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BY THE COMPTROLLER GENERAL

Report To The Congress

OF THE UNITED STATES

Inaccurate Fund Transfers Between Social Security Administration And Railroad Retirement Board

Since 1958 the Social Security Administration (SSA) has paid more than $17 billion to the Railroad Retirement Board through an annual fund transfer (financial interchange) required by law. The interchange is designed to place the social security program in the same financial position in which it would have been if railroad employment had not been excluded from social security coverage.

GAO found that the Board, which performs all the interchange calculations, makes frequent errors, uses a statistical method that makes imprecise estimates, and includes inappropriate factors to calculate the amount due. As a result, both over- and underpayments are made by SSA. GAO estimates that the net effect of such errors and inefficiencies in one financial interchange was that SSA paid the Board about $40 million more than it should have.

GAO recommends that the Board improve its calculations accuracy and that SSA do more to ensure that the amount it pays the Board is proper.

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UNITED STATES GENERAL ACCOUNTING OFFICE

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COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON D.C. 20548

B-210707

To the President of the Senate and the
Speaker of the House of Representatives

This report deals with the financial interchange whereby the Social Security Administration has paid more than $17 billion to the Railroad Retirement Board since 1958. The review was part of our continuing evaluation of the Old-Age, Survivors, and Disability Insurance programs administered by the Social Security Administration and the activities of the Railroad Retirement Board.

We are sending copies of the report to the Director, Office of Management and Budget; the Secretary of Health and Human Services; and the Chairman, Railroad Retirement Board.

Charles A. Bowsher

Comptroller General
of the United States

COMPTROLLER GENERAL'S
REPORT TO THE CONGRESS

INACCURATE FUND TRANSFERS BETWEEN SOCIAL SECURITY ADMINISTRATION AND RAILROAD RETIREMENT BOARD

D I G E S T

An annual fund transfer (financial interchange) between the Social Security Administration (SSA) and the Railroad Retirement Board is designed, as required by law, to place the social security program in the same financial position in which it would have been had railroad employment not been excluded from SSA coverage. Since 1958 SSA has paid the Board more than $17 billion through this congressionally established interchange. In recent years, the interchange has involved transfers in excess of $1.3 billion annually from SSA to the Board.

To determine the annual transfer amount, the Board calculates the benefits that would have been paid, the taxes that would have been collected, and the administrative expenses that would have been incurred, if railroad employment had been covered under social security. Because the total calculated benefits and administrative expenses currently exceed the taxes that would have been collected, SSA transfers the difference to the Board. If the taxes that would have been collected would exceed the total calculated benefits and administrative expenses, the Board would transfer that difference to SSA.

GAO reviewed the three major aspects of the interchange: benefit, tax, and administrative expense calculations. In the tax area, no problems were noted. In reviewing 1979 financial interchange data, the most current data available when GAO's review began, GAO found errors and inaccuracies in benefit calculations and projections and administrative expense estimates resulting in both over- and underpayments by SSA. GAO estimates that, for the 1979 interchange alone, the net effect of these over- and underpayments was that SSA transferred to the Board about $40 million more than it should have. (See app. VIII.)

Since many of the same procedures GAO questioned are still in effect, interchanges subsequent to 1979 will continue to contain errors and inaccuracies unless improvements are made. Continual inaccuracies in fund transfers could aggravate the financial situation of either fund. These financing problems would have to be addressed in one of three ways. Benefits may have to be decreased which will affect present and future beneficiaries. Payroll taxes may have to be increased which will affect those currently employed. Or, an infusion of general revenue would be required which would shift the burden to the general public.

BENEFIT CALCULATIONS AND PROJECTIONS

The benefit portion of the interchange is calculated by the Board by projecting benefits from a sample of railroad beneficiaries. Almost 28 percent of the 197 cases GAO reviewed were in error--many for more than a decade. Comparable social security programs experience calculation error rates no higher than 6 percent. GAO estimates that there were more than $17 million of benefit calculation errors in the 1979 financial interchange alone; the net effect being that the Board received almost $4 million less for the benefit portion of the interchange than it was due from SSA. Most of the errors GAO found resulted from the improper application of social security rules and regulations. (See pp. 6 and 7.)

Some Board benefit calculation errors, even when identified, are not corrected because the Board applies SSA error tolerance limits to financial interchange calculations. This means any error in an interchange sample case that has an impact of less than $1 on the calculated monthly benefit rate is not corrected. These limits are inappropriate for interchange calculations because with the Board using only a sample of beneficiaries, the effect of any errors is eventually projected to all beneficiaries. Lowering the current error tolerance limit would reduce maximum annual acceptable errors in the interchange. For example, correcting errors which affect the monthly benefit rate in excess of

10 cents would reduce maximum annual acceptable errors in the interchange from more than $9 million to just over $1 million. (See p. 8.)

SSA program personnel checked the accuracy of the Board's benefit calculations only once in the 30-year history of the financial interchange. Since that check, done in 1960, the Commissioner of Social Security has certified for payment billions of dollars without assurance that the underlying benefit calculations were accurate. The Board's high error rate in calculating social security benefits demonstrates the need for more frequent SSA review of these calculations. (See p. 9.)

Once a benefit for each sample case has been calculated, an average benefit for all sample cases is calculated and projected to the universe. To calculate the average benefit, the Board employs a statistical method that does not use all available sample information. Consequently, the projected estimate of benefits due under the interchange is less precise than other statistical methods would provide. If a more precise statistical method had been used to calculate the average benefit, the Board would have received about $41 million less from SSA for the 1979 financial interchange. (See pp. 12 to 16.)

ADMINISTRATIVE EXPENSE CALCULATIONS

Through the interchange the Board is also paid for the administrative expenses that SSA would have incurred in providing benefits to railroad beneficiaries. The Board applies SSA-developed cost factors to its workload estimates to calculate the administrative expenses due. (See p. 18.)

Because the Board and SSA do not adequately coordinate their actions in developing the factors used to calculate administrative expenses, inappropriate cost and workload factors have been included in the calculation and appropriate factors excluded. As a result, the Board received about $3 million more in administrative expenses from SSA than it was due for the 1979 interchange. (See pp. 19 to 23.)

In the 30 years that the annual interchange has taken place, audits have not been required and the amounts transferred have never been audited. (See p. 26.)

RECOMMENDATIONS

To provide better assurance that benefits certified for payment to the Board through the interchange are accurate and appropriate for social security payment, the Commissioner of Social Security should

--periodically review how accurately the Board calculates social security benefit amounts and

--train Board personnel who calculate social security benefits in the proper application of social security rules and regulations.

To reduce the amount of benefits resulting from calculation errors considered to be acceptable, the Commissioner and the Chairman of the Railroad Retirement Board should lower the error tolerance limit applied to interchange monthly benefit calculations. (See p. 10.)

To improve the precision of the benefit amount transferred through the interchange, the Chairman should ensure that a more precise statistical method is used to calculate the average benefit amount for the Board's sample cases. (See p. 16.)

To provide an accurate estimate of administrative expenses that SSA would have incurred in providing benefits to railroad beneficiaries, the Commissioner and the Chairman should coordinate their actions to develop appropriate cost and workload factors used to calculate administrative expenses for future interchanges. Also, the Commissioner and the Chairman should correct all amounts transferred due to administrative expense errors affecting past interchanges where supporting data are available. (See p. 23.)

To protect the interests of railroad retirement and social security taxpayers and beneficiaries, the Chairman of the Railroad Retirement Board and the Secretary of Health and Human Services should assure that their respective audit groups--either singly or jointly--periodically audit all components of the interchange. (See p. 27.)

AGENCY COMMENTS

In commenting on a draft of this report, both the Department of Health and Human Services and the Board generally agreed with GAO's recommendations. (See apps. I and II.) Both presented actions undertaken or planned to periodically review and audit interchange activities, provide training to Board personnel, correct benefit computation and administrative expense errors, and better prepare and coordinate their efforts to develop appropriate administrative expense estimates.

The Board said it disagreed with applying GAO's average benefit estimate recommendations to its existing methodology. The Board said it is, however, considering a revised methodology proposed by SSA which incorporates GAO's recommendation. The Department took issue with GAO's estimate stating that GAO's estimating method produces an error amount that is "probably misleading."

The methodology applied by GAO produces an estimate more precise than the one the Board calculated for 1979. The Board's calculation for 1979 interchange benefits of $2.4 billion was subject to a sampling error of $32 million while GAO's was subject to a sampling error of $22 million. GAO's intent was to illustrate that more precise results could be obtained. GAO agrees that any method which might produce even more precise results should be adopted by the Board.

C o n t e n t s

ABBREVIATIONS

GAO	General Accounting Office
HHS	Department of Health and Human Services
SSA	Social Security Administration

CHAPTER 1

INTRODUCTION

The railroad retirement program, begun in 1935, is the only federally administered pension plan for a private industry. This program, similar to the social security program, provides benefits to retired and disabled railroad workers and their dependents.

In their early years there was little interface between the railroad retirement and social security programs. Each developed independently, providing and financing its own benefits package. But, since 1951, through an amendment to the Railroad Retirement Act of 1937, the programs have been closely interrelated by a financial interchange. The interchange is a required annual transfer of funds between the programs designed to place social security in the same financial position it would have been in if railroad employment had been covered by social security.

Over the years the interchange has been very favorable to the railroad retirement program, and currently results in the Railroad Retirement Board receiving from the Social Security Administration (SSA) more than a billion dollars each year. Without the financial interchange the railroad retirement account would have been depleted in 1968. In the most recent interchange transfer, in June 1982, the railroad retirement program received from SSA $1.5 billion or about 29 percent of the $5.1 billion in railroad retirement benefits paid for that interchange period.

RAILROAD RETIREMENT PROGRAM ESTABLISHED SEPARATE FROM SOCIAL SECURITY

Most large railroads in the country had established private pension plans prior to 1930. In the 1930s many of these plans encountered financial difficulties, leading to strong pressure from labor unions to have the Federal Government take over and guarantee the plans. As a result, the Congress, in 1937, created the Board to administer these plans for the Federal Government.

In addition to providing some financial protection for retirees, it was hoped that the program would encourage older railroad workers to retire, thereby providing additional employment opportunities during the Depression and also enabling railroad retirees to receive benefits sooner than under the social security program.

At the outset, employers and employees financed the railroad retirement program solely by their contributions. In the 1940s railroad retirees received benefits much higher than those paid by social security. In 1950, the Congress liberalized social security eligibility requirements to enable millions of new beneficiaries to receive immediate benefits and substantially increased benefits payable to all beneficiaries.

The 1950 social security benefit increases considerably narrowed the difference between the two systems. Consequently, legislation was proposed to increase railroad retirement benefits and the number of eligible beneficiaries. The proposed legislation, however, ran into potential financing problems. Subsequently, the Congress enacted legislation to establish an annual transfer of funds between social security and railroad retirement to compensate for the exclusion of railroad employment from social security coverage. This transfer of funds became known as the financial interchange.

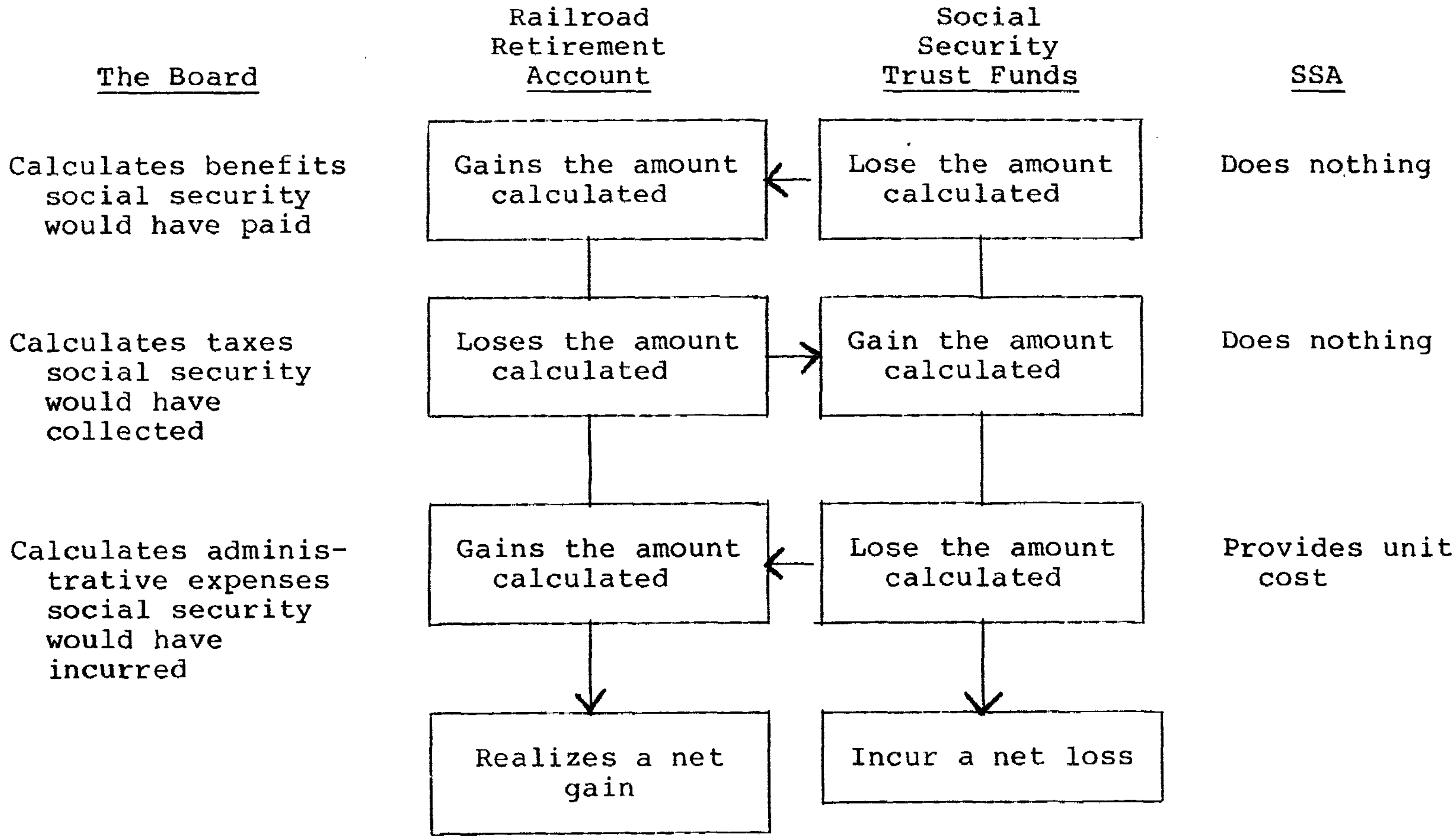
In establishing the interchange there was recognition by some Members of Congress that social security had gained by not having the railroad industry under its coverage because the railroad retirement program had a high rate of beneficiaries to tax-contributing workers.

THE BOARD CALCULATES THE TRANSFER AMOUNT

Although the Board and SSA are required by law to make a formal determination of the financial interchange amount, the former performs all the calculations. The Board estimates the benefits that would have been paid, the taxes that would have been collected, and the administrative expenses that would have been incurred if railroad retirement beneficiaries had been covered under social security (see fig. 1). The cornerstones of these calculations are 1-percent samples of both railroad beneficiaries and currently employed railroad workers.

Figure 1

How the Financial Interchange is Calculated and Its Impact on the Railroad Retirement Account and the Social Security Trust Funds



For the sample of beneficiary cases, benefit amounts are calculated as if the beneficiaries had been covered under social security. These calculated benefit amounts are then statistically projected to the universe of railroad retirement beneficiaries.

For the sample of currently employed workers, earnings information is collected from railroad employers to determine the amount of taxable earnings that would have been collected if the employees had been covered under social security. The sample taxable earnings are used to adjust taxable earnings of all railroad workers for differences in tax provisions between social security and railroad retirement. Applying the appropriate social security tax rate to this adjusted taxable earnings amount determines the tax portion of the financial interchange amount.

To determine interchange administrative expenses, the Board applies cost factors developed by SSA to its estimated volume of work actions in retirement, disability, and medicare programs.

The net amount of the financial interchange is calculated by determining the difference between the sum of the benefit and administrative expense portions and the tax portion.

Because currently the total calculated benefits and administrative expenses exceed the taxes that would have been collected, SSA transfers the difference to the Board. If the taxes that would have been collected would exceed the total calculated benefits and administrative expenses, the Board would transfer that amount to SSA.

MORE THAN $17 BILLION TRANSFERRED TO RAILROAD RETIREMENT

Although the interchange was established in 1951, the interchange payments were made retroactive to 1937. Because social security taxes collected would have exceeded benefits payable to railroad beneficiaries and the related administrative costs, railroad retirement owed social security the difference for the first interchange made in 1952 which covered 1937-51. This amount was not transferred, but rather was credited toward amounts social security would pay railroad retirement in the future. The credit was exhausted by 1957. For each year since, the interchange has favored the railroad retirement program.

Since 1958 SSA has transferred more than $17 billion to railroad retirement and is expected to transfer an additional $8 billion during the next 5 years. Over the last 10 years the interchange has annually provided the Board with an average of 34 percent of its total revenue. Appendix IV shows the historical results of the interchange.

OBJECTIVES, SCOPE, AND METHODOLOGY

We examined the interchange process to determine if it was providing the most accurate estimate of the amount to be transferred. Also, because SSA is paying more than $1 billion a year but does not perform any of the calculations, we examined what measures SSA takes to ensure that it pays the proper amount.

We performed our work in accordance with generally accepted government audit standards. Our work was conducted at the Board headquarters in Chicago and at SSA headquarters in Baltimore.

To determine the accuracy of the interchange transfer amount, we examined: (1) benefit calculations within the Board's 1-percent sample of beneficiaries, (2) statistical methods used to project sample amounts to the Board's universe of beneficiaries, (3) factors used to compute administrative expenses, and (4) tax calculations within the Board's 1-percent sample of currently employed workers.

To determine the Board's accuracy in calculating social security benefits, we analyzed, with the assistance of SSA examiners, a sample of 197 interchange cases active in 1979 for which the Board had calculated social security benefits. This was the most current data available when we began our review in May 1981. We compared the results of this sample review against national social security accuracy rates.

We evaluated the statistical methods the Board used to project sample amounts to the universe and compared these methods with other current and readily available statistical methods that might apply to the type of sample the Board uses. We analyzed administrative expense factors for accuracy in computation and evaluated them for the appropriateness of their inclusion in the interchange estimate. Our examination of the process to determine the tax portion of the transfer amount disclosed no problems. Our scope and methodology are discussed further in appendix III.

CHAPTER 2

FREQUENT ERRORS IN

BENEFIT CALCULATIONS

The Board has made numerous errors in calculating the benefits that SSA would have paid had railroad employment been covered under social security. More than 33 percent of sample disability cases and almost 28 percent of sample retirement cases that we reviewed for the 1979 interchange were in error. Many cases have been in error for years. In comparison, SSA's retirement and disability programs experience payment error rates no higher than 6 percent.

Based on our sample results, we estimate that there were more than $17 million in errors in benefit calculations for the 1979 interchange. As a result, the Board received almost $4 million less than it was due. Since many of the same procedures we questioned are still in effect, interchanges subsequent to 1979 will continue to contain errors and inaccuracies.

In the 30-year history of the interchange, SSA program personnel have checked the accuracy of the Board's calculation of social security benefits only once. That check, in 1960, reviewed only retirement benefit calculations. SSA has never checked the Board's calculation of disability benefits. The Board's high error rate in calculating social security benefits demonstrates the need for significant improvement in, and more frequent SSA review of, these calculations.

BOARD CALCULATIONS FREQUENTLY IN ERROR

The Board is required to use social security rules and regulations to calculate benefits for cases in a sample of railroad retirement beneficiaries. This enables the Board to determine what the beneficiaries would have received under social security. To test the accuracy of the Board's calculation of social security benefits, we selected from the 1979 interchange a statistical sample of 167 railroad retirement cases and 30 railroad disability cases. With the help of an SSA specialist who reviews social security cases for accuracy, we reviewed the Board's 1979 benefit calculations for each sample case. We checked for mathematical accuracy and proper application of social security rules and regulations. The error rate in the Board's 1979 calculations is shown in the following table.

Sample Cases Reviewed from
1979 Financial Interchange

	Number reviewed	Number in error	Percent in error
Retirement cases	167	45	26.9
Disability cases	30	10	33.3
Total	197	55	27.9

Projected, these cases represent more than $17 million in errors in the 1979 benefit estimate. As the following table shows, and as appendix V shows, some errors resulted in over-estimated benefits, while others led to benefits being under-estimated. We estimate that benefit calculation errors in 1979 caused the Board to receive almost $4 million less through the interchange than it was due.

Projected Amount of Errors for
1979 Financial Interchange

	Total errors	Under-estimates	Over-estimates	Net effect
		(millions)		
Retirement cases	$11.7	$ 8.3	$3.4	-$4.9
Disability cases	a/5.4	2.1	3.2	1.1
Total	$17.1	$10.4	$6.6	-$3.8

a/ Total across does not add due to rounding.

Of the 197 cases reviewed, 30 had errors that affected the interchange benefit estimate for years prior to 1979. These cases were in error from 2 to 15 years prior to 1979. Projected back to as far as 1965, these cases represent more than $1.3 million in errors. Because of these calculation errors the Board received a net of $600,000 less than it was due from past interchanges.

The Board acknowledged the errors we found and has since recovered the $600,000 through adjustments to the June 1982 interchange.

Accumulating errors have a significant effect

Uncorrected errors are carried forward to subsequent interchanges and can significantly affect the benefit estimates. One case with several errors over a 9-year period had an effect of almost $500,000 on the benefit estimates. Another case, in error since 1965, had an effect of almost $200,000. One case in error for just 1979 had an effect of more than $143,000. Of the 55 sample cases in error during 1979, the following each had a net impact of more than $100,000 on the benefit estimates for the years in which they were in error.

Effect of Errors in Seven Cases on the Financial Interchange Benefit Estimate

Sample case	Type of case	In error since	Years in error	Net impact on benefit estimate	Type of error
1	Retirement	1971	9	$498,160	Underestimate
2	Retirement	1965	15	194,110	Underestimate
3	Retirement	1978	2	157,160	Underestimate
4	Disability	1978	2	152,850	Overestimate
5	Retirement	1973	7	144,310	Underestimate
6	Disability	1979	1	143,430	Overestimate
7	Retirement	1970	10	104,750	Overestimate

Inappropriate use of SSA error tolerance limits

Since 1971 the Board has used SSA error tolerance limits to decide whether to correct errors in interchange benefit calculations. This means any error in an interchange sample case that has an impact of less than $1 on the calculated monthly benefit rate is not corrected.

However, applying SSA error tolerance limits to interchange sample calculations fails to recognize the magnified effect such sample errors have on the interchange when they are projected to all railroad beneficiaries. A single sample calculation error affecting the monthly benefit amount by $.90 would result in a $10.80 error for the entire year ($.90 x 12). Since the Board uses only a 1-percent sample, this error is multiplied by 100 and the projected annual error would be $1,080.

If all cases in the universe incurred this magnitude of error, a maximum of about $9 million (840,902 x $10.80) of errors could occur yet be considered acceptable. If, for example, the Board were to correct all errors with an impact greater than 10 cents on the monthly benefit rate, the level of maximum acceptable error would drop to just over $1 million.

SSA DOES NOT REVIEW THE BOARD'S BENEFIT CALCULATIONS

According to law, for the interchange transfer to occur the Board and SSA must make a formal determination of the amount that would place the social security trust funds in the same financial position they would have been in if railroad employment had been covered by social security. However, the Board performs all the calculations that determine the transfer amount. SSA merely signs the determination documents accepting the amount calculated by the Board as correct and certifies to the Department of the Treasury to transfer the amount to the Board.

In 1960, SSA program personnel reviewed a sample of financial interchange retirement cases to determine how accurately the Board was calculating social security benefits. Although some errors were detected, SSA concluded that the Board generally was doing an adequate job. Since 1960, rules and regulations governing social security benefit calculations have changed many times. Today, determining a benefit amount can be very complex. Despite the changes and increased complexity, SSA has not again checked the Board's calculation of retirement benefits and it never has checked disability benefit calculations. Each year since 1960 the Commissioner of Social Security has certified for payment to the Board millions of dollars without any assurance that the underlying calculations are accurate. SSA accepts the amount calculated by the Board as accurate and pays it.

For its own programs, SSA has established a comprehensive quality review system to assure a high level of accuracy in the benefits it pays. SSA field assessment office personnel routinely review all social security programs to identify payment and eligibility errors. Current SSA statistics show benefit accuracy rates of 96 percent for the retirement program and 94 percent for the disability program.

A system to periodically review financial interchange benefit calculations could be implemented easily and probably could be done with existing resources. According to the Chicago SSA Field Assessment Officer, his office has the expertise and resources to review financial interchange sample cases.

SSA TRAINING OF BOARD PERSONNEL COULD INCREASE THEIR PROFICIENCY

Board personnel who calculate benefits for the interchange have not received SSA training in applying SSA rules and regulations. Most errors detected in our sample were procedural rather than mathematical. Many could have been avoided with proper knowledge of how to apply social security rules and regulations. For example, a misunderstanding of social security regulations governing months of entitlement caused errors in six cases. Another three cases were in error because Board personnel misunderstood SSA rules governing maximum amounts payable.

SSA has an extensive training program operating at its Program Service Center in Chicago that could provide training to Board personnel. The type and amount of training could be determined through a training needs analysis of Board personnel. Such an analysis could be performed in conjunction with an SSA review of interchange cases. SSA training could increase Board personnel proficiency in calculating social security benefits and thereby improve the accuracy of the interchange benefit estimate.

CONCLUSION

Board personnel have made frequent errors when calculating social security benefits. We estimate that about 33 percent of disability cases and about 27 percent of retirement cases, representing more than $17 million, were in error for 1979. Many cases have been in error for a decade or longer. In addition, the error tolerance limits used by the Board in interchange sample calculations can have a large effect when projected to all railroad beneficiaries.

One check of benefit calculation accuracy in 30 years is insufficient to assure the accuracy of an interchange that now exceeds $1 billion a year.

RECOMMENDATIONS

To improve the accuracy of the benefit portion of the financial interchange, we recommend that the Secretary of Health and Human Services (HHS) direct the Commissioner of Social Security to:

--periodically review how accurately the Board calculates social security benefit amounts and

--train Board personnel who calculate social security benefits in the proper application of social security rules and regulations.

To reduce and minimize the amount of benefits resulting from calculation errors considered to be acceptable, we also recommend that the Secretary of HHS direct the Commissioner, in cooperation with the Chairman of the Board, to lower the error tolerance limits applied to financial interchange sample calculations.

AGENCY COMMENTS AND OUR EVALUATION

In their comments on a draft of this report (see apps. I and II), HHS and the Board agreed that the accuracy of the Board's calculations used in the financial interchange should be periodically reviewed. HHS said that it is exploring ways to carry out a periodic review and that its Office of Inspector General, through a cooperative arrangement with the Board, will periodically audit all components of the financial interchange.

The Board also agreed with our recommendation that training should be provided to Board personnel in the proper application of SSA rules and regulations. HHS stated that it already provides considerable assistance to the Board by supplying SSA policy and procedural issuances, training packages, and technical assistance. HHS added that although it believed that the training of Board personnel in SSA rules and regulations is primarily a Board responsibility, it will review existing procedures with the Board.

Although HHS provides assistance and guidance for Board personnel who calculate components of the railroad retirement benefit which require knowledge of social security provisions, the staff responsible for the financial interchange statistical sample calculations has not received such training. Our work disclosed that the calculations performed by this group had many errors and the staff had received little or no training in recent years. We believe that HHS, as well as the Board, has a responsibility to see that such staff are familiar with SSA's policies and procedures.

The Board agreed with our recommendation that the error tolerance limits applied to financial interchange sample calculations should be lowered. HHS said it agreed with this concept and that it will cooperate with the Board in determining whether this modification is feasible.

CHAPTER 3

BOARD'S STATISTICAL METHOD PRODUCES

LESS PRECISE BENEFIT ESTIMATES

Once a benefit amount is calculated for each case in the sample of railroad retirement beneficiaries, an average sample benefit is calculated and is projected to all beneficiaries. We found that the Board uses a statistical method to calculate this average benefit that is less precise than other available statistical methods. For the three interchanges we reviewed (1977-79), the Board's method resulted in an estimate that required SSA to pay almost $79 million more than it would have if a more precise statistical method had been used. The Board has also used an incorrect factor to project the average benefit to the universe thereby understating the benefits the Board was due by more than $1.4 million. If a more precise statistical method to calculate the average benefit and a correct factor to project the average benefit to the universe had been used, the Board would have received about $77.6 million less in benefits than SSA paid it for the three interchanges we reviewed.

A COMPOSITE ESTIMATOR WOULD SIGNIFICANTLY INCREASE THE PRECISION OF THE BENEFIT ESTIMATE

In calculating the average sample benefit that is projected to the universe, the Board uses sample benefit amounts for the current year. Statistical sampling theory says that when additional sample information is available to increase the precision[1] of the estimate, this information should be used. The Board's benefit sample is designed so that most cases in the current year's sample were also in the previous year's sample. This provides sample benefit amounts for most cases in both years. The Board does not use this available data from the prior year.

Estimating techniques are available that can be used to calculate a more precise estimate of the benefits that would have been paid to railroad beneficiaries if covered by social security. Such estimates use sample benefit amounts from both the current and prior year. For the 1977-79 interchanges, we

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[1]The precision of a sample estimate is increased when the range that the estimate can vary is reduced--the smaller the range, the more precise the estimate. See appendix III for more detail on the precision of a sample estimate.

chose a composite estimator[2] because it is state of the art statistical treatment of the Board's sample. It is easy to implement and, if used by the Board, would not require additional resources. Using two variations of the composite estimator, we increased the precision of the benefit estimate by reducing its range in the three interchanges we reviewed. The maximum reduction in the retirement program was 46 percent and the minimum 26 percent. For the disability program, the maximum reduction was 27 percent, the minimum 15 percent. Using the composite estimator would have reduced the amounts SSA paid the Board by a minimum of $23.6 million in 1977, $13.8 million in 1978, and $41.4 million in 1979. (See table 1.)

SSA statisticians have prepared a report dated August 25, 1982, recommending that the Board use a composite estimator.

Because the benefit sample data ultimately determine the amount of the benefit estimate, using a composite estimator does not mean the Board always will receive less benefits than it would using the current method. For example, although use of the composite estimator reduced the amount due the Board for disability benefits in 1977, it increased the amount due in 1979.

UNIVERSE PROJECTION FACTOR IN ERROR SINCE 1971

After an average benefit is calculated for beneficiaries in the Board's sample, it must be projected to the universe to determine the benefit estimate for all railroad beneficiaries. This projection is made by using a factor determined by the ratio of beneficiaries in the universe to beneficiaries in the samples.

For 9 years the Board used an incorrect factor. A Board programming error from 1971 to 1980 gave the wrong number of beneficiaries in the interchange sample and the Board universe and consequently affected the ratio. The impact of the error cannot be corrected for past interchanges because data needed to determine the proper universe number were not retained from year to year. However, for the three interchanges examined, we

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[2]The composite estimator is a weighted average of two estimates of the current year's calculated benefits using sample information from both the current and prior years. Appendix III describes in more detail the composite estimator and our analysis.

Table 1

Financial Interchange Calculated Benefits
Using Simple Random and Composite Estimators 1977 to 1979

Year	Type of estimator	Amount of benefit estimate	Difference in estimate	Range of estimate (+ or -) (note a)	Percent reduction in range
		(millions)			
Retirement program					
1977	Simple random	$1,962.4	$ -	$26.3	-
	Composite ratio	1,940.2	-22.2	17.1	35
	Composite difference	1,939.2	-23.2	14.2	46
1978	Simple random	2,088.0	-	28.1	-
	Composite ratio	2,073.8	-14.2	18.4	35
	Composite difference	2,071.6	-16.4	20.8	26
1979	Simple random	2,289.4	-	30.9	-
	Composite ratio	2,244.8	-44.6	20.2	35
	Composite difference	2,241.1	-48.3	19.8	36
Disability program					
1977	Simple random	128.9	-	8.4	-
	Composite ratio	127.5	- 1.4	6.7	20
	Composite difference	127.3	- 1.6	6.1	27
1978	Simple random	134.0	-	8.5	-
	Composite ratio	134.4	.4	6.7	21
	Composite difference	133.0	- 1.0	6.5	24
1979	Simple random	144.0	-	9.3	-
	Composite ratio	147.2	3.2	7.9	15
	Composite difference	145.6	1.6	7.5	19

Year	Type of estimator	Amount of benefit estimate	Difference in estimate	Range of estimate (+ or -) (note a)	Percent reduction in range
		——(millions)——			
Retirement and Disability programs combined					
1977	Simple random	$2,091.3	$ -		
	Composite ratio	2,067.7	-23.6		
	Composite difference	2,066.5	-24.8		
1978	Simple random	2,222.0	-		
	Composite ratio	2,208.2	-13.8		
	Composite difference	2,204.6	-17.4		
1979	Simple random	2,433.4	-		
	Composite ratio	2,392.0	-41.4		
	Composite difference	2,386.7	-46.7		
Total	Simple random	6,746.7	-		
	Composite ratio	6,667.9	-78.8		
	Composite difference	6,657.8	-88.9		

a/The range is computed at the 95-percent level of confidence using the estimates' standard error. See appendix III for more detail on the range of estimates.

estimate that the error resulted in the Board receiving about $1.4 million less in benefits than it was due from SSA. After we called this matter to its attention, the Board corrected the error so that it would not happen beginning with the June 1982 financial interchange.

CONCLUSION

The Board does not use the most efficient statistical method available to calculate the average benefit amount for its sample cases. The method used has overstated benefits the Board was due from SSA by almost $79 million in the three interchanges we examined. The precision of the benefit estimate can be significantly increased by using a composite estimator to calculate the average benefit amount.

RECOMMENDATION

To increase the precision of the amount transferred through the financial interchange, we recommend that the Chairman of the Railroad Retirement Board direct that a composite estimator be used to calculate the average benefit amount for the Board's sample cases.

AGENCY COMMENTS AND OUR EVALUATION

The Board said it disagreed with our recommendation that it use a composite estimator in conjunction with its present sample strata to calculate average benefit amounts. It said, however, it is considering an SSA recommendation that such a procedure be used with a new revised sample strata.

HHS stated that a composite estimator, as we recommended, in conjunction with a new stratification procedure, would yield more precise estimates than the current procedure used by the Board. HHS and the Board said they are currently studying a proposal to use such a procedure for calculating the average benefit amount for the Board's sample cases.

HHS took issue with our estimate that SSA transferred $40 million more to the Board in 1979 than necessary. HHS said that the composite estimator method we recommended is an unstable method and that the error amount we quoted, which is based on this method, is "probably misleading."

We disagree that our use of a composite estimator in conjunction with the Board's existing stratification sample is an unstable method or that it results in a misleading error amount. In fact, applying the composite estimator as we did results in an estimate more precise than the one the Board calculated for

1979. The Board's calculation for 1979 interchange benefits of $2.4 billion was subject to a sampling error of $32 million while ours was subject to a sampling error of $22 million. Our intent in applying the composite estimator to the Board's stratification was to illustrate that more precise results could be obtained. However, we agree with HHS and the Board that applying a composite estimator to a restratified sample would produce an even more precise result and encourage the Board to do so.

CHAPTER 4

ADMINISTRATIVE EXPENSES OVERSTATED

Through the interchange the Board is paid for administrative expenses that SSA would have incurred in providing retirement, disability, and medicare benefits to railroad beneficiaries. Because the Board and SSA do not adequately coordinate their actions in developing the factors used to calculate administrative expenses, inappropriate cost and workload factors have been included in the calculation and appropriate factors excluded. Consequently, for the 1973 through 1980 interchanges,[1] the Board received about $16 million more for administrative expenses than it was due. The process for estimating the administrative expenses needs to be further changed to provide a more accurate estimate of the administrative expenses SSA would have incurred in providing benefits to railroad beneficiaries.

DETERMINING THE ADMINISTRATIVE EXPENSE ESTIMATE

To determine administrative expenses SSA would have incurred requires an estimate of SSA's cost and the Board's workload in the retirement, disability, and medicare programs for:

--Initial enrollment - processing new benefit claims from workers and dependents.

--Maintenance - servicing all currently active beneficiary cases.

--Wage reporting - processing employee earnings statements from railroad employers.

SSA calculates its actual unit cost for these activities in each of its programs from specific cost and workload data. Included in the calculation are direct costs that relate only to a specific program and distributed common costs that are shared and allocated among all programs.

The Board independently develops workload estimates for the initial enrollment, maintenance, and wage reporting activities within the retirement, disability, and medicare programs. These estimates are based on data in the Board's 1-percent samples of retired beneficiaries and employed workers. The Board then applies the SSA unit cost factors to its workload estimates to

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[1]This period was selected because in 1973 the Board adopted new procedures for determining administrative expenses.

calculate the administrative expenses that SSA should pay the Board.

UNCOORDINATED DEVELOPMENT OF ADMINISTRATIVE COST AND WORKLOAD FACTORS CAUSES INACCURATE ESTIMATES

Numerous errors and inconsistencies in developing unit cost and workload factors resulted in the Board receiving over an 8-year period from $1.4 million to $2.8 million more each year in administrative expenses than it was due (see table 2). Because SSA and the Board independently develop cost and workload factors without either agency knowing how the other develops its factors, inappropriate factors are included in the administrative expense calculations and appropriate factors excluded. SSA and the Board have corrected some of the errors we found. Since many of the same procedures we questioned are still in effect, interchanges subsequent to 1979 will continue to contain errors and inaccuracies.

Board uses inappropriate workload factor for initial enrollments

The Board used an inappropriate workload factor to calculate administrative expenses for processing new benefit claims from workers and their dependents. This error overstated administrative expenses by an average of 70 percent for the 1973 through 1980 interchanges and resulted in the Board receiving $22 million more from SSA than it was due.

SSA calculates the initial enrollment unit cost factor by dividing total costs of initial enrollment by the total number of initial enrollees. It excludes from the total number of enrollees the survivors who receive a final payment upon the death of a beneficiary. However, the Board applies this unit cost factor to all its initial enrollees, including its estimated number of survivors receiving final payments. Considering how SSA calculates the unit cost factor, applying this factor to all initial enrollees causes an overestimate of the amount it is due from SSA.

SSA has informed the Board of the error, and if the Board modifies its workload factor, the error will not occur in future interchanges. Because this is a simple error to correct, the Board could adjust administrative expense estimates for 1973 through 1980 to calculate the proper amount that it was due. We were unable to determine whether this error occurred before 1973, because the method SSA used to calculate the initial enrollment unit cost factor prior to 1973 could not be determined.

Table 2

Impact of Administrative Expense Errors on the Financial Interchange

Fiscal year	Type of error: Improper workload factor used	Improper cost factor used	Distributed cost excluded	Calculation errors (note a)	Improper cost included	Direct cost excluded	Total errors	Net over-estimate
	(in millions)							
1973	$ 1.6	$ -	$-.4	$ .6	$(b)	$ -	$ 2.6	$ 1.8
1974	2.6	(b)	-.6	-	(b)	-	3.2	2.0
1975	3.0	(b)	-.8	-	(b)	-	3.8	2.2
1976	2.9	-.6	-.7	-	(b)	-	4.2	1.6
1977	2.6	-.5	-.8	.1	(b)	-	4.0	1.4
1978	3.1	-1.0	-	-	.2	-.1	4.4	2.2
1979	3.1	-1.2	-	.8	.1	(c)	5.2	2.8
1980	3.1	-1.0	-	-	-	(b)	4.1	2.1
Total	$22.0	-$4.3	-$3.3	$1.5	$.3	-$.1	$31.5	$16.1

a/The Board corrected the $1.5 million of calculation errors by reducing the amount transferred for the 1980 interchange.

b/The amount is probably in error, but by how much is unknown given the unavailability of data during our review.

c/Less than $0.1 million.

Cost of processing initial enrollments is understated due to an inappropriate SSA unit cost factor

SSA calculated an inappropriate unit cost factor for use in determining the cost of processing initial enrollments. Because of this, we estimate that the Board received about $4.3 million less than it was due for 1976 through 1980.

From 1960 through 1973, SSA calculated separate unit cost factors for initial worker claims and subsequent dependent or survivor claims to account for the substantial difference in processing cost between the two types of claims. During this period the dependent/survivor unit cost factor averaged 7 percent of the worker factor in the disability program and 44 percent in the retirement program. In 1974, SSA started calculating only one unit cost factor to cover initial enrollment costs for both a worker and dependent/survivor claim because separate costs were no longer available at the SSA headquarters level due to a change in SSA's accounting system. Using only one unit cost factor would be valid for the interchange if the Board's ratio of the number of worker claims to dependent/survivor claims were the same as SSA's. It is not. Over the last 5 years the ratio of SSA disability worker claims to dependent/survivor claims averaged 45 to 55, while the Board's averaged 72 to 28. In the retirement program, SSA's ratio of the two claim categories averaged 48 to 52, while the Board's averaged 40 to 60.

Because these ratios differ, using only one unit cost factor understates the amount the Board was due in administrative expenses. Using the relationship of data available on separate unit cost factors for 1960-73, which still appear to be valid today, we estimate that the Board received $4 million less than it was due for 1976 through 1980. We believe this is a reasonable estimate because separate unit cost factors available at the SSA regional level show that the 1980 difference in unit cost between processing worker and dependent/survivor claims does not vary significantly from the prior years' average for 1960-73. For the disability program the difference in unit cost is exactly the same as the 1960-73 average. Also, regional costs represent the majority of overall SSA costs. In 1980, 59 and 65 percent of overall SSA costs in the retirement and disability programs, respectively, were regional costs.

We believe SSA should recognize the significant cost difference between processing worker and dependent/survivor claims and again calculate a separate unit cost factor for each. Because currently such data are not available at the SSA headquarters level, the ratio between the two costs, available at the regional level, could be applied to the overall costs to calculate separate unit cost factors.

Medicare-distributed common costs excluded

Medicare unit cost factors calculated by SSA for 1973 through 1977 did not include common costs that must be shared and allocated among the retirement, disability, and medicare programs. As a result, the Board received $3.3 million less in administrative expenses than it was due from SSA.

In 1973, SSA began distributing common costs among the retirement, disability, and medicare programs. However, the distributed common costs were incorporated only into the calculation of unit cost factors for the retirement and disability programs and not for the medicare program. SSA discovered this error, and since 1978 distributed common costs have been incorporated into the calculation of medicare unit cost factors. The Board and SSA agreed not to recalculate common costs for the medicare program for prior years thereby excluding more than $3 million of properly includable distributed common costs from the interchange administrative expense estimates.

When we discussed this matter with them, both SSA and the Board said that an error had not actually occurred and therefore need not be corrected. They believe that the medicare unit cost factors used beginning in 1978 are a refinement over the previous factors, and therefore the cost factors for 1973 through 1977 do not constitute an error and do not have to be corrected.

We agree that the medicare unit cost factors used by SSA since 1978 are a refinement; however, this refinement should have been instituted in 1973. It was only through oversight that refinement was not implemented until 1978. By not including distributed common costs when calculating medicare unit cost factors, SSA's cost accounting principle of sharing common costs among programs was violated. The errors for the affected years could be corrected now and adjustments made for the amounts incorrectly transferred.

Cost of maintaining beneficiary records overstated by including costs for work the Board does not perform

SSA included an inappropriate cost in calculating the unit cost factor for maintaining all currently active beneficiary cases. This error overstated the maintenance cost category by 181 percent for 1978 and 1979 and resulted in the Board receiving more than $300,000 in administrative expenses than it was due.

In developing the maintenance unit cost factor, SSA includes costs for issuing and maintaining social security numbers. However, the Board no longer performs this activity. SSA corrected this error for the June 1982 interchange. No action has been taken to correct the error in prior interchanges. It would be proper for SSA to correct the error for all years where data needed to make the correction are reasonably available.

Medicare direct costs excluded

SSA failed to include any direct costs from the medicare program when calculating medicare unit cost factors for 1978 and 1979. As a result, the Board did not receive from SSA almost $100,000 it was due for administrative expenses for processing employers' reports of employees' earnings. SSA agreed that the error occurred and corrected it for the 1980 interchange. Additional medicare unit cost factors, based on other medicare direct costs, are being developed by SSA to improve future estimates.

CONCLUSION

Although data needed to estimate the administrative expense portion of the interchange are available, the Board and SSA incorrectly used them. The Board and SSA did not coordinate their efforts to compute the administrative expense estimate, but rather, each agency independently developed its own cost and workload factors. Inappropriate cost and workload factors were included in the estimate and some appropriate factors excluded. Coordination of Board and SSA efforts to develop cost and workload factors would generate a more accurate administrative expense estimate.

Most of the errors found were corrected after we discussed them with the Board and SSA and will not affect future interchanges. However, the impact of the errors on prior year estimates was not corrected.

RECOMMENDATIONS

We recommend that the Secretary of HHS direct the Commissioner of Social Security, in cooperation with the Chairman of the Railroad Retirement Board, to

--correct all amounts transferred due to administrative expense errors affecting past interchanges where supporting data are available and

--coordinate their actions to develop appropriate cost and workload factors for use in calculating the interchange administrative expense estimates.

We also recommend that the Secretary of HHS direct the Commissioner to calculate separate unit cost factors for worker and dependent or survivor claims.

AGENCY COMMENTS AND OUR EVALUATION

HHS agreed with our recommendation that administrative expense errors affecting past financial interchanges should be corrected where supporting data are available and agreed to take action before the June 1983 interchange to revise unit costs retroactively where data exist.

The Board, however, while agreeing that administrative errors affecting past interchanges should be corrected, does not believe that an error occurred in medicare-distributed common costs for the 1973-77 period. The Board apparently believes that distributed common costs associated with medicare unit cost factors were included in the retirement and disability unit cost factors used from 1973 through 1977. Although SSA had calculated separate unit cost factors for the retirement, disability, and medicare programs each year after 1972, these new associated distributed common costs were not included--but should have been--in the medicare unit cost factors used by the Board. As a result, the Board did not recover $3.3 million in administrative costs due it.

Further, in its February 2, 1982, letter referred to in its comments, the Board contended that new workload factors had to be developed to use the new SSA unit cost factors. No new workload factors had to be developed to use the new SSA unit cost factors, and, in fact, no new workload factors were developed. Beginning in 1978, the Board began applying the new medicare unit cost factors to existing retirement and disability workload factors. This same procedure could easily be done for the 1973-77 interchanges because the workload factors are available.

HHS and the Board agreed with our recommendation that better coordination is needed to develop appropriate cost and workload factors for use in calculating interchange administrative expenses. HHS said it is currently considering various ways of informing the Board of how unit costs are developed and of any proposed changes in methodology. These improvements, if implemented, should preclude the future occurrence of many errors and inconsistencies we found.

The Board said it must determine whether its initial enrollment workload factors or SSA's initial enrollment unit cost factors should be modified. We believe that the situation could be corrected if the Board subtracted the number of survivors receiving final payment upon death of a beneficiary from the total initial enrollments used as the workload factor. The method that SSA uses to develop the cost factor, when applied to a revised Board workload factor, will assure recovery of all costs.

In response to our recommendation that SSA calculate separate unit cost factors for worker and dependent or survivor claims, HHS agreed and said it plans to prepare such information and apply it retroactively to the extent available data permit. HHS said this should be accomplished before the next financial interchange.

CHAPTER 5

NEED FOR AUDITS

OF THE FINANCIAL INTERCHANGE

Most components of the interchange either have been in error for several years or could be significantly improved to provide more accurate estimates of the amount SSA should be paying the Board. If the errors and inefficiencies found during our review had not occurred, we estimate that SSA would have paid millions of dollars less to the Board for the interchanges we reviewed. Most of the errors and inefficiencies we found could have been detected and corrected through regular audits. However, the audit groups at the Board and HHS, which includes SSA, have never audited the interchange.

The Board's audit group said it recognizes the lack of oversight and plans to give high priority to a 1983 audit of the interchange.

At the time of our review, the HHS audit groups told us they have never looked at the interchange and have no future plans to examine it. The HHS Inspector General questioned whether he had authority to audit this interagency transaction. He noted that although no statute prohibits such review, neither is it authorized by law. He said that even if he had specific authority to audit the interchange, such audits should not be given a high priority because the interchange involves only a transfer from one Federal pocket to another. We believe much more is involved. Each year over a billion dollars of employer and worker contributions are transferred, unchecked, from the social security trust funds. It is important for HHS to protect the interests of those who contribute to social security and to protect the financial viability of the social security trust funds.

We are talking about two separate trust funds serving separate clientele--both of which now face severe financing problems. Continual inaccuracies in fund transfers could aggravate the financial situation of either fund. These financing problems would have to be addressed in one of three ways. Benefits may have to be decreased which will affect present and future beneficiaries. Payroll taxes may have to be increased which will affect those currently employed. Or, an infusion of general revenue would be required which would shift the burden to the general public.

CONCLUSION

Periodic audits of the interchange are necessary to ensure that the amounts transferred meet the legislative requirement of placing the social security program in the same financial position it would have been in if the Board did not exist. Such audits have been nonexistent to date. Without audits, errors and inefficiencies similar to those found during our review could continue to go undetected.

RECOMMENDATION

We recommend that the Chairman of the Board and the Secretary of HHS assure that their respective audit groups--singly or jointly--periodically audit all components of the financial interchange.

AGENCY COMMENTS AND OUR EVALUATION

HHS and the Board both agreed with our recommendation that all components of the financial interchange be audited periodically. The Board's Director of Audits and Investigations has agreed to a cooperative audit arrangement with HHS' Office of Inspector General and to begin such audits in fiscal year 1984. We believe a coordinated audit approach would be efficient and satisfy the needs of both agencies.

The Department said it annually performs an informal review of the interchange amounts calculated by the Board. While acknowledging that this type of informal review is not a substitute for the periodic detailed audits we recommend, it said that such informal reviews substantially reduce the possibility of a major error.

DEPARTMENT OF HEALTH & HUMAN SERVICES

Office of Inspector General

Washington, D.C. 20201

DEC 6 1982

Mr. Philip A. Bernstein
Director, Human Resources
Division
United States General
Accounting Office
Washington, D.C. 20548

Dear Mr. Bernstein:

The Secretary asked that I respond to your request for our comments on your draft of a proposed report "Need to Improve Procedures for Administering the Social Security Administration and Railroad Retirement Board Financial Interchange." The enclosed comments represent the tentative position of the Department and are subject to reevaluation when the final version of this report is received.

We appreciate the opportunity to comment on this draft report before its publication.

Sincerely yours,

Richard P. Kusserow
Inspector General

Enclosure

COMMENTS OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES ON THE GAO DRAFT REPORT, "NEED TO IMPROVE PROCEDURES FOR ADMINISTERING THE SOCIAL SECURITY ADMINISTRATION AND RAILROAD RETIREMENT BOARD FINANCIAL INTERCHANGE"

General

We agree with the thrust of this GAO report that more attention needs to be given to the soundness of the calculations of the financial interchange between the Social Security Administration and the Railroad Retirement Board.

We do want to point out that GAO's estimate that the Social Security Administration paid the Board $40 million more than it should in 1979 is probably misleading. The figure is based on a statistical method devised by GAO which, as we explain later, needs further refinement to produce consistently sound results.

GAO Recommendation

That the Secretary of Health and Human Services direct the Commissioner of Social Security to periodically review how accurately the Board calculates social security benefit amounts.

Department Comment

We are exploring ways for carrying out a periodic review of the Board's financial interchange cases and calculations, and will involve the Board in the decisions to be made.

In addition, as we point out later in these comments, our Office of Inspector General, through a cooperative arrangement with the Board, will periodically audit all components of the financial interchange.

GAO Recommendation

That the Secretary of Health and Human Services direct the Commissioner of Social Security to train Board personnel who calculate social security benefits in the proper application of social security rules and regulations.

Department Comment

Although the Board's primary function is to process its own portion of a claim for benefits, it also calculates the Social Security benefits as an offset; this is an ongoing activity involving all Board claims processing staff, not just a few personnel.

A sizable coordination effort already exists between various SSA and Board staff components. All SSA policy and procedural issuances are routinely forwarded to the Board, and SSA training packages are available to them. In addition, SSA's Great Lakes Program Service Center works with Board staff members to provide necessary guidance for critical changes and non-routine claims processing situations. In view of these efforts, additional training in applying SSA rules and regulations to the calculation of Social Security benefits may not, in itself, eliminate the problem of inconsistent benefit determinations.

Although we believe that the training of Board employees in SSA rules and regulations is primarily a responsibility of the Board, we will review the existing approach with them.

GAO Recommendation

That the Secretary of Health and Human Services direct the Commissioner, in cooperation with the Chairman of the Railroad Retirement Board, to lower the error tolerance limits applied to financial interchange sample calculations so that all errors with an impact of more than ten cents on the monthly benefit rate are corrected.

Department Comment

We agree with the concept of this recommendation and will cooperate with the Board in determining whether this modification is feasible.

GAO Recommendation

That the Secretary of Health and Human Services direct the Commissioner of Social Security, in cooperation with the Chairman of the Railroad Retirement Board, to correct all amounts transferred due to administrative expense errors affecting past interchanges where supporting data are available.

Department Comment

We agree. SSA will take action before the June 1983 interchange to revise affected unit costs retroactively where data exists. SSA will take the initiative as it relates to: 1) providing Medicare-related unit costs on the same basis as those provided for the Old Age, Survivors and Disability Insurance programs, 2) excluding the cost of issuing and maintaining Social Security numbers from unit costs, and 3) including direct Medicare costs in the unit cost computation. Any retroactive corrections related to initial claims counts will depend on data available at the Board.

GAO Recommendation

That the Secretary of Health and Human Services direct the Commissioner of Social Security, in cooperation with the Chairman of the Railroad Retirement Board, to coordinate their actions to develop appropriate cost and workload factors for use in calculating the interchange administrative expense estimates.

Department Comment

SSA plans to make a more consistent effort to keep the Board informed of how administrative unit costs are developed and of any proposed changes in the methodology. SSA is currently considering several ways to improve communications with the Board in this area, including: 1) developing a narrative explanation on how each unit cost is developed and requesting the Board's response to it; 2) involving Board representatives in discussions of how the unit costs are developed; and 3) more fully discussing and documenting any potential changes in the way unit costs are calculated from the GAO audited bench mark. SSA expects to decide on an effective approach by March 1983.

GAO Recommendation

That the Secretary of Health and Human Services direct the Commissioner to calculate separate unit cost factors for worker and dependent or survivor claims.

Department Comment

We agree. SSA plans to prepare separate unit costs for workers and for dependents and survivors on the most reasonable bases available and apply them retroactively within the limits of existing data. This should be accomplished before the June 1983 interchange.

GAO Recommendation

That the Chairman of the Railroad Retirement Board and the Secretary of Health and Human Services assure that their respective audit groups--singly or jointly--periodically audit all components of the financial interchange.

Department Comment

We agree that the financial interchange should be periodically audited and audit plans have already been made. The Director of Audits and Investigations of the Railroad Retirement Board has agreed to a cooperative audit arrangement with our Office of Inspector General, beginning in FY 1984. The audits will cover all components of the financial interchange.

Since there is some doubt of our Inspector General's authority to unilaterally audit the books and records of another, independent, Federal agency, we believe that the cooperative audit approach will be most responsive to GAO's concerns. In the event that this approach proves unsatisfactory, we will consider other alternatives.

Other Matters

The report frequently refers to a $40 million error in the 1979 determination. Virtually all of this amount is attributable to the report's allegation that a statistical method used by the Board is not as precise as the one recommended by GAO. SSA statisticians believe that the composite estimator method recommended by GAO is an unstable estimating method. Thus, the error amount quoted by GAO, which was based on this method, is probably misleading.

SSA and Board personnel are currently studying an SSA proposal that a different procedure be used to calculate the average benefit amount for the Board's sample cases. This method also involves using a "composite estimator", as recommended by GAO, but in conjunction with a restratified sample. We believe this approach has the potential to yield an unbiased estimate together with a lower variance (i.e., greater precision) than the current procedure.

Finally, the report states in several places that SSA does not currently perform any review of the interchange amounts as calculated by the Board. In actual practice, these results have been reviewed each year as a test of their overall reasonableness. Although this type of informal review does not remove the need for periodic detailed audits, it does substantially reduce the possibility of a major error.

UNITED STATES OF AMERICA
RAILROAD RETIREMENT BOARD
844 RUSH STREET
CHICAGO, ILLINOIS 60611

December 2, 1982

Philip A. Bernstein, Director
Human Resources Division
U.S. General Accounting Office
441 G Street, N.W.
Washington, D.C. 20548

Dear Mr. Bernstein:

We appreciate the opportunity to review and respond to your proposed report to the Congress, "Need to Improve Procedures for Administering the Social Security Administration and Railroad Retirement Board Financial Interchange." With the understanding that the references to the "Chairman of the Board" should be references to "the Board" because of the collegial nature of the agency, the following are our comments on the report's recommendations.

<u>Social Security Administration (SSA) should periodically review how accurately the Railroad Retirement Board (Board) calculates social security benefit amounts</u>

We agree. Also, these reviews of benefit calculations should be coordinated with our internal audit organization's periodic reviews of the financial interchange program.

<u>SSA should train Board personnel who calculate social security benefits in the proper application of social security rules and regulations</u>

We agree. This training should be designed to meet the specific needs of Board personnel rather than the somewhat different needs of SSA claims examiners. In some instances, access to a designated SSA contact person may reduce errors as effectively as formal training.

<u>The Commissioner of SSA and [the Chairman of] the Board should lower the error tolerance limits applied to financial interchange sample calculations so that all errors with an impact of more than ten cents on the monthly benefits rate are corrected</u>

We agree. Any changes to error tolerance limits, however, should apply to future benefit computations only, and not be retroactive.

[The Chairman of] the Board should direct that a composite estimator be used to calculate the average benefit amount for the Board's sample cases

We do not agree. Given our current method of stratifying the sample, a composite estimator produces a biased result when it is modified for the significantly large proportion of unmatched cases in many of the strata. An SSA statistician has recommended using a composite estimator in conjunction with restratification of the sample. We are reviewing his suggestion to determine whether the proposed stratification criteria are feasible, are the most appropriate, and substantially reduce or eliminate the possible bias introduced by a composite estimator.

The Commissioner of SSA and [the Chairman of] the Board should correct all amounts transferred due to administrative expense errors affecting past interchanges where supporting data are available

We agree. Regarding the calculations of medicare distributed common cost factors, however, the Board does not believe an error occurred for the 1973 through 1977 period. This position was explained in the Board's letter dated February 2, 1982, to Mr. Peter McGough, Associate Director, Human Resources Division, U.S. General Accounting Office (GAO).

The Commissioner of SSA and [the Chairman of] the Board should coordinate their actions to develop appropriate cost and workload factors for use in calculating the interchange administrative expense estimates

We agree. While it appears that the Board's workload factors for initial enrollments do not correspond directly to SSA's initial enrollment unit cost factors, it remains to be determined whether the Board, SSA, or both should modify their factors.

[The Chairman of] the Board and the Secretary of Health and Human Services should assure that their respective audit groups -- singly or jointly -- periodically audit all components of the financial interchange

We agree. Our Director of Audit and Investigation included a review of the financial interchange program in his initial 1983 audit plan, dated May 11, 1981. To allow our Director of Research time to resolve and act on the abovementioned GAO recommendations, the Director of Audit and Investigation has deferred his review until fiscal year 1984. He and a representative of the Office of Inspector General, Department of Health and Human Services have agreed to involve that office in the review by obtaining its input to the audit program and its comments on the draft audit report.

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Again, we appreciate the opportunity to comment on your proposed report.

Sincerely,

Beatrice Ezerski

FOR THE BOARD
Beatrice Ezerksi

SCOPE AND METHODOLOGY OF REVIEW

Our review of the various components that determine the financial interchange amount covered different time frames. To give a picture of the accuracy of at least one interchange, we tested all components as they pertained to the 1979 interchange. We chose the 1979 interchange because it was the most recent interchange for which data were available when our work began in May 1981. Although we reviewed data for years before 1979 and can estimate the impact identified errors had on the interchange for those years, we can provide an estimate of the total impact of errors for only one interchange--1979.

We examined (1) benefit calculations within the Board's sample of beneficiaries, (2) the Board's statistical method for calculating an average sample benefit, (3) administrative expense calculations, and (4) tax calculations for the Board's sample of currently employed workers.

Benefit calculations were analyzed by having an SSA Quality Case Analyst review for us 197 sample cases drawn from all active 1979 interchange cases. Although the review of the sample cases also included assessing the accuracy of individual benefit calculations made before 1979, the sample results are statistically projectable only for the 1979 interchange--the year from which the sample was drawn.

We compared the Board's statistical method for calculating an average sample benefit to other available statistical methods for the 1977-79 interchanges. Data for comparison were available only for the 3 years reviewed.

Our analysis of interchange administrative expenses covered 1973-80--the latest period for which data were available. The procedures used to calculate administrative expense factors did not change during this period. SSA procedures used prior to 1973 are not well documented.

Our review of the tax estimate involved assessing the appropriateness of the methodology used to calculate the amount and a check of the accuracy of the 1979 calculations. We found no irregularities in how the tax portion is calculated.

On the following pages we (1) define a "sampling error," (2) explain the Board's methodology for calculating the interchange benefit estimate, and (3) describe how we analyzed interchange sample cases and estimated the average sample benefit to be projected to the universe of railroad beneficiaries.

EXPLANATION OF SAMPLING ERROR

Statistical sampling enables one to draw conclusions about a universe of cases based on information contained in a sample of the universe. The results of a random selection of any sample are always subject to some uncertainty ("sampling error") because only a portion of the universe has been selected for analysis. The sampling error is stated at a certain specified confidence level (in this case 95 percent). The confidence level indicates the degree of reliability that can be placed on the estimates of a characteristic derived from the sample. The sampling error measures the upper and lower limits between which the actual value of the characteristics will fall at the stated confidence level. The range is also a measure of the estimate's precision. The smaller the range, the more precise the estimate.

BOARD'S METHODOLOGY FOR CALCULATING FINANCIAL INTERCHANGE BENEFITS

The benefit portion of the financial interchange is a statistical projection of the additional benefit amounts attributable to railroad employment calculated from a sample of railroad beneficiary cases. Approximately 1 percent of the railroad beneficiary cases are selected for the sample based on the beneficiary's account number. The sample consists of beneficiary cases that were in earlier determinations and new beneficiary cases for persons that became eligible for benefits during the year. For retired beneficiary cases the sample and universe are divided into 23 groups or strata by benefit type, the beneficiaries' age, the year the railroad retirement annuity began, and other factors. There is also a single stratum for social security lump sum death benefits paid in the year. The sample and universe of disabled railroad beneficiaries are separated into four strata based on the beneficiaries' age. Appendix VII shows the Board's strata criteria for the 1977-79 financial interchanges.

For each sample beneficiary case, the Board is supposed to calculate the benefit amount exactly as if the beneficiary had been covered under social security. Using this sample information, the Board uses the mathematical formulas applicable to a stratified random sample design to calculate the statistical projection and the estimate's range.

Using current year sample information, the Board calculates the arithmetic mean or average calculated benefit amount for each stratum. These estimates are multiplied by the number of beneficiary cases in the stratum (stratum population). The sum of the 24 stratum totals is the financial interchange benefit amount. Similarly, the standard error[1] of the calculated benefit amounts for the sample is calculated for each stratum. After weighing the strata's standard error, the standard error for the total benefit amount is calculated. The population standard error and the specific confidence level (95 percent for the Board) determine the range of the financial interchange benefit amount.

GAO METHODOLOGY FOR ANALYZING FINANCIAL INTERCHANGE SAMPLE CASES

To assess the Board's accuracy in calculating the initial benefit amount, we selected a random sample of 167 railroad retirement and 30 disability cases from the Board's 1979 interchange sample for review by an SSA Quality Case Analyst. Our sample was stratified by benefit and record type. We condensed the Board's 24 retirement strata into 4 strata and all the Board's disability strata into 1 stratum. We allocated our sample to each GAO stratum proportional to the Board stratum's universe with a minimum sample of 30 cases for a stratum. The following shows the structure of the sample we analyzed.

[1]The standard error is the square root of the sample variance which is a measure of variability.

GAO Sample of
Financial Interchange Cases

GAO stratum number	Board stratum included	Benefit type	Record type	Universe of financial interchange cases	GAO sample size
1	1-6	Retirement	Employee and spouse	2,822	51
2	7-11	Retirement	Employee	1,588	30
3	12-19	Retirement	Aged widow, parent	3,106	56
4	20-22	Retirement	Child, disabled widow, monthly survivor	337	30
1-4	1-22	Retirement	All	7,853	167
5	1-4	Disability	All	418	30
Total		Retirement and Disability	All	8,271	197

The SSA analyst reviewed for us the Board's calculation of social security benefits for the 197 sample cases. The Board reviewed all cases with errors noted by the analyst and concurred with all errors identified and discussed in this report. Using stratified random sampling formulas for the retirement cases and simple random sampling formulas for the disability cases, we projected the error amounts to the universes. We calculated estimates of the overpayments, underpayments, and total errors for the 1979 financial interchange transfer. Appendix V shows the estimates, sampling error, and range of estimates obtained from our analysis.

GAO METHODOLOGY FOR ANALYZING ESTIMATION OF THE AVERAGE BENEFIT

Statistical sampling theory has many estimation techniques for sample designs where the same sample elements are measured in two periods. These techniques generally provide more precise estimates than a simple random sample design where only the current sample information is used. For many of these techniques the population total (i.e., the total figure obtained if every element in the population was actually measured) for the previous period must be known. One estimator, the composite, requires only sample information for the two periods.

The composite estimate is a weighted average of two estimates of the current year's calculated benefit amount. To calculate the first estimate, the prior period's estimate is multiplied by the ratio ("composite ratio") or the difference ("composite difference") of the calculated benefit amounts for the sample cases in both the current and prior periods. The second estimate is the simple mean or average of the calculated benefit amounts for the current period sample. The weight used is a function of the relationship between the calculated benefit amounts for identical sample cases (i.e., beneficiary cases in both the current and previous sample).

To demonstrate the advantage of using additional sample information, we calculated the financial interchange benefit amounts for 1977-79 using composite ratio and composite difference estimators. Since the Board calculates a simple estimate for each stratum, we also calculated composite estimates for each stratum with the exception of the social security lump sum death benefit stratum since it does not have any variability--the stratum total equals the number of beneficiaries who died during the year multiplied by the $255 death benefit. For the 1977 calculation we used the 1976 simple average to calculate the first part of the composite estimator. For the 1978-79 calculations, we used the prior period composite estimator for the first part of the current period composite estimator. Using the same technique as the Board, we then combined the strata estimates to obtain estimates for the total financial interchange benefit amount for the year. We also calculated and combined the standard errors for the estimates. Estimates for both retired and disabled railroad beneficiaries were made. Appendix VI compares the benefit estimates, sampling error, and range of estimates obtained using simple random, composite ratio, and composite difference estimators.

SUMMARY OF

FINANCIAL INTERCHANGE TRANSFER AMOUNTS

Year	Transfers to Railroad Retirement Account (RRA): From Retirement Trust Fund	Transfers to Railroad Retirement Account (RRA): From Disability Trust Fund	Transfers from RRA to Health Insurance Trust Fund	Net gain to RRA
	(millions)			
1951-64	$ 3,088.2	$ 76.5	$ -0-	$ 3,164.7
1965	508.0	30.6	16.3	522.3
1966	437.6	20.4	44.0	414.0
1967	491.5	21.3	54.2	458.6
1968	578.8	10.4	63.5	525.7
1969	613.0	13.2	65.9	560.3
1970	724.3	24.2	66.1	682.4
1971	783.0	19.5	63.2	739.3
1972	908.6	22.3	99.2	831.7
1973	981.8	28.5	132.5	877.8
1974	1,212.3	26.4	137.7	1,101.0
1975	1,207.8	-.3	142.9	1,064.6
1976	1,588.7	29.8	213.7	1,404.8
1977	1,447.5	29.9	191.1	1,286.3
1978	1,442.0	-10.9	244.3	1,186.8
1979	1,584.9	28.2	276.5	1,336.6
1980	1,793.3	26.4	351.4	1,468.3
Total	$19,391.3	$396.4	$2,162.5	$17,625.2

Note: Figures shown for the retirement and disability trust funds are net amounts arrived at by adding the benefit, administrative expense, and interest (note a) portion of the financial interchange minus the tax portion. The amounts listed as transfers to the health insurance trust funds represent taxes collected for medicare by the Board less administrative expenses incurred by the Board

a/An interest allowance is made to account for the time delay between the date amounts are due and are actually transferred.

ERROR ESTIMATES AND SAMPLING ERROR

FOR ANALYSIS OF 1979 FINANCIAL INTERCHANGE SAMPLE CASES

Error type	Universe	Estimate	Sampling error (+ or -)	Range of estimate (note a) Low (note b)	High
Underestimate	Retirement cases	$ 8,316,087	$7,871,703	$ 444,387	$16,187,790
	Disability cases	2,106,347	2,181,176	1,647	4,287,523
	All cases	10,422,430	8,168,305	2,254,129	18,590,740
Overestimate	Retirement cases	3,381,884	3,796,192	1,360	7,178,076
	Disability cases	3,244,488	4,414,690	2,537	7,659,178
	All cases	6,626,372	5,822,420	803,952	12,448,790
All errors (note c)	Retirement cases	11,697,970	8,238,060	3,459,910	19,936,030
	Disability cases	5,351,090	5,509,220	4,185	10,860,310
	All cases	17,049,060	9,910,459	7,138,597	25,959,500

a/The ranges show the maximum and minimum values at the 95-percent confidence level.

b/The low is never less than the actual amount of errors found in the sample.

c/This note applies to the sampling error and range of estimate columns. It is not the sum of underestimates and overestimates but a separate statistical projection of the total amount of errors.

APPENDIX V

BENEFIT ESTIMATES AND SAMPLING ERROR

USING SIMPLE RANDOM AND COMPOSITE ESTIMATORS

1977-79

Year	Type of estimator	Amount of benefit estimate	Sampling error (+ or -)	Range of estimate (note a) Low	High
		(millions)			
Retirement program					
1977	Simple random	$1,962.4	$26.3	$1,936.1	$1,988.7
	Composite ratio	1,940.2	17.1	1,923.1	1,957.3
	Composite difference	1,939.2	14.2	1,925.0	1,953.4
1978	Simple random	2,088.0	28.1	2,059.9	2,116.1
	Composite ratio	2,073.8	18.4	2,055.4	2,092.2
	Composite difference	2,071.6	20.8	2,050.8	2,092.4
1979	Simple random	2,289.4	30.9	2,258.5	2,320.3
	Composite ratio	2,244.8	20.2	2,224.6	2,265.0
	Composite difference	2,241.1	19.8	2,221.3	2,260.9
Disability program					
1977	Simple random	128.9	8.4	120.5	137.3
	Composite ratio	127.5	6.7	120.7	134.2
	Composite difference	127.3	6.1	121.2	133.4
1978	Simple random	134.0	8.5	125.5	142.5
	Composite ratio	134.4	6.7	127.7	141.1
	Composite difference	133.0	6.5	126.5	139.5
1979	Simple random	144.0	9.3	134.7	153.3
	Composite ratio	147.2	7.9	139.3	155.1
	Composite difference	145.6	7.5	138.2	153.1

a/The range shows the maximum and minimum values at the 95-percent confidence level.

STRATIFICATION OF UNIVERSE OF BOARD BENEFICIARIES, CALENDAR YEARS 1977-79

Stratum number	Type of RRA benefit	Age of beneficiary on birthday in year	RRA spouse annuity payable in year	Number in survivor family	Criterion year (note a) 1977	1978	1979
	Old-Age and Survivors Insurance Trust Fund						
1	Employee	62 to 64	-	-	1936-77	1936-78	1936-79
2	Employee	65 or older	yes	-	1936-63	1936-63	1936-65
3	Employee	65 or older	yes	-	1964-68	1964-68	1966-69
4	Employee	65 or older	yes	-	1969-71	1969-71	1970-72
5	Employee	65 or older	yes	-	1972-74	1972-74	1973-75
6	Employee	65 or older	yes	-	1975-77	1975-78	1976-79
7	Employee	65 or older	no	-	1936-63	1936-63	1936-65
8	Employee	65 or older	no	-	1964-68	1964-68	1966-69
9	Employee	65 or older	no	-	1969-71	1969-71	1970-72
10	Employee	65 or older	no	-	1972-74	1972-74	1973-75
11	Employee	65 or older	no	-	1975-77	1975-78	1976-79
12	Aged widow's	60 to 61	-	1	-	-	-
13	Aged widow's; parent's	62 or older	-	1	Before 1952	1952	Before 1953
14	Aged widow's; parent's	62 or older	-	1	1952-55	1952-55	1953-56
15	Aged widow's; parent's	62 or older	-	1	1956-58	1956-58	1957-59
16	Aged widow's; parent's	62 or older	-	1	1959-61	1959-61	1960-62
17	Aged widow's; parent's	62 or older	-	1	1962-64	1962-65	1963-66
18	Aged widow's; parent's	62 or older	-	1	1965-68	1966-68	1967-70
19	Aged widow's; parent's	62 or older	-	1	1969-77	1970-78	1971-79
20	Child	-	-	1	Before 1978	1979	1980
21	Disabled widow's	-	-	1	Before 1978	1979	1980
22	Monthly survivor	-	-	2 or more	Before 1978	1979	1980
23	Monthly survivor, lump-sum	-	-	-	b/1977	1978	1979
24	None (note c)	-	-	-	-	-	-
	Disability Insurance Trust Fund						
1	Employee disability	64-65	-	-	-	-	-
2	Employee disability	61-63	-	-	-	-	-
3	Employee disability	55-60	-	-	-	-	-
4	Employee disability	Under 55	-	-	-	-	-

a/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.

b/Employee death in the year, without regard to his age or annuity accrual data.

c/Nonretired employees aged 65 and older and widows aged 60 and older who are not on the rolls.

APPENDIX VII

NET IMPACT OF ERRORS AND INEFFICIENCIES IN THE 1979 FINANCIAL INTERCHANGE

Type of error	Net effect of error or inefficiency
	(millions)
Benefit calculation errors	$-3.8
Inefficient statistical method used to calculate average sample benefit	41.4
Incorrect factor used to project average sample benefit to the universe	-.6
Administrative expense errors	2.8
Total	$39.8

Note: Positive figures indicate the Board received more and negative figures indicate the Board received less than it would have if errors and inefficiencies had not occurred.

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