REQUIRED SUPPLEMENTAL STEWARDSHIP INFORMATION

# Railroad Retirement Program Required Supplementary Stewardship Information

**Statement of Social Insurance** Actuarial Surplus or (Deficiency)<sup>1/, 2/</sup> 75-year Projection as of January 1, 2002 (Present values in millions of dollars)

	<u>1/1/2002</u>	<u>1/1/2001</u>		
Estimated future income (excluding interest) <sup><math>\frac{3}{}</math></sup> received from or on behalf of:				
Employees not yet retired and dependents	\$60,452	\$60,437		
Retired employees and dependents	51,137	51,202		
New entrants and dependents	30,843	30,690		
All participants	142,432	142,329		
Estimated future expenditures <sup>4/</sup>				
Employees not yet retired and dependents	75,781	74,453		
Retired employees and dependents	73,840	73,455		
New entrants and dependents	12,776	12,905		
All participants	162,397	160,813		
Estimated future excess of income over expenditures	(19,965)	(18,484)		
Actuarial asset value	20,861	19,251		
Estimated future excess <sup><math>5/</math></sup> of income and trust fund assets				
at start of period over expenditures	896	767		

#### Notes to the Statement:

- <sup>1/</sup> Represents combined values for the Railroad Retirement Account, Social Security Equivalent Benefit Account, and National Railroad Retirement Investment Trust.
- <sup>2/</sup> The data used reflect the provisions of the Railroad Retirement and Survivors' Improvement Act (RRSIA) of 2001. Comparable data for years prior to 2001 by participant groupings are not available. Following is the actuarial surplus (in millions) under the prior law as of the dates stated below:

September 30, 1998	\$4,083
September 30, 1999	7,292
September 30, 2000	10,238

- <sup>3/</sup> Future income (excluding interest) includes tier 1 taxes, tier 2 taxes, income taxes on benefits, financial interchange income, advances from general revenues, and repayments of advances from general revenues. The calculations assume that all future transfers required by current law under the financial interchange will be made.
- <sup>4</sup>/ Future expenditures include benefit and administrative costs.
- <sup>5/</sup> A closed group estimate using the projected tax rates under employment assumption II may be obtained by excluding amounts for "New entrants and dependents" listed above.

Note: Detail may not add to totals due to rounding. Employee and beneficiary status are determined as of 1/1/2001, whereas present values are as of 1/1/2002.

# **Program Description**

# Financing

Payroll taxes paid by railroad employers and their employees are the primary source of funding for the railroad retirement-survivor benefit program. Railroad retirement taxes, which have historically been higher than social security taxes, are calculated, like benefit payments, on a two-tier basis. Railroad retirement tier 1 payroll taxes are coordinated with social security taxes so that employees and employers pay tier 1 taxes at the same rate as social security taxes. In addition, both employees and employers pay tier 2 taxes that are used to finance railroad retirement benefit payments over and above social security levels. Beginning with calendar year 2004, these tier 2 taxes will be based on the ratio of certain asset balances to the sum of benefit payments and administrative expenses.

Revenues in excess of benefit payments are invested to provide additional trust fund income, and recent legislation now allows for the investment of railroad retirement funds in non-governmental assets, as well as in governmental securities. This legislation also established a National Railroad Retirement Investment Trust, whose Board of seven trustees oversees these investments. The Board of Trustees is comprised of three members selected by rail labor to represent the interests of labor; three members likewise selected by rail management to represent management interests; and one independent member selected by a majority of the other six members.

Additional trust fund income is derived from the financial interchange with the social security trust funds, revenues from Federal income taxes on railroad retirement benefits, and appropriations from general treasury revenues provided after 1974 as part of a phase-out of certain vested dual benefits.

# **Benefits**

Full age annuities are payable at age 60 to workers with 30 years of service. For those with less than 30 years of service, reduced annuities are payable at age 62 and unreduced annuities are payable at full retirement age, which is gradually rising from 65 to 67, depending on year of birth. Disability annuities can be paid on the basis of total or occupational disability. Annuities are also payable to spouses and divorced spouses of retired workers and to widow(er)s, surviving divorced spouses, remarried widow(er)s, children, and parents of deceased railroad workers. Qualified railroad retirement beneficiaries are covered by Medicare in the same way as social security beneficiaries.

Jurisdiction over the payment of retirement and survivor benefits is shared by the RRB and the Social Security Administration (SSA). The RRB has jurisdiction over the payment of retirement benefits if the employee had at least 10 years of railroad service, or 5 years if performed after 1995; for survivor benefits, there is an additional requirement that the employee's last regular employment before retirement or death was in the railroad industry. If a railroad employee or his or her survivors do not qualify for railroad retirement benefits, the RRB transfers the employee's railroad retirement credits to SSA, where they are treated as social security credits.

#### **Recent Developments**

The Railroad Retirement and Survivors' Improvement Act of 2001, enacted on December 21, 2001, provided several changes in benefit and financing provisions.

The legislation liberalizes early retirement benefits for 30-year employees, eliminates a cap on monthly retirement and disability benefits, lowers the minimum service requirement from 10 years to 5 years if performed after 1995, and provides increased benefits for some widow(er)s. The financing sections of the new law provide for the investment of railroad retirement funds in non-governmental assets, adjustments in the payroll tax rates paid by employers and employees, and the repeal of a supplemental annuity work-hour tax.

# **Program Finances and Sustainability**

The RRB must submit to the President and the Congress a report on the actuarial status of the railroad retirement system. Projections are made for the various components of income and outgo under three employment assumptions. The Statement of Social Insurance presents an actuarial analysis of the financial position of the railroad retirement system as of January 1, 2002. The figures in the table are based on the 2002 Section 502 Report extended through calendar year 2076. The present values in the table are based on estimates of contributions and expenditures through the year 2076. The estimates include contributions and expenditures related to future new entrants as well as to former and present railroad employees. The present values are computed on the basis of economic and demographic assumptions and employment assumption II, the intermediate employment assumption, as used in the 2002 Section 502 Report. Under employment assumption II, starting with an average 2001 employment of 237,000, (1) railroad passenger employment, would remain level at 45,000, and (2) the employment base, excluding passenger employment, would decline at a constant annual rate of 3.0 percent for 25 years, at a reducing rate over the next 25 years, and remain level thereafter.

<u>Supplementary Stewardship Information</u>: Actuarial estimates of the long-range financial condition of the railroad retirement program are presented here. Throughout this section, the following terms will generally be used as indicated:

- **Income:** sources of income are payroll taxes, income taxes, investment income, and financial interchange transfers.
- **Income excluding interest**<sup>1/</sup>: income, as defined above, excluding the interest/investment income from assets of the trust fund.
- **Expenditures:** benefit payments and administrative expenses.
- **Cashflow:** either (1) income excluding interest or (2) expenditures, depending on the context, expressed in nominal dollars.
- Net Cashflow: income excluding interest less expenditures, expressed in nominal dollars.

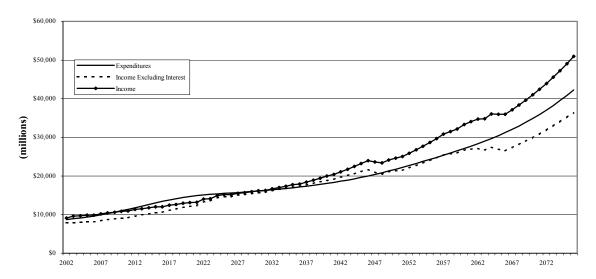
All estimates in this section are based on the intermediate assumptions in the 2002 Section 502 Report. The statement presented on page 80 and the supplementary stewardship information below are derived from estimates of future income and expenditures based on these assumptions, the Railroad Retirement Act, and the Railroad Retirement Tax Act. This information includes:

- (1) actuarial present values of future estimated expenditures for and estimated income from, or on behalf of, current and future program participants;
- (2) estimated annual income excluding income and expenditures in nominal dollars and as a percentage of taxable payroll.
- (3) the ratio of estimated annuitants to estimated full-time employees, showing the relationship between the program's benefit recipients and taxpayers; and
- (4) an analysis of the sensitivity of the projections to changes in selected assumptions, which is included in recognition of the inherent uncertainty of those assumptions.

Estimates are generally based on a 75-year projection period. Estimates extending far into the future are inherently uncertain, with uncertainty greater for the more distant years.

<sup>1</sup>/References to interest income in this section may be considered as referring to total investment income including dividends and capital gains.

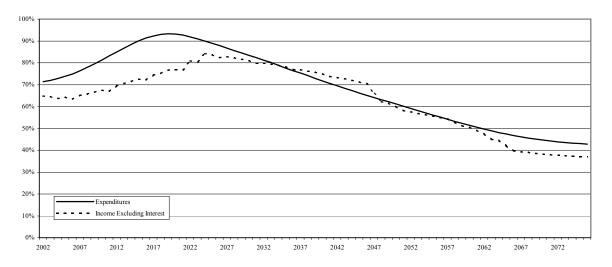
#### **Chart 1: Estimated Income and Expenditures**

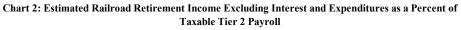


<u>Cashflow Projections</u> – Chart 1 shows actuarial estimates of railroad retirement annual income, income excluding interest, and expenditures for 2002 through 2076 in nominal dollars. The estimates are for the open-group population, which includes all persons projected to participate in the railroad retirement program as railroad workers or beneficiaries during the period. Thus, the estimates include payments from, and on behalf of, those who will be employed by the railroads during the period as well as those already employed at the beginning of the period. They also include expenditures made to, and on behalf of, such workers during that period.

As Chart 1 shows, annual expenditures begin to exceed annual income in 2010. This continues for the next two decades, but by 2032 income is once again greater than expenditures. This remains true throughout the remainder of the projection period. Without investment income, however, annual expenditures are almost always greater than annual income, except for the period 2034 through 2047. Reasons for this pattern include participant demographics, the assumed drop in railroad employment, and the automatic tier 2 tax rate adjustment mechanism. The combined balance of the NRRIT, RR Account, and SSEB Account never becomes negative largely because (i) a sufficient balance exists at the beginning of the projection period and (ii) tier 2 tax rates respond automatically to changing account balances.

<u>Percentage of Taxable Payroll</u> – Chart 2 shows estimated annual income excluding interest and expenditures for the railroad retirement program expressed as percentages of taxable payroll. Benefits and administrative expenses as a percentage of payroll increase through 2019 primarily due to the anticipated retirement of a large percentage of the current workforce combined with the projected decline in railroad employment. Except for the income from tier 1 payroll taxes, the sources of income vary as a percentage of payroll.





<u>Sensitivity Analysis</u> --- The projections of the future financial status of the railroad retirement program depend on many economic and demographic assumptions including rail employment, inflation, wage increase, investment return, age retirement, disability retirement, withdrawal, active service mortality, beneficiary mortality, total termination, probability of spouse, remarriage, family composition, disability freeze, service patterns, and salary scales. Because perfect long-range projections are impossible, this section is included to illustrate the sensitivity of the long-range projections to changes in certain key assumptions that have the greatest impact on the results. All present values are calculated as of January 1, 2002, and are based on estimates of income and expenditures during the projection period 2002 through 2076.

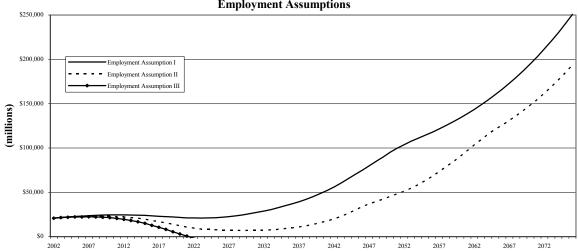
*Employment*: Average employment in the railroad industry has been in decline for some years. This decline is expected to continue. Since employment is a key consideration, projections of income and expenditures using three different employment assumptions have been made. The Statement of Social Insurance uses employment assumption II, the intermediate assumption, but this section compares results under the three assumptions. For all three cases, the average employment for the year 2001 is equal to 237,000. Employment assumptions I and II, based on a model developed by the Association of American Railroads, assume that (1) passenger employment will remain at the level of 45,000, and (2) the employment base, excluding passenger employment, will decline at a constant annual rate (1.5 percent for assumption I and 3.0 percent for assumption II) for 25 years, at a reducing rate over the next 25 years, and remain level thereafter. Employment assumption III differs from employment assumptions I and II by assuming that (1) passenger employment will decline by 500 per year until a level of 35,000 is reached and then remain level, and (2) the employment base, excluding passenger employment, will decline at a constant annual rate of 4.5 percent for 25 years, at a reducing rate over the next 25 years, and remain level thereafter. Employment assumptions I, II, and III are intended to provide an optimistic, moderate, and pessimistic assumption, respectively.

Under the first two employment assumptions, no cashflow problems occur throughout the entire period. Under the third employment assumption, cashflow problems occur in 2022. Table 1 shows the excess of assets and the present value of income over the present value of expenditures for the three employment assumptions.

Table 1Excess of Assets and Present Value of Income over Present Value of Expenditures forThree Employment Assumptions, 2002-2076(in millions)					
Employment Assumption	<u>l</u>	Ш	<u>III</u>		
Present Value	\$1,076	\$ 896	\$(3,169)		
Average Tier 2 tax rate <sup>1/</sup>	17.6%	20.0%	21.0%		

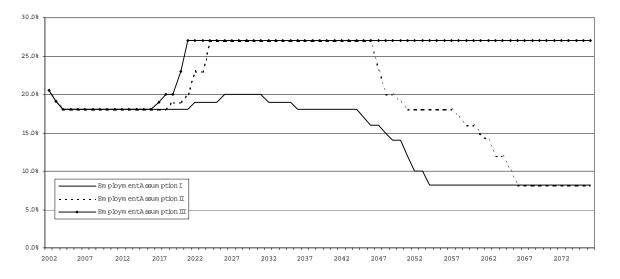
 $^{1/}$ Average combined employer/employee tier 2 tax rate is calculated by dividing the present value of tier 2 taxes by the present value of tier 2 payroll. Beginning in 2004, tier 2 tax rates will vary based on a ratio of assets to the sum of benefits and administrative expenses. Tier 1 tax rates remain the same as for social security and are not affected by employment assumptions.

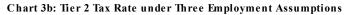
Chart 3a shows the combined balance of the accounts under each of the three employment assumptions. Note that in 2022, the combined account balance becomes negative under employment assumption III.



#### Chart 3a: Combined RR Account, NRRIT and SSEB Account balance under Three Employment Assumptions

Chart 3b shows the tier 2 tax rate under these employment assumptions. The tax rate reaches the minimum in 2054 under employment assumption I but not until 2066 under employment assumption II. Under employment assumption III, the tax rate reaches the maximum in 2021 and remains at that level throughout the remainder of the projection period because the combined account balances are negative.





Under the provisions of the Railroad Retirement and Survivors' Improvement Act of 2001, the tier 2 tax rate for each year is determined by the average account benefit ratio, which is the average for the ten most recent fiscal years of the ratio of fair market value of assets to total benefits and administrative expenses paid from the Railroad Retirement Account and the National Railroad Retirement Investment Trust. Therefore, the tier 2 tax rate will be affected by employment assumption. The tier 2 tax rate adjustment mechanism promotes but does not guarantee solvency. The tier 1 tax rate will not vary by employment assumption.

*Interest rates*: Under the Railroad Retirement and Survivors' Improvement Act of 2001, for the first time investments in non-government assets, such as equity and debt securities, will be allowed, as well as investments in governmental securities. Therefore, it is worthwhile to examine the effects of future rates of investment return. In addition to the interest rate of 8 percent used for our projections, we show the effect on the combined accounts with an interest rate of 4 percent and an interest rate of 12 percent. Table 2 shows the excess of assets and the present value of income over the present value of expenditures for the three interest rate assumptions. If the tier 2 tax rate were fixed, the actuarial surplus would increase with increasing investment return. However, the tier 2 tax rate adjusts to changing account balances, resulting in the highest average tax rate under the 4 percent scenario and the lowest average tax rate under the 12 percent scenario. Under the 8 percent scenario, the tax rate adjustment mechanism keeps the system in close actuarial balance. Under the 12 percent scenario, the tax rate is limited to a minimum value, resulting in a higher surplus. Under the 4 percent scenario, the tax rate is limited to a maximum value and then remains at that value longer than is needed, resulting in the highest actuarial surplus.

Table 2   Excess of Assets and Present Value of Income over Present Value of Expenditures for   Three Interest Rate Assumptions, 2002-2076 (in millions)				
Interest Rate Assumption	<u>4%</u>	<u>8%</u>	<u>12%</u>	
Present Value	\$7,169	\$896	\$2,300	
Average Tier 2 tax rate	23.2%	20.0%	16.3%	

Chart 4a shows the combined account balance under the three interest rate assumptions for the projection period. At a 4 percent interest rate, the account balance becomes negative in 2020 and remains so until 2053, at which time it begins to increase again. With an 8 percent interest rate, the account balance increases through 2009, then decreases, reaching a minimum in 2029, and generally increases thereafter. A 12 percent interest rate results in a combined balance that increases throughout the projection period. Although the 4 percent scenario shows the lowest account balance at the end of the projection period, the concurrent use of a 4 percent discount rate results in the highest surplus on January 1, 2002.

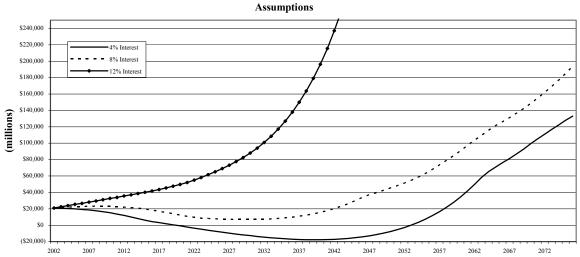
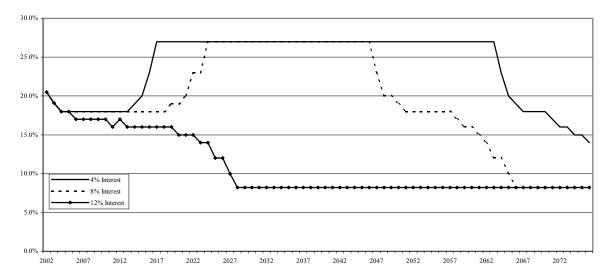


Chart 4a: Combined Balance of the RR Account, NRRIT and SSEB Account under Three Interest

Chart 4b shows the tier 2 tax rate under the same three interest assumptions. With a 4 percent interest rate, the maximum tier 2 tax rate applies throughout much of the projection period, from 2017 until 2063. Even with the 8 percent interest rate, the maximum tax rate will be paid from 2024 until 2046. On the other hand, with a 12 percent interest rate, the maximum tax rate is never applicable, and the minimum tax rate is paid beginning in 2028. As mentioned above, the tier 2 tax rate is determined based on the ratios of asset values to benefits and administrative expenses, so it will be affected by investment return, but tier 1 tax rates will not.



#### Chart 4b: Tier 2 Tax Rate under Three Interest Assumptions

*Ratio of Beneficiaries to Workers:* Chart 5 shows the estimated number of annuitants per full-time employee under all three employment assumptions. The average number of annuitants per employee for employment assumption I is highest in 2002. For assumptions II and III, the ratio is highest in 2021 and 2027, respectively. For all three employment assumptions, the average number of annuitants per employee declines to around 1.6 by the end of the projection period. The convergence in number of annuitants per employee at the end of the projection period results primarily from level employment projected in the latter years under all three employment assumptions.

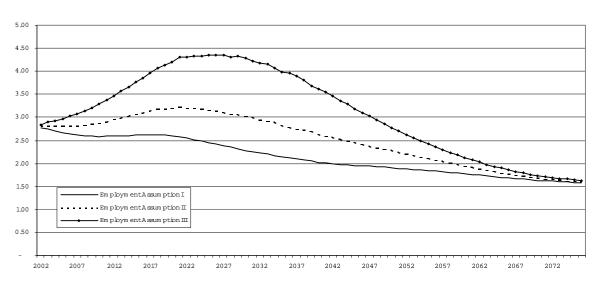


Chart 5: Average Number of Annuitants per Full-Time Employee

#### **Railroad Retirement Assumptions**

The estimates used in this presentation are based on the assumption that the program will continue as presently constructed. They are also based on various economic, employment, and other actuarial assumptions. The employment assumptions were described above. The ultimate economic assumptions are an 8 percent interest rate, a 3.2 percent annual increase in the cost of living, and a 4 percent annual wage increase. Actuarial assumptions are those published in the Twenty-first Actuarial Valuation of the U. S. Railroad Retirement System and the 2002 Section 502 Report. The Section 502 Report is an annual report on the actuarial status of the Railroad Retirement System required by law.