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

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.

This report is intended to meet the requirements of Section 22 and Section 502 for 2008.

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 2005 is shown in the following table.

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

Between 1955 and 2005, the average annual rate of decline was 3.3 percent. Since 2005, average employment and rates of decline have been as follows:

Year	Average employment for year	Annual rate of decline from previous year
2006	236,000	(1.7%)
2007	236,000	0.0

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

Three employment assumptions were used in the 23rd actuarial valuation, which served as the 2006 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 43,000, and (2) the employment base, excluding passenger employment, would decline at a constant annual rate (1.0 percent for assumption I and 2.5 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 4.0 percent for 25 years, at a reducing rate over the next 25 years, and remain level thereafter.

The 2007 annual report continued the use of the three employment assumptions, updating them as to current employment levels.

The projected average employment for 2007, based on the three employment assumptions used in the 2007 report, ranged from 229,000 to 235,000. The actual average employment for 2007 was 236,000 (subject to later adjustment), which exceeded the range of projected amounts. Passenger employment at the end of calendar year 2007 was estimated to be 43,000. Based on this result, it was decided to use 2007 average employment as a starting point in this year's report and continue the use of the rates of decline used in the 23rd valuation. In this year's report, for employment assumptions I and II, passenger employment is assumed to remain level at 43,000. 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.

III. RESULTS

Projections were made for the various components of income and outgo under each employment assumption for the 25 calendar years 2008-2032. 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[1] (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.

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.

[1] At the end of each fiscal year (September 30), an Account Benefits Ratio (ABR) is calculated by dividing the fair market value of the assets in the RRA and of the NRRIT (and for years before 2002, the SSEBA) 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 then calculated as 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.

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 currently 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 ABR's, 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 grows throughout the projection period. The combined employer and employee tier 2 tax rate decreases to 14% in 2013-2015, increases to 16% in 2019-2029 and then decreases to 15% in 2030-2032.

Under employment assumption II (Table 2-II), the combined NRRIT and RRA balance grows through 2013, remains relatively level from 2013 through 2022, and then increases through the end of the projection period. The tier 2 tax rate decreases to 14% in 2014, increases to 18% in 2025-2031, and then decreases to 17% in 2032.

Under employment assumption III (Table 2-III), the combined NRRIT and RRA balance grows through 2013 and then declines. The ABR declines throughout the projection period, reaching 3.44 in calendar year 2032. Due to the effect of 10-year averaging, the AABR first increases to 7.4 in 2012-2015, and then declines throughout the remainder of the projection period, reaching 4.4 in 2032. As a result, the tier 2 tax rate first decreases to 15% in 2009-2017, then increases until reaching a rate of 18% in 2022-2032.

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 questionable. 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 2007 Report

Both employment and investment return exceeded expectations in calendar year 2007. The results are similar to last year with an improvement shown under each employment assumption. Notably, projected tax rates are no higher in any calendar year and are one percent lower in at least three calendar years under each employment assumption.

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 the duration of the 25-year projection period.

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 interest assumptions

Calendar year	Average employment (thousands) I	II	III	Percentage increase over prior year: Earnings	Cost of living	Interest rate
2007	236	236	236	4.0%	3.3%	7.9%
2008	234	231	228	4.0	2.3	7.5
2009	232	227	220	4.0	4.0	7.5
2010	230	222	212	4.0	3.0	7.5
2011	229	218	205	4.0	3.0	7.5
2012	227	213	198	4.0	3.0	7.5
2013	225	209	191	4.0	3.0	7.5
2014	223	205	185	4.0	3.0	7.5
2015	221	201	178	4.0	3.0	7.5
2016	219	197	172	4.0	3.0	7.5
2017	218	193	166	4.0	3.0	7.5
2018	216	189	161	4.0	3.0	7.5
2019	214	186	155	4.0	3.0	7.5
2020	212	182	150	4.0	3.0	7.5
2021	211	178	145	4.0	3.0	7.5
2022	209	175	140	4.0	3.0	7.5
2023	207	172	136	4.0	3.0	7.5
2024	206	169	131	4.0	3.0	7.5
2025	204	165	128	4.0	3.0	7.5
2026	203	162	124	4.0	3.0	7.5
2027	201	159	120	4.0	3.0	7.5
2028	199	156	117	4.0	3.0	7.5
2029	198	154	114	4.0	3.0	7.5
2030	196	151	111	4.0	3.0	7.5
2031	195	148	108	4.0	3.0	7.5
2032	193	146	105	4.0	3.0	7.5

Table 2-I. 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)

				Combined NRRIT and RRA				SSEBA				
Calendar year	Account benefits ratio[a]	Average account benefits ratio[b]	Tier 2 tax rate	Benefits and administration	Tax income[c]	Other income[d]	Balance, end year	Benefits and administration	Tax income[c]	Other income and expense[e]	Balance, end year	Combined balance, end year
2008	7.88	6.90	16.0%	$4,287	$2,681	$2,612	$33,475	$5,932	$2,606	$3,312	$737	$34,212
2009	7.68	7.10	15.0%	4,493	2,626	2,514	34,122	6,191	2,701	3,522	770	34,892
2010	7.50	7.20	15.0%	4,673	2,714	2,567	34,729	6,417	2,794	3,651	798	35,527
2011	7.32	7.30	15.0%	4,862	2,804	2,573	35,244	6,652	2,890	3,791	827	36,071
2012	7.15	7.40	15.0%	5,055	2,896	2,649	35,734	6,899	2,988	3,942	858	36,592
2013	6.95	7.50	14.0%	5,240	2,818	2,679	35,990	7,158	3,091	4,099	890	36,880
2014	6.76	7.50	14.0%	5,419	2,909	2,698	36,179	7,425	3,199	4,260	923	37,102
2015	6.57	7.50	14.0%	5,588	3,002	2,714	36,306	7,701	3,311	4,424	957	37,263
2016	6.42	7.40	15.0%	5,735	3,287	2,626	36,484	7,985	3,429	4,556	958	37,442
2017	6.32	7.30	15.0%	5,859	3,391	2,713	36,729	8,272	3,554	4,789	1,028	37,757
2018	6.26	7.10	15.0%	5,963	3,497	2,775	37,039	8,554	3,684	4,905	1,063	38,102
2019	6.26	6.90	16.0%	6,045	3,816	2,814	37,624	8,823	3,808	5,048	1,097	38,721
2020	6.30	6.80	16.0%	6,111	3,935	2,867	38,314	9,075	3,936	5,170	1,128	39,442
2021	6.35	6.70	16.0%	6,162	4,057	2,805	39,013	9,309	4,069	5,269	1,157	40,170
2022	6.46	6.60	16.0%	6,201	4,182	2,990	39,985	9,529	4,206	5,350	1,184	41,169
2023	6.60	6.50	16.0%	6,239	4,310	3,072	41,128	9,735	4,346	5,415	1,210	42,338
2024	6.76	6.50	16.0%	6,284	4,441	3,167	42,452	9,930	4,487	5,466	1,234	43,686
2025	6.94	6.50	16.0%	6,333	4,574	3,273	43,965	10,122	4,630	5,515	1,258	45,223
2026	7.13	6.50	16.0%	6,383	4,710	3,301	45,593	10,318	4,777	5,565	1,282	46,875
2027	7.37	6.60	16.0%	6,434	4,850	3,522	47,532	10,520	4,927	5,618	1,307	48,839
2028	7.62	6.70	16.0%	6,501	4,994	3,673	49,697	10,731	5,079	5,677	1,333	51,030
2029	7.89	6.80	16.0%	6,586	5,142	3,841	52,095	10,948	5,235	5,740	1,360	53,455
2030	8.13	7.00	15.0%	6,683	4,996	4,014	54,421	11,179	5,395	5,813	1,388	55,809
2031	8.37	7.20	15.0%	6,787	5,143	4,135	56,912	11,428	5,559	5,900	1,419	58,331
2032	8.65	7.40	15.0%	6,879	5,296	4,383	59,712	11,702	5,731	6,005	1,453	61,165

[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.

Table 2-II. 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)

				Combined NRRIT and RRA				SSEBA				
Calendar year	Account benefits ratio[a]	Average account benefits ratio[b]	Tier 2 tax rate	Benefits and administration	Tax income[c]	Other income[d]	Balance, end year	Benefits and administration	Tax income[c]	Other income and expense[e]	Balance, end year	Combined balance, end year
2008	7.88	6.90	16.0%	$4,287	$2,665	$2,611	$33,458	$5,932	$2,590	$3,327	$737	$34,195
2009	7.67	7.10	15.0%	4,493	2,584	2,511	34,060	6,191	2,657	3,566	770	34,830
2010	7.48	7.20	15.0%	4,673	2,645	2,560	34,591	6,417	2,721	3,724	798	35,389
2011	7.28	7.30	15.0%	4,862	2,705	2,559	34,992	6,652	2,785	3,896	827	35,819
2012	7.07	7.40	15.0%	5,055	2,765	2,625	35,328	6,899	2,849	4,080	858	36,186
2013	6.87	7.40	15.0%	5,239	2,827	2,649	35,564	7,158	2,917	4,273	890	36,454
2014	6.64	7.50	14.0%	5,418	2,724	2,659	35,530	7,425	2,987	4,471	923	36,453
2015	6.44	7.40	15.0%	5,587	2,952	2,663	35,558	7,700	3,060	4,674	957	36,515
2016	6.25	7.30	15.0%	5,734	3,016	2,559	35,398	7,983	3,138	4,845	958	36,356
2017	6.09	7.20	15.0%	5,856	3,080	2,619	35,241	8,269	3,219	5,120	1,028	36,269
2018	5.95	7.00	15.0%	5,959	3,145	2,649	35,076	8,548	3,305	5,278	1,063	36,139
2019	5.86	6.80	16.0%	6,040	3,394	2,650	35,080	8,814	3,381	5,465	1,096	36,176
2020	5.80	6.60	16.0%	6,104	3,465	2,658	35,099	9,061	3,460	5,632	1,126	36,225
2021	5.74	6.50	16.0%	6,152	3,537	2,543	35,026	9,289	3,541	5,776	1,155	36,181
2022	5.74	6.30	17.0%	6,188	3,805	2,677	35,321	9,501	3,624	5,903	1,181	36,502
2023	5.77	6.20	17.0%	6,222	3,883	2,706	35,688	9,697	3,707	6,014	1,205	36,893
2024	5.80	6.10	17.0%	6,263	3,962	2,741	36,128	9,879	3,790	6,112	1,228	37,356
2025	5.86	6.00	18.0%	6,307	4,249	2,787	36,857	10,057	3,871	6,207	1,249	38,106
2026	5.94	5.90	18.0%	6,350	4,333	2,754	37,593	10,235	3,954	6,303	1,271	38,864
2027	6.04	5.90	18.0%	6,394	4,418	2,906	38,524	10,416	4,037	6,402	1,294	39,818
2028	6.14	5.90	18.0%	6,452	4,504	2,980	39,555	10,602	4,120	6,506	1,317	40,872
2029	6.25	5.90	18.0%	6,526	4,592	3,061	40,682	10,790	4,203	6,611	1,340	42,022
2030	6.35	6.00	18.0%	6,609	4,681	3,148	41,903	10,988	4,287	6,725	1,364	43,267
2031	6.46	6.00	18.0%	6,698	4,772	3,185	43,162	11,198	4,372	6,852	1,390	44,552
2032	6.56	6.10	17.0%	6,770	4,626	3,329	44,347	11,426	4,463	6,992	1,418	45,765

[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.

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)

Calendar year	Account benefits ratio[a]	Average account benefits ratio[b]	Tier 2 tax rate	Combined NRRIT and RRA: Benefits and administration	Combined NRRIT and RRA: Tax income[c]	Combined NRRIT and RRA: Other income[d]	Combined NRRIT and RRA: Balance, end year	SSEBA: Benefits and administration	SSEBA: Tax income[c]	SSEBA: Other income and expense[e]	SSEBA: Balance, end year	Combined balance, end year
2008	7.88	6.90	16.0%	$4,287	$2,646	$2,610	$33,438	$5,932	$2,572	$3,346	$737	$34,175
2009	7.65	7.10	15.0%	4,493	2,536	2,507	33,988	6,191	2,607	3,616	770	34,758
2010	7.45	7.20	15.0%	4,673	2,565	2,551	34,431	6,417	2,637	3,808	798	35,229
2011	7.22	7.30	15.0%	4,862	2,592	2,542	34,704	6,652	2,666	4,015	827	35,531
2012	6.99	7.40	15.0%	5,054	2,619	2,598	34,867	6,899	2,693	4,236	858	35,725
2013	6.75	7.40	15.0%	5,239	2,645	2,607	34,879	7,158	2,723	4,468	890	35,769
2014	6.50	7.40	15.0%	5,416	2,670	2,605	34,739	7,424	2,753	4,704	923	35,662
2015	6.26	7.40	15.0%	5,585	2,696	2,593	34,442	7,699	2,786	4,947	957	35,399
2016	6.00	7.30	15.0%	5,731	2,721	2,463	33,895	7,980	2,821	5,159	957	34,852
2017	5.77	7.10	15.0%	5,853	2,745	2,492	33,280	8,265	2,859	5,477	1,028	34,308
2018	5.58	6.90	16.0%	5,954	2,923	2,493	32,742	8,542	2,899	5,677	1,062	33,804
2019	5.40	6.70	16.0%	6,034	2,948	2,457	32,114	8,803	2,929	5,906	1,094	33,208
2020	5.25	6.40	17.0%	6,096	3,128	2,422	31,568	9,045	2,960	6,115	1,124	32,692
2021	5.09	6.20	17.0%	6,141	3,153	2,263	30,843	9,267	2,991	6,303	1,152	31,995
2022	4.98	6.00	18.0%	6,174	3,337	2,345	30,352	9,470	3,023	6,472	1,177	31,529
2023	4.87	5.80	18.0%	6,204	3,365	2,314	29,826	9,655	3,055	6,622	1,200	31,026
2024	4.75	5.60	18.0%	6,240	3,396	2,279	29,261	9,823	3,089	6,755	1,221	30,482
2025	4.63	5.40	18.0%	6,278	3,426	2,241	28,650	9,984	3,122	6,883	1,240	29,890
2026	4.49	5.30	18.0%	6,314	3,457	2,105	27,899	10,144	3,155	7,008	1,260	29,159
2027	4.35	5.10	18.0%	6,348	3,490	2,144	27,185	10,303	3,188	7,134	1,280	28,465
2028	4.20	5.00	18.0%	6,396	3,522	2,093	26,403	10,462	3,220	7,262	1,299	27,702
2029	4.03	4.80	18.0%	6,456	3,555	2,036	25,539	10,619	3,252	7,386	1,318	26,857
2030	3.85	4.70	18.0%	6,524	3,589	1,972	24,577	10,781	3,284	7,518	1,338	25,915
2031	3.64	4.60	18.0%	6,593	3,624	1,843	23,451	10,949	3,315	7,655	1,359	24,810
2032	3.44	4.40	18.0%	6,642	3,661	1,817	22,288	11,130	3,352	7,801	1,382	23,670

[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.

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