

# City of New York

October 15, 2021

Hon. Helene Weinstein Chair, Assembly Ways and Means Committee Room 711-A, Legislative Office Building Albany, NY 12248

Comptroller Thomas P. DiNapoli Gov. A.E. Smith Office Building Albany, NY 12236

Hon. Liz Krueger Chair, Senate Finance Committee 172 State Street, Capitol Building Room 416 Cap Albany, NY 12247

Robert Mujica, Director New York State Division of the Budget The Capitol Albany, NY 12224

Re: Quarterly Report on Interest Rate Exchange Agreements pursuant to Section 54.90 of the Local Finance Law as of September 30, 2021

#### Dear Sirs and Mesdames:

The City of New York (the "City") is filing this report pursuant to Section 54.90 of the New York State Local Finance Law ("LFL"). Terms used herein that are not defined have the meanings ascribed thereto in Section 54.90 of the LFL. The City Swap Transaction Summary (the "Summary") is attached hereto as Exhibit A. The Summary indicates whether each interest rate exchange agreement described below was entered into pursuant to Section 54.90.c or 54.90.d of the LFL or Section 2926 of the Public Authorities Law of the State of New York. For information on Interest Rate Exchange Agreements ("IREAs") that have terminated, please see Exhibit C hereto.

# Description of the Interest Rate Exchange Agreements

# A. City as Counterparty

The City has entered into a separate ISDA Master Agreement and Schedule to the Master Agreement (collectively, a "Master Agreement") with each counterparty or its assignee (each individually, a "Counterparty" and collectively, the "Counterparties") listed in the table below. Each Master Agreement, together with the related confirmation or confirmations, is hereinafter referred to as an "Interest Rate Exchange Agreement", "IREA" or "Swap". Details of each IREA are included in the Summary. IREAs numbered 1-4, 6, 7, and 9-14 have terminated and are not described in this Quarterly Report other than in exhibits hereto.

| Transaction<br>Number and<br>Type | Counterparty                                           | Notional<br>Amount as of<br>9/30/2021 | Initial Trade<br>Date | Termination<br>Date |
|-----------------------------------|--------------------------------------------------------|---------------------------------------|-----------------------|---------------------|
| 5: Synthetic Fixed                | U.S. Bank, N.A.<br>("USB")                             | \$54,850,000                          | January 9,<br>2003    | August 1, 2026      |
| 8: Synthetic Fixed                | Wells Fargo Bank,<br>National Association<br>("WFBNA") | \$350,000,000                         | July 1, 2003          | August 1, 2031      |
|                                   | _                                                      | Total                                 |                       | _                   |

Total: \$404,850,000

The total notional amount of IREAs outstanding as of September 30, 2021 is \$404,850,000. Exhibit A attached hereto sets forth the terms of the IREAs in greater detail.

The City's IREA number 5 was initially procured through negotiation between the City and the initial Counterparty. IREA number 8 was procured through competitive bidding. The City received an independent finding that the terms and conditions of each of the transactions reflected fair market value as of their respective pricing dates.

On April 1, 2008, the City executed a bond refunding transaction pursuant to which a portion of the bonds associated with IREA number 5 were refunded. IREA number 5 is not integrated for tax purposes and is considered an investment derivative for accounting purposes. Nevertheless, IREA number 5 remains in effect.

On March 20, 2010, the Office of the Comptroller of the Currency certified as effective the merger of Wachovia Bank, NA with and into WFBNA, with WFBNA becoming the resulting bank. This development relates to IREA number 8.

On March 25, 2014, October 3, 2017, and April 19, 2018, the City executed bond refunding transactions pursuant to which a portion of the bonds associated with IREA number 8 were refunded. IREA number 8 is not integrated for tax purposes and is considered an investment derivative for accounting purposes. Nevertheless, IREA number 8 remains in effect.

On October 5, 2016, the City novated IREAs number 5 from UBS AG ("UBS") to USB.

The rating of UBS was A1/A+. The rating of USB was A1/AA-.

On April 27, 2020, the City and WFBNA amended IREA number 8 such that the floating rate to be received by the City was changed from 61.85% of one-month LIBOR to SIFMA and the fixed rate to be paid by the City was changed from 2.964% to 3.175%, all effective on May 1, 2020.

The estimated total mid-marked-to-market value of all of the remaining transactions, as of September 30, 2021, is approximately (\$54,579,536). (This is the net amount the City would owe to the Counterparties if all of the transactions were terminated on that date exclusive of unwind costs or benefits in connection with the termination.) The estimated mid-marked-to-market value of the transactions by current counterparty, as of September 30, 2021, is as follows: WFBNA (\$49,966,887); and USB (\$4,612,650). See Exhibit A attached hereto for the mid-marked-to-market values stated separately for each transaction.

#### Payments under the Transactions

As of September 30, 2021, the City has received a total of \$683,563,044 from the Counterparties under the outstanding, matured and terminated IREAs, which includes \$85,523,261 from the Counterparties under the outstanding IREAs and \$598,039,784 from matured and terminated IREAs. See Exhibit A attached hereto for a full breakdown of the payments the City has received for each transaction.

As of September 30, 2021, the City has made payments of \$821,303,634 to the Counterparties under the outstanding, matured and terminated IREAs, which includes \$259,109,774 under the outstanding IREAs and \$562,193,860 under the matured and terminated IREAs.

#### Credit Enhancement

There are no liquidity facilities or reserves provided in connection with the IREAs. In each outstanding IREA, the City and each Counterparty have agreed to post collateral securing the termination value of the applicable IREA. Under the Master Agreement with WFBNA, the City is required to post collateral if the City's credit rating goes below Baa3 or BBB-. Under the Master Agreement with USB, the City is required to post collateral if the credit rating of the City goes below Baa3 and BBB-. WFBNA is required to post collateral if one of its credit ratings goes below A2/A. USB is required to post collateral if one of its credit ratings goes below Aa3/AA-.

#### Costs and Expenses

The aggregate costs and expenses incurred in connection with the execution of IREAs numbered 5 and 6 were approximately \$65,000, consisting of approximately \$25,000 in legal fees and \$40,000 in swap advisory fees. The costs and expenses for IREA number 5 were aggregated with costs and expenses associated with IREA number 6, which was subsequently terminated and is not included in this Quarterly Report.

The costs and expenses incurred in connection with the execution of IREA number 8 were approximately \$65,000, consisting of approximately \$25,000 in legal fees and \$40,000 in swap advisory fees.

The costs and expenses incurred in connection with the novation of IREAs numbered 4 and 5 consisted of \$7,500 in swap advisory fees. The costs and expenses in connection with the novation of IREA number 5 were aggregated with costs and expenses associated with the novation of IREA number 4, which was subsequently terminated and is not included in this Quarterly Report.

The costs and expenses in connection with the amendment of IREA number 8 consisted of \$30,000 in legal fees and \$16,240 in swap advisory fees.

## **Description of Counterparties**

WFBNA, a national banking association organized under the laws of the United States, is rated Aa2/A+. USB, a national banking association organized under the laws of the United States, is rated A1/AA-. All ratings are as of September 30, 2021.

#### Risk Assessment

Counterparty Risk: The risk is that a counterparty (or its guarantor) will not meet its obligations under the swap. If a counterparty were to default under its agreement when the counterparty would owe a termination payment to the City, the City may have to pay another entity to assume the position of the defaulting counterparty. The City has sought to limit its counterparty risk by contracting only with highly rated entities or requiring guarantees of the counterparty's obligations under the swap documents. The City also manages counterparty risk by exercising its rights under the various Master Agreements to novate IREAs to higher-rated counterparties, or terminate IREAs, as it did in November, 2012 with some of its MSCS IREAs.

Termination Risk: The risk is that a counterparty will optionally terminate a swap at a time when the City owes it a termination payment. The City has mitigated this risk by specifying that the counterparty has the right to terminate only as a result of certain events, including: a payment default by the City; other City defaults which remain uncured for 30 days after notice; City bankruptcy; insolvency of the City (or similar events); or a downgrade of the City's credit rating below investment grade (i.e., Baa3/BBB-).

Basis Risk: The risk is that the City's variable rate bond payments will not equal its variable rate swap receipts because they are based on different indices. Under the terms of its LIBOR-based swap transaction (IREA number 5), the City pays a variable rate on its bonds based on the tax-exempt variable rate market but receives a variable rate based on a percentage of one month LIBOR. The City budgets sufficient amounts to cover any basis costs.

Tax Risk: The risk is that a change in Federal tax rates will alter the fundamental relationship between tax-exempt and taxable rates. A reduction in Federal tax rates, for example, could result in increases to tax-exempt variable rates, which would cause an increase in the City's payment on its underlying variable rate bonds in the synthetic fixed rate transactions. The Tax Cuts and Jobs Act ("TCJA") reduced the corporate federal income tax rate from 35% to 21% effective as of January 1, 2018, in addition to reducing certain individual income tax brackets. While short-term tax-exempt rates initially increased when the TCJA went into effect, SIFMA has been at or below .13% over the past 52 weeks. The outlook for future tax-exempt rates and tax-exempt/taxable ratios remains uncertain.

Discontinuation of LIBOR Risk: On March 5, 2021, ICE Benchmark Administration Limited ("IBA") and Financial Conduct Authority ("FCA") announced that the LIBOR cessation date for most USD LIBOR tenors, including 1 Month LIBOR, will be June 23, 2023 (the "LIBOR

Cessation Date"). Under IREA number 5, which is scheduled to still be in effect on the LIBOR Cessation Date, the City receives a percentage of 1 Month LIBOR.

On October 23, 2020, ISDA published Fallback Supplement and Fallback Protocol. The supplement (effective since January 25, 2021) provides fallback language by amending the ISDA interbank offered rate ("IBOR") definitions (including USD LIBOR) to include a fallback rate in case of LIBOR discontinuation. This fallback language can be implemented by adhering to the Fallback Protocol or negotiating bilateral agreements. At this time the City has not yet taken action to adhere to protocol or negotiate bilateral agreements. The March 5, 2021 announcement also triggered the fixing of the USD LIBOR-SOFR fallback spread adjustment. SOFR, the Secured Overnight Financing Rate, is a broad measure of the cost of borrowing cash overnight collateralized by treasury securities. If the City were to adhere to the Protocol, IREA number 5 would convert to 60.8 percent of SOFR plus the predetermined spread of .07% after the LIBOR cessation date.

See Exhibit B for a matrix showing how changes in market conditions would affect the City's exposure (defined as "Value at Risk" in the City's Interest Rate Exchange Agreement Policy) on the Interest Rate Exchange Agreements.

## B. Dormitory Authority of the State of New York as Counterparty:

The Dormitory Authority of the State of New York ("DASNY") entered into separate Master Agreements with each of the Counterparties listed in the table below for Transactions numbered D3 and D4. The City is obligated, subject to appropriation, to make lease payments to DASNY reflecting DASNY's obligations. IREAs numbered D1 and D2 have terminated and are not described in this Quarterly Report.

| Transaction               | Counterparty                                                           | Notional<br>Amount as of<br>9/30/2021 | Trade Date      | Termination<br>Date |
|---------------------------|------------------------------------------------------------------------|---------------------------------------|-----------------|---------------------|
| D3:<br>Synthetic<br>Fixed | Goldman Sachs<br>Matsui Marine<br>Derivative Products<br>LP ("GSMMDP") | \$80,680,000                          | June 1,<br>2005 | May 15,<br>2039     |
| D4:<br>Synthetic<br>Fixed | JPM                                                                    | \$44,820,000                          | June 1,<br>2005 | May 15,<br>2039     |
|                           |                                                                        | Total:                                |                 |                     |

Each of DASNY's IREAs was procured through negotiation among DASNY, the City and the Counterparties. DASNY received an independent finding that the terms and conditions of each of the transactions reflected fair market value as of their respective pricing dates.

\$125,500,000

The estimated total mid-marked-to-market value of IREAs D3 and D4, as of September 30, 2021, is approximately (\$34,680,240). The estimated mid-marked-to-market value of the IREAs by counterparty is as follows: GSMMDP (\$22,294,851); JPM (\$12,385,389).

As of September 30, 2021, DASNY received payments of \$43,078,821 under its outstanding and terminated IREAs, which includes \$18,853,821 under its outstanding IREAs and \$24,225,000 under its terminated IREAs. As of September 30, 2021, DASNY has made payments of \$60,265,848 under its outstanding IREAs. DASNY made no payments under its terminated IREAs.

#### Credit Enhancement

There are no liquidity facilities or reserves provided in connection with the DASNY IREAs. Under the Master Agreements with GSMMDP and JPM, DASNY is required to post collateral if the City's credit rating goes below Baa2 and BBB. Each of GSMMDP and JPM is required to post collateral if each of its credit ratings is below Aa3 or AA- or if it has any credit rating of less than A3 or A-.

# Costs and Expenses

The costs and expenses incurred in connection with the DASNY IREAs were paid by DASNY and consisted of \$25,000 in legal fees and \$111,000 in swap advisory fees. The costs and expenses for the DASNY IREAs numbered D3 and D4 were aggregated with the costs and expenses associated with IREAs D1 and D2, which were subsequently terminated and are not described in this Quarterly Report.

# **Description of Counterparties**

GSMMDP is a limited partnership organized under the laws of the State of Delaware. It is a joint venture of The Goldman Sachs Group and Mitsui Sumitomo Insurance Co., Ltd. GSMMDP is rated Aa2/AA-. JPM is a national bank incorporated in the State of Delaware and is rated Aa2/A+. All ratings are as of September 30, 2021.

### Risk Assessment

The counterparty risks associated with the DASNY IREAs are comparable to those of the City in connection with its IREAs. The termination risk involves the Counterparty's ability to terminate should the City's credit rating fall below Baa3/BBB-. The transactions involve the risk of a shortfall between the variable rate paid on the underlying bonds and the variable rate received in connection with the IREAs. The tax risk and potential discontinuation of LIBOR risk associated with the DASNY IREAs are comparable to those of the City in connection with its IREAs. The steps taken by DASNY to reduce or mitigate risks on the DASNY IREAs are comparable to those taken by the City in connection with its IREAs. Similar to the City, DASNY can address the LIBOR cessation by adhering to the ISDA Fallback Protocol. If DASNY adheres to the Protocol, both DASNY IREAs D3 and D4 would convert to 64.3% of SOFR plus the fallback adjustment spread of 0.074% after the LIBOR Cessation Date.

See Exhibit B for a matrix showing how changes in market conditions would affect DASNY's exposure in connection with the DASNY IREAs.

#### C. New York City Industrial Development Agency as Counterparty:

The IREAs that were entered into with the New York City Industrial Development Agency have terminated and are described in Exhibit C hereto.

This report reflects information in connection with IREAs through September 30, 2021.

A copy of the City's Interest Rate Exchange Agreement Policy (the "Policy") adopted by the Mayor and Comptroller of the City was provided to you with the quarterly report dated January 14, 2003. The Policy was amended for the first time on June 26, 2013. The Policy, as amended, was provided to you with the quarterly report dated July 15, 2013.

Yours truly,

David M. Womack Deputy Director

New York City Office of

Management and Budget

Marjorie E. Henning Deputy Comptroller for Public Finance

New York City Comptroller's Office

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Yours truly,

David M. Womack Deputy Director New York City Office of Management and Budget

Marjorie H. Henning

Deputy Comptroller for Public Finance New York City Comptroller's Office

# City of New York Swap Transaction Summary

| Transaction                                                                                     | 1 - Matured                     | 2 - Matured                                          | 3 - Matured                                     | 4 - Matured                                                      | 5                                                                 |
|-------------------------------------------------------------------------------------------------|---------------------------------|------------------------------------------------------|-------------------------------------------------|------------------------------------------------------------------|-------------------------------------------------------------------|
| Current Authorizing Law                                                                         | 54.90.d*                        | 54.90.c*                                             | 54.90.c*                                        | 54.90.c*                                                         | 54.90.c*                                                          |
| Corresponding Bond Series                                                                       | 2003 C, D, & E                  | 2003 C, D, & E                                       | 2003 C                                          | 2012 G-6                                                         | 2012 G-6                                                          |
| Swap Type                                                                                       | Synthetic Fixed                 | Synthetic Fixed                                      | Synthetic Fixed                                 | Synthetic Fixed                                                  | Synthetic Fixed                                                   |
| Counterparty                                                                                    | J.P. Morgan<br>Chase Bank, N.A. | Merrill Lynch<br>Capital Services Inc                | U.S. Bank National<br>Association <sup>1</sup>  | U.S. Bank National<br>Association <sup>2</sup>                   | U.S. Bank National<br>Association <sup>2</sup>                    |
| Credit Ratings (S&P / Moody's) Guarantor Credit Ratings (S&P/Moody's)                           | A+/Aa2<br>See above             | NR A-/A2 (BAC) AA/Aa3 (MLDP)-for Termination Payment | AA-/A1<br>See above                             | AA-/A1<br>See above                                              | AA-/A1<br>See above                                               |
| Original Notional Amount                                                                        | \$200,000,000                   | \$66,666,667                                         | \$66,666,667                                    | \$66,666,666                                                     | \$135,050,000                                                     |
| Current Notional Amount                                                                         | \$0                             | \$0                                                  | \$0                                             | \$0                                                              | \$54,850,000                                                      |
| Up Front Cash Payment to City                                                                   | N/A                             | N/A                                                  | N/A                                             | N/A                                                              | N/A                                                               |
| Effective Date                                                                                  | 11/13/2002                      | 11/13/2002                                           | 11/13/2002                                      | 11/13/2002                                                       | 1/22/2003                                                         |
| Termination Date                                                                                | 8/1/2020                        | 8/1/2020                                             | 8/1/2020                                        | 8/1/2020                                                         | 8/1/2026                                                          |
| Option Exercise Date                                                                            | N/A                             | N/A                                                  | N/A                                             | N/A                                                              | Expired                                                           |
| Option Premium                                                                                  | N/A                             | N/A                                                  | N/A                                             | N/A                                                              | \$7,467,000.00                                                    |
| City Pays                                                                                       | 3.269%                          | 3.269%                                               | 3.269%                                          | 3.269%                                                           | 3.259%                                                            |
| Actual Payments Made by City as of 9/30/2021                                                    | \$102,137,398.79                | \$34,045,799.64                                      | MS: (\$21,175,855.62)<br>USB: (\$12,869,944.02) | UBS: (\$29,681,957.03)<br>USB: (\$4,363,842.55)                  | UBS: (\$57,228,080.74)<br>USB: (\$13,736,685.01)                  |
| Actual Payments Received by City as of 9/30/2021                                                | \$30,128,260.25                 | \$10,042,448.95                                      | MS: \$8,516,785.12<br>USB: \$1,525,396.78       | UBS: \$8,885,088.06<br>Novation: \$75,000<br>USB: \$1,157,233.05 | UBS: \$17,365,971.82<br>Novation: \$75,000<br>USB: \$3,267,598.31 |
| City Receives                                                                                   | 62.8 % of USD-LIBOR-<br>BBA.    | 62.8 % of USD-LIBOR-<br>BBA.                         | 62.8 % of USD-LIBOR-<br>BBA.                    | 62.8 % of USD-LIBOR-<br>BBA.                                     | 60.8% of USD-LIBOR-<br>BBA                                        |
| First Counterparty Payment Date                                                                 | 12/2/2002                       | 12/2/2002                                            | MS: 12/2/2002<br>U.S. Bank: 12/3/2012           | UBS: 12/2/2002<br>U.S. Bank: 11/1/2016                           | UBS: 2/3/2003<br>U.S. Bank: 11/1/2016                             |
| First City Payment Date                                                                         | 8/1/2003                        | 8/1/2003                                             | MS: 8/1/2003<br>U.S. Bank: 2/1/2013             | UBS: 8/1/2003<br>U.S. Bank: 2/1/2017                             | UBS: 8/1/2003<br>U.S. Bank: 2/1/2017                              |
| Marked to Market Value as of 9/30/2021 (shown as negative number if the City would owe payment) | Matured 8/1/20                  | Matured 8/1/20                                       | Matured 8/1/20                                  | Matured 8/1/20                                                   | (\$4,612,649.58)                                                  |

<sup>\*</sup>The City's swaps were executed under Section 54.90 of the Local Finance Law of the State of New York.

<sup>&</sup>lt;sup>1</sup>Novated to U.S. Bank from Morgan Stanley on 11/20/2012.

<sup>&</sup>lt;sup>2</sup>Novated to U.S. Bank from UBS on 10/5/2016.

# City of New York Swap Transaction Summary

| Transaction                                                                                     | 6 - Matured                | 7 - Terminated                                                                                            | 8                                               | 9 - Terminated                                                     | 10 - Terminated                                                                              |
|-------------------------------------------------------------------------------------------------|----------------------------|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| Current Authorizing Law                                                                         | 54.90.c*                   | 54.90.c*                                                                                                  | 54.90.c*                                        | 54.90.c*                                                           | 54.90.d*                                                                                     |
| Corresponding Bond Series                                                                       | 2003 G-2, G-3 and H-2      | 2004 F-2, 2006 I-4, and<br>2009 B-3                                                                       | 2018 B-4, 2018 B-5, 2019 D-4                    | 2004 F                                                             | 1998F, 1998G, 1998H,<br>1999A, 1999F, 2001D,<br>2001G, 2002G, 2003A,<br>2003C-1, and 2003G-1 |
| Swap Type                                                                                       | Synthetic Fixed            | Basis Swap                                                                                                | Synthetic Fixed                                 | Total Return                                                       | Swaption to Floating                                                                         |
| Counterparty                                                                                    | UBS AG                     | The Bank of New<br>York Mellon <sup>3</sup>                                                               | Wells Fargo Bank,<br>National Association       | Citigroup Financial<br>Products Inc                                | J.P. Morgan<br>Chase Bank, N.A.                                                              |
| Credit Ratings (S&P / Moody's) Guarantor Credit Ratings (S&P/Moody's)                           | A+/Aa3<br>See above        | AA-/Aa2<br>See above                                                                                      | A+/Aa2<br>See above                             | NR<br>BBB+/A3 (CGMH)                                               | A+/Aa2<br>See above                                                                          |
| Original Notional Amount                                                                        | \$80,000,000               | \$671,245,000                                                                                             | \$350,000,000                                   | \$500,000,000                                                      | \$250,000,000                                                                                |
| Current Notional Amount                                                                         | \$0                        | \$0                                                                                                       | \$350,000,000                                   | \$0                                                                | \$0                                                                                          |
| Up Front Cash Payment to City                                                                   | N/A                        | \$20,000,000.00                                                                                           | N/A                                             | N/A                                                                | N/A                                                                                          |
| Effective Date                                                                                  | 1/22/2003                  | 3/14/2003                                                                                                 | 7/14/2003                                       | 12/18/2003                                                         | 8/1/2007                                                                                     |
| Termination Date                                                                                | 8/1/2014                   | 3/15/2029                                                                                                 | 8/1/2031                                        | 12/15/2011                                                         | 8/1/2024                                                                                     |
| Option Exercise Date                                                                            | Expired                    | N/A                                                                                                       | N/A                                             | N/A                                                                | 8/1/2007                                                                                     |
| Option Premium                                                                                  | \$2,345,000.00             | N/A                                                                                                       | N/A                                             | N/A                                                                | \$7,177,004.00                                                                               |
| City Pays                                                                                       | 3.109% <sup>4</sup>        | SIFMA Index x 1.36                                                                                        | 2.964% (to 5/1/20)<br>3.175% (beginning 5/1/20) | SIFMA Index + .0035                                                | SIFMA                                                                                        |
| Actual Payments Made by City as of 9/30/2021                                                    | (\$18,945,035.01)          | MS: (\$128,475,662.00)<br>BONYM: (\$942,753.74)                                                           | (\$188,145,008.33)                              | (\$83,399,384.83)                                                  | \$0.00                                                                                       |
| Actual Payments Received by City as of 9/30/2021                                                | \$9,704,767.21             | MS: \$135,498,449.78<br>Termination: \$123,000.00<br>BONYM: \$2,359,459.17<br>Termination: \$2,410,000.00 | \$57,347,690.75                                 | \$188,936,674.03 plus<br>Termination Payment of<br>\$18,708,175.28 | \$0.00                                                                                       |
| City Receives                                                                                   | 61.8% of USD-LIBOR-<br>BBA | USD-LIBOR-BBA                                                                                             | SIFMA <sup>5</sup>                              | Adjusted Fixed Rates as Set forth in the Confirm                   | 4.10%                                                                                        |
| First Counterparty Payment Date                                                                 | 2/3/2003                   | various dates, starting with 7/15/2003 (MS) & 2/15/2013 (BONYM)                                           | 8/1/2003                                        | 6/15/2004                                                          | N/A                                                                                          |
| First City Payment Date                                                                         | 8/1/2003                   | various dates, starting with 7/15/2003 (MS) & 2/15/2013 (BONYM)                                           | 2/4/2004                                        | 6/15/2004                                                          | N/A                                                                                          |
| Marked to Market Value as of 9/30/2021 (shown as negative number if the City would owe payment) | Matured 8/1/14             | Terminated 11/19/2012 and 8/4/2015                                                                        | (\$49,966,886.88)                               | Terminated 12/15/11                                                | Terminated 8/1/09<br>(Option Expired)                                                        |

<sup>\*</sup>The City's swaps were executed under Section 54.90 of the Local Finance Law of the State of New York.

<sup>&</sup>lt;sup>3</sup>The City terminated 3 of the individual basis swaps with Morgan Stanley totaling \$178,690,000 in notional amount on 11/19/2012. The remaining 3 basis swaps totaling \$364,100,000 in notional amount were novated to the Bank of New York Mellon on 11/20/2012, and were terminated on 8/4/2015.

 $<sup>^4</sup>$ On 4/11/07, the counterparty cancellation option was eliminated and the fixed rate payment was changed from 2.818% to 3.109%

<sup>&</sup>lt;sup>5</sup>On 4/27/20, the City amended the swap to change the floating rate received from 61.85% 1M LIBOR to SIFMA, beginning 5/1/20.

# City of New York Swap Transaction Summary

| Transaction                                                                                     | 11 - Terminated                                                                              | 12 - Matured                           | 13 - Terminated                                           | 14 - Matured                    |
|-------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------------|---------------------------------|
| Current Authorizing Law                                                                         | 54.90.d*                                                                                     | 54.90.d*                               | 54.90.d*                                                  | 54.90.d*                        |
| Corresponding Bond Series                                                                       | 1998F, 1998G, 1998H,<br>1999A, 1999F, 2001D,<br>2001G, 2002G, 2003A,<br>2003C-1, and 2003G-1 | 2005A and 2005B                        | 2002C, 2002D, 2003F,<br>2003I, 2004C, 2004D,<br>and 2004F | 2005J, 2005K and<br>2005L       |
| Swap Type                                                                                       | Swaption to Floating                                                                         | CPI Swap to Fixed                      | Basis Swap                                                | CPI Swap to Fixed               |
| Counterparty                                                                                    | Lehman Brothers Derivative Products Inc                                                      | Morgan Stanley<br>Capital Services Inc | J.P. Morgan<br>Chase Bank, N.A.                           | J.P. Morgan<br>Chase Bank, N.A. |
| Credit Ratings (S&P / Moody's) Guarantor Credit Ratings (S&P/Moody's)                           | NR<br>NR/NR                                                                                  | NR<br>BBB+/A3 (MS)                     | A+/Aa2<br>See above                                       | A+/Aa2<br>See above             |
| Original Notional Amount                                                                        | \$100,000,000                                                                                | \$50,000,000                           | \$500,000,000                                             | \$44,145,000                    |
| Current Notional Amount                                                                         | \$0                                                                                          | \$0                                    | \$0                                                       | \$0                             |
| Up Front Cash Payment to City                                                                   | N/A                                                                                          | N/A                                    | \$20,585,000.00                                           | N/A                             |
| Effective Date                                                                                  | 8/1/2007                                                                                     | 7/29/2004                              | 8/1/2004                                                  | 3/3/2005                        |
| Termination Date                                                                                | 8/1/2024                                                                                     | 8/1/2014                               | 12/1/2033                                                 | 8/1/2017                        |
| Option Exercise Date                                                                            | 8/1/2007                                                                                     | N/A                                    | N/A                                                       | N/A                             |
| Option Premium                                                                                  | \$2,870,801.00                                                                               | N/A                                    | N/A                                                       | N/A                             |
| City Pays                                                                                       | SIFMA                                                                                        | 4.120%                                 | SIFMA                                                     | 4.710%                          |
| Actual Payments Made by City as of 9/30/2021                                                    | Termination Payment (\$623,265.00)                                                           | (\$19,333,791.66)                      | (\$82,515,930.93)                                         | (\$23,683,239.12)               |
| Actual Payments Received by City as of 9/30/2021                                                | \$0.00                                                                                       | \$15,964,867.94                        | \$91,930,166.13                                           | \$19,096,206.60                 |
| City Receives                                                                                   | 4.10%                                                                                        | CPI plus .90%                          | Stepped % of 1-month<br>LIBOR                             | CPI plus 1.60%                  |
| First Counterparty Payment Date                                                                 | N/A                                                                                          | 2/1/2005                               | 9/1/2004                                                  | 8/1/2005                        |
| First City Payment Date                                                                         | N/A                                                                                          | 2/1/2005                               | 9/1/2004                                                  | 8/1/2005                        |
| Marked to Market Value as of 9/30/2021 (shown as negative number if the City would owe payment) | Terminated 4/20/09                                                                           | Matured 8/1/14                         | Terminated 3/21/19 of the Local Finance Law of            | Matured 8/1/2017                |

<sup>\*</sup>The City's swaps were executed under Section 54.90 of the Local Finance Law of the State of New York.

# DASNY Swap Transaction Summary

| Transaction                                               | D-1 - Terminated       | D-2 - Terminated    | D-3                    | D-4                  |
|-----------------------------------------------------------|------------------------|---------------------|------------------------|----------------------|
| Current Authorizing Law                                   | Section 2926*          | Section 2926*       | Section 2926*          | Section 2926*        |
| Corresponding Bond Series                                 | DASNY 2005 A & B       | DASNY 2005 A & B    | DASNY 2005 A & B       | DASNY 2005 A & B     |
| Swap Type                                                 | Synthetic Float        | Synthetic Float     | Synthetic Fixed        | Synthetic Fixed      |
| Counterparty                                              | Goldman Sachs          | JP Morgan Chase     | Goldman Sachs          | JP Morgan Chase      |
|                                                           | Mitsui Marine          | Chase Bank, N.A.    | Mitsui Marine          | Chase Bank, N.A.     |
|                                                           | Derivative Products LP |                     | Derivative Products LP |                      |
| Credit Ratings (S&P/Moody's)                              | AA-/Aa2                | A+/Aa2              | AA-/Aa2                | A+/Aa2               |
| Guarantor Credit Ratings (S&P/Moody's)                    | See above              | See above           | See above              | See above            |
| Original Notional Amount                                  | \$80,680,000           | \$44,820,000        | \$80,680,000           | \$44,820,000         |
| <b>Current Notional Amount</b>                            | \$0                    | \$0                 | \$80,680,000           | \$44,820,000         |
| Up Front Cash Payment to DASNY                            | N/A                    | N/A                 | N/A                    | N/A                  |
| Effective Date                                            | 5/1/2013               | 5/1/2013            | 6/15/2005              | 6/15/2005            |
| <b>Termination Date</b>                                   | 5/15/2032              | 5/15/2032           | 5/15/2039              | 5/15/2039            |
| Option Exercise Date                                      | N/A                    | N/A                 | N/A                    | N/A                  |
| Option Premium                                            | N/A                    | N/A                 | N/A                    | N/A                  |
| DASNY Pays                                                | SIFMA                  | SIFMA               | 3.017%                 | 3.017%               |
| Actual Payments Made by DASNY as of 9/30/2021             | \$0                    | \$0                 | (\$38,743,016.72)      | (\$21,522,831.28)    |
| Actual Payments Received by DASNY as of 9/30/2021         | Termination Payment    | Termination Payment |                        |                      |
|                                                           | \$15,655,000.00        | \$8,570,000.00      | \$12,045,332.63        | \$6,808,488.10       |
| DASNY Receives                                            | 4.179%                 | 4.179%              | 64.3 % of USD-LIBOR-   | 64.3 % of USD-LIBOR- |
|                                                           |                        |                     | BBA.                   | BBA.                 |
| First Counterparty Payment Date                           | 11/15/2013             | 11/15/2013          | 7/15/2005              | 7/15/2005            |
| First DASNY Payment Date                                  | 11/15/2013             | 11/15/2013          | 11/15/2005             | 11/15/2005           |
| Marked to Market Value as of 9/30/2021 (shown as negative | Terminated 9/27/11     | Terminated 9/27/11  | (\$22,294,851.35)      | (\$12,385,388.89)    |
| number if the DASNY would owe payment)                    |                        |                     |                        |                      |

<sup>\*</sup> DASNY swaps were executed under Section 2926 of the Public Authorities Law of the State of New York

## City of New York Value at Risk Termination Matrix

| Swap 5 (U.S. Bank)   |                           |                        |                      |  |  |
|----------------------|---------------------------|------------------------|----------------------|--|--|
| Rate Change from     | Valuation Net of Accruals | Accruals (1) 9/30/2021 | Mid-Market Valuation |  |  |
| Value Date 9/30/2021 | 9/30/2021                 |                        | 9/30/2021            |  |  |
| 0.00%                | (\$4,317,031)             | (\$295,618)            | (\$4,612,650)        |  |  |
| 0.25%                | (\$4,063,811)             | (\$295,618)            | (\$4,359,429)        |  |  |
| 0.50%                | (\$3,826,663)             | (\$295,618)            | (\$4,122,282)        |  |  |
| 0.75%                |                           | (\$295,618)            | (\$3,887,557)        |  |  |
| -0.25%               | (\$4,545,487)             | (\$295,618)            | (\$4,841,105)        |  |  |
| -0.50%               | (\$4,790,073)             | (\$295,618)            | (\$5,085,691)        |  |  |

<sup>(1)</sup> Accruals represent \$297,926.92 of fixed rate accruals since last Fixed Rate Payer Date less \$2,308.73 of variable rate accruals since last Floating Rate Payer Date.

<sup>(2)</sup> The swap was novated to U.S. Bank from UBS on 10/5/2016.

|                         | Swap 8 (Wells Fargo)                               |                                |                                  |  |  |  |
|-------------------------|----------------------------------------------------|--------------------------------|----------------------------------|--|--|--|
| Rate Change from        | Valuation Net of Accruals 9/30/2021                | Accruals (1)                   | Mid-Market Valuation             |  |  |  |
| Value Date 9/30/2021    |                                                    | 9/30/2021                      | 9/30/2021                        |  |  |  |
| 0.00%<br>0.25%<br>0.50% | (\$48,120,845)<br>(\$43,207,824)<br>(\$38,947,387) | (\$1,846,042)<br>(\$1,846,042) | (\$45,053,866)<br>(\$40,793,429) |  |  |  |
| 0.75%                   | (\$34,691,162)                                     | . , , ,                        | (\$36,537,204)                   |  |  |  |
| -0.25%                  | (\$52,228,379)                                     |                                | (\$54,074,421)                   |  |  |  |
| -0.50%                  | (\$56,832,214)                                     |                                | (\$58,678,257)                   |  |  |  |

<sup>(1)</sup> Accruals represent \$1,852,083.33 of fixed rate accruals since last Fixed Rate Payer Date less \$6,041.10 of variable rate accruals since last Floating Rate Payer Date.

| Swap 5 (U.S. Bank                                 | )                 |  |  |  |
|---------------------------------------------------|-------------------|--|--|--|
| Swap Cashflows Since Swap Inception               |                   |  |  |  |
| Total Variable Cashflows Accrued/Received by City | \$20,635,878.86   |  |  |  |
| Total Fixed Accrued/Paid Outflows of City         | (\$71,262,692.67) |  |  |  |
| Net Cashflows                                     | (\$50,626,813.81) |  |  |  |

<sup>\*</sup>City received an upfront cash payment of \$7,467,000 and a novation payment of \$75,000 which is not included above.

| Swap 8 (Wells Fargo)                              |                    |  |  |  |  |
|---------------------------------------------------|--------------------|--|--|--|--|
| Swap Cashflows Since Swap Inception               |                    |  |  |  |  |
| Total Variable Cashflows Accrued/Received by City | \$57,353,731.85    |  |  |  |  |
| Total Fixed Accrued/Paid Outflows of City         | (\$189,997,091.66) |  |  |  |  |
| Net Cashflows                                     | (\$132,643,359.81) |  |  |  |  |

#### **City of New York Value at Risk Termination Matrix**

|                  | Swap D-3 (Goldman Sachs) |              |                      |  |  |  |
|------------------|--------------------------|--------------|----------------------|--|--|--|
| Rate Change from |                          |              |                      |  |  |  |
| Value Date       | Valuation Net of         | Accruals (1) | Mid-Market Valuation |  |  |  |
| 9/30/2021        | Accruals 9/30/2021       | 9/30/2021    | 9/30/2021            |  |  |  |
|                  |                          |              |                      |  |  |  |
| 0.00%            | (\$21,377,191)           | (\$917,660)  | (\$22,294,851)       |  |  |  |
| 0.25%            | (\$19,019,789)           | (\$917,660)  | (\$19,937,449)       |  |  |  |
| 0.50%            | (\$17,104,732)           | (\$917,660)  | (\$18,022,393)       |  |  |  |
| 0.75%            | (\$15,254,703)           | (\$917,660)  | (\$16,172,363)       |  |  |  |
| -0.25%           | (\$23,054,908)           | (\$917,660)  | (\$23,972,568)       |  |  |  |
| -0.50%           | (\$25,180,181)           | (\$917,660)  | (\$26,097,841)       |  |  |  |

<sup>(1)</sup> Accruals represent \$919,554.78 of fixed rate accruals since last Fixed Rate Payer Date less \$1,894.59 of variable rate accruals since last Floating Rate Payer Date.

| Swap D-4 (JPMorgan Chase) |                    |              |                      |  |
|---------------------------|--------------------|--------------|----------------------|--|
| Rate Change from          |                    |              |                      |  |
| Value Date                | Valuation Net of   | Accruals (1) | Mid-Market Valuation |  |
| 9/30/2021                 | Accruals 9/30/2021 | 9/30/2021    | 9/30/2021            |  |
|                           |                    |              |                      |  |
| 0.00%                     | (\$11,875,603)     | (\$509,786)  | (\$12,385,389)       |  |
| 0.25%                     | (\$10,567,642)     | (\$509,786)  | (\$11,077,428)       |  |
| 0.50%                     | (\$9,503,853)      | (\$509,786)  | (\$10,013,639)       |  |
| 0.75%                     | (\$8,476,190)      | (\$509,786)  | (\$8,985,976)        |  |
| -0.25%                    | (\$12,809,107)     | (\$509,786)  | (\$13,318,893)       |  |
| -0.50%                    | (\$13,989,679)     | (\$509,786)  | (\$14,499,465)       |  |

<sup>(1)</sup> Accruals represent \$510,838.44 of fixed rate accruals since last Fixed Rate Payer Date less \$1,052.50 of variable rate accruals since last Floating Rate Payer Date.

| Swap D-3 (Goldman Sachs)                           |                   |  |  |
|----------------------------------------------------|-------------------|--|--|
| Swap Cashflows Since Swap Inception                |                   |  |  |
| Total Variable Cashflows Accrued/Received by DASNY | \$12,047,227.22   |  |  |
| Total Fixed Accrued/Paid Outflows of DASNY         | (\$39,662,571.50) |  |  |
| Net Cashflows                                      | (\$27,615,344.28) |  |  |

| Swap D-4 (JP Morgan Chase)                         |                   |  |
|----------------------------------------------------|-------------------|--|
| Swap Cashflows Since Swap Inception                |                   |  |
| Total Variable Cashflows Accrued/Received by DASNY | \$6,809,540.60    |  |
| Total Fixed Accrued/Paid Outflows of DASNY         | (\$22,033,669.72) |  |
| Net Cashflows                                      | (\$15,224,129.12) |  |

#### Global Swap Assumptions

- 1) Swap Values evaluated using market data as of September 30, 2021
- 2) Change from Value Date represents parallel curve shifts from the base rate curve as of September 30, 2021
- 3) Valuation Net of Accrual represents swap mid-market valuation at the respective interest rates levels net of accruals on September 30, 2021
- 4) Accruals represent (payments)/receipts accrued by the City at September 30, 2021 under the swap agreements. Accruals calculated as City's accrued receipts less accrued payments.
- 5) Mid-market valuations are indicative only and subject to change with varying market conditions.
- 6) Accrual information calculated and provided by City.
- 7) Swaps D-3 and D-4 are swaps executed by DASNY. The City is obligated, subject to lease appropriation, to make lease payments to DASNY.

## **Exhibit C: Summary of Terminated Swaps**

Terminated Swaps with NYC as Counterparty

| Transaction Number and Type | Counterparty                          | Original<br>Notional<br>Amount | Initial Trade<br>Date | Termination<br>Date  |
|-----------------------------|---------------------------------------|--------------------------------|-----------------------|----------------------|
| 1: Synthetic Fixed          | JP Morgan Chase Bank, N.A.            | \$ 200,000,000                 | October 30, 2002      | August 1, 2020       |
| 2: Synthetic Fixed          | Merrill Lynch Capital Services, Inc.  | 66,666,667                     | October 30, 2002      | August 1, 2020       |
| 3: Synthetic Fixed          | U.S. Bank, N.A.                       | 66,666,667                     | October 30, 2002      | August 1, 2020       |
| 4: Synthetic Fixed          | U.S. Bank, N.A.                       | 66,666,666                     | October 30, 2002      | August 1, 2020       |
| 6: Synthetic Fixed          | UBS AG                                | 80,000,000                     | January 9, 2003       | August 1, 2014       |
| 7: Basis Swap (Partial)     | Morgan Stanley Capital Services, Inc. | 276,935,000                    | March 14, 2003        | November 19,<br>2012 |
| 7: Basis Swap (Remainder)   | Bank of New York Mellon               | 394,310,000                    | March 14, 2003        | August 4, 2015       |
| 9: Total Return             | Citigroup Financial Products, Inc.    | 500,000,000                    | December 9,<br>2003   | December 15,<br>2011 |
| 10: Swaption to Floating    | JP Morgan Chase Bank, N.A.            | 250,000,000                    | March 4, 2004         | August 15, 2009      |
| 11: Swaption to Floating    | Lehman Brothers Derivative Products   | 100,000,000                    | March 4, 2004         | April 20, 2009       |
| 12: CPI Swap to Fixed       | Morgan Stanley Capital Services, Inc. | 50,000,000                     | July 13, 2004         | August 1, 2014       |
| 13: Basis Swap              | JP Morgan Chase Bank, N.A.            | 500,000,000                    | July 29, 2004         | March 21, 2019       |
| 14: CPI Swap to Fixed       | JP Morgan Chase Bank, N.A.            | 44,145,000                     | February 15,<br>2005  | August 1, 2017       |

Terminated Swaps with Dormitory Authority of the State of New York as Counterparty

| Transaction Number and Type | Counterparty                                    | Original<br>Notional<br>Amount | Initial Trade<br>Date | Termination<br>Date   |
|-----------------------------|-------------------------------------------------|--------------------------------|-----------------------|-----------------------|
| D1: Synthetic Floating      | Goldman Sachs Mitsui Marine Derivative Products | \$ 80,680,000                  | June 1, 2005          | September 27,<br>2011 |
| D2: Synthetic Floating      | JP Morgan Chase Bank, N.A.                      | 44,820,000                     | June 1, 2005          | September 27,<br>2011 |

Terminated Swaps with New York City Industrial Development Agency as Counterparty

| Transaction Number and Type | Counterparty                          | Original<br>Notional<br>Amount | Initial Trade<br>Date | Termination<br>Date |
|-----------------------------|---------------------------------------|--------------------------------|-----------------------|---------------------|
| IDA1: Total Return          | Morgan Stanley Capital Services, Inc. | \$ 18,520,000                  | August 6, 2003        | May 29, 2008        |
| IDA2: Total Return          | Morgan Stanley Capital Services, Inc. | 2,580,000                      | August 6, 2003        | February 10, 2009   |
| IDA3: Total Return          | Morgan Stanley Capital Services, Inc. | 2,710,000                      | August 6, 2003        | February 10, 2009   |
| IDA4: Total Return          | Morgan Stanley Capital Services, Inc. | 2,850,000                      | August 6, 2003        | February 10, 2009   |
| IDA5: Total Return          | Morgan Stanley Capital Services, Inc. | 3,000,000                      | August 6, 2003        | February 10, 2009   |
| IDA6: Total Return          | Morgan Stanley Capital Services, Inc. | 3,155,000                      | August 6, 2003        | February 10, 2009   |
| IDA7: Total Return          | Morgan Stanley Capital Services, Inc. | 3,325,000                      | August 6, 2003        | February 10, 2009   |
| IDA8: Total Return          | Morgan Stanley Capital Services, Inc. | 41,820,000                     | August 6, 2003        | February 10, 2009   |
| IDA9: Total Return          | Morgan Stanley Capital Services, Inc. | 11,240,000                     | July 15, 2008         | February 10, 2009   |