

RRB - SSA - CMS FINANCIAL INTERCHANGE

**Calculations for Fiscal Year 2022
With Respect to OASI, DI, and HI Trust Funds**

Summary and Documentation

71st Determination

Prepared jointly by

**U.S. RAILROAD RETIREMENT BOARD
SOCIAL SECURITY ADMINISTRATION
and
CENTERS FOR MEDICARE & MEDICAID SERVICES**

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**Compiled by
U.S. RAILROAD RETIREMENT BOARD
CHICAGO, ILLINOIS
2023**

INTRODUCTION

The financial interchange between the railroad retirement and social security systems is intended to place the Social Security Old-Age and Survivors Insurance (OASI) and Disability Insurance (DI) Trust Funds and the Centers for Medicare and Medicaid Services Hospital Insurance (HI) Trust Fund in the same condition they would have been had railroad employment been covered by the Social Security and Federal Insurance Contributions Acts. Every year estimates are made of the additional benefits and administrative expenses that would have been paid from the Trust Funds as well as the additional payroll taxes and income taxes that would have been received by them, with allowances for interest.

This booklet documents the determination through fiscal year 2022. Included are the official determination and certification documents and a summary of the results of the determination. Exhibit 1 provides details on the benefit, administrative cost, income tax, and interest calculations for the determination. Exhibit 2 covers the payroll calculations.

TABLE OF CONTENTS

	<u>Page</u>
Determinations Pursuant to Section 7(c)(2) of the Railroad Retirement Act of 1974, as amended	1
Certifications Pursuant to Section 7(c)(2) of the Railroad Retirement Act of 1974, as amended	3
Results of Determination through Fiscal Year 2022	7
Table 1. RRB-SSA Financial Interchange: Change in Balance of OASI Trust Fund at End of Each Calendar Year 1937-2021, and on September 30, 2022	10
Table 2. RRB-SSA Financial Interchange: Change in Balance of DI Trust Fund at End of Each Calendar Year 1957-2021, and on September 30, 2022	13
Table 3. RRB-CMS Financial Interchange: Change in Balance of HI Trust Fund at End of Each Calendar Year 1966-2021, and on September 30, 2022	15

Exhibit 1 – Benefit, Administrative Cost, Income Tax, Interest Charges Calculations and Correspondence

Part I. Summary of Benefit, Administrative Cost, Income Tax and Interest Charges Calculations	17
Part II. Tables Pertaining to Benefit Calculations.....	22
Table 1. Computation of Family Composition Factors and Factors for Child's Benefits for Calendar Year 2021 Applied to Male Old-Age Employees.....	22
Table 1a. Selected benefit estimates relating to male old-age (primary) beneficiary families in current-payment status on December 31, 2021	23
Table 2. Computation of Family Composition Factors and Factors for Child's Benefits for Calendar Year 2021 Applied to Female Old-Age Employees	24
Table 2a. Selected benefit estimates relating to female old-age (primary) beneficiary families in current-payment status on December 31, 2021	25
Table 3. Analysis of Net Benefit Amounts (Uninflated) for 2021, By Type of Benefit (Accrual Basis).....	26
Table 4. Stratification of Universe of RRB Beneficiaries, Calendar Year 2021.....	27

TABLE OF CONTENTS

	<u>Page</u>
Table 5. Basic Data Used to Compute Inflated Amount of OASI Benefits and Sampling Error, 2021	28
Table 5a. Basic Data Used to Compute Inflated Amount of DI Benefits and Sampling Error, 2021	29
Table 6. OASI Benefit Payments, 1937-2021, Including Adjustments, on an Accrual Basis.....	30
Table 6a. DI Benefit Payments, 1957-2021, Including Adjustments, on an Accrual Basis.....	31
Table 7. Summary of Float Days for Financial Interchange, 1997-2022, Cycle 1-4 Payments.....	32
Table 8. Summary of Uncollectible Benefit Overpayment Calculations	33
Part III. Tables Pertaining to Administrative Cost Calculations	34
Table 9. Calculation of OASDI Administrative Expenses – 2021	34
Table 9a. Calculation of HI Administrative Expenses – 2021	35
Part IV. Summary of Income Tax Calculations	36
Table 10. Financial Interchange OASDI Income Tax Transfers, Calendar Years 1984-2021 and January-September 2022	36
Table 10a. Financial Interchange HI Income Tax Transfers, Calendar Years 1994-2021 and January-September 2022	37
Part V. Correspondence and Memoranda	38
<u>Addressee</u>	<u>Subject</u>
Mr. Sartain, RRB	Effective Interest Rates on OASDI Trust Funds, Administrative Cost Information, SSA Statement of Account, and Uncollectible Overpayments Information..... 38
Mr. May, RRB	HI Interest Rate Information .....44
Mr. Sartain, RRB	Selected OASI Benefit Estimates on December 31, 2021 45

TABLE OF CONTENTS

	<u>Page</u>
<u>Exhibit 2 – Payroll Calculations and Gross Earnings Sample</u>	
Part I. Payroll Calculations Summary and Tables	49
Table 1. Annual Maximum Taxable Earnings Under the RRA and FICA	55
Table 2. Summary of Accrued Taxable Payroll Calculations, 1937-1965	57
Table 3. Summary of Accrued Taxable Payroll Calculations, 1966-2021	58
Table 4. Summary of Accrued Taxable Payroll Calculations Under ACA, 2013-2021	60
Part II. 2021 Gross Earnings Sample for Financial Interchange Payroll Calculations	61

**DETERMINATIONS PURSUANT TO SECTION 7(c)(2)
OF THE RAILROAD RETIREMENT ACT OF 1974, AS AMENDED**

**DETERMINATION PURSUANT TO SECTION 7(c)(2)
OF THE RAILROAD RETIREMENT ACT OF 1974, AS AMENDED**

Pursuant to the provisions of section 7(c)(2) of the Railroad Retirement Act of 1974, as amended, the Acting Commissioner of Social Security and the Railroad Retirement Board have determined that, as of the close of the fiscal year ended September 30, 2022, the subtraction of \$5,516,300,000 from the Federal Old-Age and Survivors Insurance Trust Fund and \$59,100,000 from the Federal Disability Insurance Trust Fund would place such Funds in the same position in which they would have been if service as an employee after December 31, 1936, covered by said Railroad Retirement Act, had been included in the term "employment" as defined in the Social Security Act and in the Federal Insurance Contributions Act.

The amount of \$5,516,300,000 for the Federal Old-Age and Survivors Insurance Trust Fund is based on expenditures of \$7,703,900,000 in benefit payments, \$13,100,000 in administrative expenses, less payroll taxes of \$1,930,600,000 and net income taxes of \$360,700,000, plus net interest of \$90,600,000. The amount of \$59,100,000 for the Federal Disability Insurance Trust Fund is based on expenditures of \$384,300,000 in benefit payments, \$4,200,000 in administrative expenses, less payroll taxes of \$327,900,000 and net income taxes of \$4,400,000, plus net interest of \$2,900,000.

It is understood by the Acting Commissioner and the Board that the determination of the amounts specified herein is made without prejudice to settlement of any unresolved questions between the Acting Commissioner and the Board, relative to the provisions of section 7(c)(2) of the Railroad Retirement Act, in making any subsequent determinations pursuant to such section.

IN WITNESS WHEREOF the Acting Commissioner of Social Security and the Railroad Retirement Board, by its Secretary to the Board, have hereunto set their respective hands and caused, respectively, the seals of the Social Security Administration and the Railroad Retirement Board to be affixed.

Social Security Administration

By *K. L. Kijak*
Acting Commissioner of Social Security
5/26/2023
Date signed

Applying my electronic signature here is the
Equivalent of my hand-written signature and
certification of the contents of the reports.

Railroad Retirement Board

By STEPHANIE HILLYARD
FOR THE BOARD
Secretary to the Board
May 4, 2023
Date signed

Applying my electronic signature here is the
Equivalent of my hand-written signature and
certification of the contents of the reports.

DETERMINATION PURSUANT TO SECTION 7(c)(2)
OF THE RAILROAD RETIREMENT ACT OF 1974, AS AMENDED

Pursuant to the provisions of section 7(c)(2) of the Railroad Retirement Act of 1974, as amended, the Secretary of Health and Human Services and the Railroad Retirement Board have determined that, as of the close of the fiscal year ended September 30, 2022, the addition of \$582,100,000 to the Federal Hospital Insurance Trust Fund would place such Fund in the same position in which it would have been if service as an employee after December 31, 1936, covered by said Railroad Retirement Act, had been included in the term "employment" as defined in the Social Security Act and in the Federal Insurance Contributions Act.

The amount of \$582,100,000 for the Federal Hospital Insurance Trust Fund is based on payroll taxes of \$568,500,000 and net income taxes of \$6,600,000, less administrative expenses of \$1,900,000, plus net interest of \$8,900,000.

It is understood by the Secretary and the Board that the determination of the amounts specified herein is made without prejudice to settlement of any unresolved questions between the Secretary and the Board, relative to the provisions of section 7(c)(2) of the Railroad Retirement Act, in making any subsequent determinations pursuant to such section.

IN WITNESS WHEREOF the Administrator of the Centers for Medicare & Medicaid Services, acting herein by virtue of authority vested in them by the Secretary of Health and Human Services, and the Railroad Retirement Board, by its Secretary to the Board, have hereunto set their respective hands and caused, respectively, the seals of the Department of Health and Human Services and the Railroad Retirement Board to be affixed.

Secretary of Health and Human Services

By Chig B. Lad
Administrator of the Centers for Medicare
& Medicaid Services

June 22, 2023

Date signed

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Equivalent of my hand-written signature and
certification of the contents of the reports.

Railroad Retirement Board

STEPHANIE
By HILLYARD
FOR THE BOARD
Secretary to the Board

May 4, 2023

Date signed

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certification of the contents of the reports.

**CERTIFICATIONS PURSUANT TO SECTION 7(c)(2)
OF THE RAILROAD RETIREMENT ACT OF 1974, AS AMENDED**

**CERTIFICATION PURSUANT TO SECTION 7(c)(2)
OF THE RAILROAD RETIREMENT ACT OF 1974, AS AMENDED**

Pursuant to the provisions of section 7(c)(2) of the Railroad Retirement Act of 1974, as amended, the Acting Commissioner of Social Security and the Railroad Retirement Board have determined that, as of the close of the fiscal year ended September 30, 2022, the amount of \$5,516,300,000 if subtracted from the Federal Old-Age and Survivors Insurance Trust Fund, would place such Fund in the same position in which it would have been if service as an employee after December 31, 1936, covered by said Railroad Retirement Act, had been included in the term "employment" as defined in the Social Security Act and in the Federal Insurance Contributions Act.

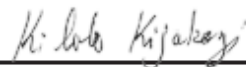
The amount of \$5,516,300,000 for the Federal Old-Age and Survivors Insurance Trust Fund is based on expenditures of \$7,703,900,000 in benefit payments, \$13,100,000 in administrative expenses, less payroll taxes of \$1,930,600,000 and net income taxes of \$360,700,000, plus net interest of \$90,600,000.

The Acting Commissioner of Social Security hereby certifies to the Secretary of the Treasury, pursuant to the provisions of such section 7(c)(2), the amount of \$5,576,469,000 including interest of \$60,169,000 for the period October 1, 2022 to the date of certification, for transfer from the Federal Old-Age and Survivors Insurance Trust Fund to the Social Security Equivalent Benefit Account.

Certified as of the 2nd day of June 2023.

IN WITNESS WHEREOF the Acting Commissioner of Social Security has hereunto set their hand and caused the seal of the Social Security Administration to be affixed.

Social Security Administration

By 
Acting Commissioner of Social Security

5/26/2023

Date signed

Applying my electronic signature here is the
Equivalent of my hand-written signature and
certification of the contents of the reports.

CERTIFICATION PURSUANT TO SECTION 7(c)(2)
OF THE RAILROAD RETIREMENT ACT OF 1974, AS AMENDED

Pursuant to the provisions of section 7(c)(2) of the Railroad Retirement Act of 1974, as amended, the Acting Commissioner of Social Security and the Railroad Retirement Board have determined that, as of the close of the fiscal year ended September 30, 2022, the amount of \$59,100,000, if subtracted from the Federal Disability Insurance Trust Fund, would place such Fund in the same position in which it would have been if service as an employee after December 31, 1936, covered by said Railroad Retirement Act, had been included in the term "employment" as defined in the Social Security Act and in the Federal Insurance Contributions Act.

The amount of \$59,100,000 for the Federal Disability Insurance Trust Fund is based on expenditures of \$384,300,000 in benefit payments, \$4,200,000 in administrative expenses, less payroll taxes of \$327,900,000 and net income taxes of \$4,400,000, plus net interest of \$2,900,000.

The Acting Commissioner of Social Security hereby certifies to the Secretary of the Treasury, pursuant to the provisions of such section 7(c)(2), the amount of \$59,745,000, including interest of \$645,000 for the period October 1, 2022 to the date of certification, for transfer from the Federal Disability Insurance Trust Fund to the Social Security Equivalent Benefit Account.

Certified as of the 2nd day of June 2023.

IN WITNESS WHEREOF the Acting Commissioner of Social Security has hereunto set their hand and caused the seal of the Social Security Administration to be affixed.

Social Security Administration

By 
Acting Commissioner of Social Security

5/26/2023

Date signed

Applying my electronic signature here is the
Equivalent of my hand-written signature and
certification of the contents of the reports.

CERTIFICATION PURSUANT TO SECTION 7(c)(2)
OF THE RAILROAD RETIREMENT ACT OF 1974, AS AMENDED

Pursuant to the provisions of section 7(c)(2) of the Railroad Retirement Act of 1974, as amended, the Secretary of Health and Human Services and the Railroad Retirement Board have determined that, as of the close of the fiscal year ended September 30, 2022, the amount of \$582,100,000, if added to the Federal Hospital Insurance Trust Fund, would place such Fund in the same position in which it would have been if service as an employee after December 31, 1936, covered by said Railroad Retirement Act, had been included in the term "employment" as defined in the Social Security Act and in the Federal Insurance Contributions Act.


The amount of \$582,100,000 for the Federal Hospital Insurance Trust Fund is based on payroll taxes of \$568,500,000 and net income taxes of \$6,600,000, less administrative expenses of \$1,900,000, plus net interest of \$8,900,000.

The Railroad Retirement Board hereby certifies to the Secretary of the Treasury, pursuant to the provisions of such section 7(c)(2), the amount of \$588,449,000, comprised of \$573,200,000 in principal, net interest of \$8,900,000 through September 30, 2022, plus \$6,349,000 in interest for the period October 1, 2022 to the date of certification, for transfer from the Social Security Equivalent Benefit Account to the Federal Hospital Insurance Trust Fund.

Certified as of the 2nd day of June 2023.

IN WITNESS WHEREOF the Secretary to the Board of the Railroad Retirement Board, acting herein by virtue of authority vested in them by the Railroad Retirement Board, has hereunto set their hand and caused the seal of the Railroad Retirement Board to be affixed.

Railroad Retirement Board

STEPHANIE
By HILLYARD  Digitally signed by STEPHANIE
HILLYARD
Date: 2023.05.04 12:30:08 -05'00'
FOR THE BOARD
Secretary to the Board
May 4, 2023
Date signed

Applying my electronic signature here is the
Equivalent of my hand-written signature and
certification of the contents of the reports.

RESULTS OF DETERMINATION THROUGH FISCAL YEAR 2022

RRB-SSA-CMS Financial Interchange Results of Determination through Fiscal Year 2022

As of September 30, 2022, the Social Security Equivalent Benefit Account (Account) was due \$5,516.3 million from the OASI Trust Fund and \$59.1 million from the DI Trust Fund; \$582.1 million was due from the Account to the HI Trust Fund. With the inclusion of interest to June 2, 2023, the anticipated date of transfer, the amounts to be transferred are \$5,576,469,000 from the OASI Trust Fund, \$59,745,000 from the DI Trust Fund and \$588,449,000 to the HI Trust Fund. This will result in a net transfer of \$5,047,765,000 to the Account.

The results of the calculations, including adjustments, for fiscal year 2022 are shown below, separately for each of the trust funds:

<u>OASI Trust Fund</u>		<u>Amount</u>
		(millions)
Amount due to Social Security Equivalent Benefit Account:		
September 30, 2021		\$5,258.4
Plus: Benefit payments		7,703.9
Administrative expenses		13.1
Interest		148.0
Less: Payroll taxes at OASI rates on railroad payroll		1,930.6
Income taxes (after Treasury reconciliation)		360.7
Transferred to Social Security Equivalent Benefit Account on June 2, 2022 (principal of \$5,258.4 million, plus interest of \$57.4 million)		5,315.8
Amount due to Social Security Equivalent Benefit Account:		
September 30, 2022		\$5,516.3
June 2, 2023 (including interest at 1.625 percent)		\$5,576.5
 <u>DI Trust Fund</u>		
Amount due to Social Security Equivalent Benefit Account:		
September 30, 2021		\$153.9
Plus: Benefit payments		384.3
Administrative expenses		4.2
Interest		4.6
Less: Payroll taxes at DI rates on railroad payroll		327.9
Income taxes (after Treasury reconciliation)		4.4
Transferred to Social Security Equivalent Benefit Account on June 2, 2022 (principal of \$153.9 million, plus interest of \$1.7 million)		155.6
Amount due to Social Security Equivalent Benefit Account:		
September 30, 2022		\$59.1
June 2, 2023 (including interest at 1.625 percent)		\$59.7

<u>HI Trust Fund</u>		<u>Amount</u> (millions)
Amount due to HI Trust Fund:		
September 30, 2021		\$510.3
Plus: Payroll taxes at HI rates on railroad payroll.....		568.5
Income taxes (after Treasury reconciliation).....		6.6
Interest.....		14.5
Less: Administrative expenses		1.9
Transferred to HI Trust Fund on June 2, 2022 (principal of \$510.3 million, plus interest of \$5.6 million)		515.9
Amount due to HI Trust Fund:		
September 30, 2022.....		\$582.1
June 2, 2023 (including interest at 1.625 percent)		\$588.4

The net payment of \$5,047.8 million due the Social Security Equivalent Benefit Account is \$92.3 million more than the previous determination. This increase consists of the following changes: an increase of \$406.9 million in benefit payments, offset by increases of \$214.4 million in payroll tax revenues and \$86.3 million in income tax revenues, as well as decreases of \$1.5 million in administrative expenses and \$12.4 million in total interest.

Presented below is a more detailed comparison between the current and prior determinations.

Benefit Amounts

Overall, the additional social security benefits that would have been payable if railroads had been covered by the Social Security Act increased by 5.3 percent, or \$406.9 million, to \$8,088.2 million from the previous determination amount of \$7,681.3 million. Even with a declining number of beneficiaries each year, higher wages for more recent retirees have resulted in larger benefit awards. Furthermore, cost-of-living increases of 1.3 percent and 5.9 percent were applied to all benefits in fiscal year 2022 for the first 3 months and last 9 months, respectively.

Payroll Taxes

The combined payroll tax amount creditable to the OASDHI Trust Funds increased by 8.2 percent, or \$214.4 million, to \$2,827.0 million from the previous determination amount of \$2,612.6 million. This increase was primarily due to wage increases and a higher taxable wage limit. The average employment level increased from 187,000 in fiscal year 2021 to the preliminary level of 188,000 in fiscal year 2022.

Income Taxes

Federal income taxes credited to the OASDHI Trust Funds increased by 30.2 percent, or \$86.3 million, to \$371.7 million from the previous determination amount of \$285.4 million. There were no reconciliations of Treasury OASDI and HI in the current determination, while the previous determination reflected OASDI and HI reconciliations for calendar years 2015 and 2016.

Administrative Expenses

Administrative expense reimbursements decreased by 7.2 percent, or \$1.5 million, to \$19.2 million from the previous determination amount of \$20.7 million. OASI administrative expense reimbursements decreased from \$16.3 million to \$13.1 million due primarily to a decrease in new OASI enrollments that was offset by an increase in unit costs. DI administrative expense reimbursements increased from \$2.5 million to \$4.2 million due to increases in new DI employee enrollments and in the unit costs. HI administrative expense reimbursements remained unchanged at \$1.9 million, as the increase in unit costs was offset by a net decrease in new enrollments.

Interest Charges

Total interest charges to the OASI, DI and HI trust funds decreased by \$13.7 million to \$138.1 million, from the previous determination amount of \$151.8 million. The decrease in interest charges was primarily due to fewer DI prior year adjustments. The decrease was also due to a decline in interest rates used to credit the OASI and DI Trust Funds, while the interest rates used to credit the HI Trust Fund rose in fiscal year 2022. The net decrease in total interest charges was \$12.4 million after adding \$1.3 million for additional interest through the June 2023 transfer date.

Table 1. -- RRB-SSA Financial Interchange: Change in Balance of OASI Trust Fund at End of Each Calendar Year 1937-2021, and on September 30, 2022

Calendar Year	(Dollar amounts in millions)										Decrease in Trust Fund Balance at End of Year ⁶
	Appropriations (Payroll Taxes) ¹	Income Taxes	Benefit Payments ²	Administrative Expenses	Military Service Adjustments	Transfers to SSEB Account ³	Interest factor ⁴		Interest Creditable to SSEB Account ⁵		
							First Semi-Annual %	Second Semi-Annual %			
Total	\$76,479.2	\$5,261.1	\$241,839.3	\$1,043.0	\$1,220.0	\$165,327.6			\$10,921.9		
1937	37.2		0.1				0.8819		(0.2)	(\$37.3)	
1938	24.7		0.9				2.2607		(1.1)	(62.2)	
1939	40.3		1.3				2.3651		(1.9)	(103.1)	
1940	44.2		6.0	1.9			2.6680		(3.2)	(142.6)	
1941	49.7		14.1	1.9			2.6440		(4.2)	(180.5)	
1942	62.3		20.2	2.0			2.4610		(4.9)	(225.5)	
1943	74.7		25.7	2.2			2.2530		(5.6)	(277.9)	
1944	83.5		32.1	2.5			2.1450		(6.4)	(333.2)	
1945	84.7		40.7	2.6			2.1010		(7.4)	(382.0)	
1946	87.8		52.5	2.9			2.0470		(8.1)	(422.5)	
1947	91.5		61.5	3.2			2.0240		(8.8)	(458.1)	
1948	95.4		71.8	3.4			2.1150		(9.8)	(488.1)	
1949	87.8		84.6	3.6			2.1620		(10.4)	(498.1)	
1950	131.6		112.2	3.7			2.1520		(10.9)	(524.7)	
1951	153.6		184.8	3.7			2.1510		(10.7)	(500.5)	
1952	154.8		200.9	3.9			2.2050		(10.4)	(460.9)	
1953	154.5		241.4	4.0			1.1200	1.1760	(9.4)	(379.4)	
1954	179.6		270.6	3.6		(21.1)	1.1700	1.1150	(7.1)	(270.8)	
1955	193.5		337.7	5.0		(7.4)	1.0510	1.1330	(3.9)	(118.1)	
1956	208.1		371.1	4.4		(5.2)	1.1430	1.2430	(0.5)	54.0	
1957	205.6		413.2	4.8		(1.6)	1.2390	1.2400	4.3	272.3	
1958	178.8		451.8	5.5		124.4	1.2570	1.2470	9.3	435.7	
1959	203.2		516.3	5.8		282.0	1.2740	1.2940	12.3	484.9	
1960	259.0		578.6	6.1		318.4	1.2850	1.2940	12.8	505.0	
1961	230.0		606.8	6.5		331.7	1.3410	1.3840	14.8	571.4	
1962	236.9		640.8	6.3		360.8	1.3850	1.4080	17.2	638.0	
1963	268.7		662.9	7.1		422.5	1.4160	1.4750	18.7	635.5	
1964	265.6		675.5	7.3		402.6	1.5000	1.5510	20.0	670.1	
1965	259.4		732.9	6.9		435.6	1.5490	1.5940	22.1	737.0	
1966	330.2		743.4	8.2		443.8	1.6410	1.7820	25.6	740.2	

Table 1. -- RRB-SSA Financial Interchange: Change in Balance of OASI Trust Fund at End of Each Calendar Year 1937-2021, and on September 30, 2022 (Continued)

Calendar Year	Appropriations (Payroll Taxes) ¹	Income Taxes	Benefit Payments ²	Administrative Expenses	Military Service Adjustments	Transfers to SSEB Account ³	Interest factor ⁴		Interest Creditable to SSEB Account ⁵	Decrease in Trust Fund Balance at End of Year ⁶
							First Semi-Annual %	Second Semi-Annual %		
1967	\$334.3		\$759.2	\$9.1		\$508.0	1.7750	1.9040	\$24.6	\$690.8
1968	336.6		851.7	9.8		437.6	1.9120	1.9570	27.7	805.8
1969	374.3		878.7	10.2		491.5	2.0510	2.2440	34.5	863.4
1970	366.5		1,012.7	10.6		578.8	2.3520	2.5400	43.1	984.5
1971	403.4		1,119.0	11.1		613.0	2.5140	2.5740	51.7	1,149.9
1972	441.9		1,189.7	10.8		724.3	2.5840	2.6340	58.6	1,242.8
1973	544.8		1,461.4	10.6		783.0	2.7080	2.8740	68.5	1,455.5
1974	647.3		1,581.6	11.8		908.6	2.9100	3.1530	83.5	1,576.5
1975	640.6		1,708.8	13.2		981.8	3.1670	3.2940	103.5	1,779.6
1976	707.6		1,838.2	13.1	\$47.0	1,212.3	3.2720	3.3460	112.4	1,776.4
1977	760.8		1,945.5	13.6	2.6	1,207.8	3.3650	3.4570	118.4	1,882.7
1978	795.9		2,069.1	14.0		1,588.7	3.5070	3.5370	117.2	1,698.4
1979	990.4		2,261.4	16.2		1,447.5	3.6270	3.6850	114.6	1,652.7
1980	1,089.7		2,526.5	15.0		1,442.0	4.1560	4.1810	134.6	1,797.1
1981	1,173.6		2,863.0	17.5		1,584.9	4.7750	4.9190	175.7	2,094.8
1982	1,106.9		3,167.6	19.9		1,793.3	5.0270	5.8080	238.6	2,620.7
1983	1,146.0		3,252.1	21.0		2,250.8	5.3020	5.2950	270.7	2,767.7
1984	1,303.7	\$57.0	3,370.4	21.8		2,404.0	5.1510	6.1970	284.5	2,679.7
1985	1,261.7	65.0	3,506.7	23.3		2,310.2	5.7970	5.2900	290.2	2,863.0
1986	1,235.3	68.3	3,619.0	21.4		2,585.1	5.5630	5.4800	299.1	2,913.8
1987	1,236.7	(12.0)	3,686.1	20.4		2,557.3	5.1190	4.7940	283.4	3,121.7
1988	1,289.4	4.2	3,832.6	23.2		2,790.0	4.7850	4.7740	283.3	3,177.2
1989	1,271.7	14.0	3,992.3	19.3		2,845.3	4.7436	4.6028	286.9	3,344.7
1990	1,270.5	30.5	4,182.5	18.6		2,969.3	4.5631	4.5323	298.4	3,573.9
1991	1,299.1	47.2	4,391.1	18.6		3,374.6	4.4871	4.3982	300.2	3,562.9
1992	1,329.6	53.9	4,522.8	19.1		3,148.4	4.3350	4.2187	302.3	3,875.2
1993	1,355.6	58.7	4,644.5	18.4		3,352.5	4.1602	3.9913	306.2	4,077.5
1994	1,249.5	49.4	4,693.0	17.6		3,419.6	3.9462	3.9283	317.5	4,387.1
1995	1,253.4	40.0	4,723.5	16.0	51.2	4,052.3	3.9134	3.8165	307.0	4,036.7
1996	1,285.4	55.9	4,759.8	16.8		3,554.1	3.7763	3.7618	295.6	4,213.5

Table 1. -- RRB-SSA Financial Interchange: Change in Balance of OASI Trust Fund at End of Each Calendar Year 1937-2021, and on September 30, 2022 (Continued)
(Dollar amounts in millions)

Calendar Year	Appropriations (Payroll Taxes) ¹	Income Taxes	Benefit Payments ²	Administrative Expenses	Military Service Adjustments	Transfers to SSEB Account ³	Interest factor ⁴		Interest Creditable to SSEB Account ⁵	Decrease in Trust Fund Balance at End of Year ⁶
							First Semi-Annual %	Second Semi-Annual %		
1997	\$1,338.2	\$55.5	\$4,814.8	\$16.2		\$3,688.1	3.7287	3.6895	\$298.5	\$4,261.2
1998	1,407.9	72.1	4,824.9	14.1		3,662.2	3.6343	3.5192	288.6	4,246.6
1999	1,427.1	103.4	4,795.5	14.4		3,681.4	3.4594	3.4101	272.0	4,116.6
2000	1,413.3	124.5	4,815.2	13.2	\$326.1	3,538.2	3.4051	3.3607	259.2	3,802.1
2001	1,401.4	89.5	4,858.8	14.0		3,273.1	3.3149	3.2369	248.6	4,159.5
2002	1,388.3	106.7	4,857.5	14.6		3,493.3	3.2021	3.1118	253.6	4,296.9
2003	1,405.3	108.6	4,879.9	15.4		3,580.0	3.0557	2.8726	242.4	4,340.7
2004	1,468.8	107.3	4,863.8	14.5		3,628.1	2.8360	2.7672	227.2	4,242.0
2005	1,543.2	111.5	4,921.7	21.4		3,579.3	2.7386	2.6368	212.3	4,163.4
2006	1,592.8	124.5	5,076.6	18.1		3,458.0	2.6274	2.6119	207.3	4,290.1
2007	1,654.5	128.2	5,196.5	19.1		3,574.6	2.6010	2.5769	210.2	4,358.6
2008	1,715.4	104.2	5,289.7	18.1		3,632.3	2.5465	2.4784	206.6	4,421.1
2009	1,622.8	128.5	5,644.6	19.1		3,689.7	2.4377	2.3513	207.2	4,851.0
2010	1,634.8	151.4	5,683.8	22.1		3,929.7	2.3340	2.2338	212.4	5,053.4
2011	1,755.5	170.0	5,759.8	19.0		4,109.5	2.2167	2.1109	203.1	5,000.3
2012	1,837.0	273.8	6,046.9	18.7	154.8	4,139.2	2.0820	1.9380	185.5	4,846.6
2013	1,882.7	238.7	6,194.2	20.4		3,948.4	1.9143	1.8135	174.2	5,165.6
2014	2,035.8	243.9	6,360.2	20.3		4,257.1	1.8017	1.7191	169.2	5,178.5
2015	2,117.2	291.5	6,538.6	17.3		4,258.0	1.7046	1.6139	159.1	5,226.8
2016	1,834.9	295.3	6,617.9	20.8	228.9	4,286.9	1.6037	1.5197	154.9	5,374.4
2017	1,854.0	287.6	6,714.5	18.3		4,315.8	1.5130	1.4498	153.6	5,803.4
2018	1,971.4	288.6	6,919.5	16.9		4,768.9	1.4470	1.4274	155.3	5,866.2
2019	2,032.1	264.0	7,124.6	15.2		4,880.4	1.4182	1.3640	152.4	5,981.9
2020	1,850.1	287.9	7,286.1	15.8	409.4	4,844.0	1.3479	1.2630	148.1	6,040.5
2021	1,810.0	312.6	7,384.5	14.3		4,792.5	1.2501	1.1785	144.5	6,668.7
2022 (9 month estimate)	1,505.6	259.2	5,806.3	10.7		5,315.8	1.1749	1.1507	111.2	5,516.3

¹ Appropriations are net of payroll tax refunds for the calendar year.

² Uncollectible benefits overpayments are included in annual benefit payments.

³ Figures in parentheses represent amounts creditable or transferred to trust fund.

⁴ Represents rate derived from average interest rate earned by trust fund in indicated six month period (calendar year for 1937-1952). Interest factors applied to balance at beginning of period plus weighted net income in period.

⁵ The Social Security Equivalent Benefit (SSEB) Account replaced the Railroad Retirement Account (RRA) as the Financial Interchange depository beginning in 1984.

⁶ Figures in parentheses represent increases in trust fund balances at end of year.

NOTE - Detail may not add to totals shown because of rounding.

Table 2. -- RRB-SSA Financial Interchange: Change in Balance of DI Trust Fund at End of Each Calendar Year 1957-2021, and on September 30, 2022

Calendar Year	(Dollar amounts in millions)										Decrease in Trust Fund Balance at End of Year ⁶
	Appropriations (Payroll Taxes) ¹	Income Taxes	Benefit Payments ²	Administrative Expenses	Military Service Adjustments	Transfers to SSEB Account ³	Interest factor ⁴		Interest Creditable to SSEB Account ⁵		
							First Semi-Annual %	Second Semi-Annual %			
Total	\$11,608.1	\$130.7	\$19,232.8	\$248.3	\$139.6	\$8,413.9			\$870.0		
1957	23.2		2.6	0.4			1.0830	1.1680	(0.2)	(\$20.4)	
1958	22.6		19.4	0.7			1.1900	1.2240	(0.5)	(23.4)	
1959	22.7		26.0	0.9		(22.0)	1.2310	1.2560	(0.2)	2.6	
1960	23.8		31.8	1.1		(4.9)	1.2880	1.3160	0.3	16.9	
1961	20.9		34.3	1.2		5.1	1.3840	1.4460	0.6	27.0	
1962	20.7		36.5	1.3		11.0	1.4280	1.4720	0.9	34.0	
1963	19.9		38.1	1.6		19.6	1.4730	1.5060	1.0	35.2	
1964	19.7		39.3	2.0		19.1	1.5320	1.6030	1.2	38.9	
1965	19.2		48.1	1.7		23.6	1.5930	1.7350	1.4	47.3	
1966	33.0		52.1	2.0		25.0	1.8360	1.8570	1.7	45.1	
1967	33.0		53.2	2.3		30.6	1.9810	2.1040	1.6	38.6	
1968	48.0		59.0	2.0		20.4	1.9860	2.3090	1.5	32.7	
1969	48.0		59.5	1.7		21.3	2.4080	2.6100	1.4	26.0	
1970	55.1		67.8	2.6		10.4	2.7940	2.9450	1.6	32.5	
1971	54.8		71.0	3.5		13.2	2.9450	2.9580	2.0	41.0	
1972	60.0		75.2	2.8		24.2	2.9500	2.9520	2.0	36.8	
1973	69.7		91.7	4.2		19.5	2.9960	3.0870	2.3	45.8	
1974	85.1		103.4	1.9		22.3	3.1260	3.2700	2.7	46.4	
1975	84.2		112.5	2.2		28.5	3.2890	3.3320	3.1	51.5	
1976	93.0		123.1	2.5	28.4	26.4	3.3040	3.3450	2.7	32.0	
1977	100.0		137.2	2.2	3.8	(0.3)	3.4430	3.5700	3.7	71.6	
1978	143.6		146.3	2.8		29.8	3.5990	3.7240	4.3	51.6	
1979	171.7		151.9	2.7		29.9	3.8690	3.9280	2.1	6.7	
1980	136.1		165.0	2.5		(12.1)	4.3330	4.2770	2.7	52.9	
1981	161.9		190.2	4.4		29.4	4.8340	5.0380	5.5	61.7	
1982	198.0		195.7	4.4		26.4	5.5220	5.9770	6.3	43.7	
1983	152.0		188.4	3.8		27.8	5.1070	5.0260	5.4	61.5	
1984	126.7	1.8	186.8	2.3		21.6	5.1510	5.2820	8.9	109.4	
1985	121.3	2.0	183.4	1.4		42.7	5.3420	4.9420	12.6	140.8	
1986	118.8	2.1	182.5	2.3		67.7	4.9890	4.8360	14.0	151.0	
1987	118.9	(1.8)	179.6	3.3		56.9	4.8620	4.5870	15.1	175.0	
1988	123.6	(0.7)	187.3	3.3		61.3	4.6890	4.7030	17.0	198.4	
1989	121.9	0.2	197.1	3.4		88.2	4.7092	4.6612	18.3	206.9	
1990	135.7	0.3	193.8	3.8		79.9	4.6134	4.5708	18.6	207.2	
1991	139.2	0.6	217.0	2.8		82.1	4.5373	4.4280	18.7	223.8	

Table 2. -- RRB-SSA Financial Interchange: Change in Balance of DI Trust Fund at End of Each Calendar Year 1957-2021, and on September 30, 2022 (Continued)
(Dollar amounts in millions)

Calendar Year	Appropriations (Payroll Taxes) ¹	Income Taxes	Benefit Payments ²	Administrative Expenses	Military Service Adjustments	Transfers to SSEB Account ³	Interest factor ⁴		Interest Creditable to SSEB Account ⁵	Decrease in Trust Fund Balance at End of Year ⁶
							First Semi-Annual %	Second Semi-Annual %		
1992	\$142.4	\$0.8	\$236.1	\$3.1		\$58.0	4.3697	4.3236	\$21.8	\$283.6
1993	145.2	1.2	247.2	3.1		82.8	4.2213	4.1717	24.9	329.6
1994	223.4	1.1	248.7	3.8		106.0	4.0431	3.9940	23.8	275.4
1995	224.0	1.0	261.7	3.6	\$41.5	67.8	3.9499	3.3458	18.6	225.0
1996	229.7	1.2	273.2	4.9		2.2	3.3242	3.4263	17.3	287.3
1997	212.6	1.5	302.0	4.5		59.1	3.4160	3.4207	21.1	341.7
1998	223.7	1.8	314.7	6.4		156.8	3.3774	3.2997	20.7	301.2
1999	226.7	2.6	338.3	6.2		134.6	3.2486	3.2498	18.8	300.6
2000	240.0	3.5	369.7	4.4	145.0	159.4	3.2600	3.2483	16.2	143.0
2001	237.9	2.9	396.5	5.6		9.7	3.2049	3.1466	14.2	308.8
2002	235.7	3.8	441.4	4.2		153.5	3.1153	3.0480	20.4	381.8
2003	238.7	4.5	525.5	5.3		167.4	2.9995	2.8445	25.4	527.4
2004	249.4	4.9	567.8	6.5		215.4	2.8170	2.2766	29.5	661.5
2005	262.1	5.0	587.8	10.4		337.9	2.7455	2.6705	35.0	689.7
2006	270.5	5.8	630.3	9.3		388.3	2.6628	2.6440	35.0	699.7
2007	280.9	6.5	678.3	8.1		445.2	2.6336	2.6097	34.5	688.0
2008	291.2	5.4	691.4	5.4		417.6	2.5890	2.5282	34.1	704.7
2009	275.6	7.6	728.7	7.1		447.6	2.4937	2.4602	34.0	743.7
2010	277.6	7.6	739.2	6.1		461.9	2.4392	2.4164	35.3	777.2
2011	298.1	6.7	735.8	7.9		464.7	2.3802	2.3650	35.4	786.8
2012	311.9	4.4	743.2	6.7	(74.5)	511.8	2.3306	2.2930	34.5	817.6
2013	319.7	4.5	719.4	5.2		550.6	2.2281	2.2010	31.9	699.3
2014	345.7	8.0	700.1	4.4		443.7	2.2198	2.2442	28.3	634.7
2015	359.5	6.2	668.9	6.2		418.6	2.2479	2.2560	25.3	550.8
2016	433.8	6.1	625.5	4.1	0.7	375.7	1.9036	1.6935	16.0	380.1
2017	438.1	7.1	543.6	4.5		206.7	1.6224	1.5138	10.2	286.5
2018	465.9	1.3	512.8	4.3		173.5	1.5216	1.5720	6.5	169.4
2019	344.9	4.9	477.2	4.4		66.0	1.5628	1.5167	6.3	241.5
2020	314.2	4.7	420.0	2.5	(5.3)	143.8	1.4966	1.4163	6.3	212.9
2021	307.3	0.6	386.7	3.5		107.1	1.4099	1.3302	5.6	193.7
2022 (9 month estimate)	255.7	3.0	274.3	2.6		155.6	1.3238	1.3121	2.8	59.1

¹ Appropriations are net of payroll tax refunds for the calendar year.

² Uncollectible benefits overpayments are included in annual benefit payments.

³ Figures in parentheses represent amounts creditable or transferred to trust fund.

⁴ Represents rate derived from average interest rate earned by trust fund in indicated six month period. Interest factors applied to balance at beginning of period plus weighted net income in period.

⁵ The Social Security Equivalent Benefit (SSEB) Account replaced the Railroad Retirement Account (RRA) as the Financial Interchange depository beginning in 1984.

⁶ Figures in parentheses represent increases in trust fund balances at end of year.

NOTE - Detail may not add to totals shown because of rounding.

Table 3. — RRB-CMS Financial Interchange: Change in Balance of HI Trust Fund at End of Each Calendar Year 1966-2021, and on September 30, 2022
(Dollar amounts in millions)

Calendar Year	Appropriations (Payroll Taxes) ¹	Income Taxes	Administrative Expenses	Transfers to HI Trust Fund	Interest Factor ²		Interest Creditable to HI Trust Fund ³	Tax Refunds	Increase in Trust Fund Balance at End of Year
					First Semi-Annual %	Second Semi-Annual %			
Total	\$20,030.2	\$20.5	\$117.4	\$20,802.4			\$1,437.9	\$18.5	
1966	33.1		0.4	16.3	2.1800	2.4200	0.5		\$16.9
1967	47.2		0.1	44.0	2.1400	2.3800	1.4	0.1	21.4
1968	60.7		0.1	54.2	2.4200	2.5200	1.7	0.4	29.5
1969	60.7		0.1	63.5	2.7100	2.8000	2.2	1.1	28.8
1970	60.3		0.1	65.9	3.0900	3.1700	2.5	0.8	25.6
1971	59.8		0.1	66.1	3.2900	3.2600	2.3	0.6	21.5
1972	65.5		0.1	63.2	3.2800	3.1600	2.4	0.8	26.1
1973	126.3		0.1	99.2	3.1800	3.2300	4.1	0.7	57.2
1974	133.2		0.1	132.5	3.3800	3.5000	6.2	1.2	64.0
1975	131.7		0.1	137.7	3.5500	3.5100	7.0	0.8	64.9
1976	145.6		0.8	142.9	3.5700	3.6000	7.6	0.6	74.4
1977	156.5		1.0	0.0	3.6200	3.7200	11.6	0.7	241.5
1978	185.8		1.2	213.7	3.5900	3.7200	16.0	0.5	228.4
1979	240.1		1.7	191.1	3.8200	3.8900	19.0	1.5	294.7
1980	253.4		1.5	244.3	4.1000	4.1700	23.7	0.9	326.0
1981	323.2		1.9	276.5	4.4900	4.8800	31.4	0.7	402.2
1982	314.3		2.5	351.4	5.0700	5.4200	38.3	0.7	400.9
1983	312.5		2.3	357.7	5.4800	5.6000	40.0	0.6	393.4
1984	326.7		2.0	350.6	5.7800	5.9300	43.3	0.5	410.8
1985	327.2		2.1	371.4	5.8900	5.6600	43.7	0.8	408.2
1986	343.8		2.1	364.4	5.1500	4.9800	38.6	0.8	424.1
1987	344.9		2.2	368.0	4.8800	4.8400	38.5	0.5	437.3
1988	338.8		2.6	363.8	4.8500	4.8200	39.6	0.9	449.3
1989	333.5		2.7	378.8	4.8200	4.7200	39.2	0.9	440.5
1990	329.1		2.5	367.4	4.7100	4.6700	38.2	0.7	437.9
1991	347.3		2.4	352.2	4.6300	4.5400	38.0	0.5	468.6
1992	363.7		2.7	374.5	4.5200	4.4200	39.3		494.4
1993	375.3		2.7	400.5	4.3900	4.2700	40.2		506.7
1994 ⁴	362.6	0.0	2.7	412.9	4.2600	4.2100	38.5	0.2	492.2
1995	367.8	0.2	2.4	396.1	4.2200	4.1100	38.2		499.9

Table 3. -- RRB-CMS Financial Interchange: Change in Balance of HI Trust Fund at End of Each Calendar Year 1966-2021, and on September 30, 2022 (Continued)

Calendar Year	Appropriations (Payroll Taxes) ¹	Income Taxes	Administrative Expenses	Transfers to HI Trust Fund	Interest Factor ²		Interest Creditable to HI Trust Fund ³	ACA Adjustments	Increase in Trust Fund Balance at End of Year
					First Semi-Annual %	Second Semi-Annual %			
1996	\$375.1	\$0.0	\$3.2	\$401.3	4.0900	4.0600	\$37.9		\$508.4
1997	382.2	(0.1)	3.0	419.1	4.0100		37.2		505.6
1998	411.7	0.0	3.0	419.4	3.9800	3.9200	37.9		532.8
1999	416.4	0.0	2.8	429.9	3.8800	3.7200	38.1		554.6
2000	407.4	0.0	2.1	465.3	3.6800	3.6200	36.4		531.0
2001	397.6	(0.2)	2.4	469.7	3.5200	3.4100	32.7		489.0
2002	393.3	(0.3)	2.2	424.7	3.3400	3.2300	29.6		484.7
2003	402.8	0.2	2.4	426.3	3.1800	2.9200	27.5		486.5
2004	423.8	0.3	2.6	418.6	2.9500	2.9200	27.2		516.6
2005	447.2	0.0	3.5	444.9	2.8100	2.7000	27.0		542.4
2006	469.0	(0.4)	3.4	471.5	2.7000	2.6500	27.7		563.8
2007	488.5	(0.2)	3.5	483.3	2.6500	2.6200	28.7		594.0
2008	519.5	(0.2)	3.3	525.7	2.5900	2.5100	28.8		613.1
2009	470.9	0.0	3.3	524.3	2.4800	2.4200	27.4		583.8
2010	472.0	0.0	3.9	535.1	2.4000	2.3800	24.6		541.4
2011	517.8	0.3	3.7	477.2	2.3500	2.3700	25.2		603.8
2012	566.1	0.6	3.5	510.9	2.2900	2.2900	27.8		683.9
2013	548.1	0.7	2.5	576.6	2.2300	2.2200	28.4		682.0
2014	607.9	1.0	2.5	611.6	2.1900	2.1800	28.2		705.0
2015	624.8	1.4	2.6	594.7	2.1700	2.0900	29.6	\$1.2	764.7
2016	571.2	1.9	2.9	656.8	2.0300	1.8800	27.0	1.4	706.5
2017	576.7	1.9	2.3	637.4	1.8500	1.8100	23.6	1.7	670.7
2018	603.3	1.8	2.2	596.5	1.8200	1.7800	23.2	1.8	702.1
2019	589.5	1.5	2.2	570.3	1.7400	1.5900	23.0	2.4	746.0
2020	524.9	1.9	1.8	606.4	1.4400	0.9300	16.6	1.8	683.0
2021	522.6	3.3	1.9	568.2	0.9700	1.0100	12.2	3.0	654.0
2022 (9 month estimate)	429.3	4.9	1.4	515.9	1.0800	1.3100	11.2		582.1

¹ Appropriations are net of payroll tax refunds for the calendar year.

² Represents rate derived from average interest earned by trust fund in indicated six month period. Interest factor applied to balance at beginning of period plus weighted net income in period.

³ Figures adjusted to allow for interest on cash transfers to trust fund, at rates shown in table, from date of transfer to end of year.

⁴ Tax refunds ceased after 1994.

NOTE - Detail may not add to totals shown because of rounding.

EXHIBIT 1 – BENEFIT, ADMINISTRATIVE COST, INCOME TAX, INTEREST CHARGES CALCULATIONS AND CORRESPONDENCE

Part I. Summary of Benefit, Administrative Cost, Income Tax, and Interest Charges Calculations

Benefit Calculations

The benefit calculations for each determination include estimating, from one-percent sample data, the additional benefit amounts payable on the basis of railroad employment for the calendar year ending in the fiscal year covered by the determination. A preliminary estimate is also made of the benefit amounts for the last nine months of the fiscal year. In addition, adjustments in benefit calculations for prior years are made to reflect new information or to correct processing errors.

The railroad beneficiary universe for the calendar year, to which sample amounts are inflated, consists of all accounts on which a monthly benefit was in force (payable or withheld) under the Railroad Retirement Act (RRA) for at least one month of the year and on which a monthly benefit might have been payable under Social Security Administration (SSA) eligibility conditions. Also included are those on which an SSA lump sum based on death in the year would have been payable. The corresponding one-percent sample consists of cases carried over from earlier determinations and new cases in the universe with employee SSA account number ending in the digits "30."

The sample also includes cases with employee SSA number ending in "30" of non-retired employees full retirement age and over, employees (and their auxiliaries) eligible for RRA benefits but only paid benefits by SSA, and of widows ages 60 and over not on the RRB rolls (due to election of residual payment) where SSA benefits would have been payable in the year. The universe numbers for these railroad non-beneficiaries are assumed to be 100 times the sample numbers.

For each railroad employee beneficiary in the sample, a gross benefit amount was calculated on the basis of the employee's combined railroad and social security earnings record. Appropriate reductions for benefits payable on other earnings records and for earnings received during the year were then applied. Auxiliary benefits are either computed or estimated. Beginning with the 60th determination for calendar year 2010, auxiliary benefits are only computed when there is a spouse under full retirement age whose annuity is not reduced for early retirement. For all other cases, auxiliary benefits are estimated by applying factors based on SSA experience by gender (Tables 1 and 2) to the employee's benefit amounts. The gross amounts were reduced by the amounts of actual SSA payments, to obtain net additional amounts that would be paid on the basis of railroad employment. Separate OASI and DI amounts were developed for employee disability beneficiaries who were paid actual old-age benefits by SSA.

Separate OASI life and survivor amounts were developed in cases where the employee annuitant died during the year. For all survivor cases, the gross amount is computed based on the employee's combined earnings, with reduction when needed for beneficiary earnings in the year. Survivor gross amounts are reduced for actual SSA payments based on other earnings records (in most cases the beneficiary's) to obtain the net additional OASI amounts based on railroad service.

For employees who retired after 1956 and for non-retired employees who died after 1956, actual earnings under social security annual limits have been obtained from railroad employers. For cases on the rolls before 1957, however, annual benefits before reduction for SSA payments were increased by fixed ratios according to year of accrual. (Development of the ratios is described in the Financial Interchange Summary and Documentation for Fiscal Year 1957-58, pages 135-142.) The distribution of OASI and DI sample amounts by type of benefit is shown in Table 3.

The sample and universe are stratified to improve the accuracy of the benefit estimates. The retirement beneficiary stratification is based on the employee's age in the determination year, the year their RRA annuity began and whether an RRA spouse annuity was payable. Monthly survivor beneficiary records are stratified on the basis of number of beneficiaries, type of benefit, beneficiary's age, and year of employee's death, or, if applicable, year retired employee had attained age 66. There is a single stratum for lump-sum death benefits and one for the railroad non-beneficiary group. Employee disability benefit strata are based entirely on employee's age. The composition of the 2021 strata is shown in Table 4.

Universe and sample counts were obtained for each stratum and the sample benefit payment amounts were tabulated by stratum (Tables 5 and 5a). These sample benefit payment amounts were then inflated by multiplying each stratum total by the ratio of the universe number to the sample number.

On an accrual basis, the uninflated additional OASI benefits for 2021 totaled \$74,156,001 and the inflated amount was \$7,415,083,214. The standard error of the OASI inflated amount was \$54,710,759 and the 95-percent confidence interval for the amount of OASI benefits was \$7,307,850,126 to \$7,522,316,303.

The uninflated amount of additional DI benefits accrued in 2021 was \$3,354,793. The inflated amount was \$380,019,177. The standard error of the DI inflated amount was \$10,640,751 and the 95-percent confidence interval for the amount of DI benefits was \$359,163,304 to \$400,875,049.

The preliminary estimates of additional benefit payments in January-September 2022 were made largely on the basis of the net sample amounts in current-payment status at the end of 2021. Allowances were made for lump-sum payments and the effect of family composition factors. The estimated accrued benefit amounts payable in the 9-month period were \$5,799 million in OASI and \$270 million in DI benefits. These figures will be superseded in the next determination by a calendar year 2022 estimate based on the one-percent sample.

Adjustments were made to the benefit calculations for years prior to 2021. These adjustments primarily involved the late receipt of data on benefit payments or earnings from RRB or SSA and the correction of processing errors. OASI adjustments increased benefits by \$16,997,000 for calendar years 1998-2020 and DI adjustments increased benefits by \$9,193,000 for calendar years 2019-2021.

The inflated adjustments and adjusted benefit amounts are shown by Trust Fund in Tables 6 and 6a.

The adjusted benefit payments for a year are the latest estimates of the amounts that would have been payable for that period on an accrual basis. Beginning with the 39th determination, second-degree curves are fit to annual accrued benefit amounts to estimate accrued benefit payments by month. The payments are then converted from an accrual to a cash basis by adding the estimated amount accrued in the preceding year but paid in the current year to the estimated amount both accrued and paid in the current year. These amounts are estimated from the number of lag months, i.e., the average length of time from date of accrual to payment, under SSA experience.

Beginning with the 46th determination (see Financial Interchange Summary and Documentation for Fiscal Year 1997, pages 42-46), the calculation of the float period reflects cycled benefit payments initiated by SSA. The float is the average number of days between the beginning of the month and the day on which Treasury clears funds for benefit payments. Effective June 1997, SSA began paying monthly benefits on staggered Wednesdays in the month (cycles 2 through 4) in addition to the third of the month (cycle 1). Almost all the SSA benefits paid in cycles 2 through 4 payments are to new beneficiaries, and the formula assumes all cycle 2 through 4 payments are by electronic funds transfer

(EFT). The methodology to calculate a cycled float utilizes RRB experience on the percentage of annuitants receiving payments by EFT and SSA experience on the proportion of payments made in cycle 1 versus cycles 2 through 4. Table 7 displays the calculation of the float.

Beginning with the 53rd determination (see Financial Interchange Summary and Documentation for Fiscal Year 2004, pages 36-48), benefit overpayments written off as uncollectible are included in the calculations. Table 8 displays the calculation of the uncollectible overpayment amounts included in the benefit calculations for calendar years 1999-2021.

The Financial Interchange is liable under Public Law 88-133 for crediting SSA with benefits they have paid that are associated with pre-1957 military service covered under both the RRA and SSA. These benefits paid during 1952-1972, 1973-1974, 1975-1979, 1980-1991, 1992-1997, 1998-2005, and 2006-2018 were reimbursed in the 25th, 26th, 44th, 49th, 61st, 65th, and 69th determinations, respectively. No pre-1957 military service adjustment is included in the 71st determination.

Administrative Cost Calculations

The additional administrative expenses that would have been paid by the OASDHI Trust Funds with respect to coverage of railroad employment were estimated to total \$19.7 million for 2021 (Tables 9 and 9a). Expenses are based on unit cost factors supplied by SSA (see Correspondence) and workload estimates developed from the financial interchange one-percent sample of beneficiaries, the gross earnings one-percent sample of active railroad employees and actual RRB wage reports processing.

Beginning with the 38th determination, administrative expense calculations reflect an agreement on the treatment of dually entitled annuitants (discussed in the Financial Interchange Summary and Documentation for Fiscal Year 1986 (pages 76-95), Fiscal Year 1987 (pages 49-59) and Fiscal Year 1988 (pages 70-77)). The following discussion is a simplified explanation of how cases receiving SSA benefits are treated under the agreement.

The estimated net additional number of OASI cases for which there would have been a determination of insured status and computation of the primary insurance amount (PIA) is based on the financial interchange sample. It is 100 times the difference between (1) the number of new awards to employees and survivors where no previous FI or SSA award had been based on the account and (2) the number of accounts on the FI employee and survivor rolls on which SSA awarded benefits in the determination year.

Additional DI cases requiring determination of insured status and computation of PIA are based on the inflated number of disability freeze decisions reached in the determination year, less the number where SSA made the first freeze determination.

The number of additional cases that would have required adjudication of OASI auxiliary benefits was estimated from financial interchange sample data. It is the difference (inflated) between (1) the number of new OASI awards to spouses and children not receiving SSA benefits or to survivors who were not receiving life benefits in the month prior to the employee's death and (2) the number of aged widows (not on the RRA rolls), spouses, and children on the FI rolls who were awarded SSA benefits in the determination year.

The approximate increase in administrative costs due to the maintenance of benefit rolls is based on the number of benefits in the financial interchange sample. It is the average of the inflated number of financial interchange benefits (excluding those to individuals receiving SSA benefits) payable at the end

of the determination year and at the end of the preceding determination year.

The number of compensation reports that would have been received by SSA from railroad employers was estimated from RRB experience during the year. Included are allowances for compensation adjustments and additional reports for employees with more than one railroad employer. The cost is apportioned between the OASI, DI, and HI Trust Funds. A portion of the costs for both OASI and DI awards is charged to the HI Trust Fund as it pays the hospital insurance benefits that are charged to these accounts. This portion of the OASI and DI costs is supplied by SSA in the form of unit cost factors. Table 9 shows the 2021 OASI and DI administrative cost calculations. The 2021 HI administrative cost calculation is shown in Table 9a.

Income Tax Calculations

At the beginning of each quarter, Treasury transfers the estimated increase in tax liability to the OASI and DI Trust Funds and the Social Security Equivalent Benefit Account for benefit payments to be received during such quarters. Proper adjustments to the transfers are made whenever the actual increase in tax liability is determined.

Income tax transfers in the financial interchange are calculated as a proportion of railroad retirement Tier 1 to social security equivalent benefit income taxes. Children of life annuitants are excluded from the calculations because it can be assumed that they would have negligible tax liability. All other non-RRB annuitants (primarily widow(er)s and spouses) are assumed to have proportionate tax liability.

Beginning with the 36th determination, income tax calculations reflect prior year income tax reconciliations. Financial interchange income tax adjustments are made in the year of the Treasury reconciliation.

The Omnibus Budget Reconciliation Act of 1993 legislation raised the level of taxes imposed on Social Security beneficiaries beginning in 1994. The increased tax revenues resulting from this legislation are payable to the HI Trust Fund. The manner of financial interchange tax liability calculations and Treasury payments to the HI Trust Fund are similar to that for OASDI. Beginning with the 43rd determination, annual adjustments are calculated to equate Treasury's quarterly and adjustment payments to what they would have been had they been calculated under the financial interchange methodology.

Table 10 shows the results of the OASDI calculations for calendar years 1984-2021 and January-September 2022. Table 10a shows the results of the HI calculations for calendar years 1994-2021 and January-September 2022.

Interest Charges Calculations

Interest charges on income taxes, administrative expenses, payroll taxes (including refunds), and benefits (including prior year amendments) accrue at interest rates earned by the OASI and DI Trust Funds on a semi-annual basis. The effective interest rates for the first and second halves of 2022 are 1.17491% and 1.15070% for the OASI Trust Fund, and 1.32383% and 1.31214% for the DI Trust Fund. The interest charges for the current determination reflect a cumulative interest accrual on \$17.0 million in OASI prior year benefit charges and \$9.2 million in DI prior year benefit charges.

Communications

The Correspondence and Memoranda section in Part V contains letters and memoranda sent between the RRB and SSA and the RRB and CMS on financial interchange related matters.

Part II.

Tables Pertaining to Benefit Calculations

**Table 1. -- Computation of Family Composition Factors and Factors for Child's Benefits for Calendar Year 2021
Applied to Male Old-Age Employees**

Age Last Birthday of Old-Age Beneficiary	Social Security Data		
	(A)	(B)	(C)
	Child Factors	Family Composition Factors I	Family Composition Factors II
	$\frac{(1)-(7)+(3)-(9)}{(1)-(7)}$	$\frac{(5)+(6)}{(5)}$	$\frac{(2)-(5)+(3)+(10)-(6)}{(2)-(5)}$
62	1.0226	.....	.....
63	1.0242	.....	.....
64	1.0226	.....	.....
65	1.0185	1.0142	1.0174
66	1.0152	1.0126	1.0156
67	1.0146	1.0134	1.0153
68	1.0136	1.0127	1.0143
69	1.0125	1.0110	1.0133
70	1.0105	1.0097	1.0114
71	1.0101	1.0101	1.0107
72	1.0095	1.0100	1.0100
73	1.0091	1.0107	1.0093
74	1.0084	1.0111	1.0084
75	1.0082	1.0112	1.0080
76	1.0077	1.0126	1.0075
77	1.0075	1.0130	1.0071
78	1.0069	1.0138	1.0065
79	1.0067	1.0152	1.0062
80-84	1.0060	1.0182	1.0054
85 and over	1.0045	1.0149	1.0040

NOTE - Numbers in above column formulae correspond to the columns in Table 1a, which is supplied annually by SSA.

Column (A) - Factors to be applied to amounts of male old-age benefits in area of actual life benefits.

Column (B) - Factors to be applied to amounts of male old-age benefits in area of presumptive life benefits with a spouse on the rolls.

Column (C) - Factors to be applied to amounts of male old-age benefits in area of presumptive life benefits with no spouse on the rolls.

Table 1a — Selected benefit estimates relating to male old-age (primary) beneficiary families in current-payment status on 12/31/2021

Age	All old-age families			Beneficiary families consisting of a male old-age beneficiary with an aged wife receiving a full benefit whether or not children are present			Beneficiary families consisting of a male old-age beneficiary with a wife whose entitlement is based on having an eligible child in her care and is receiving a full benefit			
	(1) Old-age benefits	(2) Monthly rate of PIA	(3) Child benefits	(4) Old-age benefits	(5) Monthly rate of PIA	(6) Child benefits	(7) Old-age benefits	(8) Monthly rate of PIA	(9) Child benefits	(10) Wife benefits
62	\$375,586,466	\$525,474,860	\$9,211,360	\$1,054,757	\$1,477,395	\$11,786	\$1,295,839	\$1,816,064	\$746,162	\$583,407
63	572,708,647	780,859,750	15,110,048	2,087,207	2,850,859	33,482	2,337,641	3,199,556	1,314,168	1,045,114
64	718,658,621	949,198,693	17,682,701	3,389,340	4,480,486	72,145	2,808,265	3,742,291	1,524,511	1,242,105
65	997,719,469	1,247,035,517	20,200,479	6,188,789	7,642,462	108,162	3,432,131	4,378,321	1,773,100	1,443,987
66	2,193,724,878	2,443,183,973	35,845,198	22,335,437	24,177,173	304,387	5,769,657	6,588,643	2,671,682	2,192,884
67	2,628,013,719	2,848,394,082	41,219,525	43,361,780	45,248,171	608,385	6,630,518	7,269,872	2,987,978	2,408,855
68	2,530,590,392	2,728,274,150	36,844,235	71,090,636	72,834,043	924,988	5,739,665	6,226,442	2,547,729	2,098,278
69	2,567,841,110	2,758,405,202	34,378,159	106,796,159	107,995,957	1,185,468	5,428,957	5,823,300	2,362,509	1,965,430
70	2,838,545,523	2,935,576,546	31,674,933	143,379,542	136,731,575	1,332,182	4,291,368	4,513,481	1,837,683	1,528,507
71	2,643,881,998	2,742,720,350	28,095,239	141,074,737	131,813,632	1,335,775	3,542,131	3,689,793	1,512,385	1,237,662
72	2,589,654,387	2,710,606,454	25,961,724	143,102,352	131,942,500	1,316,467	3,346,771	3,470,251	1,433,187	1,170,636
73	2,524,877,107	2,671,747,270	24,024,729	131,968,061	122,482,513	1,312,415	2,599,995	2,719,845	1,108,184	920,800
74	2,520,359,197	2,692,576,684	22,136,784	121,929,546	114,249,281	1,265,170	2,331,532	2,431,791	1,011,872	826,652
75	2,205,740,080	2,374,403,899	18,775,249	100,350,365	95,211,856	1,061,778	1,750,934	1,848,943	758,944	626,864
76	1,638,350,875	1,857,330,646	13,826,260	69,766,322	66,879,382	842,759	1,203,124	1,268,843	532,950	424,341
77	1,717,482,259	1,784,572,100	12,605,391	59,575,115	57,839,705	754,609	905,591	958,795	389,760	329,919
78	1,616,746,176	1,774,042,417	11,550,017	53,272,230	52,307,981	721,228	819,178	875,027	360,119	298,399
79	1,490,976,817	1,640,991,452	10,259,388	43,148,614	43,100,418	657,133	649,567	688,395	278,798	234,899
80	1,257,956,392	1,386,837,356	8,348,851	33,604,442	33,837,617	561,771	520,974	564,393	237,375	190,205
81	1,098,008,988	1,210,241,742	6,958,316	27,591,042	28,061,589	492,072	339,445	366,806	154,690	124,130
82	952,578,086	1,048,353,377	5,834,752	22,052,934	22,519,118	427,608	249,020	271,246	110,851	93,275
83	867,888,641	953,844,885	4,947,357	19,307,863	19,786,718	403,594	175,921	188,086	77,406	65,504
84	742,199,407	812,134,184	4,026,142	16,334,857	16,733,881	317,393	139,667	149,820	61,332	51,120
85	616,729,643	674,598,120	3,185,274	12,816,002	13,147,282	231,733	94,097	99,118	38,987	34,139
86	533,127,567	582,523,459	2,613,992	11,429,350	11,738,816	209,319	65,276	70,056	28,246	22,384
87	453,154,506	492,242,870	2,187,671	10,706,776	10,839,843	195,371	50,310	53,208	21,217	19,532
88	375,146,462	404,367,459	1,744,408	9,701,019	9,601,085	144,553	35,922	38,194	15,110	14,139
89	334,916,390	359,753,438	1,479,265	9,392,189	9,122,793	132,753	30,291	32,810	13,000	11,225
90	275,817,110	293,621,855	1,215,946	8,116,531	7,709,763	89,756	17,939	18,773	7,262	6,755
91	229,995,002	244,093,652	971,767	6,798,714	6,379,669	79,215	18,580	19,329	6,804	7,002
92	176,106,043	186,168,275	730,052	4,996,739	4,641,198	49,634	5,902	5,650	2,469	1,815
93	139,340,335	147,689,059	553,687	3,760,761	3,532,061	46,296	7,208	7,617	2,688	2,688
94	107,495,685	113,505,066	406,667	2,583,228	2,429,126	16,623	6,721	6,641	2,943	2,342
95	76,020,083	80,363,813	282,717	1,623,376	1,536,347	15,921	5,795	5,411	2,533	1,996
96	54,304,712	57,220,875	199,760	1,101,326	1,044,085	14,085	1,531	1,901	1,140	285
97	36,751,858	38,690,494	125,050	767,850	727,053	8,980	3,750	3,261	1,634	817
98	23,726,271	24,773,997	75,119	428,986	408,427	2,817	1,320	1,270	530	530
99	14,855,675	15,474,580	58,156	260,134	244,899	4,200	0	0	0	0
100	9,392,627	9,736,367	25,152	109,789	103,726	0	0	0	0	0
101+	10,881,945	11,203,392	37,404	149,456	142,694	1,679	0	0	0	0
Total	42,757,851,148	46,612,832,358	455,408,922	1,467,504,351	1,423,553,177	17,293,691	56,652,534	63,413,244	25,937,939	21,228,622

**Table 2. -- Computation of Family Composition Factors and Factors for Child's Benefits for Calendar Year 2021
Applied to Female Old-Age Employees**

Social Security Data			
Age Last Birthday of Old-Age Beneficiary	(A)	(B)	(C)
	Child	Family	Family
	Factors	Composition	Composition
	$\frac{(1)-(7)+(3)-(9)}{(1)-(7)}$	$\frac{(5)+(6)}{(5)}$	$\frac{(2)-(5)+(3)+(10)-(6)}{(2)-(5)}$
62	1.0054	.....	.....
63	1.0059	.....	.....
64	1.0054	.....	.....
65	1.0043	1.0039	1.0037
66	1.0038	1.0031	1.0036
67	1.0037	1.0020	1.0036
68	1.0036	1.0027	1.0035
69	1.0032	1.0033	1.0032
70	1.0026	1.0029	1.0027
71	1.0025	1.0030	1.0026
72	1.0023	1.0023	1.0023
73	1.0021	1.0037	1.0021
74	1.0018	1.0024	1.0019
75	1.0018	1.0019	1.0019
76	1.0016	1.0018	1.0017
77	1.0015	1.0017	1.0016
78	1.0013	1.0014	1.0014
79	1.0012	1.0019	1.0013
80-84	1.0010	1.0022	1.0011
85 and over	1.0005	1.0023	1.0006

NOTE - Numbers in above column formulae correspond to the columns in Table 2a, which is supplied annually by SSA.

Column (A) - Factors to be applied to amounts of female old-age benefits in area of actual life benefits.

Column (B) - Factors to be applied to amounts of female old-age benefits in area of presumptive life benefits with a spouse on the rolls.

Column (C) - Factors to be applied to amounts of female old-age benefits in area of presumptive life benefits with no spouse on the rolls.

Table 2a — Selected benefit estimates relating to female old-age (primary) beneficiary families in current-payment status on 12/31/2021

Age	All old-age families			Beneficiary families consisting of a female old-age beneficiary with an aged husband receiving a full benefit whether or not children are present			Beneficiary families consisting of a female old-age beneficiary with a husband whose entitlement is based on having an eligible child in his care and is receiving a full benefit			
	(1) Old-age benefits	(2) Monthly rate of PIA	(3) Child benefits	(4) Old-age benefits	(5) Monthly rate of PIA	(6) Child benefits	(7) Old-age benefits	(8) Monthly rate of PIA	(9) Child benefits	(10) Husband benefits
62	\$328,816,499	\$447,411,658	\$1,794,078	\$848,662	\$1,191,821	\$6,679	\$13,817	\$19,361	\$7,122	\$5,767
63	504,878,568	663,525,648	2,977,738	2,142,947	2,932,686	15,059	27,413	37,840	15,142	13,040
64	641,691,911	809,384,969	3,474,961	3,681,783	4,898,087	22,182	21,838	28,854	13,675	9,318
65	899,915,750	1,069,838,444	3,912,895	6,616,906	8,289,260	32,532	14,966	19,459	7,123	7,624
66	1,787,716,909	1,913,777,054	6,867,771	14,756,134	16,523,483	51,526	29,642	34,993	12,814	13,747
67	2,110,433,656	2,183,708,107	7,778,785	25,482,770	26,917,823	54,155	23,678	26,290	9,696	9,696
68	1,948,170,002	1,999,115,347	7,003,978	28,685,851	29,622,656	79,795	30,374	32,113	11,574	12,038
69	1,975,783,551	2,013,165,477	6,375,942	25,869,724	26,232,150	87,391	22,149	24,595	9,449	8,558
70	2,221,477,793	2,167,543,466	5,859,638	20,345,883	19,485,469	57,136	14,232	15,578	6,276	4,894
71	2,089,005,089	2,023,237,149	5,185,745	14,560,726	13,730,251	41,092	8,777	9,807	3,377	4,112
72	2,060,563,898	1,996,893,868	4,652,471	11,984,920	11,230,158	26,250	5,255	5,630	1,985	2,418
73	2,008,954,847	1,950,618,610	4,191,173	9,299,836	8,897,572	32,587	1,468	1,469	571	571
74	1,997,759,287	1,919,878,913	3,679,276	7,190,760	7,057,140	17,103	3,265	3,944	1,648	1,648
75	1,746,554,832	1,673,746,497	3,202,472	5,582,258	5,529,431	10,242	2,177	2,481	930	930
76	1,368,583,639	1,290,414,104	2,181,918	3,736,222	3,747,995	6,861	0	0	0	0
77	1,322,499,444	1,233,934,563	1,936,593	3,203,602	3,216,039	5,367	0	0	0	0
78	1,316,598,178	1,216,060,155	1,712,641	2,588,231	2,651,429	3,838	0	0	0	0
79	1,218,186,336	1,113,137,627	1,495,686	2,346,468	2,411,177	4,473	0	0	0	0
80	1,042,163,102	944,632,850	1,268,449	1,684,145	1,733,863	7,026	0	0	0	0
81	922,143,129	823,949,105	950,348	1,346,084	1,379,255	2,148	0	0	0	0
82	821,331,417	717,699,882	796,311	1,191,137	1,220,273	2,592	0	0	0	0
83	761,752,336	653,615,681	661,794	921,457	940,552	1,218	0	0	0	0
84	667,487,014	558,713,785	575,073	714,361	727,625	276	0	0	0	0
85	582,223,404	470,516,107	404,924	495,244	500,719	3,104	0	0	0	0
86	521,449,301	409,477,103	313,506	401,321	391,559	82	0	0	0	0
87	458,897,104	352,316,789	232,343	296,431	296,724	0	0	0	0	0
88	390,997,488	295,813,101	192,847	210,746	203,740	542	0	0	0	0
89	361,406,639	271,723,944	141,348	169,621	162,165	219	0	0	0	0
90	310,096,381	224,596,382	119,397	121,942	117,346	0	0	0	0	0
91	270,819,287	191,339,585	96,101	84,242	78,013	149	0	0	0	0
92	223,775,112	154,445,931	69,867	61,914	59,850	0	0	0	0	0
93	189,729,877	131,692,654	52,311	35,532	32,751	0	0	0	0	0
94	155,943,343	107,999,928	47,578	31,311	28,484	0	0	0	0	0
95	120,486,102	82,067,570	28,939	14,208	15,377	317	0	0	0	0
96	92,982,171	64,089,648	28,005	15,937	14,079	0	0	0	0	0
97	68,989,054	46,645,194	15,996	6,854	6,285	0	0	0	0	0
98	48,382,856	32,296,009	12,634	5,152	4,846	0	0	0	0	0
99	33,101,712	21,781,616	7,350	1,347	987	0	0	0	0	0
100	23,376,211	15,251,405	7,263	0	0	0	0	0	0	0
101+	35,674,962	24,209,559	10,153	0	0	0	0	0	0	0
Total	35,650,798,187	34,280,265,479	80,316,297	196,732,667	202,479,118	571,941	219,050	262,413	101,383	94,363

Table 3. – Analysis of Net Benefit Amounts (Uninflated) for 2021, By Type of Benefit (Accrual Basis)
(in thousands)

Type of Benefit	Total			OASI			DI		
	Net Chargeable	Combined ¹ Earnings	Actual SSA Offsets	Net Chargeable	Combined ¹ Earnings	Actual SSA Offsets	Net Chargeable	Combined Earnings	Actual SSA Offsets
Total	\$77,511	\$85,532	\$8,021	\$74,156	\$82,136	\$7,980	\$3,355	\$3,396	\$41
Retired Employees, Total	51,992	55,703	3,711	48,793	52,463	3,670	3,199	3,240	41
Full Rate	15,069	17,005	1,936	11,870	13,765	1,895	3,199	3,240	41
Reduced Rate	36,923	38,698	1,775	36,923	38,698	1,775	-	-	-
Non-Retired Employees, Total	5	18	13	5	18	13	-	-	-
Presumptives ²	-	-	-	-	-	-	-	-	-
Regular ³	5	18	13	5	18	13	-	-	-
Auxiliaries of Retired Employees, Total	10,469	10,516	47	10,313	10,360	47	156	156	-
Spouses, Full Rate, Full Retirement Age and Over	631	649	19	631	649	19	-	-	-
Spouses, Reduced Rate	9,658	9,687	28	9,563	9,592	28	95	95	-
Spouses, Full Rate, Under Full Retirement Age	79	79	-	72	72	-	7	7	-
Children ⁴	101	101	-	46	46	-	55	55	-
Auxiliaries of Non-Retired Employees, Total	1	10	9	1	10	9	-	-	-
Survivors, Total	15,045	19,286	4,242	15,045	19,286	4,242	-	-	-
Aged Widow(er)s, Full Rate	2,983	3,958	974	2,983	3,958	974	-	-	-
Aged Widow(er)s, Reduced Rate	10,641	13,680	3,039	10,641	13,680	3,039	-	-	-
Disabled Widow(er)s	494	611	117	494	611	117	-	-	-
Widowed Mothers/Fathers	102	102	-	102	102	-	-	-	-
Children and Parents	810	906	96	810	906	96	-	-	-
Widow(er)s Not on RRB Rolls	1	16	15	1	16	15	-	-	-
Lump Sum	14	14	-	14	14	-	-	-	-

¹ Includes amounts due to child and family composition factors.

² Benefits for period between earliest retroactivity of application and date of first payment by RRB or SSA.

³ Benefits paid by SSA, but not RRB.

⁴ Actual SSA offsets under OASI were below \$500, and thus were rounded down to \$0.

NOTE: For retired employees and auxiliaries, combined earnings are after reduction for receipt of SSA benefits based on other than retired employee's earnings. SSA offsets for retired employees and auxiliaries include only payments based on retired employee's earnings. For survivors, SSA offsets are payments based on other than the employee's earnings. Detail may not add to totals shown because of rounding.

Table 4. -- Stratification of Universe of RRB Beneficiaries, Calendar Year 2021

Stratum Number	Type of RRA Benefit Payable	Age of Beneficiary on Birthday in 2021	RRA Spouse Annuity Payable in 2021	Criterion Year ¹	Number in Survivor Family
<u>OLD-AGE AND SURVIVORS INSURANCE TRUST FUND²</u>					
1	Employee	62-65	---	Before 2022	-
2	Employee	66 or older	Yes	Before 1992	-
3	Employee	66 or older	Yes	1992-1997	-
4	Employee	66 or older	Yes	1998-2003	-
5	Employee	66 or older	Yes	2004-2011	-
6	Employee	66 or older	Yes	2012-2021	-
7	Employee	66 or older	No	Before 1992	-
8	Employee	66 or older	No	1992-1997	-
9	Employee	66 or older	No	1998-2003	-
10	Employee	66 or older	No	2004-2011	-
11	Employee	66 or older	No	2012-2021	-
12	Aged Widow(er)	60-61	---	Before 2022	1
13	Aged Widow(er), Parent	62 or older	---	Before 1979	1
14	Aged Widow(er), Parent	62 or older	---	1979-1986	1
15	Aged Widow(er), Parent	62 or older	---	1987-1996	1
16	Aged Widow(er), Parent	62 or older	---	1997-2001	1
17	Aged Widow(er), Parent	62 or older	---	2001-2006	1
18	Aged Widow(er), Parent	62 or older	---	2007-2011	1
19	Aged Widow(er), Parent	62 or older	---	2012-2021	1
20	Child	---	---	Before 2022	1
21	Disabled Widow(er)	---	---	Before 2022	1
22	Monthly Survivor	---	---	Before 2022	2 or more
23	Monthly Survivor, Lump Sum	---	---	2021 ³	-
24	None ⁴	---	---	---	-
<u>DISABILITY INSURANCE TRUST FUND</u>					
1	Employee Disability	64-FRA ⁵	---	---	-
2	Employee Disability	60-63	---	---	-
3	Employee Disability	55-59	---	---	-
4	Employee Disability	Under 55	---	---	-

¹ For employee benefits, employee annuity accrual year; for monthly survivor benefits, year employee attained age 65, where employee had retired and died at age 65 or older; in all other cases year of employee death.

² Excludes all interim widow(er) benefits, survivor-option annuities, and other survivor benefits based on deaths before April 1938.

³ Employee death in 2021, the determination year, without regard to employee's age or annuity accrual date.

⁴ Non-retired employees at full retirement age and older, employees (and their auxiliaries) with 10 or more years of railroad service (or 5 or more years of railroad service after 1995) paid benefits by SSA but not RRB, and widow(er)s age 60 and older who are not on the rolls.

⁵ Full retirement age gradually increases from age 65 to age 67, for those born between 1937 and 1960. It is age 67 for those born after 1959 and age 65 for those born before 1938.

Table 5. -- Basic Data Used to Compute Inflated Amount of OASI Benefits and Sampling Error, 2021

Stratum Number ¹ <i>i</i>	Universe Number <i>N_i</i>	Sample Number <i>n_i</i>	Sum of Net Benefit Amounts $\sum_{j=1}^{n_i} X_{ij}$	Sum of Squares of Net Benefit Amounts $\sum_{j=1}^{n_i} X_{ij}^2$
Total ²	351,218	3,497	\$74,156,001	\$2,051,930,310,075
1	22,048	215	4,996,875	133,463,009,634
2	5,996	60	1,196,352	27,538,094,964
3	12,930	128	2,907,243	75,528,361,473
4	25,513	256	7,007,244	218,033,378,674
5	51,659	541	15,790,508	522,232,158,165
6	40,844	424	13,076,841	453,140,579,456
7	8,664	78	1,103,880	19,326,821,659
8	11,268	113	1,835,338	35,234,109,810
9	14,543	134	2,524,682	55,640,755,744
10	23,718	223	4,228,205	95,711,884,220
11	24,498	227	4,438,336	103,782,696,800
12	752	11	180,234	3,464,084,842
13	3,029	31	218,810	2,643,857,694
14	7,753	83	978,052	16,194,509,294
15	28,530	292	3,834,212	68,563,715,300
16	14,793	150	1,974,528	38,091,968,384
17	12,628	131	2,088,795	43,087,244,759
18	11,070	101	1,552,160	34,976,913,012
19	11,067	118	2,078,136	48,936,184,984
20	4,709	45	432,584	5,727,859,508
21	3,436	38	507,161	8,595,752,029
22	5,439	40	1,184,741	41,996,967,919
23	6,031	55	14,025	---
24	300	3	7,059	19,401,752

¹. For description of strata, see Table 4.

². Universe and sample numbers exclude 2,995 and 34 retirement annuities, respectively, from a group that consists almost entirely of non-disabled annuitants under age 62.

NOTE: The inflated amount, A , of the benefits and the sample error, S_a , of the inflated amount are computed from the following formulas:

$$A = \sum_{i=1}^{24} \frac{N_i}{n_i} * \sum_{j=1}^{n_i} x_{ij}$$

$$S_a^2 = \sum_{i=1}^{24} \frac{N_i(N_i - n_i)}{n_i^2(n_i - 1)} \left[n_i \sum_{j=1}^{n_i} x_{ij}^2 - \left(\sum_{j=1}^{n_i} x_{ij} \right)^2 \right]$$

where x_{ij} is the benefit amount for the j th individual in the i th stratum and the remaining symbols are defined by the table caption headings. Detail may not add to totals shown because of rounding.

Table 5a. -- Basic Data Used to Compute Inflated Amount of DI Benefits and Sampling Error, 2021

Stratum Number ¹	Universe Number	Sample Number	Sum of Net Benefit Amounts $\sum_{j=1}^{n_i} X_{ij}$	Sum of Squares of Net Benefit Amounts $\sum_{j=1}^{n_i} X_{ij}^2$
i	N_i	n_i		
Total ²	15,310	135	\$3,354,793	\$91,868,728,481
1	5,971	56	1,325,340	35,118,128,948
2	4,333	40	1,085,697	30,589,613,345
3	2,419	18	431,749	11,722,030,147
4	2,587	21	512,007	14,438,956,041

¹ For description of strata, see Table 4.

² Universe and sample exclude 7,094 and 78 disability annuities, respectively, composed largely of annuitants denied a disability freeze. Of these, 3,654 and 42, respectively, were annuitants ages 62 to 66 who were included in the OASI strata.

NOTE: The inflated amount, A , of the benefits and the sample error, S_a , of the inflated amount are computed from the following formulas:

$$A = \sum_{i=1}^4 \frac{N_i}{n_i} * \sum_{j=1}^{n_i} x_{ij}$$

$$s_a^2 = \sum_{i=1}^4 \frac{N_i(N_i - n_i)}{n_i^2(n_i - 1)} \left[n_i \sum_{j=1}^{n_i} x_{ij}^2 - \left(\sum_{j=1}^{n_i} x_{ij} \right)^2 \right]$$

where x_{ij} is the benefit amount for the j th individual in the i th stratum and the remaining symbols are defined by the table caption headings. Detail may not add to totals shown because of rounding.

Table 6. -- OASI Benefit Payments, 1937-2021, Including Adjustments, on an Accrual Basis

Year	Benefit Payments		Adjusted Benefit Payments
	Before Adjustments (Accrual Basis)	Adjustments ¹	
Total	\$236,644,822,774	\$16,997,142	\$236,661,819,916
1937-1970 ²	11,739,327,167	---	11,739,327,167
1971	1,128,570,194	---	1,128,570,194
1972	1,210,965,811	---	1,210,965,811
1973	1,471,457,246	---	1,471,457,246
1974	1,590,141,425	---	1,590,141,425
1975	1,724,239,005	---	1,724,239,005
1976	1,845,392,953	---	1,845,392,953
1977	1,955,837,142	---	1,955,837,142
1978	2,079,934,396	---	2,079,934,396
1979	2,281,435,049	---	2,281,435,049
1980	2,552,252,439	---	2,552,252,439
1981	2,892,694,764	---	2,892,694,764
1982	3,187,533,843	---	3,187,533,843
1983	3,257,653,071	---	3,257,653,071
1984	3,383,732,525	---	3,383,732,525
1985	3,515,602,903	---	3,515,602,903
1986	3,623,833,354	---	3,623,833,354
1987	3,700,591,036	---	3,700,591,036
1988	3,843,574,962	---	3,843,574,962
1989	4,009,931,952	---	4,009,931,952
1990	4,199,908,201	---	4,199,908,201
1991	4,402,929,123	---	4,402,929,123
1992	4,531,315,765	---	4,531,315,765
1993	4,653,171,768	---	4,653,171,768
1994	4,694,292,958	---	4,694,292,958
1995	4,726,567,302	---	4,726,567,302
1996	4,764,123,499	---	4,764,123,499
1997	4,816,342,931	---	4,816,342,931
1998	4,822,260,567	(177,301)	4,822,083,266
1999	4,796,837,227	(510,903)	4,796,326,324
2000	4,819,396,869	63,931	4,819,460,800
2001	4,849,956,379	67,803	4,850,024,182
2002	4,855,267,294	69,530	4,855,336,824
2003	4,884,810,004	69,822	4,884,879,826
2004	4,860,606,010	49,149	4,860,655,159
2005	4,937,109,169	53,325	4,937,162,494
2006	5,083,984,802	53,219	5,084,038,021
2007	5,203,800,832	54,861	5,203,855,693
2008	5,313,538,200	55,546	5,313,593,746
2009	5,650,734,517	59,644	5,650,794,161
2010	5,684,729,591	61,212	5,684,790,803
2011	5,786,022,106	61,791	5,786,083,897
2012	6,058,954,676	66,300	6,059,020,976
2013	6,205,628,521	65,549	6,205,694,070
2014	6,375,737,790	66,518	6,375,804,308
2015	6,542,857,090	67,613	6,542,924,703
2016	6,625,308,999	1,361,640	6,626,670,639
2017	6,727,887,601	3,054,209	6,730,941,810
2018	6,937,093,728	3,159,384	6,940,253,112
2019	7,129,278,380	3,674,823	7,132,953,203
2020	7,294,586,424	5,449,477	7,300,035,901
2021	7,415,083,214	---	7,415,083,214

¹ Includes revision of work deduction amounts and adjustments based on information received subsequent to the previous determination.² Data for years 1937-1970 are not shown separately as they are not adjusted in this determination.

Table 6a. -- DI Benefit Payments, 1957-2021, Including Adjustments, on an Accrual Basis

Year	Benefit Payments		
	Before Adjustments (Accrual Basis)	Adjustments ¹	Adjusted Benefit Payments
	Total		
	\$18,969,481,454	\$9,192,604	\$18,978,674,058
1957-1988 ²	3,259,212,386	---	3,259,212,386
1989	197,808,413	---	197,808,413
1990	193,549,099	---	193,549,099
1991	220,959,582	---	220,959,582
1992	236,428,705	---	236,428,705
1993	248,711,444	---	248,711,444
1994	248,241,221	---	248,241,221
1995	264,253,680	---	264,253,680
1996	273,960,615	---	273,960,615
1997	305,988,787	---	305,988,787
1998	314,356,909	---	314,356,909
1999	341,730,308	---	341,730,308
2000	371,011,014	---	371,011,014
2001	398,667,514	---	398,667,514
2002	446,908,210	---	446,908,210
2003	534,251,811	---	534,251,811
2004	566,765,951	---	566,765,951
2005	591,239,641	---	591,239,641
2006	633,338,928	---	633,338,928
2007	681,521,390	---	681,521,390
2008	691,173,185	---	691,173,185
2009	730,077,531	---	730,077,531
2010	738,159,883	---	738,159,883
2011	736,004,195	---	736,004,195
2012	741,137,800	---	741,137,800
2013	715,777,195	---	715,777,195
2014	697,701,193	---	697,701,193
2015	662,589,532	---	662,589,532
2016	620,484,109	---	620,484,109
2017	533,952,390	---	533,952,390
2018	513,509,456	---	513,509,456
2019	466,088,874	2,867,634	468,956,508
2020	413,901,325	1,848,083	415,749,408
2021	380,019,177	4,476,887	384,496,064

¹ Includes revision of work deduction amounts and adjustments based on information received subsequent to the previous determination.

² Data for years 1957-1988 are not shown separately as they are not adjusted in this determination.

Table 7. -- Summary of Float Days For Financial Interchange, 1997-2022

Year	Cycle 1-4 Payments													
	First Half							Second Half						
	Cycle 1			Cycles 2-4		Combined Float	RRB EFT PCT	Cycle 1			Cycles 2-4		Combined Float	DI
	RRB EFT PCT	Percentage OASI	EFT PCT DI	EFT Float	Check Float			Percentage OASI	EFT PCT DI	EFT Float	Check Float	Float		
1997	63.60%	100.00%	63.60%	2.8333	7.6333	4.5805	66.30%	99.29%	99.47%	66.06%	8.1000	17.4339	4.6025	4.5760
1998	68.90%	97.38%	68.06%	2.5000	7.8333	4.5718	71.50%	95.35%	94.39%	70.11%	8.1333	17.4339	4.9114	5.0531
1999	74.20%	93.34%	72.36%	2.3333	7.7667	4.8067	75.20%	91.14%	88.11%	72.79%	8.3000	17.7673	5.2904	5.7536
2000	76.20%	88.87%	73.22%	2.8333	7.7667	5.6883	77.00%	85.57%	82.20%	73.12%	8.1000	18.1006	5.9350	6.4663
2001	77.70%	83.21%	73.20%	2.3333	7.8000	6.3404	78.80%	81.06%	76.97%	73.85%	8.1000	18.2673	6.5735	7.2252
2002	80.90%	78.82%	74.33%	2.3333	7.6000	6.6432	81.70%	76.64%	72.06%	76.12%	8.0000	18.3768	7.2153	7.9428
2003	82.20%	74.55%	76.12%	2.8333	7.6333	7.5731	82.90%	72.43%	68.26%	76.39%	8.1000	17.4339	7.6666	8.2822
2004	83.60%	70.28%	76.67%	2.6667	7.8000	8.2932	84.10%	68.29%	65.52%	76.72%	8.3000	17.7673	8.2635	8.6864
2005	84.80%	66.05%	76.99%	2.6667	7.8000	8.4597	85.30%	64.13%	63.29%	77.08%	7.9333	19.1006	9.1709	9.3114
2006	85.90%	62.05%	77.28%	2.8333	7.9667	9.1610	86.40%	60.27%	62.11%	77.43%	8.1000	18.1006	9.3820	9.0922
2007	87.00%	58.30%	77.70%	2.3333	7.8000	9.9660	87.50%	56.61%	61.31%	77.92%	8.1000	18.2673	9.9672	9.2190
2008	87.90%	54.72%	77.89%	2.5000	7.6333	10.3358	88.40%	52.90%	59.97%	78.07%	8.1000	17.4339	10.2529	9.2087
2009	89.00%	51.00%	78.43%	2.5000	7.8333	10.8124	89.60%	49.05%	59.05%	78.80%	8.1333	17.5459	10.8169	9.3290
2010	90.10%	47.24%	79.04%	2.3333	7.7667	11.3665	90.60%	45.47%	57.17%	79.33%	8.3000	17.7673	11.3703	9.5838
2011	91.30%	43.85%	80.16%	2.6667	7.8000	11.4052	93.00%	42.36%	56.61%	83.47%	7.9333	19.1006	12.3904	10.0003
2012	94.70%	40.85%	87.02%	2.5000	7.8333	12.0112	96.00%	39.44%	56.30%	89.86%	8.1000	18.2673	12.2142	9.5266
2013	98.00%	37.93%	94.73%	2.3333	7.6000	12.1215	98.90%	36.60%	56.43%	96.99%	8.0000	18.3768	12.6268	9.4773
2014	99.00%	35.33%	97.17%	2.8333	7.6333	12.7545	99.10%	34.15%	56.70%	97.36%	8.1000	17.4339	12.4395	9.1098
2015	99.20%	32.97%	97.57%	2.5000	7.8333	13.1118	99.20%	31.86%	56.90%	97.49%	8.1333	17.5459	12.8489	9.1235
2016	99.20%	30.82%	97.40%	2.1667	7.8000	13.0042	99.20%	29.86%	56.97%	97.32%	7.9333	19.1006	14.1393	9.5925
2017	99.20%	28.84%	97.23%	2.8333	7.9667	13.3834	99.20%	27.93%	57.10%	97.14%	8.1000	18.1006	13.7424	9.1436
2018	99.30%	26.97%	97.40%	2.3333	7.8000	14.4947	99.30%	26.14%	57.25%	97.32%	8.4667	18.2673	14.1454	9.1887
2019	99.30%	25.28%	97.23%	2.3333	7.6000	14.0267	99.30%	24.52%	57.11%	97.15%	8.0000	18.3196	14.4790	9.3239
2020	99.30%	23.77%	97.05%	2.6667	7.8000	13.9602	99.30%	23.03%	57.41%	96.96%	8.1333	17.5459	14.1577	9.0417
2021	99.40%	22.27%	97.31%	2.3333	7.7667	14.8811	99.40%	21.67%	57.41%	97.23%	8.3000	17.7673	14.4940	9.0372
2022	99.40%	21.07%	97.15%	2.6667	7.8000	14.5539	99.40%	20.56%	57.67%	97.08%	7.9333	19.1006	15.6870	9.4649

Table 8. -- Summary of Uncollectible Benefit Overpayment Calculations

Year	SSA Equivalent Uncollectible Overpayments	Sample SSEB Percentage ¹	Overpayment		DI Trust Fund Proportion ²	Amount Charged		Ratio of Overpayments to FI Benefits ³
			Amount Charged	By Trust Fund OASI		DI		
1999	\$3,503,422	66.21%	\$2,319,615	\$1,059,963	0.54304	\$1,259,652	0.0452%	
2000	2,781,767	66.21%	1,841,808	778,261	0.57745	1,063,548	0.0355%	
2001	1,770,787	66.21%	1,172,438	489,584	0.58242	682,854	0.0223%	
2002	1,867,458	66.21%	1,236,444	479,196	0.61244	757,248	0.0233%	
2003	1,867,671	66.21%	1,236,585	441,937	0.64262	794,649	0.0229%	
2004	3,292,057	69.08%	2,274,153	801,451	0.64758	1,472,702	0.0419%	
2005	2,304,781	69.08%	1,592,143	551,506	0.65361	1,040,637	0.0289%	
2006	2,373,485	69.08%	1,639,603	521,833	0.68173	1,117,770	0.0287%	
2007	2,262,935	69.08%	1,563,235	484,892	0.68981	1,078,343	0.0266%	
2008	3,612,941	69.08%	2,495,820	883,599	0.64597	1,612,220	0.0417%	
2009	2,979,389	60.85%	1,812,958	696,022	0.61608	1,116,936	0.0285%	
2010	3,205,170	60.85%	1,950,346	731,961	0.62470	1,218,385	0.0304%	
2011	2,246,004	60.85%	1,366,693	513,628	0.62418	853,066	0.0210%	
2012	1,826,605	60.85%	1,111,489	406,729	0.63407	704,761	0.0164%	
2013	1,503,658	60.85%	914,976	355,343	0.61164	559,632	0.0132%	
2014	2,162,281	62.78%	1,357,480	552,528	0.59298	804,952	0.0192%	
2015	2,633,041	62.78%	1,653,023	762,664	0.53862	890,359	0.0229%	
2016	1,225,186	62.78%	769,172	393,158	0.48886	376,013	0.0106%	
2017	924,273	62.78%	580,259	314,310	0.45833	265,949	0.0080%	
2018	817,161	62.78%	513,013	302,217	0.41090	210,796	0.0069%	
2019	804,726	65.26%	525,164	270,510	0.48490	254,655	0.0069%	
2020	692,212	65.26%	451,738	148,663	0.67091	303,074	0.0059%	
2021	240,104	65.26%	156,692	57,391	0.63373	99,301	0.0020%	

¹ Percentage of SSA equivalent uncollectible overpayments attributable to the SSEB portion of the Tier 1 benefit. Percentages are recalculated every 5 years based on a sample of railroad annuity overpayments written off as uncollectible in the first year of the 5 year grouping.

² OASI/DI allocation is based on overall SSA OASI/DI overpayment experience for the calendar year.

³ The uncollectible overpayment amount, when expressed as a fraction of total benefit payments for the calendar year, is limited to the corresponding ratio of uncollectible overpayments to total benefits experienced by SSA.

Part III.**Tables Pertaining to Administrative Cost Calculations****Table 9. — Calculation of OASDI Administrative Expenses - 2021**

Source	Total cost (thousands)	Number of Items		Unit cost
		Total	SSA		Chargeable
OASI Trust Fund				
Total.....	\$14,345			
Determination of eligibility and benefit computations, OASI.....	6,524	13,000	-	13,000
Retired employees.....	2,560	4,800	-	4,800
Dependents of retired employees.....	2,707	5,600	-	5,600
Non-retired employees.....	-	-	-	-
Widow(er)s not on RRB rolls.....	-	-	-	-
Survivor monthly beneficiaries.....	1,257	2,600	-	2,600
Maintenance of benefit rolls.....	7,716	402,200	-	402,200
Handling compensation reports.....	105	284,600	-	284,600
				\$533.27
				483.32
				533.27
				483.32
				483.32
				\$19.18
				0.37
DI Trust Fund				
Total.....	\$3,509			
Determination of eligibility and benefit computations, DI.....	2,713	1,200	-	1,200
Retired employees.....	2,100	1,000	-	1,000
Dependents of retired employees.....	613	200	-	200
Maintenance of benefit rolls.....	781	14,400	-	14,400
Handling compensation reports.....	15	284,600	-	284,600
				\$2,099.85
				3,067.15
				54.26
				0.05

Table 9a. – Calculation of HI Administrative Expenses - 2021

Source	Total cost (thousands)	Number of Items		Unit cost
		Total	SSA		Chargeable
HI Trust Fund				
Total.....	\$1,888			
Initial enrollment, OASI.....	917	13,000	-	13,000
Retired employees.....	360	4,800	-	4,800
Dependents of retired employees.....	380	5,600	-	5,600
Non-retired employees.....	-	-	-	-
Widow(er)s not on RRB rolls.....	-	-	-	-
Survivor monthly beneficiaries.....	177	2,600	-	2,600
Initial enrollment, DI.....	726	1,200	-	1,200
Retired employees.....	562	1,000	-	1,000
Dependents of retired employees.....	164	200	-	200
Maintenance of benefit rolls, OASI.....	149	402,200	-	402,200
Maintenance of benefit rolls, DI.....	61	14,400	-	14,400
Handling compensation reports.....	35	284,600	-	284,600

Part IV.**Summary of Income Tax Calculations****Table 10. -- Financial Interchange OASDI Income Tax Transfers, Calendar Years 1984-2021 and January-September 2022**

(in millions)							
Year	Original Treasury Transfers		Adjusted Accrual Basis		Final FI Adjusted Taxes Due		
	Amount	FI Adjusted ¹	Taxes Due ²		Cash Basis ³		
			Amount	FI Adjusted	Total	OASI ^{4, 5}	DI ^{4, 5}
1984	\$68.0	\$58.8	\$36.0	\$31.1	\$58.8	\$57.0	\$1.8
1985	77.0	67.0	33.4	29.1	67.0	65.0	2.0
1986	69.0	70.4	29.3	29.9	70.4	68.3	2.1
1987	48.0	49.2	30.4	31.2	(13.8)	(12.0)	(1.8)
1988	41.0	42.0	32.4	33.2	3.5	4.2	(0.7)
1989	36.0	36.8	39.0	39.9	14.2	14.0	0.2
1990	39.0	39.6	45.0	45.7	30.8	30.5	0.3
1991	44.0	44.7	47.0	47.7	47.8	47.2	0.6
1992	48.0	48.6	46.0	46.6	54.7	53.9	0.8
1993	56.0	56.9	47.0	47.8	59.9	58.7	1.2
1994	52.0	52.5	48.0	48.5	50.5	49.4	1.1
1995	50.0	50.1	59.0	59.2	41.0	40.0	1.0
1996	57.0	57.1	75.0	75.1	57.1	55.9	1.2
1997	61.0	61.0	86.0	86.0	57.0	55.5	1.5
1998	74.0	73.9	88.0	87.9	73.9	72.1	1.8
1999	79.0	78.9	94.0	93.9	106.0	103.4	2.6
2000	102.0	102.0	105.0	105.0	128.0	124.5	3.5
2001	94.0	93.4	100.0	99.3	92.4	89.5	2.9
2002	97.0	96.5	93.0	92.5	110.5	106.7	3.8
2003	97.0	98.1	85.0	86.0	113.1	108.6	4.5
2004	109.0	109.2	91.0	91.2	112.2	107.3	4.9
2005	117.0	116.5	125.0	124.4	116.5	111.5	5.0
2006	125.0	124.4	149.0	148.2	130.3	124.5	5.8
2007	135.0	134.7	170.0	169.7	134.7	128.2	6.5
2008	144.0	143.7	168.0	167.6	109.6	104.2	5.4
2009	144.0	144.1	164.0	164.1	136.1	128.5	7.6
2010	159.0	159.0	182.0	182.0	159.0	151.4	7.6
2011	160.0	160.8	192.0	193.0	176.7	170.0	6.7
2012	194.0	195.5	211.0	212.7	278.2	273.8	4.4
2013	199.0	200.2	230.0	231.4	243.2	238.7	4.5
2014	250.0	251.9	251.0	252.9	251.9	243.9	8.0
2015	263.0	265.5	258.0	260.5	297.7	291.5	6.2
2016	281.0	284.2	265.0	268.0	301.4	295.3	6.1
2017	292.0	294.7			294.7	287.6	7.1
2018	255.0	257.7			289.9	288.6	1.3
2019	267.0	268.9			268.9	264.0	4.9
2020	289.0	292.6			292.6	287.9	4.7
2021	327.0	334.4			313.2	312.6	0.6
1/2022 - 9/2022	257.0	262.2			262.2	259.2	3.0

¹ Total amount of quarterly transfers from Treasury originally received for the calendar year.² The FI Amount is the total original Treasury transfers multiplied by a ratio of $\left(\frac{FI\ Benefits}{SSEB\ Benefits}\right)$ for the appropriate year.³ Revised Total Amount and FI Amount based on subsequent reconciliations.⁴ Sum of FI Amount original transfers and any adjustments made in the year for prior calendar years. Amount for 9-month estimate year is calculated separately based on projected SSEB and FI Benefits for that period.⁵ OASI/DI allocation is based on overall SSA OASI/DI income tax allocation experience for the calendar year.

**Table 10a. -- Financial Interchange HI Income Tax Transfers, Calendar Years 1994-2021 and
January-September 2022**
(in millions)

Year	Original Treasury Transfers		Treasury Adjustment		Final FI
	Amount	FI Adjusted ¹	Accrual Basis ²		Adjusted
			Amount	FI Adjusted	Total ^{3, 4}
1994	\$14.0	\$14.0	\$1.0	\$0.9	\$0.0
1995	30.0	30.2	29.0	29.2	0.2
1996	30.0	30.0	35.0	35.0	0.0
1997	30.0	30.0	39.0	39.0	(0.1)
1998	31.0	31.0	27.0	27.0	0.0
1999	55.0	55.0	60.0	60.0	0.0
2000	50.0	50.0	52.0	52.0	0.0
2001	57.0	56.8	52.0	51.8	(0.2)
2002	58.0	57.7	53.0	52.7	(0.3)
2003	55.0	55.2	42.0	42.1	0.2
2004	53.0	53.3	46.0	46.3	0.3
2005	54.0	54.0	61.0	60.9	0.0
2006	64.0	63.6	81.0	80.5	(0.4)
2007	67.0	66.8	91.0	90.8	(0.2)
2008	76.0	75.9	97.0	96.9	(0.2)
2009	78.0	78.0	84.0	84.0	0.0
2010	86.0	86.0	89.0	89.0	0.0
2011	101.0	101.3	107.0	107.3	0.3
2012	121.0	121.8	129.0	129.9	0.6
2013	111.0	111.7	112.0	112.7	0.7
2014	153.0	154.0	159.0	160.0	1.0
2015	155.0	156.4	146.0	147.3	1.4
2016	177.0	178.8	165.0	166.7	1.9
2017	180.0	181.9			1.9
2018	176.0	177.8			1.8
2019	165.0	166.5			1.5
2020	194.0	195.9			1.9
2021	197.0	200.5			3.3
1/2022 - 9/2022	230.0	234.9			4.9

¹ Total amount of quarterly transfers from Treasury directly to the HI trust fund for the calendar year.

² The FI Amount is the total original Treasury transfers multiplied by a ratio of $\left(\frac{FI\ Benefits}{SSEB\ Benefits}\right)$ for the appropriate year.

³ Revised Total Amount and FI Amount based on subsequent reconciliations.

⁴ Since the original Treasury transfers and subsequent reconciliations are made directly to the HI trust fund, the final FI amount results only from the difference between FI Benefits and SSEB Benefits.

Part V.

Correspondence and Memoranda



March 14, 2023

Mr. Keith T. Sartain
 Chief Actuary
 Railroad Retirement Board
 844 North Rush Street
 Chicago, Illinois 60611-2092

Dear Mr. Sartain:

This letter provides the items you requested for use in the 71st financial interchange determination in your letter to us dated January 17, 2023.

Below we present the effective interest rates earned by the Old-Age and Survivors Insurance (OASI) and Disability Insurance (DI) Trust Funds in calendar year 2022 on a semiannual and annual basis.

Period	OASI	DI
January-June 2022	1.17491%	1.32383%
July-December 2022	1.15070%	1.31214%
Calendar year 2022	2.33922%	2.65285%

Attachment A provides a memorandum from Stephen Hull, Director of SSA's Office of Finance within the Office of Financial Policy and Operations (OFPO). The memorandum provides final workload unit cost factors for calendar year 2021 and preliminary factors for 2022. The final factors for 2021 are identical to the preliminary factors we provided in our most recent prior letter dated March 18, 2022.

Attachment B provides a table summarizing the operations of the OASI and DI Trust Funds for December 2022 and calendar year 2022, based on data from the Department of the Treasury and OFPO. The format of the table is consistent with the table for calendar year 2021, which we sent in our letter dated March 18, 2022. In calendar year 2022, the general fund transferred \$183 million to the OASI Trust Fund pursuant to the section 4003(3) of Public Law 116-36, the Coronavirus Aid, Relief, and Economic Security Act (CARES Act). Section 4003(e) of this act provided for loans to businesses and State and local governments to assist in alleviating losses incurred as a result of the COVID-19 pandemic. This section further specified that a portion of proceeds from repayments of these loans be transferred to the OASI Trust Fund. This amount is included with the line labeled "Transfer due to section 4003(e) of P.L. 116-136".

In September 2022, the trust funds transferred amounts to the general fund for estimated refunds of taxes paid by employees whose combined wages from more than one employer exceeded the 2021 taxable maximum. The entire amount of these refunds is included on the line labeled "Multi-employer tax refunds" in the attached table showing the operations of the trust funds (Attachment B). There were no such refunds in any other months of calendar year 2022.

Calendar year 2022 data on cyclical payments by payment method are available on the internet at <https://www.ssa.gov/oact/progdata/payment.html>. For consistency with our treatment of accelerated benefit payments in our trust fund accounting, this cyclical payment data reflects benefit payments based on the normally scheduled payment date.

The requested annual ratios of uncollectible overpayments to total benefits are in Attachment C. Such ratios are to be used as limits on the amount of estimated uncollectible overpayments to be added to benefit payments chargeable to the Social Security trust funds through the financial interchange, as described in the August 2, 2004, letter from Stephen C. Goss to Frank Buzzi. Similar to such data for calendar years 2020 and 2021, the amount of uncollectible overpayments in 2022 is significantly higher than in years prior to 2020. Based on previous discussion with OFPO, this higher level is due to a special initiative undertaken by SSA during 2020.

If you require further information about any of this information, please let us know.

Sincerely,



Michael Stephens, A.S.A.
Supervisory Actuary

Attachments: A-C

cc: Stephen C. Goss
Karen P. Glenn



SOCIAL SECURITY

MEMORANDUM

Date: March 13, 2023 **Refer To:** S1NN1

To: Supervisory Actuary
Office of the Chief Actuary

From: Director
Office of Finance

Subject: Workload Unit Cost Factors for the SSA-Railroad Retirement Board (RRB) Financial Interchange (Your Memo, 01/19/23)—INFORMATION

This memorandum transmits and documents the final calendar year (CY) 2021 and preliminary CY 2022 unit cost factors for use in the SSA-RRB financial interchange. The CY 2021 calculations have not changed from those transmitted last year. The CY 2022 calculations will be revised only if necessitated by any future recalculations of the fiscal year 2022 administrative costs.

The unit costs are as follows:

<u>Workload</u>	<u>CY 2021 Final</u>	<u>CY 2022 Preliminary</u>
OASI Maintenance of Earnings Accounts	\$ 0.369927	\$ 0.368579
DI Maintenance of Earnings Accounts	\$ 0.052543	\$ 0.050045
HI Maintenance of Earnings Accounts	\$ 0.121834	\$ 0.120823
 OASI Initial Enrollment – Wage Earners	 \$ 533.269364	 \$ 512.169822
DI Initial Enrollment – Wage Earners	\$ 2,099.848810	\$ 2,237.374224
HI (OASI Related) Initial Enrollment – Wage Earners	\$ 74.966372	\$ 74.223950
HI (DI Related) Initial Enrollment– Wage Earners	\$ 561.961462	\$ 623.204957
 OASI Initial Enrollment – Auxiliaries	 \$ 483.324599	 \$ 477.177422
DI Initial Enrollment – Auxiliaries	\$ 3,067.152966	\$ 3,299.975842
HI (OASI related) Initial Enrollment – Auxiliaries	\$ 67.945197	\$ 69.152831
HI (DI related) Initial Enrollment – Auxiliaries	\$ 820.831364	\$ 919.185214

<u>Workload</u>	CY 2021 <u>Final</u>	CY 2022 <u>Preliminary</u>
OASI Maintenance of the Rolls	\$ 19.183311	\$ 18.581268
DI Maintenance of the Rolls	\$ 54.256193	\$ 56.626123
HI (OASI Related) Maintenance of the Rolls	\$ 0.370365	\$ 0.397749
HI (DI Related) Maintenance of the Rolls	\$ 4.227535	\$ 5.689824

Copies of the worksheets and backup materials used to calculate these unit costs are available upon request. Should your staff or the staff of RRB wish to discuss these computations, they should contact Nicole Wartman at (410) 966-9452.

Stephen
Hull

Stephen Hull

Digitally signed by
Stephen Hull
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Financial Operations of the OASI and DI Trust Funds, December 2022

Old-Age and Survivors Insurance Trust Fund			
	Current month	Fiscal year to date	Calendar year to date
Total income	\$113,011,592,875.78	\$265,073,484,393.30	\$1,056,718,211,764.00
Payroll tax contributions	84,086,248,204.24	221,422,248,204.24	950,326,917,282.54
Multi-employer tax refund	0.00	0.00	-4,402,968,400.00
Net payroll tax contributions	84,086,248,204.24	221,422,248,204.24	945,923,948,882.54
Reimbursement income tax credits	3,589.18	3,589.18	10,150.87
Reimbursement due to P.L. 111-312, 112-78, and 112-96	6,835.64	6,835.64	139,413.23
Transfer due to section 4003(e) of P.L. 116-136	0.00	183,247,961.98	183,247,961.98
General Fund reimbursement subtotal	10,424.82	183,258,386.80	183,397,526.08
Income from benefit taxation	21,754,661.90	12,686,641,135.20	47,071,414,137.90
Interest on investments	28,903,198,049.23	30,780,947,009.79	63,538,988,432.70
Interest on reimbursements	380,535.59	380,535.59	445,162.24
Interest subtotal	28,903,578,584.82	30,781,327,545.38	63,539,433,594.94
Gifts & miscellaneous income	1,000.00	9,121.68	17,622.54
Total cost	92,174,539,763.23	276,803,821,355.19	1,097,454,844,892.42
Benefit payments	91,826,187,404.61	275,831,495,634.89	1,088,170,392,055.09
Reimbursements (uncashed checks & misc.)	-4,056,433.33	-12,419,668.69	-52,772,891.80
Vocational rehabilitation payments	1,820,863.55	6,272,387.83	22,870,122.71
Benefits subtotal	91,823,951,832.83	275,825,348,354.03	1,088,140,489,286.00
SSA-RRB Financial Interchange	0.00	0.00	5,315,756,000.00
Treasury administrative expenses	74,393,957.05	198,815,567.55	628,321,323.09
SSA salaries & expenses	275,435,551.00	768,349,754.00	3,289,718,835.83
Construction	2,699,636.00	13,498,178.00	86,752,737.52
Offsetting miscellaneous income	-331,882.68	-581,167.42	-826,442.62
Pension reform reimbursement	-567,678.14	-567,678.14	-1,921,622.59
Reimbursement for SSA expenses	-1,041,652.83	-1,041,652.83	-3,445,224.81
Administrative expenses subtotal	350,587,930.40	978,473,001.16	3,998,599,606.42
Net increase in asset reserves	20,837,053,112.55	-11,730,336,961.89	-40,736,633,128.42
Undisbursed balance	-19,502,045.54	-19,502,045.54	-19,502,045.54
Invested asset reserves (book value)	2,711,918,658,000.00	2,711,918,658,000.00	2,711,918,658,000.00
Asset reserves at end of month	2,711,899,155,954.46	2,711,899,155,954.46	2,711,899,155,954.46

Disability Insurance Trust Fund			
	Current month	Fiscal year to date	Calendar year to date
Total income	\$15,581,716,438.14	\$39,475,664,070.95	\$165,063,485,283.67
Payroll tax contributions	14,294,955,750.65	37,615,955,750.65	161,424,406,895.06
Multi-employer tax refund	0.00	0.00	-746,193,600.00
Net payroll tax contributions	14,294,955,750.65	37,615,955,750.65	160,678,213,295.06
Reimbursement income tax credits	342.17	342.17	969.37
Reimbursement due to P.L. 111-312, 112-78, and 112-96	1,160.78	1,160.78	23,674.00
General Fund reimbursement subtotal	1,502.95	1,502.95	24,643.37
Income from benefit taxation	281,266.10	425,856,854.00	1,552,585,360.30
Interest on investments	1,286,266,612.26	1,433,632,657.17	2,830,745,855.99
Interest on reimbursements	211,306.18	211,306.18	1,812,588.12
Interest subtotal	1,286,477,918.44	1,433,843,963.35	2,832,558,444.11
Gifts & miscellaneous income	0.00	6,000.00	103,540.83
Total cost	12,055,056,252.44	36,178,840,032.42	146,469,896,792.46
Benefit payments	11,813,152,254.05	35,492,365,143.18	143,475,240,909.85
Reimbursements (uncashed checks & misc.)	-2,412,614.67	-6,682,641.70	-27,949,246.59
Vocational rehabilitation payments	8,941,826.91	32,007,678.44	119,639,172.87
Benefits subtotal	11,819,681,466.29	35,517,690,179.92	143,566,930,836.13
SSA-RRB Financial Interchange	0.00	0.00	155,579,000.00
Treasury administrative expenses	12,573,032.97	33,575,769.48	109,730,229.28
SSA salaries & expenses	220,572,814.00	616,211,447.00	2,570,229,908.90
Construction	1,965,805.00	9,829,026.00	63,433,539.73
Reimbursement for SSA expenses	-758,504.70	-758,504.70	-2,508,723.77
Demonstration projects	1,021,638.88	2,292,114.72	6,502,002.19
Administrative expenses subtotal	235,374,786.15	661,149,852.50	2,747,386,956.33
Net increase in asset reserves	3,526,660,185.70	3,296,824,038.53	18,593,588,491.21
Undisbursed balance	-43,855,639.34	-43,855,639.34	-43,855,639.34
Invested asset reserves (book value)	118,031,585,000.00	118,031,585,000.00	118,031,585,000.00
Asset reserves at end of month	117,987,729,360.66	117,987,729,360.66	117,987,729,360.66

Notes:

- Fiscal year is the 12-month period ending September 30. See summary of [fiscal year data](#).
- Temporary tax credits were established by the 1983 Amendments (see footnote to our [tax rate table](#) for applicable years). The OASI and DI Trust Funds are reimbursed from the general fund of the Treasury for these tax credits.
- Income from taxation of benefits was established by the 1983 Amendments. A relatively small amount of this income is from taxation of benefits paid to non-resident aliens (deducted from monthly benefits). The remainder is transferred to the trust funds at the beginning of each calendar quarter on an estimated basis, with subsequent adjustment for actual income tax data. For further information, see [Taxation of Social Security benefits](#).
- The "SSA-RRB Financial Interchange" is an annual transfer among the Social Security Trust Funds and the Railroad Retirement program's *Social Security Equivalent Benefit Account*. The transfers, computed by the Railroad Retirement Board, are designed to put the Social Security Trust Funds in the same financial position that they would have been if railroad employment had always been covered by Social Security.
- Offsetting miscellaneous income is composed of miscellaneous income due to the Trust Funds, which can include refunds, penalties, fees, and other income due to the Trust Funds.
- The Employee Retirement Income Security Act of 1974 requires that SSA furnish information on deferred vested benefits to pension plan participants. The general fund of the Treasury reimburses the OASI Trust Fund for the costs incurred by furnishing such information.
- Net increase in asset reserves is calculated as total income less total cost.
- When a trust fund holds marketable securities, the book value differs from the face value of such securities. The OASI Trust Fund redeemed its marketable securities in November 1982; DI redeemed its last in February 2005. For special issues, book value is the same as face value.

Ratio of uncollectible overpayments to total benefit payments
[Dollar amounts in thousands]

Calendar year	OASI Trust Fund			DI Trust Fund		
	Uncollectible overpayments	Total benefit payments ^a	Ratio	Uncollectible overpayments	Total benefit payments ^a	Ratio
1999	\$90,533	\$334,383,416	0.0271%	\$234,852	\$51,313,271	0.4577%
2000	95,287	352,651,519	0.0270%	264,862	54,920,576	0.4823%
2001	95,898	372,312,043	0.0258%	262,639	59,558,650	0.4410%
2002	116,271	388,118,781	0.0300%	342,519	65,627,224	0.5219%
2003	114,015	399,842,083	0.0285%	337,982	70,885,971	0.4768%
2004	115,636	415,031,484	0.0279%	343,713	78,180,163	0.4396%
2005	118,455	435,325,384	0.0272%	367,617	85,373,479	0.4306%
2006	143,851	460,404,994	0.0312%	498,697	92,357,903	0.5400%
2007	135,954	485,819,057	0.0280%	473,033	99,057,104	0.4775%
2008	190,680	508,994,214	0.0375%	556,943	106,271,269	0.5241%
2009	169,630	557,101,116	0.0304%	448,360	118,298,745	0.3790%
2010	168,014	577,390,879	0.0291%	463,123	124,162,037	0.3730%
2011	168,088	596,153,634	0.0282%	473,100	128,904,536	0.3670%
2012	148,672	637,892,767	0.0233%	450,078	136,849,591	0.3289%
2013	136,349	672,126,128	0.0203%	385,530	140,046,294	0.2753%
2014	120,188	706,777,966	0.0170%	319,036	141,600,507	0.2253%
2015	93,543	742,905,710	0.0126%	206,111	143,263,174	0.1439%
2016	101,550	768,598,740	0.0132%	190,877	142,684,346	0.1338%
2017	180,098	798,686,160	0.0225%	336,532	142,720,079	0.2358%
2018	194,288	844,887,862	0.0230%	311,010	143,637,104	0.2165%
2019	171,646	902,796,624	0.0190%	387,767	145,029,039	0.2674%
2020	477,569	952,348,936	0.0501%	2,546,309	143,466,468	1.7748%
2021	518,071	993,118,329	0.0522%	2,413,116	139,969,197	1.7240%
2022	411,954	1,088,117,619	0.0379%	1,837,496	143,447,292	1.2810%

^a Payments are reduced for unnegotiated checks.

Sources: 1. Uncollectible overpayment amounts are from SSA's Office of Financial Policy and Operations (OFPO).
2. Total benefit payments are computed based on input from OFPO and the Bureau of the Fiscal Service in the U.S. Department of the Treasury.

Social Security Administration
Office of the Chief Actuary
March 14, 2023

DEPARTMENT OF HEALTH & HUMAN SERVICES
Centers for Medicare & Medicaid Services
7500 Security Boulevard, Mail Stop 00-00-00
Baltimore, Maryland 21244-1850



March 7, 2023

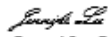
Mr. Carl May
Bureau of the Actuary
Railroad Retirement Board
844 N. Rush Street
Chicago, Illinois 60611-2092

Dear Mr. May:

The effective semi-annual rates of interest earned by the HI Trust Fund during the six months ending June 30, 2022 and December 31, 2022, were 1.08 percent and 1.31 percent, respectively.

If you have any questions, please contact me at (410)786-6392.

Sincerely,


Jennifer Lee
CMS/OACT



December 21, 2022

Mr. Keith Sartain
Chief Actuary
Railroad Retirement Board
844 North Rush Street
Chicago, Illinois 60611-2092

Dear Mr. Sartain:

The attached tables provide estimated benefits in current-payment status as of December 31, 2021. Table 1 relates to male retired worker beneficiaries and their beneficiary dependents. Table 2 presents the corresponding estimates for female retired worker beneficiaries. We first provided table 2 in our letter dated January 19, 2012, per agreement between our offices in August 2011 to revise the application of child and family composition factors.¹ The attached data were derived from 100-percent sample data.

Sincerely,

Michael Stephens, A.S.A.
Supervisory Actuary

/S/
Craig Feinstein
Actuary

Attachments: Tables 1-2

¹ See letter from Stephen C. Goss, dated August 19, 2011.

Table 1 — Selected benefit estimates relating to male old-age (primary) beneficiary families in current-payment status on 12/31/2021

Age	All old-age families				Beneficiary families consisting of a male old-age beneficiary with an aged wife receiving a full benefit whether or not children are present				Beneficiary families consisting of a male old-age beneficiary with a wife whose entitlement is based on having an eligible child in her care and is receiving a full benefit			
	Old-age benefits	Monthly rate of PLA	Child benefits	Old-age benefits	Monthly rate of PLA	Child benefits	Old-age benefits	Monthly rate of PLA	Child benefits	Monthly rate of PLA	Child benefits	Wife benefits
62	\$375,586,466	\$525,474,860	\$9,211,360	\$1,054,757	\$1,477,365	\$11,786	\$1,295,839	\$1,816,064	\$746,162	\$583,407	\$583,407	
63	572,708,647	780,859,750	15,110,048	2,087,207	2,850,859	33,482	2,337,641	3,198,556	1,314,168	1,045,114	1,045,114	
64	718,658,621	949,198,693	17,682,701	3,389,340	4,480,486	72,145	2,808,265	3,742,291	1,524,511	1,242,105	1,242,105	
65	997,719,469	1,247,035,517	20,200,479	6,188,789	7,642,462	108,162	3,432,131	4,378,331	1,773,100	1,443,987	1,443,987	
66	2,193,724,878	2,443,183,973	35,845,198	22,335,457	24,177,173	304,387	5,769,657	6,588,643	2,671,682	2,192,884	2,192,884	
67	2,638,013,719	2,848,394,082	41,219,525	43,361,780	45,248,171	608,385	6,630,518	7,269,872	2,987,978	2,408,855	2,408,855	
68	2,530,590,392	2,728,274,150	36,844,235	71,090,636	72,834,043	904,988	5,739,665	6,226,442	2,547,729	2,098,278	2,098,278	
69	2,567,841,110	2,758,405,202	34,378,159	106,796,159	107,995,957	1,185,468	5,438,957	5,823,300	2,362,509	1,965,430	1,965,430	
70	2,838,545,523	2,935,576,546	31,674,933	143,379,542	136,731,575	1,332,182	4,291,368	4,513,481	1,837,683	1,538,507	1,538,507	
71	2,643,881,998	2,742,720,350	28,095,239	141,074,737	131,813,632	1,335,775	3,542,131	3,689,793	1,512,385	1,237,662	1,237,662	
72	2,589,654,387	2,710,606,454	25,981,724	143,102,352	131,942,352	1,316,467	3,346,771	3,470,251	1,433,187	1,170,636	1,170,636	
73	2,524,877,107	2,671,747,270	24,024,729	131,968,061	122,482,513	1,312,415	2,599,995	2,719,845	1,108,184	920,800	920,800	
74	2,530,359,197	2,692,576,684	22,136,784	121,929,546	114,249,281	1,265,170	2,331,532	2,431,791	1,011,872	826,652	826,652	
75	2,205,740,080	2,374,403,899	18,775,249	100,350,365	95,211,856	1,061,778	1,750,934	1,848,943	758,944	626,864	626,864	
76	1,717,482,259	1,857,330,646	13,826,260	69,766,322	66,879,382	842,759	1,203,134	1,268,843	532,950	434,341	434,341	
77	1,638,350,875	1,784,572,100	12,695,391	59,575,115	57,839,705	754,609	905,591	958,795	389,760	329,919	329,919	
78	1,616,746,176	1,774,042,417	11,550,017	53,272,230	52,307,981	721,228	819,178	875,027	360,119	298,399	298,399	
79	1,490,976,817	1,640,901,452	10,259,388	43,148,614	43,100,418	657,133	649,567	688,395	278,798	234,899	234,899	
80	1,257,956,392	1,386,837,356	8,348,851	33,604,442	33,837,617	561,771	520,974	564,393	237,375	190,205	190,205	
81	1,098,008,988	1,210,241,742	6,958,316	27,591,042	28,061,589	492,072	339,445	366,806	154,690	124,130	124,130	
82	952,578,086	1,048,353,377	5,834,752	22,052,934	22,519,118	427,608	249,020	271,246	110,851	93,275	93,275	
83	867,888,641	953,844,885	4,947,357	19,307,863	19,786,718	403,594	175,921	188,086	77,406	65,504	65,504	
84	742,199,407	812,134,184	4,026,142	16,334,857	16,733,881	317,393	139,667	149,820	61,332	51,120	51,120	
85	616,729,643	674,598,120	3,185,274	12,816,002	13,147,282	231,733	94,097	99,118	38,987	34,139	34,139	
86	533,127,567	582,523,459	2,613,992	11,429,350	11,738,816	209,319	65,276	70,056	28,246	22,384	22,384	
87	453,154,506	492,242,870	2,187,671	10,706,776	10,839,843	195,371	50,310	53,208	21,217	19,532	19,532	
88	375,146,462	404,367,459	1,744,408	9,701,019	9,601,085	144,553	35,922	38,194	15,110	14,139	14,139	
89	334,916,390	359,753,438	1,479,265	9,392,189	9,122,793	132,753	30,291	32,810	13,000	11,225	11,225	
90	275,817,110	293,621,855	1,215,946	8,116,531	7,709,763	89,756	17,939	18,773	7,262	6,755	6,755	
91	229,995,002	244,093,652	971,767	6,798,714	6,379,689	79,215	18,580	19,329	6,804	7,002	7,002	
92	176,106,043	186,168,275	730,052	4,996,739	4,641,198	49,634	5,902	5,650	2,469	1,815	1,815	
93	139,340,335	147,689,059	553,687	3,760,761	3,532,061	46,296	7,208	7,617	2,688	2,688	2,688	
94	107,495,685	113,505,066	406,667	2,583,228	2,429,126	16,623	6,721	6,641	2,943	2,342	2,342	
95	76,020,083	80,363,813	282,717	1,623,376	1,536,347	15,921	5,795	5,411	2,533	1,996	1,996	
96	54,304,712	57,220,875	199,760	1,101,326	1,044,085	14,085	1,531	1,901	1,140	285	285	
97	36,751,838	38,690,494	125,050	767,850	727,053	8,980	3,750	3,261	1,634	817	817	
98	23,726,271	24,773,997	75,119	428,986	408,427	2,817	1,320	1,270	530	530	530	
99	14,855,675	15,474,580	58,156	260,134	244,899	4,200	0	0	0	0	0	
100	9,392,627	9,736,367	25,152	109,789	103,726	0	0	0	0	0	0	
101+	10,881,945	11,203,392	37,404	149,456	142,694	1,679	0	0	0	0	0	
Total	43,757,851,148	46,612,832,358	455,408,922	1,467,504,351	1,423,553,177	17,293,691	56,652,534	63,413,244	25,937,939	21,228,622	21,228,622	

Social Security Administration
Office of the Chief Actuary
December 21, 2022

Table 2 — Selected benefit estimates relating to female old-age (primary) beneficiary families in current-payment status on 12/31/2021

Age	All old-age families				Beneficiary families consisting of a female old-age beneficiary with an aged husband receiving a full benefit whether or not children are present				Beneficiary families consisting of a female old-age beneficiary with a husband whose entitlement is based on having an eligible child in his care and is receiving a full benefit			
	Old-age benefits	Monthly rate of PLA	Child benefits	Child benefits	Old-age benefits	Monthly rate of PLA	Child benefits	Child benefits	Old-age benefits	Monthly rate of PLA	Child benefits	Husband benefits
62	\$328,816,499	\$447,411,658	\$1,794,078	\$6,679	\$948,662	\$1,191,821	\$6,679	\$13,817	\$19,361	\$7,122	\$5,767	
63	504,878,568	663,525,648	2,977,738	15,059	2,142,947	2,932,686	15,059	27,413	37,840	15,142	13,040	
64	641,691,911	808,394,969	3,474,961	22,182	3,681,783	4,898,087	22,182	21,838	28,854	13,675	9,318	
65	899,915,750	1,069,838,444	3,912,895	32,532	6,616,906	8,289,260	32,532	14,966	19,459	7,123	7,624	
66	1,787,716,909	1,913,777,054	6,867,771	51,526	14,756,134	16,523,483	51,526	29,642	34,993	12,814	13,747	
67	2,110,433,656	2,183,708,107	7,778,785	54,155	25,482,770	26,917,823	54,155	23,678	26,290	9,696	9,696	
68	1,948,170,000	1,999,115,347	7,003,978	79,795	28,685,851	29,622,656	79,795	30,374	32,113	11,574	12,038	
69	1,975,783,551	2,013,165,477	6,375,942	87,391	25,869,724	26,232,150	87,391	22,149	24,595	9,449	8,558	
70	2,221,477,793	2,167,543,466	5,859,638	57,136	20,345,883	19,485,469	57,136	14,232	15,578	6,276	4,894	
71	2,089,005,089	2,023,237,149	5,185,745	41,092	14,560,726	13,730,251	41,092	8,777	9,807	3,377	4,112	
72	2,060,563,898	1,996,893,868	4,652,471	26,250	11,984,920	11,230,158	26,250	5,255	5,630	1,985	2,418	
73	2,008,954,847	1,950,618,610	4,191,173	32,587	9,299,836	8,897,572	32,587	1,468	1,469	571	571	
74	1,997,759,287	1,919,878,913	3,679,276	17,103	7,190,760	7,057,140	17,103	3,265	3,944	1,648	1,648	
75	1,746,554,832	1,673,746,497	3,202,472	10,242	5,582,358	5,529,431	10,242	2,177	2,481	930	930	
76	1,348,583,639	1,290,414,104	2,181,918	6,861	3,736,222	3,747,995	6,861	0	0	0	0	
77	1,322,499,444	1,233,934,563	1,936,593	5,367	3,203,602	3,216,039	5,367	0	0	0	0	
78	1,316,598,178	1,216,060,155	1,712,641	3,838	2,388,231	2,651,429	3,838	0	0	0	0	
79	1,218,186,336	1,113,137,627	1,495,686	4,473	2,346,468	2,411,177	4,473	0	0	0	0	
80	1,042,163,102	944,632,850	1,268,449	7,026	1,694,145	1,733,863	7,026	0	0	0	0	
81	922,143,129	823,949,105	950,348	2,148	1,346,084	1,379,255	2,148	0	0	0	0	
82	821,331,417	717,699,882	798,311	2,592	1,191,137	1,220,273	2,592	0	0	0	0	
83	761,752,336	653,615,681	661,794	1,218	921,457	940,552	1,218	0	0	0	0	
84	667,487,014	558,713,785	575,073	276	714,361	727,625	276	0	0	0	0	
85	582,223,404	470,516,107	404,924	3,104	495,344	500,719	3,104	0	0	0	0	
86	521,449,301	409,477,103	313,506	82	401,321	391,559	82	0	0	0	0	
87	458,897,104	352,316,789	232,343	0	296,431	296,724	0	0	0	0	0	
88	390,997,488	295,813,101	192,847	542	210,746	203,740	542	0	0	0	0	
89	361,406,639	271,723,944	141,348	219	169,621	162,165	219	0	0	0	0	
90	310,096,381	224,596,382	119,397	0	121,942	117,346	0	0	0	0	0	
91	270,819,287	191,336,585	96,101	149	84,242	78,013	149	0	0	0	0	
92	223,775,112	154,445,931	69,867	0	61,914	59,850	0	0	0	0	0	
93	189,729,877	131,692,654	52,311	0	35,532	32,751	0	0	0	0	0	
94	155,943,343	107,999,928	47,578	0	31,311	28,484	0	0	0	0	0	
95	120,486,102	82,067,570	28,939	317	14,208	15,377	317	0	0	0	0	
96	92,982,171	64,089,648	28,005	0	15,937	14,079	0	0	0	0	0	
97	68,989,054	46,645,194	15,996	0	6,854	6,285	0	0	0	0	0	
98	48,382,856	32,296,009	12,634	0	5,152	4,946	0	0	0	0	0	
99	33,101,712	21,781,616	7,350	0	1,347	987	0	0	0	0	0	
100	23,376,211	15,251,405	7,263	0	0	0	0	0	0	0	0	
101+	35,674,962	24,208,559	10,153	0	0	0	0	0	0	0	0	
Total	35,650,798,187	34,280,265,479	80,316,297	571,941	196,732,667	202,479,118	571,941	219,050	262,413	101,383	94,363	

Social Security Administration
Office of the Chief Actuary
December 21, 2022

EXHIBIT 2 – PAYROLL CALCULATIONS AND GROSS EARNINGS SAMPLE

Part I.

Payroll Calculations Summary and Tables

Accrued Taxable Payroll

Accrued taxable payroll, as developed for financial interchange purposes, is the amount of railroad compensation to which combined employee and employer tax rates are applied to obtain additional accrued gross taxes (including overpayments of employee taxes) that would have been paid into the Old-Age and Survivors Insurance (OASI), Disability Insurance (DI) or Hospital Insurance (HI) Trust Funds if railroad employment were covered by the Federal Insurance Contributions Act (FICA).

Table 1 shows the maximum taxable earnings bases under the Railroad Retirement Act (RRA) and FICA. Tables 2 and 3 summarize the various components that determine accrued taxable payroll for calendar years 1937-1965 and 1966-2021, respectively.

The general methodology and assumptions governing the development of the OASDHI taxable payroll for financial interchange purposes are covered individually below.

RRA Creditable Payroll

The RRA creditable payroll for 2021, including sickness payments and miscellaneous compensation, was \$17,100.9 million. This amount is based on reports submitted by the railroads and third party payors to the Railroad Retirement Board (RRB). Beginning in 1985, RRA compensation is creditable up to an annual limit rather than a monthly limit. This limit, \$142,800 in 2021, is the same as FICA.

Prior year adjustments of \$4.55 million were subtracted from the RRA creditable payrolls for 1999-2020. No prior year adjustments for years before 1982 were made in this determination, and the 1981 prior year adjustment amount remains unchanged.

Inflation Factor for HI Payroll

Inflation factors are developed from the sample gross earnings data, as described in Part II. Prior to 1985, inflation factors were the ratio of compensation under the annual FICA limit to compensation under the monthly RRA limit. Beginning in 1985, the RRA creditable limit became annual and equal to the FICA limit, so inflation factors were unnecessary for calendar years 1985-1990. Beginning in 1991, a higher taxable limit applied to payroll under the HI portion of the FICA contribution rate. Consequently, inflation factors were reinstated for HI payroll calculations. Beginning in 1994, the HI limit was removed entirely and all wages are subject to HI payroll taxes.

The amount of earnings that would have been subject to the HI portion of the FICA tax rate was estimated from a sample of accounts for which records of gross earnings (including sickness payments and miscellaneous compensation) were obtained from railroad employers. From these records, annual earnings data were gathered that indicated the RRA creditable compensation and total HI earnings for each sample record.

For 2021, the total sample amounts subject to HI and RRA taxes were, respectively, \$175,659,590 and \$167,628,437. Therefore, the 2021 ratio for inflating OASDI and HI taxable payroll is 1.0479. HI payroll calculations are elaborated upon further in Part II.

RRA Payroll up to FICA Limit

Prior to 1985, various adjustments and factors have been applied to RRA payroll to inflate it to OASDI levels. A summary of such adjustments and factors is included in the 41st Financial Interchange Summary and Documentation for Fiscal Year 1992, pages 62-63, with accompanying tables. Since 1985, OASDI payroll has been equal to RRA creditable payroll plus other adjustments. HI payroll equaled OASDI payroll through 1990. Since 1991, HI payroll equals the OASDI payroll times the inflation factor.

Multiple Railroads Employment and Miscellaneous Compensation Adjustment

Beginning in 1985, the employer RRA tax applies to the taxable compensation up to the annual limit earned by each employee, as has been the case under FICA. Under both systems, the employee's overall tax is limited by the annual maximum, even if the employee works for more than one employer. Thus, when an employee works with multiple employers and earns more than the FICA limit over the course of a year, the employee excess taxes are refundable, but the employer excess is not.

This is complicated somewhat by the inclusion of miscellaneous compensation, primarily sick pay, which became taxable and creditable in 1982. Third party miscellaneous compensation payors such as insurance companies and the RRB automatically withhold FICA taxes from the employee's payment. Consequently, such withholdings that exceed the maximum taxable amount are refundable to the employee.

The situation for railroad employers, however, is different. Insurance companies and the RRB notify them of the amount of benefits paid, and they in turn remit to the Internal Revenue Service (IRS) only that amount payable up to the annual limit for the employee. Consequently, employers generally do not pay excess FICA taxes on miscellaneous compensation.

Thus, it is necessary to determine both the amount and the source of payroll amounts in excess of annual FICA limits. Excess tax amounts resulting from multiple employment are paid for by both employers and employees, but refundable only to employees. Excess amounts resulting from miscellaneous compensation are paid only by employees and are fully refundable.

Full records of employer and miscellaneous payroll have been kept since 1989. Since records for 1982-1988 are not available, experience for these years was extrapolated from 1989-1991 experience.

The following equations are used to determine the miscellaneous pay/multiple railroad employment adjustment since 1989. They employ the following definitions relating to data for employee i and railroad employer j :

C_{ij} = Compensation for employee i from railroad j
 B_i = Railroad Retirement Board sickness payments for employee i
 I_i = Insurance company sickness payments for employee i
 L = Annual FICA payroll limit
 R = Number of annual railroad employers
 N = Number of employees

The total excess payroll, A , for a given year is calculated as follows:

$$A = \sum_{i=1}^N \text{Max} \left\{ \left(\sum_{j=1}^R C_{ij} \right) + B_i + I_i - L, 0 \right\}$$

That portion of total excess payroll due to multiple railroads employment, B , is:

$$B = \sum_{i=1}^N \text{Max} \left\{ \left(\sum_{j=1}^R C_{ij} \right) - L, 0 \right\}$$

Therefore, the amount of excess payroll due to multiple railroads employment is given by B , and the excess payroll attributable to miscellaneous compensation is given by $(A - B)$. These formulas are problematic in certain cases where there is a combination of multiple employment and miscellaneous compensation within a year. Experience indicates, however, that these instances are very rare.

Dual Coverage Wage Adjustment and Sampling Error

Dual coverage is the estimate of the amount of Social Security wages earned and taxed that would have exceeded FICA limits had all railroad compensation been subject to FICA. For 2021, the amounts involved for an affected employee would be combined earnings under both systems in excess of \$142,800 but not in excess of \$142,800 under either system separately.

We estimate this adjustment using data received from SSA that contains OASDI wages for the Gross Earnings (see Part II) sample individuals. Combined earnings over the OASDI limit that are subject to the OASDI limits under either system are inflated to yield an estimate of the universe amount of employee refunds that would have been payable from this source.

The dual coverage wage adjustment estimate of \$70.8 million for 2021 was obtained using the formula:

$$A = \frac{N}{n} \sum_{i=1}^n X_i$$

where A = estimated dual coverage adjustment for the universe
 X_i = dual coverage amount in excess of the Social Security wage base for sample account i
 N = universe number
 n = sample number

The standard error of \$27.5 million for 2021 was computed for these estimates from the formula:

$$S_A^2 = \frac{N(N-n)}{n^2(n-1)} \left\{ n \sum_{i=1}^n X_i^2 - \left(\sum_{i=1}^n X_i \right)^2 \right\}$$

Using the standard error, the 95 percent confidence interval was \$16.8 million to \$124.7 million for 2021.

Only the employee tax rates apply to dual coverage refunds. For 2021, the OASI inflated tax refund amount was \$3.75 million and the 95 percent confidence interval was \$0.89 million to \$6.61 million, while the DI inflated tax refund amount was \$0.64 million and the 95 percent confidence interval was \$0.15 million to \$1.12 million.

Final FICA Accrued Payroll

The final annual FICA accrued payroll, as shown in Tables 2 and 3, is the amount of railroad compensation to which combined employee and employer tax rates may be applied to obtain additional gross taxes (including overpayments of employee taxes) that would have been paid into the OASI, DI or HI Trust Funds if railroad employment were covered by FICA.

For years 1937-1965, the final accrued payroll is calculated as the net of (1) RRA payroll not in excess of the FICA limit, plus (2) compensation over the RRA monthly limit but not over the FICA limit, plus (3) the multiple railroad employment adjustment, less (4) 75 percent of dual coverage self-employment adjustment.

For years 1966-1987, the final accrued payroll is calculated as the net of (1) RRA creditable payroll inflated to under the annual FICA limit, plus (2) the multiple railroad employment adjustment, less (3) 50 percent of tips, less (4) sickness payments, less (5) the self-employment adjustment.

For years 1988 and later, the final accrued payroll is obtained by adding to the RRA creditable payroll up to the FICA limit the multiple railroad employment/miscellaneous compensation adjustment.

The OASDI accrued payroll for 2021 is \$17,100.9 million. The HI accrued payroll for 2021 is \$17,111.4 million.

Accrued Payroll under the Affordable Care Act

Beginning in calendar year 2013, the Affordable Care Act (ACA) imposes an additional employee Medicare tax of 0.9 percent on earnings above \$200,000 (for those who file an individual return) or \$250,000 (for those who file a joint return). The 0.9 percent tax is withheld from earnings above \$200,000 regardless of filing status. Because the taxable thresholds are applied separately to FICA earnings and railroad compensation, households with both FICA earnings and railroad compensation whose combined earnings are in excess of the taxable limits pay less tax than if all of their earnings were covered under FICA. An adjustment to the total accrued amount over \$200,000, the HI ACA payroll, is therefore required for the resulting shortfall of additional taxes that would have been collected if railroad employment was covered under FICA.

The \$317.9 million HI ACA payroll for 2021 was derived from gross earnings data reported by employers. A shortfall adjustment of \$3.0 million was made in December 2021. Table 4 summarizes the various components that determine the HI ACA payroll and the shortfall adjustment.

FICA Payroll Taxes on Cash Basis

The financial interchange requires that both the amount and pattern of FICA taxes that would have been collected from the final accrued OASDHI payroll be determined. To determine the pattern, a quarterly payroll distribution was estimated using the Gross Earnings study (see Part II). Quarterly pay for sample employees was accumulated over each quarter, up to the \$142,800 annual limit for 2021 for each employee. The resulting sample quarterly distribution was then applied to the overall population. Beginning with the 39th determination, the pattern of payment was further refined by applying second-degree curves to the quarterly payrolls to determine hypothetical monthly distributions (see Financial Interchange Summary and Documentation: 35th determination, pages 60-70; 36th determination, pages 41-43; 39th determination, pages 73-77). Finally, for calendar years before 1993, the monthly payroll results were further adjusted to reflect the measurable lag period between payroll disbursement and actual collection of FICA taxes thereon. This was discontinued beginning with calendar year 1993.

The table below shows the quarterly dollar and percentage distributions of the sample OASDI accrued payroll for 2021 and the resulting distribution of the accrued OASDI payroll. For the purpose of these tables, the sample amounts were limited to those employees for whom monthly or quarterly data were reported.

	Sample Amount ¹	Percentage Distribution	OASDI Payroll (millions)
Total	\$129,642,668	100.00	\$17,111.4
1st Quarter	33,784,220	26.06	4,459.2
2nd Quarter	31,972,309	24.66	4,219.7
3rd Quarter	32,135,953	24.79	4,241.9
4th Quarter	31,750,186	24.49	4,190.6

¹ Numbers may not add up due to rounding.

Similar calculations were performed for HI payroll, with the exception of the application of any annual covered earnings limit.

	Sample Amount ¹	Percentage Distribution	HI Payroll (millions)
Total	\$134,140,829	100.00	\$17,920.2
1st Quarter	34,362,630	25.62	4,591.2
2nd Quarter	32,396,358	24.15	4,327.7
3rd Quarter	32,990,186	24.59	4,406.6
4th Quarter	34,391,655	25.64	4,594.7

¹ Numbers may not add up due to rounding.

The table below shows the quarterly dollar and percentage distribution of the sample HI ACA accrued payroll for 2021 and the resulting distribution of the HI ACA accrued payroll.

	Sample Amount ¹	Percentage Distribution	HI ACA Payroll (millions)
Total	\$2,359,584	100.00	\$317.9
1st Quarter	408,545	17.31	55.0
2nd Quarter	279,876	11.86	37.7
3rd Quarter	408,605	17.32	55.1
4th Quarter	1,262,558	53.51	170.1

¹ Numbers may not add up due to rounding.

Preliminary estimates were made of the quarterly accrued payroll for the first nine months of 2022 based on presumed employment levels and wage increases. Under the OASDI annual limit of \$147,000 for 2022, estimated accrued payroll for January-September 2022 was \$14,244.8 million. The total HI estimated accrued payroll for January-September 2022 was \$14,704.6 million of which \$321.9 million was subject to the 0.9 percent additional Medicare tax.

Table 1. -- Annual Maximum Taxable Earnings Under the RRA and FICA

Year	RRA Limit ¹	FICA Limits	
		OASDI	HI
1937-1950	\$300	\$3,000	---
1951	300	3,600	---
1952	300	3,600	---
1953	300	3,600	---
1954	300/350 ²	3,600	---
1955	350	4,200	---
1956	350	4,200	---
1957	350	4,200	---
1958	350	4,200	---
1959	350/400 ³	4,800	---
1960	400	4,800	---
1961	400	4,800	---
1962	400	4,800	---
1963	400/450 ⁴	4,800	---
1964	450	4,800	---
1965	450	4,800	---
1966	550	6,600	\$6,600
1967	550	6,600	6,600
1968	650	7,800	7,800
1969	650	7,800	7,800
1970	650	7,800	7,800
1971	650	7,800	7,800
1972	750	9,000	9,000
1973	900	10,800	10,800
1974	1,100	13,200	13,200
1975	1,175	14,100	14,100
1976	1,275	15,300	15,300
1977	1,375	16,500	16,500
1978	1,475	17,700	17,700
1979	1,908	22,900	22,900
1980	2,158	25,900	25,900
1981	2,475	29,700	29,700
1982	2,700	32,400	32,400
1983	2,975	35,700	35,700
1984	3,150	37,800	37,800

See footnotes at the end of table.

Table 1. -- Annual Maximum Taxable Earnings Under the RRA and FICA (Continued)

Year	RRA Limit ¹	FICA Limits	
		OASDI	HI
1985	\$39,600	\$39,600	\$39,600
1986	42,000	42,000	42,000
1987	43,800	43,800	43,800
1988	45,000	45,000	45,000
1989	48,000	48,000	48,000
1990	51,300	51,300	51,300
1991	53,400	53,400	125,000
1992	55,500	55,500	130,200
1993	57,600	57,600	135,000
1994	60,600	60,600	No Limit
1995	61,200	61,200	No Limit
1996	62,700	62,700	No Limit
1997	65,400	65,400	No Limit
1998	68,400	68,400	No Limit
1999	72,600	72,600	No Limit
2000	76,200	76,200	No Limit
2001	80,400	80,400	No Limit
2002	84,900	84,900	No Limit
2003	87,000	87,000	No Limit
2004	87,900	87,900	No Limit
2005	90,000	90,000	No Limit
2006	94,200	94,200	No Limit
2007	97,500	97,500	No Limit
2008	102,000	102,000	No Limit
2009	106,800	106,800	No Limit
2010	106,800	106,800	No Limit
2011	106,800	106,800	No Limit
2012	110,100	110,100	No Limit
2013	113,700	113,700	No Limit
2014	117,000	117,000	No Limit
2015	118,500	118,500	No Limit
2016	118,500	118,500	No Limit
2017	127,200	127,200	No Limit
2018	128,400	128,400	No Limit
2019	132,900	132,900	No Limit
2020	137,700	137,700	No Limit
2021	142,800	142,800	No Limit
2022	147,000	147,000	No Limit

¹ Earnings bases are monthly through 1984 and annual thereafter.

² The RRA limit was \$300 for the first six months of 1954, raised to \$350 for the last six months of the year.

³ The RRA limit was \$350 for the first six months of 1959, raised to \$400 for the last six months of the year.

⁴ The RRA limit was \$400 for the first six months of 1963, raised to \$450 for the last six months of the year.

Table 2. -- Summary of Accrued Taxable Payroll Calculations, 1937-1965

(in millions)						
Year	RRA Creditable Payroll	RRA Payroll Up to FICA Limit ¹	FICA Level Payroll Exceeding RRA Monthly Limit	Multiple RR Employment Adjustment	Dual Coverage Self Employment	Final FICA Accrued Payroll
1937	\$2,264.3	\$2,136.2	\$4.0	\$0.5		\$2,140.7
1938	2,007.5	1,912.1	4.0	0.5		1,916.6
1939	2,145.3	2,118.1	4.0	0.5		2,122.6
1940	2,248.2	2,217.6	3.9	0.6		2,222.1
1941	2,656.9	2,616.8	4.8	0.8		2,622.4
1942	3,301.7	3,228.5	8.3	1.4		3,238.2
1943	3,944.4	3,825.8	13.0	2.3		3,841.1
1944	4,301.4	4,134.2	15.0	3.3		4,152.5
1945	4,340.0	4,181.3	16.4	3.1		4,200.8
1946	4,639.5	4,423.9	22.5	4.3		4,450.7
1947	4,750.3	4,486.8	20.8	5.2		4,512.8
1948	4,951.5	4,592.5	24.8	7.1		4,624.4
1949	4,609.3	4,262.7	26.0	6.8		4,295.5
1950	4,704.3	4,334.1	29.6	7.3		4,371.0
1951	5,111.4	5,111.4	111.9	5.7	\$1.6	5,227.8
1952	5,046.2	5,046.2	118.4	6.5	2.5	5,169.2
1953	4,989.3	4,989.3	106.3	7.9	1.2	5,102.6
1954	4,706.7	4,527.0	55.7	8.4	2.2	4,589.5
1955	4,924.6	4,924.6	116.7	7.0	10.3	5,040.6
1956	5,059.7	5,059.7	126.5	13.1	14.8	5,188.2
1957	4,859.5	4,859.5	127.8	16.7	6.6	4,999.1
1958	4,246.4	4,246.4	149.9	18.4	8.5	4,408.3
1959	4,377.1	4,377.1	321.4	22.7	9.7	4,713.9
1960	4,403.8	4,403.8	137.8	16.8	10.6	4,550.5
1961	4,076.5	4,076.5	127.6	14.7	10.1	4,211.2
1962	3,990.8	3,990.8	129.3	15.3	9.8	4,128.1
1963	3,954.8	3,906.7	113.7	18.1	15.7	4,026.7
1964	4,210.9	3,890.4	75.9	17.4	20.1	3,968.6
1965	4,139.5	3,794.1	63.5	16.2	23.1	3,856.5

¹ Taxable payroll for employees age 65 and over is excluded in 1937-1938.

Table 3. -- Summary of Accrued Taxable Payroll Calculations, 1966-2021
(Dollar amounts in millions)

Year	RRA Creditable Payroll	Prior Year ¹ & Coverage Adjustments	RRA Payroll Up to FICA Limit	Multiple Railroad & Miscellaneous Comp Adjustment	1/2 Tips	Miscellaneous Adjustments ²	Final OASDI Accrued Payroll	HI Payroll Inflation Factor	Final HI Accrued Payroll ³	Final HI ACA Accrued Payroll ⁴
1966	\$4,717.0	\$1.8	\$4,834.4	\$11.4	\$0.5	\$20.9	\$4,824.5			
1967	4,611.6	1.4	4,747.4	11.7	0.3		4,758.9			
1968	4,994.8	5.1	5,126.1	8.8	0.2		5,134.7			
1969	4,960.3	6.1	5,122.5	8.8	0.1		5,131.2			
1970	4,893.6	2.1	5,062.2	10.9	0.1		5,073.1			
1971	4,824.4	5.5	5,023.2	12.6	0.0	1.2	5,034.5			
1972	5,346.5	3.1	5,526.3	8.8	0.0	2.4	5,532.7			
1973	6,262.1	2.6	6,471.2	9.2	0.0	3.6	6,476.9			
1974	7,268.0	2.8	7,458.0	11.3	0.0	3.6	7,465.7			
1975	7,105.8	6.3	7,361.0	9.6	0.0	5.1	7,365.5			
1976	7,833.1	15.0	8,115.7	15.2	0.0	5.6	8,125.3			
1977	8,468.3	14.9	8,725.6	4.7	0.0	1.2	8,729.2			
1978	8,991.1	10.6	9,383.4	8.8	0.0	0.3	9,392.0			
1979	11,132.3	36.6	11,557.3	13.5	0.0	0.2	11,570.6			
1980	11,828.3	42.9	12,163.2	9.7	0.0		12,172.8			
1981	12,333.3	(64.4)	12,572.5	6.3	0.0		12,578.8			
1982	11,785.5	(14.8)	12,152.7	6.8	0.0		12,159.5			
1983	11,711.6	(7.0)	11,964.4	13.4	0.0		11,977.8			
1984	12,332.0	(2.1)	12,570.0	5.6	0.0		12,575.6			
1985	12,113.9	(1.8)	12,112.1	14.2	0.2		12,126.1			
1986	11,968.9	(1.4)	11,967.6	14.2	0.0		11,981.8			
1987	11,878.0	(1.9)	11,876.1	35.3	0.0		11,911.4			
1988	11,661.2	(13.2)	11,648.1	20.5			11,668.5			
1989	11,517.8	(5.0)	11,512.8	12.2			11,525.0			
1990	11,390.4	(7.3)	11,383.1	9.9			11,393.0			
1991	11,575.3	(11.4)	11,563.9	12.4			11,576.4	1.0415	\$12,044.0	
1992	11,901.4	(4.9)	11,896.5	15.7			11,912.3	1.0581	12,588.2	
1993	11,719.8	(3.0)	11,716.8	12.3			11,729.1	1.0612	12,434.4	
1994	11,888.5	2.7	11,891.2	9.8			11,901.0	1.0522	12,511.6	
1995	11,918.0	(3.1)	11,914.9	13.5			11,928.3	1.0644	12,682.2	
1996	12,224.1	(3.4)	12,220.7	14.2			12,234.9	1.0585	12,935.7	
1997	12,508.5	(1.7)	12,506.8	17.2			12,524.0	1.0538	13,179.2	
1998	13,166.0	(3.3)	13,162.7	19.6			13,182.3	1.0785	14,195.7	
1999	13,325.6	(3.8)	13,321.8	38.8			13,360.6	1.0777	14,357.4	
2000	13,362.1	(3.8)	13,358.3	9.5			13,367.8	1.0516	14,047.1	

See footnotes at the end of table.

Table 3. -- Summary of Accrued Taxable Payroll Calculations, 1966-2021 (Continued)
(Dollar amounts in millions)

Year	RRA Creditable Payroll	Prior Year ¹ & Coverage Adjustments	RRA Payroll Up to FICA Limit	Multiple Railroad & Miscellaneous Comp Adjustment	1/2 Tips	Miscellaneous Adjustments ²	Final OASDI Accrued Payroll	HI Payroll Inflation Factor	Final HI Accrued Payroll ³	Final HI ACA Accrued Payroll ⁴
2001	\$13,247.1	(\$3.3)	\$13,243.7	\$8.2			\$13,251.9	1.0352	\$13,710.4	
2002	13,113.3	(3.5)	13,109.7	8.0			13,117.7	1.0345	13,562.3	
2003	13,262.5	(1.5)	13,261.1	9.7			13,270.8	1.0474	13,889.2	
2004	13,870.9	(0.8)	13,870.1	7.8			13,878.0	1.0535	14,612.3	
2005	14,564.7	(0.9)	14,563.7	8.6			14,572.4	1.0588	15,420.3	
2006	15,033.1	(0.4)	15,032.8	9.5			15,042.3	1.0759	16,173.6	
2007	15,619.0	(0.7)	15,618.3	10.7			15,629.0	1.0785	16,844.4	
2008	16,202.5	(0.5)	16,202.0	11.0			16,213.0	1.1057	17,915.0	
2009	15,341.8	(0.5)	15,341.3	7.6			15,348.9	1.0585	16,238.7	
2010	15,439.7	(0.4)	15,439.2	7.7			15,446.9	1.0541	16,274.7	
2011	16,572.3	(0.4)	16,572.0	10.3			16,582.3	1.0775	17,856.1	
2012	17,350.2	(0.3)	17,349.8	11.4			17,361.2	1.1252	19,521.9	
2013	17,771.7	(0.4)	17,771.3	12.7			17,784.0	1.0532	18,716.7	\$593.1
2014	19,215.1	(0.5)	19,214.6	16.7			19,231.4	1.0772	20,697.3	851.6
2015	19,986.9	(0.6)	19,986.3	12.8			19,999.1	1.0684	21,352.4	624.1
2016	18,314.2	(0.1)	18,314.1	9.6			18,323.7	1.0648	19,500.3	629.1
2017	18,503.7		18,503.7	12.1			18,515.8	1.0637	19,683.0	656.8
2018	19,664.2		19,664.2	13.2			19,677.4	1.0517	20,680.7	403.6
2019	19,186.5		19,186.5	11.4			19,197.8	1.0523	20,190.1	444.0
2020	17,472.9		17,472.9	9.2			17,482.2	1.0302	18,000.9	317.9
2021	17,100.9		17,100.9	10.5			17,111.4	1.0479	17,920.2	317.9

¹ Prior year adjustments for 1966-1981. Beginning with 1982, prior year adjustments are reflected in the RRA creditable payroll column.

² Self-employment income in 1966, sickness payments in 1971-1979.

³ RRA payroll up to FICA limit times HI inflation factor. After 1993, HI limit on taxable pay was removed and all compensation is taxable.

⁴ RRA payroll above \$200,000 per individual subject to additional 0.9 percent HI tax under ACA.

Table 4. -- Summary of Accrued Taxable Payroll Calculations Under ACA, 2013-2021
(in millions)

Year	Additional Medicare Tax		Final HI ACA		Shortfall
	Compensation		Accrued	Shortfall ¹	Adjustment
	Regular	Miscellaneous	Payroll	Amount	Date ²
2013	\$592.1	\$1.1	\$593.1	\$1.2	Dec 2015
2014	839.5	12.1	851.6	1.4	Dec 2016
2015	624.1	0.0	624.1	1.7	Dec 2017
2016	628.4	0.7	629.1	1.8	Dec 2018
2017	655.6	1.2	656.8	2.4	Dec 2019
2018	403.6	0.0	403.6	1.8	Dec 2020
2019	444.0	0.0	444.0	3.0	Dec 2021
2020	317.7	0.3	317.9		
2021 ³	317.7	0.3	317.9		

¹ Difference between payroll taxes actually collected and the amount that would have been collected under FICA.

² Adjustments are scheduled for December of the second year after the year for which the tax is collected.

³ 2020 payroll data are used in the calculations.

Part II.2021 Gross Earnings Sample for Financial
Interchange Payroll Calculations**Design of the Sample**

All railroad employers were asked to report the 2021 gross earnings of a one-percent sample of their employees. Sample employees were those with social security account numbers ending in "30". Employers with 5,000 or more employees were asked to supply monthly or quarterly gross earnings data for the sample employees. Smaller employers could supply monthly, quarterly or annual gross earnings figures. The full 2021 gross earnings one-percent sample consisted of 2,108 records.

The gross earnings sample is used to determine the dual coverage payroll adjustment, the inflation factor for calculating the HI payroll, and the quarterly payroll distribution estimate.

A comparison of the average RRA creditable compensation (exclusive of miscellaneous compensation) and average service months for all employees based on the tabulation of all 2021 creditable earnings records and the gross earnings sample is as follows:

	Number of Employees	Average Compensation	Average Months of Service
All employees	217,123	\$ 77,804	10.37
Gross earnings sample	2,108	\$ 78,489	10.46

In addition, the representation of the universe by the sample was checked by means of Chi-square tests applied to distributions of employees by service months and by compensation (excluding miscellaneous compensation) creditable under the RRA. The Chi-square statistics of the gross earnings sample versus the expected numbers based on 100-percent data were tested at a 95-percent credibility level.

Results are shown in the following table.

Service months	Gross earnings sample	Expected number	Taxable compensation	Gross earnings sample	Expected number
Total	2,108	2,108		2,108	2,108
0	59	78	Under \$5,000	97	105
1	38	39	\$5,000-\$9,999	45	47
2	41	37	\$10,000-\$14,999	40	34
3	50	37	\$15,000-\$19,999	32	31
4	33	35	\$20,000-\$24,999	35	27
5	32	32	\$25,000-\$29,999	21	25
6	32	34	\$30,000-\$34,999	27	27
7	40	38	\$35,000-\$39,999	19	29
8	24	38	\$40,000-\$44,999	29	35
9	38	49	\$45,000-\$49,999	40	42
10	48	53	\$50,000-\$54,999	49	54
11	66	68	\$55,000-\$59,999	52	73
12	1,607	1,570	\$60,000-\$64,999	104	106
			\$65,000-\$69,999	150	153
			\$70,000-\$74,999	161	152
			\$75,000-\$79,999	131	134
			\$80,000-\$84,999	159	131
			\$85,000-\$89,999	130	121
			\$90,000-\$94,999	114	112
			\$95,000-\$99,999	99	104
			\$100,000-\$104,999	98	97
			\$105,000-\$109,999	88	84
			\$110,000-\$114,999	74	69
			\$115,000-\$119,999	67	57
			\$120,000-\$124,999	43	45
			\$125,000-\$129,999	28	35
			\$130,000-\$134,999	40	30
			\$135,000-\$139,999	24	25
			\$140,000-\$142,799	14	15
			\$142,800	98	109
Degrees of freedom		12			29
Chi-square		19.021			31.856
95% Threshold		21.026			42.557

The above Chi-square values are below the acceptable limit defined by the 95-percent credibility level. From this, and the comparison of averages, it may be concluded that the 2021 gross earnings sample adequately represents the universe of employee data and should produce valid estimates.

Sampling Errors in Financial Interchange HI Tax Calculation

It is estimated that accrued HI taxes (excluding ACA amounts) on railroad payrolls in calendar year 2021, had railroad employment been covered under HI, would have amounted to \$519.7 million. The estimate was obtained by applying the HI tax rate to the RRA taxable payroll after it was adjusted to include compensation in excess of the OASDI limit. The estimated 95-percent confidence interval for this adjustment was +/- \$14.6 million. Since the RRA total taxable payroll is available on a 100-percent basis, this is the only error inherent in the estimate. Thus, the 95-percent confidence interval for 2021 HI taxes was \$505.1 million to \$534.3 million.

The adjustment calculation uses the following definitions:

- A = estimated difference between payroll under the RRA annual creditable limit and total HI taxable payroll
- X_i = HI taxable payroll for sample account i
- Y_i = RRA creditable payroll for sample account i
- N = universe number
- n = sample number
- B = Universe amount of RRA creditable payroll

The formula for the adjustment amount, A, is:

$$A = \left[\frac{\sum_{i=1}^n X_i}{\sum_{i=1}^n Y_i} - 1 \right] B$$

This calculation gave A = \$819.3 million.

The standard error S_A associated with this estimate is computed from the formula:

$$S_A^2 = \frac{N(N-n)}{n(n-1)} \left\{ \sum_{i=1}^n X_i^2 + R^2 \sum_{i=1}^n Y_i^2 - 2R \sum_{i=1}^n X_i Y_i \right\}$$

where

$$R = \frac{\sum_{i=1}^n X_i}{\sum_{i=1}^n Y_i}$$

The standard error computed by the formula was \$256.3 million. The 95-percent confidence interval was \$317.0 million to \$1,321.6 million.