Railroad Retirement System

Annual Report Required by Railroad Retirement Act of 1974 and Railroad Retirement Solvency Act of 1983



U.S. Railroad Retirement Board
Bureau of the Actuary
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ANNUAL ACTUARIAL REPORT REQUIRED BY RAILROAD RETIREMENT ACT OF 1974 AND RAILROAD RETIREMENT SOLVENCY ACT OF 1983

I. INTRODUCTION

This report is intended to meet the requirements of Section 22 of the Railroad Retirement Act of 1974 and Section 502 of the Railroad Retirement Solvency Act of 1983.

Section 22 of the Railroad Retirement Act of 1974 requires the Railroad Retirement Board to prepare an annual report containing a five-year projection of revenues to and payments from the Railroad Retirement Account and to submit the report to the President and the Congress by July 1. The report must also contain a five-year projection of the account benefits ratio and average account benefits ratio. If the five-year projection indicates that funds in the Railroad Retirement Account will be insufficient to pay full benefits, (1) representatives of railroad employees, railroad carriers and the President must submit proposals to the Congress to preserve the financial solvency of the Railroad Retirement Account, and (2) the Railroad Retirement Board must issue regulations to reduce annuity levels during any fiscal year in which there would be insufficient funds to make full payments.

Section 502 of the Railroad Retirement Solvency Act of 1983 requires the Railroad Retirement Board to prepare an annual report on the actuarial status of the railroad retirement system and to submit the report to the Congress by July 1. The report must contain recommendations for any financing changes which might be advisable, including (1) changes in the tax rates, and (2) whether any part of the taxes on employers should be diverted to the Railroad Unemployment Insurance Account to aid in the repayment of its debt to the Railroad Retirement Account.

II. RAILROAD EMPLOYMENT

Over the years, the main source of income to the railroad retirement system has been a payroll tax on railroad employment. The amount of income that the tax produces is directly dependent on the number of railroad employees covered under the system.

An abbreviated history of average railroad employment from 1955 through 2010 is shown in the following table.

Year	Average employmentfor year	Average annual rate of decline for the 5-year period ending with the year
1955 1960	1,239,000 909,000	6.0%

1965	753,000	3.7
1970	640,000	3.2
1975	548,000	3.1
1980	532,000	0.6
1985	372,000	6.9
1990	296,000	4.5
1995	265,000	2.2
2000	246,000	1.5
2005	232,000	1.2
2010	221,000	1.0

Between 1955 and 2010, the average annual rate of decline was 3.1 percent. Since 2010, average employment has instead had an increasing period with rates of decline as follows:

Year	Average employment for year	Annual rate of decline from previous year
2011	229,000	-3.6%
2012	234,000	-2.2%
2013	237,000	-1.3%
2014	242,000	-2.1%
2015	247,000	-2.1%
2016	225,000	8.9%

Two things become clear from the figures shown -- (1) railroad employment has generally declined over a long period of years, and (2) the rate of decline has been irregular.

Three employment assumptions were used in the 26th actuarial valuation, which served as the 2015 annual report required by Section 502. Employment assumptions I and II were based on a model developed by the Association of American Railroads, and assumed that (1) passenger employment would remain at the level of 46,000, and (2) the employment base, excluding passenger employment, would decline at a constant annual rate (0.5 percent for assumption I and 2.0 percent for assumption II) for 25 years, at a reducing rate over the next 25 years, and remain level thereafter. Employment assumption III differed from employment assumptions I and II by assuming that (1) passenger employment would decline by 500 per year until a level of 35,000 was reached and then remain level, and (2) the employment base, excluding passenger employment, would decline at a constant annual rate of 3.5 percent for 25 years, at a reducing rate over the next 25 years, and remain level thereafter.

The 2016 annual report continued the use of the three employment assumptions, updating them to reflect recent employment declines.

The projected average employment for 2016, based on the three employment assumptions used in the 2016 report, ranged from 223,000 to 229,000. The actual average employment for 2016 was 225,000 (subject to later adjustment), which was within the range of projected amounts. Average passenger employment for calendar year 2016 was estimated to be 47,000. Based on this result, it was decided to use 2016 average employment of 225,000 as a starting point in this year's report and continue the use of the rates of decline used in the 26th valuation. In this year's report, for employment assumptions I and II, passenger employment is assumed to remain level at 47,000. For employment assumption III, passenger employment is assumed to decline by 500 per year until a level of 35,000 is reached and then remain level. These assumptions are shown in Table 1.

With the exception of the economic and employment assumptions shown in Table 1, the assumptions used in this report correspond to those published in the Twenty-Sixth Actuarial Valuation of the Assets and Liabilities Under the Railroad Retirement Acts as of December 31, 2013 with Technical Supplement, which may be found at www.rrb.gov.

III. RESULTS

Projections were made for the various components of income and outgo under each employment assumption for the 25 calendar years 2017-2041. The projections of these components were combined and the investment income calculated to produce the projected balances in the accounts at the end of each projection year. The results are summarized in Table 2 and Figure 1.

Table 2 consists of three tables, one for each of employment assumptions I, II and III. The tables show, for the Social Security Equivalent Benefit Account (SSEBA) and the combined National Railroad Retirement Investment Trust (NRRIT) and Railroad Retirement Account (RRA), for each projection year, (1) the various elements of income and outgo, (2) the account balance on December 31, and (3) the account benefits ratio (ABR) and average account benefits ratio (AABR).

Table 2 indicates that cash flow problems do not arise during the projection period under any of the three employment assumptions. The results shown in Table 2 will be discussed separately for the SSEBA and the combined NRRIT and RRA.

¹ At the end of each fiscal year (September 30), the Account Benefits Ratio (ABR) is calculated by dividing the fair market value of the assets in the RRA and the NRRIT as of the close of such fiscal year by the total benefits and administrative expenses paid from the RRA and the NRRIT during such fiscal year. The Average Account Benefits Ratio (AABR), with respect to any calendar year, is the average of the account benefits ratios for the 10 most recent fiscal years ending before such calendar year. If the AABR is not a multiple of 0.1, it is increased to the next highest multiple of 0.1. The tier 2 tax rate is determined from a tax rate table based on the AABR.

A. Social Security Equivalent Benefit Account

The SSEBA pays the social security level of benefits and administrative expenses allocable to those benefits, and it receives as income the social security level of taxes. The SSEBA also receives or pays the financial interchange transfers between the railroad retirement and social security systems. The financial interchange transfer, subject to the qualification in the next paragraph, should be enough to offset any surplus or deficit for the year. The SSEBA can thus be regarded as automatically funded, the financial interchange being the mechanism for correcting any surplus or deficiency.

The qualification mentioned in the preceding paragraph arises because, in a relatively small number of cases, the railroad retirement system does not pay benefits when the social security system would. In these cases, mainly dependent children of retired railroad employees, the SSEBA collects an amount through the financial interchange but does not pay a corresponding benefit. This imbalance between outgo and income is small in any particular year.

The SSEBA must from time to time transfer to the NRRIT or RRA amounts not needed to pay current benefits and administrative expenses in such a manner as to maximize investment return to the Railroad Retirement system.

The SSEBA is assumed to maintain a target balance of approximately 1.5 months of benefit payments in order to meet benefit obligations and contingencies, and transfer any excess to the NRRIT/RRA. However, if the NRRIT/RRA runs into cash flow problems, the SSEBA is assumed to transfer enough of its accumulated funds to the NRRIT/RRA to provide for benefit payments until the SSEBA is exhausted. Thereafter, the SSEBA is assumed to transfer to the NRRIT/RRA any excess of income over outgo, maintaining a zero balance.

B. Railroad Retirement Account and National Railroad Retirement Investment Trust

The RRA receives tier 2 payroll taxes and income taxes on tier 2 and excess tier 1 benefits. Tier 2 benefits, excess tier 1 benefits, supplemental annuity benefits and administrative expenses are paid from the RRA. The NRRIT receives funds from the RRA and SSEBA for investment, pays investment expenses, and transfers funds to the RRA to meet benefit obligations.

The tier 2 payroll tax rate is determined from a tax rate table based on the AABR. The combined employer and employee tier 2 tax rate is 18% for values of the AABR between 4.0 and 6.0, inclusive. A maximum rate of 27% is reached when the AABR falls below 2.5, and a minimum rate of 8.2% is reached when the AABR reaches 9.0. Since the AABR is a 10-year average of the ABRs, whether the AABR in a given year increases or decreases from the prior year depends solely on whether the ABR in the prior year is greater or less than the ABR 10 years earlier.

Under employment assumption I (Table 2-I), the combined NRRIT and RRA balance declines initially but then increases through the remainder of projection period. The combined employer and employee tier 2 tax rate remains level at 18%.

Under employment assumption II (Table 2-II), the combined NRRIT and RRA balance remains relatively level, declining through 2026 and then generally growing through the end of the projection period. The combined employer and employee tier 2 tax rate increases to 19% in 2032-2041.

Under employment assumption III (Table 2-III), the combined NRRIT and RRA balance declines through the end of the projection period. The combined employer and employee tier 2 tax rate increases to 27% in 2038. Despite the 27% tax rate, expenditures continue to exceed income at the end of the projection period and the ABR falls to a level of 0.9.

C. Analysis of Results

Under each employment assumption, no cash flow problems occur throughout the 25-year projection period, and the ABR remains above 0.5 in each year.

The overall conclusion is that, barring a sudden, unanticipated, large decrease in railroad employment or substantial investment losses, the railroad retirement system will experience no cash flow problems during the next 25 years. The long-term stability of the system, however, is still uncertain. Under the current financing structure, actual levels of railroad employment and investment return over the coming years will largely determine whether corrective action is necessary.

D. Comparison of Results with 2016 Report

The overall results do not differ substantially from last year. The projected tier 2 tax rates are the same as in last year's report in each calendar year under employment assumptions I and III. Under employment assumption II, the projected tier 2 tax rate differs only in being one percent higher in calendar years 2032-2034.

Actual investment return in calendar year 2016 met expectations, and actual employment fell within the assumed range falling just below the intermediate assumption in last year's report.

IV. RECOMMENDATIONS

As stated in the introduction, this report must contain recommendations with regard to (1) tax rates and (2) whether any part of the taxes on employers should be diverted to the Railroad Unemployment Insurance Account to aid in the repayment of any debt to the Railroad Retirement Account.

A. Tax Rates

This report recommends no change in the rate of tax imposed on employers and employees. The tax adjustment mechanism will automatically increase or decrease tax rates in response to changes in fund balance. Even under a pessimistic employment assumption, this mechanism is expected to prevent cash flow problems for at least 25 years.

B. Diversion of Taxes to Railroad Unemployment Insurance Account

No diversion of taxes from the Railroad Retirement Account to the Railroad Unemployment Insurance Account is recommended at this time. There are currently no loans outstanding from the Railroad Retirement Account to the Railroad Unemployment Insurance Account.

Table 1. Employment, inflation and investment return assumptions

Calendar	Average	e employment (thousands)		age increase prior year	Investment
year	I	II	III	Earnings	Cost of living	return
2016	225	225	225	2.0%	0.0%	7.0%
2017	224	221	218	3.7	0.3	7.0
2018	223	218	211	3.7	1.9	7.0
2019	222	214	205	3.7	2.3	7.0
2020	221	211	199	3.7	2.7	7.0
2021	220	208	193	3.7	2.7	7.0
2022	219	204	188	3.7	2.7	7.0
2023	219	201	182	3.7	2.7	7.0
2024	218	198	177	3.7	2.7	7.0
2025	217	195	171	3.7	2.7	7.0
2026	216	192	166	3.7	2.7	7.0
2027	215	189	162	3.7	2.7	7.0
2028	214	186	157	3.7	2.7	7.0
2029	214	184	152	3.7	2.7	7.0
2030	213	181	148	3.7	2.7	7.0
2031	212	178	144	3.7	2.7	7.0
2032	211	176	140	3.7	2.7	7.0
2033	210	173	135	3.7	2.7	7.0
2034	209	171	132	3.7	2.7	7.0
2035	209	168	128	3.7	2.7	7.0
2036	208	166	124	3.7	2.7	7.0
2037	207	163	121	3.7	2.7	7.0
2038	206	161	117	3.7	2.7	7.0
2039	205	159	114	3.7	2.7	7.0
2040	205	156	111	3.7	2.7	7.0
2041	204	154	108	3.7	2.7	7.0

Table 2-1. Progress of the Combined National Railroad Retirement Investment Trust (NRRIT) and Railroad Retirement Account (RRA), and Social Security Equivalent Benefit Account (SSEBA) under Employment Assumption I (Dollar amounts in millions)

		Average)	ombined NR	Combined NRRIT and RRA	4		S	SSEBA		
	Account	Account account	Tier 2	Benefits				Benefits		Other		Combined
Calendar	benefits	benefits benefits	tax	and admin-	Tax	Other	Balance,	and admin-	Tax	income and	Balance,	balance,
year	ratio	ratio	rate	istration	income	income	end year	istration	income	expense	end year	end year
2017	4.58	5.50	18.0%	\$5,554	\$3.612	\$1.700	\$25.072	171,171	\$3,291	\$3,815	\$674	\$25.746
2018	4.46	5.20	18.0%	5,646	3,745	1.685	24,855	7,359	3,425	4.042	782	25,637
2019	4.37	5.00	18.0%	5,724	3,872	1.672	24,675	7,566	3,557	4.125	668	25,574
2020	4.30	4.90	18.0%	5.795	4,000	1.717	24.597	7,794	3,694	4.170	970	25.567
2021	4.24	4.80	18.0%	5,852	4,132	1,659	24,536	8,015	3,838	4,129	922	25,458
2022	4.21	4.70	18.0%	5,901	4,268	1,689	24,592	8,223	3,985	4,339	1,024	25,616
2023	4.21	4.70	%0.81	5.949	4.407	1.783	24.833	8,417	4.136	4,305	1,048	25,881
2024	4.23	4.60	%0.81	6,005	4,549	1.807	25,185	8,602	4,290	4.335	1,071	26,256
2025	4.25	4.50	18.0%	990'9	4.694	1.728	25,541	8,782	4,445	4,359	1,093	26,634
2026	4.29	4.40	%0.81	6,131	4.842	1.870	26,122	8.967	4.604	4.386	1,116	27,238
2027	4.36	4.40	%0.81	6,202	4.995	1.917	26.831	9,154	4.767	4,411	1.139	27,970
2028	4.43	4.30	18.0%	6.291	5.150	1,971	27.662	9,346	4,917	4,453	1,163	28,825
2029	4.50	4.30	18.0%	6.397	5.309	2.035	28.609	9,541	5.068	4.497	1.187	29.796
2030	4.58	4.40	18.0%	6.512	5.474	2,105	29,676	9,743	5.224	4,544	1.212	30,888
2031	4.67	4.40	18.0%	6,635	5,642	2,146	30,829	856'6	5,384	4.600	1,239	32,068
2032	4.78	4.40	18.0%	6.754	5.816	2,268	32,160	10.189	5.550	4.667	1,267	33,427
2033	4.92	4.50	%0.81	198'9	5.997	2.367	33,662	10,436	5.725	4.741	1.298	34.960
2034	5.07	4.60	%0.81	686'9	6,184	2,478	35,335	10,685	5,905	4,811	1,329	36,664
2035	5.21	4.60	%0.81	7,152	6.376	2,601	37,161	10.935	6,087	4.879	1,360	38,521
2036	5.36	4.70	18.0%	7.323	6.575	2,726	39,139	11,199	6.276	4,956	1,393	40,532
2037	5.51	4.80	18.0%	7,504	6.781	2.874	41,291	11.480	6.472	5,042	1,427	42,718
2038	2.67	5.00	18.0%	7,703	6.994	3.030	43,612	11,766	6.675	5,126	1.463	45,075
2039	5.84	5.10	18.0%	7.902	7,216	3.197	46.123	12.062	6.888	5,211	1.500	47,623
2040	6.03	5.20	18.0%	8,104	7,448	3,377	48,845	12,372	7,111	5,299	1,538	50,383
2041	6.22	5.40	18.0%	8,336	7.687	3,570	51,766	12,699	7,340	5,400	1,579	53,345

a The fair market value of the assets in the RRA and NRRIT as of the close of the fiscal year (September 30) divided by the total benefits and administrative expenses paid from the RRA and NRRIT during the fiscal year.

The average of the account benefits ratios for the 10 most recent fiscal years ending before the calendar year.

c Includes payroll taxes and income taxes on benefits.

^d Includes investment income and transfers from the SSEBA.

e Other income includes financial interchange income, advances from general revenues, and interest income. Other expense includes repayment of advances from general revenues and transfers to the NRRIT or RRA.

Table 2-11. Progress of the Combined National Railroad Retirement Investment Trust (NRRIT) and Railroad Retirement Account (RRA), and Social Security Equivalent Benefit Account (SSEBA) under Employment Assumption II (Dollar amounts in millions)

Other Balance, and admin-lincome and income and admin-lincome			l i			Combined NRRIT and RRA	RIT and RR	A		S	SSEBA		
Balance, and admin- admin- frax income and Balance, con 24,772 7,359 3,374 4,093 4,210 8,963 4,289 4,289 1,048 3,23 1,048 3,37 4,407 4,550 1,048 3,34 1,116 3,34 1,416 4,369 1,116 3,34 1,403 4,403 4,403 4,403 4,403 4,403 4,403	Account account Tier 2 Benefits	Tier 2		Benefits					Benefits		Other		Combined
\$25,051 \$7,171 \$3,273 \$3,833 \$674 \$ \$ \$ 24,772 24,772 7,359 3,374 4,093 782 24,772 7,566 3,473 4,210 899 24,486 7,566 3,473 4,210 899 24,486 7,794 3,574 4,291 970 23,982 8,015 3,678 4,289 922 23,667 8,213 3,784 4,540 1,023 23,667 8,611 3,891 4,540 1,023 23,667 8,611 3,997 4,626 1,070 23,456 8,781 4,103 4,700 1,093 23,456 8,781 4,103 4,777 1,115 23,456 9,148 4,316 4,855 1,185 23,456 9,248 4,590 5,158 1,210 23,450 9,337 4,407 4,953 1,185 23,450 9,931 4,682 5,274 1,263 </th <th>s benefits tax and admin-</th> <th>tax and admin-</th> <th>and admin-</th> <th></th> <th>Tax</th> <th></th> <th>Other</th> <th>Balance,</th> <th>and admin-</th> <th>Tax</th> <th>income and</th> <th>Balance,</th> <th>balance,</th>	s benefits tax and admin-	tax and admin-	and admin-		Tax		Other	Balance,	and admin-	Tax	income and	Balance,	balance,
\$25,051 \$7,171 \$3,273 \$3,833 \$674 \$24,772 \$3,59 \$3,74 \$4,093 782 24,486 7,566 3,473 4,093 782 24,486 7,566 3,473 4,210 899 24,253 7,794 3,574 4,291 970 23,982 8,015 3,678 4,289 922 23,667 8,417 3,891 4,540 1,023 23,667 8,417 3,891 4,540 1,023 23,667 8,781 4,103 4,700 1,093 23,456 8,781 4,113 4,700 1,093 23,443 8,963 4,209 4,777 1,115 23,445 9,148 4,316 4,855 1,118 23,456 9,148 4,316 4,879 5,536 1,185 23,450 9,337 4,407 4,953 1,186 23,450 9,331 4,682 5,274 1,235 23,450 9,931 4,682 5,274 1,235 24,187	ratio ratio rate istration income	io rate istration	istration		income		income	end year	istration	income	expense	end year	end year
24,772 7,359 3,374 4,093 782 24,486 7,566 3,473 4,210 899 24,253 7,794 3,574 4,291 970 23,982 8,015 3,678 4,291 970 23,667 8,417 3,891 4,540 1,023 23,602 8,601 3,997 4,626 1,070 23,456 8,781 4,103 4,700 1,093 23,456 8,963 4,209 4,777 1,115 23,456 9,148 4,209 4,777 1,115 23,456 9,148 4,209 4,777 1,115 23,456 9,148 4,316 4,855 1,138 23,479 9,337 4,407 4,953 1,162 23,450 9,347 4,682 5,053 1,185 23,456 9,931 4,682 5,274 1,235 23,450 10,152 4,778 5,36 1,203 24,426 10,152 4,778 5,36 1,263 24,436 1	4.58 5.50 18.0% \$5,554 \$3,592	18.0% \$5,554	\$5,554		\$3.592		\$1,700	\$25,051	171.171	\$3.273	\$3.833	\$674	\$25.725
24,486 7,566 3,473 4,210 899 24,253 7,794 3,574 4,291 970 23,982 8,015 3,678 4,289 922 23,667 8,417 3,891 4,540 1,023 23,667 8,417 3,891 4,550 1,048 23,667 8,601 3,997 4,626 1,070 23,456 8,781 4,103 4,700 1,093 23,443 8,963 4,209 4,777 1,115 23,497 9,337 4,407 4,985 1,185 23,497 9,527 4,498 5,053 1,185 23,497 9,527 4,498 5,053 1,185 23,497 9,527 4,498 5,053 1,185 23,497 9,527 4,498 5,053 1,185 23,497 9,527 4,498 5,053 1,185 23,450 10,152 4,778 5,240 1,263 24,187 10,622 4,982 5,536 1,244 24,436 <	4.45 5.20 18.0% 5,646 3,686	18.0% 5,646	5,646		3,686		1,681	24,772	7,359	3,374	4.093	782	25,554
24,253 7,794 3,574 4,291 970 23,982 8,015 3,678 4,289 922 23,767 8,223 3,784 4,540 1,023 23,667 8,417 3,891 4,550 1,048 23,667 8,601 3,997 4,626 1,070 23,456 8,781 4,103 4,700 1,093 23,456 9,148 4,209 4,777 1,115 23,479 9,337 4,407 4,983 1,162 23,497 9,527 4,498 5,053 1,185 23,497 9,527 4,498 5,053 1,185 23,497 9,527 4,498 5,053 1,185 23,497 9,527 4,498 5,053 1,185 23,502 9,724 4,590 5,158 1,202 24,187 10,622 4,879 5,536 1,203 24,426 10,855 5,082 5,693 1,314 24,439 11,100 5,187 5,943 1,414 25,018	4.34 5.00 18.0% 5,724 3,775	18.0% 5.724	5,724		3,775		1.662	24,486	7,566	3,473	4,210	668	25,385
23.982 8,015 3,678 4,289 922 23,767 8,223 3,784 4,540 1,023 23,667 8,417 3,891 4,550 1,048 23,602 8,601 3,997 4,626 1,070 23,456 8,781 4,103 4,700 1,093 23,456 9,148 4,209 4,777 1,115 23,497 9,527 4,498 5,053 1,185 23,497 9,527 4,498 5,053 1,185 23,497 9,527 4,498 5,053 1,185 23,497 9,527 4,498 5,053 1,185 23,502 9,931 4,682 5,274 1,235 23,504 10,152 4,778 5,36 1,202 24,187 10,622 4,982 5,56 1,202 24,426 10,855 5,082 5,801 1,350 24,439 11,100 5,187 5,943 1,414 25,018 11,876 5,294 6,094 1,414 25,018	4.24 4.90 18.0% 5.794 3.863	18.0% 5.794	5,794		3,863		1.699	24,253	7,794	3,574	4,291	970	25,223
23,767 8.223 3,784 4,540 1,023 23,667 8,417 3,891 4,550 1,048 23,602 8,601 3,997 4,626 1,070 23,456 8,781 4,103 4,700 1,093 23,443 8,963 4,209 4,777 1,115 23,456 9,148 4,316 4,855 1,138 23,497 9,527 4,498 5,053 1,162 23,497 9,527 4,498 5,053 1,185 23,497 9,527 4,498 5,053 1,185 23,497 9,527 4,498 5,053 1,185 23,407 9,931 4,682 5,274 1,235 23,506 10,152 4,778 5,401 1,263 24,187 10,622 4,879 5,536 1,292 24,426 10,855 5,082 5,801 1,380 24,430 11,100 5,187 5,943 1,414 25,018 11,613 5,403 6,242 1,444 25,023 <td>4.15 4.80 18.0% 5.851 3.952</td> <td>18.0% 5.851</td> <td>5.851</td> <td></td> <td>3,952</td> <td></td> <td>1,628</td> <td>23.982</td> <td>8,015</td> <td>3,678</td> <td>4.289</td> <td>922</td> <td>24,904</td>	4.15 4.80 18.0% 5.851 3.952	18.0% 5.851	5.851		3,952		1,628	23.982	8,015	3,678	4.289	922	24,904
23.667 8.417 3.891 4.550 1.048 23.602 8.601 3.997 4.626 1,070 23.456 8.781 4,103 4.700 1,093 23.443 8.963 4,209 4.777 1,115 23.456 9,148 4,316 4,855 1,138 23.479 9,337 4,407 4,953 1,162 23.497 9,527 4,498 5,053 1,185 23.450 9,214 4,590 5,158 1,210 23.450 9,931 4,682 5,274 1,235 23.676 10,152 4,778 5,401 1,263 24,187 10,622 4,887 5,569 1,321 24,426 10,855 5,082 5,801 1,350 24,431 11,100 5,187 5,943 1,412 24,806 11,356 5,294 6,094 1,414 25,018 11,613 5,403 6,349 1,414	4.08 4.70 18.0% 5.899 4.042	5.899	5.899		4.042		1,642	23,767	8,223	3.784	4,540	1,023	24,790
23,602 8,601 3,997 4,626 1,070 23,456 8,781 4,103 4,700 1,093 23,443 8,963 4,209 4,777 1,115 23,456 9,148 4,316 4,855 1,138 23,479 9,337 4,407 4,953 1,162 23,497 9,527 4,498 5,053 1,185 23,450 9,724 4,590 5,158 1,210 23,450 9,931 4,682 5,274 1,235 23,676 10,152 4,778 5,401 1,263 24,187 10,622 4,879 5,536 1,292 24,187 10,622 4,982 5,569 1,321 24,426 10,855 5,082 5,801 1,350 24,431 11,100 5,187 5,943 1,412 24,933 11,613 5,403 6,094 1,414 25,018 11,876 5,519 6,389 1,476 25,023 12,444 5,764 6,702 1,545 <t< td=""><td>4.03 4.60 18.0% 5.947 4.132</td><td>5.947</td><td>5.947</td><td></td><td>4.132</td><td></td><td>1,714</td><td>23,667</td><td>8,417</td><td>3,891</td><td>4,550</td><td>1.048</td><td>24,715</td></t<>	4.03 4.60 18.0% 5.947 4.132	5.947	5.947		4.132		1,714	23,667	8,417	3,891	4,550	1.048	24,715
23,456 8,781 4,103 4,700 1,093 23,443 8,963 4,209 4,777 1,115 23,456 9,148 4,316 4,855 1,138 23,479 9,337 4,407 4,953 1,162 23,497 9,527 4,498 5,053 1,185 23,450 9,724 4,590 5,158 1,210 23,450 9,931 4,682 5,274 1,235 23,676 10,152 4,778 5,401 1,263 24,187 10,622 4,879 5,536 1,292 24,426 10,855 5,082 5,801 1,350 24,431 11,100 5,187 5,943 1,412 24,806 11,356 5,294 6,094 1,412 24,933 11,613 5,403 6,349 1,476 25,018 11,876 5,519 6,389 1,476 25,027 12,441 5,764 6,702 1,510	3.98 4.50 18.0% 6.001 4.223	0 18.0% 6.001	6.001		4.223		1,713	23,602	8.601	3.997	4.626	1,070	24,672
23,443 8,963 4,209 4,777 1,115 23,456 9,148 4,316 4,855 1,138 23,479 9,337 4,407 4,953 1,162 23,497 9,527 4,498 5,053 1,185 23,502 9,724 4,590 5,158 1,210 23,450 9,931 4,682 5,274 1,235 23,676 10,152 4,778 5,401 1,263 24,187 10,622 4,879 5,536 1,292 24,426 10,855 5,082 5,801 1,350 24,431 11,100 5,187 5,943 1,312 24,806 11,356 5,294 6,094 1,412 24,933 11,613 5,403 6,349 1,476 25,018 11,876 5,519 6,389 1,476 25,037 12,431 5,764 6,702 1,545	3.92 4.40 18.0% 6,061 4,313	190'9	190'9		4,313		1.603	23,456	8.781	4,103	4.700	1,093	24,549
23,456 9,148 4,316 4,855 1,138 23,479 9,337 4,407 4,953 1,162 23,497 9,527 4,498 5,053 1,185 23,502 9,724 4,590 5,158 1,210 23,450 9,931 4,682 5,274 1,235 23,676 10,152 4,778 5,401 1,263 24,187 10,622 4,879 5,536 1,292 24,187 10,622 4,982 5,669 1,321 24,426 10,855 5,082 5,801 1,350 24,431 11,100 5,187 5,943 1,412 24,933 11,613 5,403 6,094 1,412 25,018 11,876 5,519 6,389 1,476 25,062 12,148 5,641 6,540 1,510 25,037 12,431 5,764 6,702 1,545	3.88 4.30 18.0% 6,124 4,404	6,124	6,124		4,404		1.707	23,443	8,963	4,209	4.777	1,115	24,558
23.479 9.337 4,407 4,953 1.162 23.497 9.527 4,498 5.053 1.185 23.502 9,724 4,590 5.158 1.210 23.450 9,931 4,682 5.274 1,235 23.676 10,152 4,778 5,401 1,263 24.187 10,622 4,879 5,569 1,321 24.487 10,622 4,982 5,669 1,321 24,426 10,855 5,082 5,801 1,350 24,431 11,100 5,187 5,943 1,412 24,933 11,613 5,403 6,094 1,412 25,018 11,876 5,519 6,389 1,476 25,003 12,431 5,764 6,702 1,545	3.84 4.20 18.0% 6.193 4.496	0 18.0% 6,193	6.193		4.496		1,710	23,456	9.148	4.316	4.855	1,138	24,594
23,497 9,527 4,498 5,053 1,185 23,502 9,724 4,590 5,158 1,210 23,450 9,931 4,682 5,274 1,235 23,676 10,152 4,778 5,401 1,263 23,926 10,386 4,879 5,536 1,292 24,187 10,622 4,982 5,669 1,321 24,426 10,855 5,082 5,801 1,350 24,631 11,100 5,187 5,943 1,380 24,806 11,356 5,294 6,094 1,412 24,933 11,613 5,403 6,242 1,414 25,018 11,876 5,519 6,389 1,476 25,003 12,414 5,764 6,702 1,510	4.10 18.0%	6.279	6.279		4.588		1,714	23.479	9.337	4,407	4,953	1.162	24,641
23.502 9.724 4.590 5.158 1.210 23.450 9,931 4,682 5.274 1,235 23.676 10,152 4,778 5,401 1,263 23.926 10,386 4,879 5,536 1,292 24,187 10,622 4,982 5,669 1,321 24,426 10,855 5,082 5,801 1,350 24,631 11,100 5,187 5,943 1,380 24,806 11,356 5,294 6,094 1,412 24,933 11,613 5,403 6,242 1,444 25,018 11,876 5,519 6,389 1,476 25,005 12,148 5,641 6,540 1,510 25,037 12,431 5,764 6,702 1,545	4.10 18.0% 6.382	6.382	6.382		4.682		1.718	23,497	9.527	4,498	5.053	1.185	24,682
23.450 9,931 4,682 5,274 1,235 23.676 10,152 4,778 5,401 1,263 23,926 10,386 4,879 5,536 1,292 24,187 10,622 4,982 5,669 1,321 24,426 10,855 5,082 5,801 1,350 24,631 11,100 5,187 5,943 1,380 24,806 11,356 5,294 6,094 1,412 24,933 11,613 5,403 6,242 1,444 25,018 11,876 5,519 6,389 1,476 25,005 12,148 5,641 6,540 1,510 25,037 12,431 5,764 6,702 1,545	4.00 18.0% 6.493	6.493	6.493		4,777		1.722	23.502	9.724	4.590	5,158	1,210	24,712
23.676 10,152 4,778 5.401 1.263 23,926 10,386 4,879 5.536 1.292 24,187 10,622 4,982 5,669 1,321 24,426 10,855 5,082 5,801 1,350 24,631 11,100 5,187 5,943 1,380 24,933 11,613 5,403 6,242 1,412 25,018 11,876 5,519 6,389 1,476 25,062 12,148 5,641 6,540 1,510 25,037 12,431 5,764 6,702 1,545	4.00 18.0% 6,612	6,612	6,612		4.873		1.685	23,450	9,931	4,682	5.274	1,235	24,685
23,926 10,386 4,879 5,536 1,292 24,187 10,622 4,982 5,669 1,321 24,426 10,855 5,082 5,801 1,350 24,631 11,100 5,187 5,943 1,380 24,806 11,356 5,294 6,094 1,412 24,933 11,613 5,403 6,242 1,444 25,018 11,876 5,519 6,389 1,476 25,062 12,148 5,641 6,540 1,510 25,037 12,431 5,764 6,702 1,545	3.90 19.0% 6,724	6,724	6,724		5,220		1,730	23.676	10,152	4,778	5,401	1,263	24.939
24,187 10,622 4,982 5,669 1,321 24,426 10,855 5,082 5,801 1,350 24,631 11,100 5,187 5,943 1,380 24,806 11,356 5,294 6,094 1,412 24,933 11,613 5,403 6,242 1,444 25,018 11,876 5,519 6,389 1,476 25,062 12,148 5,641 6,540 1,510 25,037 12,431 5,764 6,702 1,545	3.90	6,826	6,826		5,327		1.749	23.926	10,386	4,879	5.536	1,292	25,218
24,426 10,855 5,082 5,801 1,350 24,631 11,100 5,187 5,943 1,380 24,806 11,356 5,294 6,094 1,412 24,933 11,613 5,403 6,242 1,444 25,018 11,876 5,519 6,389 1,476 25,062 12,148 5,641 6,540 1,510 25,037 12,431 5,764 6,702 1,545	6,946	6,946	6,946		5,437		1,770	24,187	10,622	4,982	5,669	1,321	25,508
24,631 11,100 5.187 5.943 1,380 24,806 11,356 5.294 6,094 1,412 24,933 11,613 5,403 6.242 1,444 25,018 11,876 5,519 6,389 1,476 25,062 12,148 5,641 6,540 1,510 25,037 12,431 5,764 6,702 1,545	7,100	0 19.0% 7,100	7,100		5,549		1,791	24,426	10,855	5,082	5,801	1,350	25,776
24,806 11,356 5.294 6,094 1,412 24,933 11,613 5,403 6.242 1,444 25,018 11,876 5,519 6,389 1,476 25,062 12,148 5,641 6,540 1,510 25,037 12,431 5,764 6,702 1,545	3.45 3.70 19.0% 7.261 5.663	7,261	7,261		5.663		1.803	24,631	11,100	5.187	5,943	1,380	26.011
24.933 11,613 5,403 6,242 1,444 25.018 11,876 5,519 6,389 1,476 25,062 12,148 5,641 6,540 1,510 25,037 12,431 5,764 6,702 1,545	3.40 3.70 19.0% 7,429 5,781	7,429	7,429		5,781		1,824	24,806	11,356	5.294	6,094	1,412	26,218
25,018 11,876 5,519 6,389 1,476 25,062 12,148 5,641 6,540 1,510 25,037 12,431 5,764 6,702 1,545	3.33 3.60 19.0% 7,613 5,902	19.0% 7.613	7,613	-,	5.902		1,838	24.933	11,613	5,403	6.242	1,444	26,377
25,062 12,148 5,641 6,540 1,510 25,037 12,431 5,764 6,702 1,545	3.27 3.60 19.0% 7.794 6.029	7,794	7,794		6.029		1.848	25,018	11,876	5,519	6.389	1,476	26,494
25,037 12,431 5,764 6,702 1,545	3.20 3.50 19.0% 7,974 6,162	7,974	7,974		6,162		1,856	25,062	12,148	5,641	6,540	1,510	26,572
	3.12 3.50 19.0% 8.181 6.298	8.181	8.181		6.298		1,859	25,037	12,431	5,764	6,702	1,545	26,582

a The fair market value of the assets in the RRA and NRRIT as of the close of the fiscal year (September 30) divided by the total benefits and administrative expenses paid from the RRA and NRRIT during the fiscal year.

^b The average of the account benefits ratios for the 10 most recent fiscal years ending before the calendar year.

c Includes payroll taxes and income taxes on benefits.

^d Includes investment income and transfers from the SSEBA.

e Other income includes financial interchange income, advances from general revenues, and interest income. Other expense includes repayment of advances from general revenues and transfers to the NRRIT or RRA.

Table 2-III. Progress of the Combined National Railroad Retirement Investment Trust (NRRIT) and Railroad Retirement Account (RRA), and Social Security Equivalent Benefit Account (SSEBA) under Employment Assumption III (Dollar amounts in millions)

		Average		0	ombined NR	Combined NRRIT and RRA	A		S	SSEBA		
	Account	Account account	Tier 2	Benefits				Benefits		Other		Combined
Calendar	benefits	benefits benefits	tax	and admin-	Tax	Other	Balance,	and admin-	Tax	income and	Balance,	balance,
year	ratio	ratio	rate	istration	іпсоте	income	end year	istration	income	expense	end year	end year
2017	4.57	5.50	18.0%	\$5,554	\$3,568	\$1,699	\$25,026	\$7.171	\$3,252	\$3,854	\$674	\$25.700
2018	4,44	5.20	%0.81	5,646	3.618	1.677	24,675	7,359	3,314	4.153	782	25,457
2019	4.30	5.00	18.0%	5,724	3.663	1.651	24,266	7,566	3,374	4.308	668	25,165
2020	4.18	4.90	%0.81	5,793	3,706	1.677	23.855	7,794	3,435	4,430	970	24,825
2021	4.06	4.80	18.0%	5,850	3,747	1,592	23,345	8,015	3,497	4.470	922	24,267
2022	3.93	4.70	18.0%	2,897	3,787	1.587	22,823	8,223	3,557	4,767	1,023	23,846
2023	3.82	4.60	%0.81	5,944	3.825	1.636	22,341	8,416	3.617	4,824	1.048	23,389
2024	3.70	4.50	%0.81	2.997	3,862	1,607	21,812	8.599	3.673	4,949	1,070	22,882
2025	3.56	4.30	%0°81	950'9	3,896	1,462	21,114	8.778	3,727	5.073	1.092	22,206
2026	3.42	4.20	18.0%	6.117	3,928	1.525	20,451	8,960	3.779	5.203	1,115	21,566
2027	3.26	4.00	%0.81	6,184	3.960	1.481	19,708	9,142	3,831	5.334	1.138	20.846
2028	3.12	3.90	%0.61	6,266	4.185	1,437	19,063	9.326	3,864	5,485	1.160	20,223
2029	2.95	3.80	%0.61	6.366	4.215	1,392	18,304	9,511	3.895	5.639	1,183	19,487
2030	2.77	3.70	%0.61	6,474	4.245	1.339	17,414	9,701	3.925	5,800	1,207	18.621
2031	2.57	3.50	%0.61	6,588	4,275	1,237	16,338	006'6	3.954	5,971	1,231	17,569
2032	2.38	3.40	20.0%	9699	4.504	1,207	15,354	10,110	3,983	6.153	1.257	119,91
2033	2.18	3.20	20.0%	6.789	4,536	1.138	14,239	10,331	4.016	6.343	1,285	15.524
2034	1.97	3.00	20.0%	6.902	4.569	1,060	12,966	10,551	4,048	6.531	1,312	14,278
2035	1.80	2.90	23.0%	7,046	5.208	994	12,122	10,766	4,075	6.718	1,339	13,461
2036	1.63	2.70	23.0%	7,198	5,243	928	11,095	10,990	4,103	6.914	1,366	12,461
2037	1.43	2.50	23.0%	7,355	5,278	860	728.6	11,220	4.131	7,118	1,395	11,272
2038	1.31	2.30	27.0%	7,524	6.137	805	9,296	11,446	4,159	7.315	1,423	10,719
2039	1.19	2.20	27.0%	7,689	6,182	763	8.552	11,673	4,191	7,510	1,451	10,003
2040	1.05	2.00	27.0%	7,851	6,237	711	7,649	11,905	4,230	7,703	1,480	9,129
2041	06.0	1.80	27.0%	8,036	6.301	645	6.558	12,141	4,272	7.898	1,509	8,067

a The fair market value of the assets in the RRA and NRRIT as of the close of the fiscal year (September 30) divided by the total benefits and administrative expenses paid from the RRA and NRRIT during the fiscal year.

The average of the account benefits ratios for the 10 most recent fiscal years ending before the calendar year.

c Includes payroll taxes and income taxes on benefits.

d Includes investment income and transfers from the SSEBA.

e Other income includes financial interchange income, advances from general revenues, and interest income. Other expense includes repayment of advances from general revenues and transfers to the NRRIT or RRA.

1802 OBOR Employment assumption III Employment assumption II Employment assumption I 500 8002 1000 SEDE Stor BEOR Elle Elle 1602 OFOR 6202 8202 1202 9702 Stor 5002 Edus tox 1202 0202 5102 8102 100 \$55,000 \$50,000 \$45,000 \$25,000 \$10,000 \$5,000 80 \$40,000 \$35,000 \$30,000 \$20,000 \$15,000 \$60,000

Figure 1. Combined NRRIT, RRA and SSEBA Balance (In millions)