oracle database ORAPROD1 is monitored and the tools used to monitor them.
- Reviewing user access to the database ORAPROD1, which contains the Oracle Financials, as well as reviewing access to the Cash Management systems Emphasys, Benedict and SymPro to determine if users are active HDC employees.

IV. Audit Results:

Upon completion of the audit, we noted no matters involving internal controls that we considered material weaknesses. Except for the items noted below, we found that access to the databases is appropriately restricted and monitored and access to the Oracle financials, Emphasys, Benedict and SymPro was limited to HDC employees and vendor IT support staff for Emphasys and SymPro.

Observation 1: Database policies and procedures

Observation:

General IT policies and procedures exist, with some general database policies included, but the detailed database administration & security functions necessary to perform the function are not documented.

Criteria:

Written policies and procedures are good operating practices necessary to communicate a corporation's mission regarding a certain activity. They provide assurance that management establishes controls, communicates compliance requirements and each person involved in the process understands the tasks they are responsible for.

Risk:

Lack of clear procedures increase the risk of undefined responsibilities and guidance surrounding the database administration & security function.

Recommendation:

Specific policies and procedures pertaining to database administration should be written. Although there are pieces of database administration contained within the IT policies and procedures, more detailed information should be developed, including, but not limited to:

- List of infrastructure that needs to be monitored based on service criticality
- Database capacity monitoring procedures
- Tools and processes that are used to monitor the databases to ensure they are fully operational
- Rules that identify and record threshold breaches and events
- Event logs retention policy
- Rules to ensure that incidents are resolved according to Service Level Agreements (SLA's) with vendors

Management Response:

All the recommendations are part of DBA's daily jobs function and they do perform these tasks on a daily basis. We will expand on the documentation and include more details on the DBA's responsibilities in our IT policies and procedures handbook. We will be able to accomplish this before the end of the May 2018.

Observation 2: Disaster recovery policy and procedures

Observation:

The HDC Disaster Recovery Procedures does not contain a complete list of each department's first responders and technology requirements.

Criteria:

Written policies and procedures are good operating practices necessary to communicate a corporation's mission regarding a certain activity. They provide assurance that management establishes controls, communicates compliance requirements and each person involved in the process understands the tasks they are responsible for.

Cause:

The business recovery plan and disaster recovery procedures have not been completed with each department's first responders and technology requirements.

Risk:

Lack of clear procedures increase the risk of undefined responsibilities and guidance surrounding disaster recovery.

Recommendation:

The disaster recovery procedures should be updated with the first responders for each department, including the technology requirements.

Management Response:

Regarding First Responders, by default all the Department heads are considered first responders for their departments. We have already updated the documentation and will follow-up with each department if they would like to include additional names. IT is responsible for all systems, and as such through many semi-annual DR drills and DR tests, we are confident we can recover all production systems that are backed up to the cloud and can ensure a high amount of data integrity before we pass the system onto the users.

Observation 3: Database event logs

Observation:

There are no audit logs generated for successful and unsuccessful login attempts for Emphasys, Benedict or SymPro.

In addition, there are no audit logs for when a user attempts to perform a function for which they are not given access.

Criteria:

Best security practices suggest auditing successful login events to be able to track when each user logs on or off the system and auditing unsuccessful login attempts to see if unauthorized users are attempting to access or attack the system.

Cause:

The auditing feature has not been turned on to log those events. There are no logs to capture unsuccessful attempts to perform a function to which a user has not been assigned.

Risk:

By not alerting the DBA to unsuccessful login attempts on a daily basis, HDC may not detect in a timely manner attempts to attack the system.

Recommendation

Turn on the auditing feature for successful and unsuccessful login attempts for Emphasys, Benedict and SymPro.

Write scripts to alert the DBA of unsuccessful attempts to perform a function for which a user is not assigned.

Management Response:

We are aware that this area needs some improvement. We are looking into setting up the alerting successful and unsuccessful login attempts for Emphasys, Benedict or SymPro system and it is in process of being implementing through our new security information and event management (SIEM) tool that was recently acquired. This system informs us of major system events, so we can respond accordingly. We have completed implementing this feature in Benedict, however the other systems have different back end databases, so we need to consult with the vendors to implement this feature. We will follow-up with them.

Regarding the comment on "User attempts to perform a function for which they are not given access" this seems more likely that it is related to the application layer audit instead of database layer audit. Applications do control based on the access that the user has been given. An Application user does not have any direct access to database layer. They are the frontend users so they can only perform that function which they have been granted through application.

Cc: E. Enderlin, President

R. Froehlich, EVP, COO and General Counsel

J. Quinlivan, SVP for Administration

P. Choi, AVP of Network Operations

V. Dharaneeswaran, Database Administrator

K. Lad, Database Administrator