TIER III/IV/VI LOAN INSURANCE PREMIUM RATE
FOR THE
NEW YORK CITY BOARD OF EDUCATION
RETIREMENT SYSTEM
FOR LOANS ORIGINATING DURING FISCAL YEAR 2024

prepared by the

New York City
Office of the Actuary
June 2, 2023

OFFICE OF THE ACTUARY

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MAREK TYSZKIEWICZ
CHIEF ACTUARY

June 2, 2023

Board of Trustees
New York City Board of Education Retirement System
55 Water Street – 50th Floor
New York, NY 10041

Re: Fiscal Year 2024 Tier III/IV/VI Loan Insurance Premium Rate

Dear Members:

This Report presents the Actuary's recommendation to the Board of Trustees on the Loan Insurance Premium Rate on outstanding loan balances for loans originating during Fiscal Year 2024 for Tier III/IV/VI members. As shown in the attached report, the Actuary recommends that the Premium Rate continue at the rate of 0.2% per annum of the outstanding loan balance.

I, Marek Tyszkiewicz, am the Chief Actuary for, and independent of, the New York City Retirement Systems and Pension Funds. I am an Associate of the Society of Actuaries and a Member of the American Academy of Actuaries. I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. To the best of my knowledge, the results contained herein have been prepared in accordance with generally accepted actuarial principles and procedures and with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

I will be pleased to discuss this Report and answer any questions you may have with regard to the findings and recommendations.

Best Regards,

Marek Tyszkiewicz

Marek Tyszkiewicz, ASA, MAAA
Chief Actuary

MT/eh

cc: Dolores Capone, ASA, EA – New York City Office of the Actuary
Michael Hunter, ASA, EA – New York City Office of the Actuary
Sanford Rich – New York City Board of Education Retirement System
Mike Samet, FSA – New York City Office of the Actuary
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SECTION I – EXECUTIVE SUMMARY

This Report presents the Actuary's recommendation to the Board of Trustees of the New York City Board of Education Retirement System (BERS) of the Tier III/IV/VI Loan Insurance Premium Rate on any outstanding loan balances for loans originating during Fiscal Year 2024.

In accordance with Chapter 920 of the Laws of 1990 (Chapter 920/90), BERS began issuing loans to Tier III/IV members on July 1, 1991. These provisions became applicable to Tier VI members on April 1, 2012.

Chapter 920/90 provides for life insurance coverage after the date of issuance of the loan as follows:

From	To	Coverage
1 day	30 days	No coverage
31 days	Loan Repayment	100% of Unpaid Balance
Anytime loan is in default		No Coverage

Chapter 920/90 also provides that the loan insurance premium rate payable by the member for such loan insurance shall be set by the Board of Trustees at a rate not to exceed 1.00% of the amount loaned.

In a May 1, 1991 Report entitled "Proposed Conditions Governing Insurance On Tier III and Tier IV Loans For The New York City Board of Education Retirement System," the Actuary recommended a Tier III/IV Loan Insurance Premium Rate of 0.50% per annum to be applied against any outstanding loan balances.

At the May 22, 1991 meeting of the Board of Trustees a Resolution was adopted including "Rules and Regulations Governing Loans to Tier III/IV Members" which established the Tier III/IV Loan Insurance Premium Rate of 0.50% per annum.

That Resolution also stated that the Tier III/IV Loan Insurance Premium Rate would be reviewed at least annually and adjusted as deemed appropriate by the Board of Trustees.

The history of the Loan Insurance Premium Rate is shown in the table below:

Loans Originating in Fiscal Year	Loan Insurance Premium Rate
1991-1998	0.50%
1999-2015	0.30%
2016-2023	0.20%

Now, following the detailed study presented in this Report, the Actuary recommends that the Tier III/IV/VI Loan Insurance Premium Rate be continued at 0.20% per annum on outstanding loan balances for loans originating during Fiscal Year 2024.

Section II of this Report provides background information on the statutory basis for issuing Tier III/IV/VI loans and conditions governing them.

Section III presents the assumptions and methods used to develop the theoretical Tier III/IV/VI Loan Insurance Premium Rate.

Section IV presents the Experience Review.

Section V presents the findings and recommendations of this Report.

Appendix A presents the rules for insurance on Tier III/IV/VI Loans.

Appendix B presents a worksheet that develops theoretical Tier III/IV/VI Loan Insurance Premium Rates based on the actuarial assumptions used in the actuarial valuation to determine the Preliminary Fiscal Year 2024 employer contributions.

Appendix C presents a table reflecting the insurance premiums collected, the insurance claims paid out, and the investment income earned on assumed asset balances under the Tier III/IV/VI Loan Insurance Program from July 1, 1991 through June 30, 2022, based on information furnished to the Office of the Actuary (OA) by BERS. Investment income and assumed asset balances are developed by the OA using Rates of Return on Market Value of Assets of the BERS Qualified Pension Plan as provided by the New York City Office of the Comptroller.

Appendix D presents a draft Board Resolution to adopt the Tier III/IV/VI Loan Insurance Premium Rate for Fiscal Year 2024.

SECTION II – BACKGROUND

BERS began issuing loans to Tier III/IV members on July 1, 1991 and to Tier VI members on April 1, 2012.

Following are some of the important conditions governing Tier III/IV/VI loans:

- A member must be credited with at least one year of service and either be in active service or on a paid leave of absence to be eligible for a loan.

- The amount of the loan must be at least $1,000 and not exceed 75% of a member's accumulated contributions and interest. Also, the amount of the loan must be less than $50,000, less outstanding QPP and TDA loan balances during the previous 12-month period. Other restrictions may also apply.

- Only one loan can be obtained in any 12-month period.

- There is an administrative service charge for each loan issued. The amount is currently $50.00.

- The current interest rate payable on a loan is 6% per year.

- Generally, a loan must be repaid within five years. However, in no event can the annual repayment amount be less than 2% of a member's contract salary.

- Repayment may be made either through payroll deduction or via direct payment.

- A loan is fully insured beginning 31 days from the issue date. A loan insurance premium is included in the member's loan repayments.

- A loan in default results in a cancellation of the loan insurance. Also, non-payment of a loan will actuarially decrease a member's future retirement allowance as the member is borrowing against the employee-paid portion of the pension benefit.

SECTION III - DEVELOPMENT OF THEORETICAL LOAN INSURANCE PREMIUM RATE

In order to determine a reasonable loan insurance premium rate for Tier III/IV/VI loans, the estimated amount of loan insurance claims expected to be paid in one year was compared to the estimated amount of insurance coverage expected to be needed for one year.

The calculations were based on the number of active Tier III/IV/VI members at each age and the probabilities of mortality prior to retirement used in the June 30, 2022 actuarial valuation to determine the Preliminary Fiscal Year 2024 Employer Contributions.

These calculations yielded a theoretical Tier III/IV/VI Loan Insurance Premium Rate of approximately 0.14% per annum. Appendix B presents the calculation worksheet.

SECTION IV – EXPERIENCE REVIEW

Sound financing is necessary to fund insurance on loans. If the insurance premiums collected exceed the insurance claims incurred and paid out, then the excess can provide a reserve for claim fluctuation and to mitigate future premium increases which could occur if the group ages. However, if the insurance premiums collected are less than the insurance claims incurred and paid out, the Tier III/IV/VI Loan Insurance Premium Rate must be increased to reestablish a balance.

Appendix C provides the reserve for loan insurance based on historical insurance premiums collected and insurance claims paid out as provided by BERS, and hypothetical investment income credited for the Tier III/IV/VI Loan Insurance Program. Under this calculation, the reserve balance is $2.2 million as of June 30, 2022.

A review of the theoretical premium rate and the actual experience suggests it is appropriate to recommend for Fiscal Year 2024 to continue the Tier III/IV/VI Loan Insurance Premium Rate at 0.20% per annum. Continued monitoring of the experience of the Program is required.

SECTION V – FINDINGS AND RECOMMENDATIONS

In accordance with legislation, the Board of Trustees must, at least annually, review the Loan Insurance Premium Rate and may increase or reduce the premium rate, modify the terms or conditions of loan insurance coverage, or discontinue the insurance of loans.

Based on the analyses in this Report, the Actuary recommends that the Tier III/IV/VI Loan Insurance Premium Rate be continued at 0.20% per annum on outstanding loan balances for any loans originating during Fiscal Year 2024.

Appendix A

APPENDIX A

THE NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM RULES FOR INSURANCE ON TIER III/IV/VI LOANS

1. Each loan not in default is insured against the death of the member in an amount equal to the amount of the loan outstanding at any given time except there will be no insurance for the first 30 days.

2. Under Internal Revenue Service (IRS) regulations, BERS must treat each loan issued under the Loan Program since January 1, 2004 independently. In cases of death within 30 days after a new loan issuance date, the old loan is considered fully insured (if not in default) but no loan insurance shall be paid on the new loan.

3. Insurance claims are paid from the "Loan Insurance Fund."

4. Upon the death of a member, the amount of loan insurance payable is credited to his or her accumulated contributions.

5. The Loan Insurance Premium Rate is charged throughout the life of the loan, including the first 30 days during which no loan insurance payment would be made in the event of the death of a member with an outstanding loan balance.

6. The Board of Trustees on any July 1 may increase or reduce the premium rate, modify the terms or conditions of coverage, or discontinue the insurance of loans.

Appendix B

APPENDIX B
NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM
THEORETICAL TIER III/IV/VI LOAN INSURANCE PREMIUM RATE
AS OF JUNE 30, 2022

SEX: **M & F**

AGE	COUNT [1]	ACTIVE PROBABILITY OF ORDINARY DEATH [2]	NUMBER OF EXPECTED DEATHS	AVERAGE PROBABILITY OF EXPECTED DEATH
≤ 19	2	0.0250%	0.0005	
20	5	0.0280%	0.0014	
21	11	0.0273%	0.0030	
22	16	0.0288%	0.0046	
23	22	0.0282%	0.0062	
24	26	0.0281%	0.0073	
25	60	0.0283%	0.0170	
26	85	0.0302%	0.0257	
27	114	0.0333%	0.0380	
28	182	0.0369%	0.0671	
29	230	0.0393%	0.0904	
30	223	0.0431%	0.0962	
31	311	0.0462%	0.1438	
32	303	0.0489%	0.1483	
33	327	0.0532%	0.1739	
34	418	0.0561%	0.2345	
35	378	0.0571%	0.2159	
36	406	0.0581%	0.2360	
37	413	0.0615%	0.2539	
38	527	0.0624%	0.3289	
39	457	0.0633%	0.2892	
40	459	0.0625%	0.2870	
41	528	0.0670%	0.3540	
42	518	0.0691%	0.3577	
43	581	0.0736%	0.4274	
44	618	0.0760%	0.4699	
45	662	0.0794%	0.5257	
46	624	0.0839%	0.5233	
47	660	0.0884%	0.5834	
48	667	0.0934%	0.6233	
49	701	0.0981%	0.6880	
50	733	0.1029%	0.7546	
51	767	0.1109%	0.8503	
52	844	0.1199%	1.0120	
53	762	0.1272%	0.9689	
54	813	0.1388%	1.1286	
55	910	0.1463%	1.3316	
56	892	0.1579%	1.4084	
57	964	0.1683%	1.6222	
58	922	0.1789%	1.6491	
59	921	0.1882%	1.7337	
60	905	0.1980%	1.7918	
61	821	0.2023%	1.6612	
62	842	0.2154%	1.8135	
63	668	0.2195%	1.4664	
64	624	0.2239%	1.3970	
65	572	0.2268%	1.2973	
66	466	0.2445%	1.1396	
67	341	0.2542%	0.8668	
68	257	0.2574%	0.6616	
69	239	0.2738%	0.6545	
70	171	0.3067%	0.5245	
71	135	0.3647%	0.4924	
72	107	0.4162%	0.4453	
73	102	0.4804%	0.4900	
74	60	0.5082%	0.3049	
75	77	0.5804%	0.4469	
76	45	0.6544%	0.2945	
77	28	0.7239%	0.2027	
78	20	0.8175%	0.1635	
≥ 79	83	1.0081%	0.8367	
TOTAL	25,625		36.6320	**0.1430%**

[1] Includes Tier III/IV/VI members who qualify to take out loans.
[2] Weighted probability for the July 1, 2023 to June 30, 2024 year, based on male/female mix at each age.

Appendix C

APPENDIX C

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM

Tier III/IV/VI Loan Insurance Account [1]

as of June 30, 2022

Fiscal Year Ended June 30	Insurance Premiums Collected	Insurance Claims Paid Out	Investment Income Credited	Hypothetical Balance as of June 30
1992	$ 19,106	$ 0	$ 1,423	$ 20,529
1993	28,255	0	4,887	53,671
1994	37,190	17,010	510	74,361
1995	45,997	14,987	16,715	122,086
1996	53,715	47,960	20,744	148,585
1997	63,273	49,895	32,359	194,322
1998	76,475	34,441	41,194	277,550
1999	78,120	33,750	41,783	363,703
2000	77,544	101,409	33,489	373,327
2001	80,369	69,800	(32,598)	351,298
2002	94,065	71,645	(27,696)	346,022
2003	68,862	61,486	15,352	368,750
2004	62,225	105,536	56,750	382,189
2005	62,377	32,750	40,494	452,310
2006	55,377	84,642	45,737	468,782
2007	58,684	60,939	87,732	554,259
2008	62,296	36,105	(30,070)	550,380
2009	61,696	31,152	(102,949)	477,975
2010	70,004	102,518	69,442	514,903
2011	78,321	61,753	126,559	658,030
2012	87,418	50,318	677	695,807
2013	93,981	57,695	92,100	824,193
2014	102,214	63,697	164,220	1,026,930
2015	109,619	19,426	34,090	1,151,213
2016	115,859	87,067	1,982	1,181,987
2017	119,296	70,986	184,902	1,415,199
2018	98,112	60,791	148,691	1,601,211
2019	95,678	100,210	111,766	1,708,445
2020	91,752	80,713	98,039	1,817,523
2021	78,674	39,217	513,879	2,370,859
2022	98,966	43,182	(216,127)	2,210,516 [2]

[1] Insurance Premiums Collected and Insurance Claims Paid Out are supplied by the New York City Board of Education Retirement System.

[2] Balance may not reflect insurance claims incurred but not yet paid as of June 30, 2022.

Appendix D

REQUEST FOR THE BOARD OF TRUSTEES TO ADOPT THE ACTUARY'S RECOMMENDATION REGARDING THE TIER III/IV/VI LOAN INSURANCE PREMIUM RATE FOR FISCAL YEAR 2024

JUNE 2023

WHEREAS, In accordance with the legislation establishing a Loan Program for Tier III/IV/VI members of the New York City Board of Education Retirement System, the Board of Trustees is required, at least annually, to review the Loan Insurance Premium Rate applicable to the Loan Program; and

WHEREAS, Based on the recommendation of the prior Actuaries, such Loan Insurance Premium Rate has been set each year at 0.50% per annum of the outstanding loan balances for loans originating between July 1, 1991 and June 30, 1998, at 0.30% per annum of the outstanding loan balances for loans originating between July 1, 1998 and June 30, 2015, and at 0.20% per annum of the outstanding loan balances for loans originating between July 1, 2015 and June 30, 2023; and

WHEREAS, In a Report dated June 2, 2023, the Actuary has analyzed the experience and current status of the Loan Program, concluded that no change needs to be made and recommends to the Board of Trustees that the Loan Insurance Premium Rate be continued at 0.20% per annum of the outstanding loan balances for any loans originating during Fiscal Year 2024 (i.e., July 1, 2023 through June 30, 2024); now, therefore, be it

RESOLVED, That the Board of Trustees hereby adopts the recommendation of the Actuary as stated in a Report dated June 2, 2023, and stipulates the Tier III/IV/VI Loan Insurance Premium Rate be continued at its current rate of 0.20% per annum of the outstanding loan balances for any loans originating during Fiscal Year 2024 (i.e., July 1, 2023 through June 30, 2024).

Respectfully Submitted:

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Sanford Rich
Executive Director