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1988 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE FEDERAL HOSPITAL INSURANCE TRUST FUND

COMMUNICATION

From

**THE BOARD OF TRUSTEES,
FEDERAL HOSPITAL INSURANCE
TRUST FUND**

Transmitting

**THE 1988 ANNUAL REPORT OF THE BOARD,
PURSUANT TO
SECTION 1817(b) OF THE SOCIAL SECURITY ACT,
AS AMENDED**

LETTER OF TRANSMITTAL

BOARD OF TRUSTEES OF THE
FEDERAL HOSPITAL INSURANCE TRUST FUND
Washington, D.C, May 5, 1988

HONORABLE JAMES C. WRIGHT, JR.
Speaker of the House of Representatives
Washington, D.C.

HONORABLE GEORGE BUSH
President of the Senate
Washington, D.C.

GENTLEMEN:

We have the honor of transmitting to you the 1988 Annual Report of the Board of Trustees of the Federal Hospital Insurance Trust Fund (the 23rd such report), in compliance with the provisions of section 1817(b) of the Social Security Act.

Respectfully,

JAMES A. BAKER, III,
Secretary of the Treasure, and
Managing Trustee of the Trust Fund

ANN McLAUGHLIN,
Secretary of Labor,
and Trustee

OTIS R. BOWEN, M.D.,
Secretary of Health and
Human Services and Trustee

MARY FALVEY FULLER,
Trustee

SUZANNE DENBO JAFFE,
Trustee

WILLIAM L. ROPER, M.D..,
Administrator of the Health Care Financing
Administration, and Secretary,
Board of Trustees

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1988 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE FEDERAL HOSPITAL INSURANCE TRUST FUND

THE BOARD OF TRUSTEES

The Federal Hospital Insurance Trust Fund, established on July 30, 1965, is held by the Board of Trustees under the authority of section 1817(b) of the Social Security Act, as amended. The Board has five members. Three serve in an ex officio capacity. These members are the Secretary of the Treasury, the Secretary of Labor, and the Secretary of Health and Human Services. Two public members, Mary Falvey Fuller and Suzanne Denbo Jaffe, are provided for by the Social Security Amendments of 1983 (Public Law 98-21, enacted into law on April 20, 1983). The two public members were nominated by the President for a term of four years, and were confirmed by the Senate.

By law, the Secretary of the Treasury is designated as the Managing Trustee and the Administrator of the Health Care Financing Administration is designated as Secretary of the Board. The Board of Trustees reports to the Congress each year on the operation and status of the trust fund, in compliance with section 1817(b)(2) of the Social Security Act. This is the 1988 annual report, the twenty-third such report.

EXECUTIVE SUMMARY

The hospital insurance (HI) program pays for inpatient hospital care and other related care of those aged 65 and over and of the long-term disabled. In calendar year 1987, about 28 million people over age 65 and about 3 million disabled people under age 65 were covered under HI, financed primarily by the contributions of 131 million workers through payroll taxes. Payroll taxes during 1987 amounted to $58.6 billion, accounting for 91.5 percent of all HI income. Interest payments to the HI fund amounted to 7.0 percent of all HI income for 1987. The remaining 1.5 percent of calendar year 1987 income consisted primarily of transfers from the Railroad Retirement Account and the general fund of the Treasury (in accordance with provisions for the collection of taxes from railroad workers, the collection of taxes on deemed military service wage credits, and reimbursement to the fund for benefits for certain uninsured persons), and premiums paid by voluntary enrollees. Of the $50.3 billion in HI disbursements, $49.5 billion was for benefit payments while the remaining $0.8 billion was spent for administrative expenses. HI administrative expenses were 1.6 percent of total disbursements.

As mentioned above, the HI program is financed primarily by payroll taxes, with the taxes paid by current workers used primarily to pay benefits to current beneficiaries. Income not currently needed to pay benefits and related expenses is held in the HI trust fund. The assets of the fund may not be used for any other purpose. While in the fund, the

assets are invested in certain interest-bearing obligations of the U.S. Government.

The HI contribution rates applicable to taxable earnings in each of the calendar years 1984 and later are shown in Table I. The maximum taxable amounts of annual earnings are shown for 1984 through 1988. After 1988, the automatic increase provisions in section 230 of the Social Security Act determine the maximum taxable amount.

TABLE I.—CONTRIBUTION RATES AND MAXIMUM TAXABLE AMOUNT OF ANNUAL EARNINGS

Calendar years	Maximum taxable amount of annual earnings	Contribution rate (Percent or taxable earnings)	
		Employees and employers, each	Self-employed
1984	$37,800	1.30	2.60
1985	39,600	1.35	2.70
1986	42,000	1.45	2.90
1987	43,800	1.45	2.90
1988	45,000	1.45	2.90
Changes scheduled In present law:			
1989 & later	Subject to automatic adjustment	1.45	2.90

Actuarial Status of the Trust Fund

The Board of Trustees recommends that it is advisable to maintain a balance in the trust fund equal to a minimum of one-half year's disbursements, as a reserve against fluctuations in program experience and to provide time for any needed legislation to remedy unexpected imbalances. At the beginning of 1988, the trust fund was above the minimum desired level.

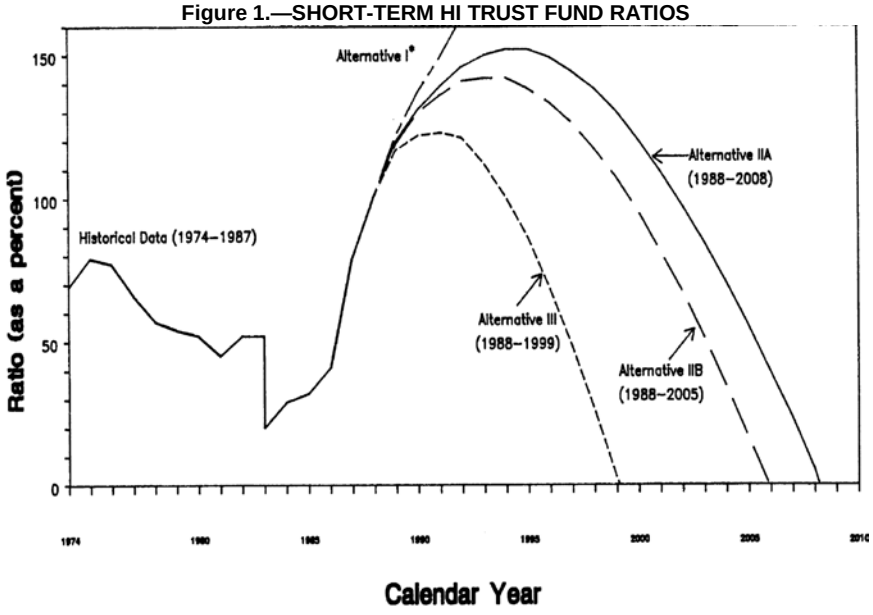
Projections were made under four alternative sets of assumptions: optimistic, two intermediate sets (alternatives II-A and 11-B), and pessimistic. Under both sets of intermediate assumptions, the trust fund ratio, defined as the ratio of assets at the beginning of the year to disbursements during the year, is projected to increase until about 1994 and then decline steadily until the fund is completely exhausted shortly after the turn of the century. Under the more optimistic set of assumptions (alternative I), the trust fund is projected to remain solvent throughout the first two 25-year projection periods, with trust fund exhaustion occurring in

2044. Under the more pessimistic set of assumptions (alternative III), the trust fund ratio is projected to increase to a level of about 123 percent in 1991 and then decrease rapidly until the fund is exhausted in 1999.

Table II in this report summarizes the estimated operations of the HI trust fund under the four alternative sets of assumptions. Figure 1

shows historical trust fund ratios for recent years and projected ratios under the four sets of assumptions.

Figure 1.—SHORT-TERM HI TRUST FUND RATIOS



*The trust fund is depleted in 2044 under alternative I.

Note: The trust fund ratio is defined as the ratio of assets at the beginning of the year to disbursements during the year.

The adequacy of the financing of the HI program on a long-range basis is measured by comparing on a year-by-year basis the actual tax rates specified by law with the corresponding costs of the program, expressed as percentages of taxable payroll. The actuarial balance is defined to be the excess of the average tax rate for the valuation period over the average cost of the program expressed as a percentage of taxable payroll[1]. Table II compares the actuarial balance under each of the four sets of assumptions for the 75-year projection period 1988-2062[2]. Figure 2 shows the year-by-year costs as a percent of taxable payroll for each of the four sets of assumptions, as well as the scheduled tax rates.

[1] In last year's report, the actuarial balance was defined to be the excess of the average tax rate for the valuation period over the average cost of the program, expressed as a percentage of taxable payroll, for the same period, where cost included (1) program expenditures and (2) a small amount to maintain the trust fund at the level of at least a half-year's outgo after accounting for the offsetting effect of interest earnings. In this report, the actuarial balance is defined to be the excess of the average tax rate for the valuation period over the average cost of the program, expressed as a percentage of taxable payroll, for the same period, where cost represents program expenditures only. This approach is more in line with the reporting methods of the OASDI report.

[2] Multi-year actuarial balances in this report are computed on the average cost basis, as described on page 31 of this report.

The cost figures in Figure 2 do not include amounts for maintaining the trust fund at the level of at least a half-year's disbursements.

Figure 2 emphasizes the inadequacy of the financing of the HI program by illustrating the divergence of the program costs and scheduled tax rates under each set of assumptions.

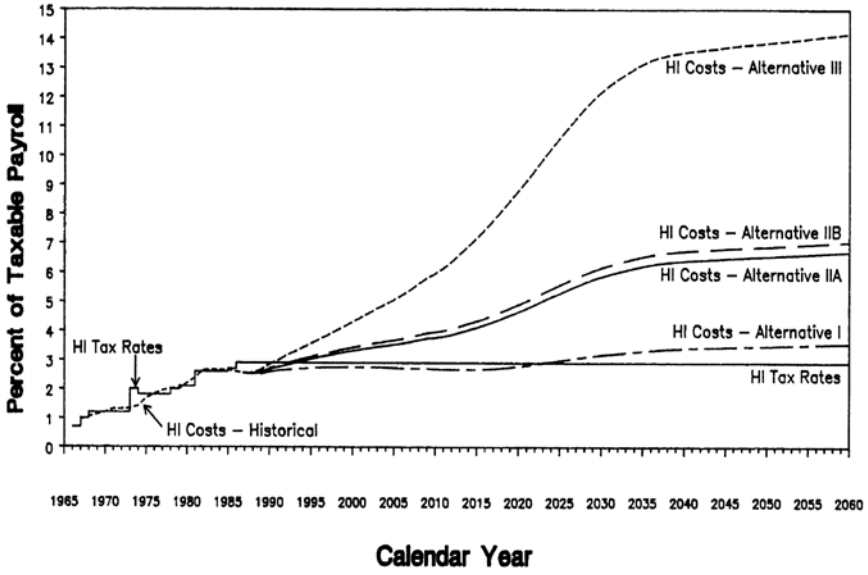
TABLE II.—SEVENTY-FIVE ACTUARIAL BALANCES OF THE HOSPITAL INSURANCE PROGRAM, UNDER ALTERNATIVE SETS OF ASSUMPTIONS

	Alternatives			
	I	II-A	II-B	III
Average contribution rate[2]	2.90%	2.90%	2.90%	2.90%
Average program expenditures[3,4]	3.05	5.01	5.25	9.53
Actuarial balance[5]	-0.15	-2.11	-2.35	-6.63
Trust fund building and maintenance[3,6]	+0.00	+0.01	+0.02	+0.12
Program cost including trust fund building and maintenance[3,7]	3.05	5.02	5.27	9.65
Augmented balance[8]	-0.15	-2.12	-2.37	-6.75

[1]For the 75-year period 1988-2062.
[2]As scheduled under present law.
[3]Expressed as a percentage of taxable payroll.
[4]Expenditures for benefit payments and administrative costs for Insured beneficiaries, on an incurred basis.
[5]Difference between the average contribution rate (tax rate scheduled in the law) and program expenditures.
[6]Allowance for building and maintaining the trust fund balance at the level of at least a half-year's outgo after accounting for the offsetting effect of interest earnings.
[7]Sum of program expenditures and trust fund building and maintenance.
[8]The augmented balance is the difference between the average contribution rate and the average cost of the program, including trust fund building and maintenance.

NOTE: The balances shown in this table do not use the new level-financing methodology used in the OASDI report.

Figure 2. ESTIMATED HI COSTS AND TAX RATES



Note: HI projected costs shown are expenditures attributable to insured beneficiaries only, on an incurred basis, without an allowance for building and maintaining the trust fund balance at the level of at least a half–year's outgo.

Table III presents a comparison of the projected experience in the 1987 and 1988 reports. As Table III indicates, the projections in the 1988 report show that the fund will be depleted a few years later than in the 1987 report under all alternative projections. This change is primarily due to legislation passed since the 1987 report was issued. Table IV shows the major reasons for the change in the 75-year actuarial balance of the HI program from the 1987 report. The section of the report entitled "Actuarial Status of the Trust Fund" discusses more completely the reasons for the change in the actuarial balance.

Table III.—STATUS OF THE HOSPITAL INSURANCE TRUST FUND

Sets of assumptions	Year In which the trust fund Is exhausted as published In the		75-year actuarial balance[1,2] of the HI program as published In the	
	1987 report	1988 report	1987 report	1988 report
I (optimistic)	2043	2044	-0.11%	-0.15%
II-A (Intermediate)	2005	2008	-2.02	-2.11
II-B (Intermediate)	2002	2005	-2.30	-2.35
Ill (pessimistic)	1996	1999	-6.55	-6.63

[1]The actuarial balance of the hospital insurance program was defined in the 1987 report to be the excess of the average tax rate for the valuation period over the average cost of the program, including an amount for trust fund building and maintenance and expressed as a percentage of taxable payroll, for the same period. Trust fund building and maintenance is not included in the definition of the actuarial balance in this report. For purposes of comparison, the figures from the 1987 report have been restated according to this report's definition of the actuarial balance. This approach is more in line with the reporting methods of the OASDI report.
[2]Multi-year actuarial balances in this report are computed on the average cost basis, as described on page 31 of this report.

TABLE IV.—CHANGE IN THE 75-YEAR ACTUARIAL BALANCE SINCE THE 1987 REPORT

1. Actuarial balance. Alternative II-B, 1987 report[1,2]	-2.30%
2. Changes:	
a. Valuation period	-0.06
b. Base estimate	+0.09
c. Legislation since the 1987 report	+0.40
d. Economic and demographic assumptions	-0.24
e. Hospital assumptions	-0.24
f. Net effect, above changes	-0.05
3. Actuarial balance, alternative II-B, 1988 report[1,2]	-2.35%

[1]The actuarial balance of the hospital insurance program was defined in the 1987 report to be the excess of the average tax rate for the valuation period over the average cost of the program, including an amount for trust fund building and maintenance and expressed as a percentage of taxable payroll, for the same period. Trust fund building and maintenance is not included in the definition of the actuarial balance in this report. For purposes of comparison, the figures from the 1987 report have been restated according to this report's definition of the actuarial balance. This approach is more in line with the reporting methods of the OASDI report.
[2]Multi-year actuarial balances in this report are computed on the average cost basis, as described on page 31 of this report.

Conclusion of the Board of Trustees

The present financing schedule for the hospital insurance program is sufficient to ensure the payment of benefits over the next 17 to 20 years if the intermediate assumptions underlying the estimates are realized, with trust fund exhaustion occurring in 2008 and 2005 under alternatives II-A and II-B, respectively. Under the more pessimistic alternative III, the fund is exhausted in 1999. Under the more optimistic alternative I, the trust fund is exhausted in 2044.

There are currently over four covered workers supporting each HI enrollee. This ratio will begin to decline rapidly early in the next century. By the middle of that century, there will be only about two covered workers supporting each enrollee. Not only are the anticipated reserves and financing of the HI program inadequate to offset this demographic

change, but under all but the most optimistic assumptions, the trust fund is projected to become exhausted even before the major demographic shift begins to occur. Exhaustion is projected to occur shortly after the turn of the century under the intermediate assumptions, and could occur as early as 1999 if the pessimistic assumptions are realized.

The Board notes that promising steps to begin reducing the rate of growth in payments to hospitals have already been taken, including the implementation of prospective payment and diagnosis-related groups and the legislation described on pages 8 through 9 of this report. Initial experience under the prospective payment system for hospitals suggests that this payment mechanism is an effective means of constraining the growth in hospital payments and improving the efficiency of the hospital industry. Efforts focused on improving the efficiency and reducing the costs of the health care delivery system need to be continued, in close combination with mechanisms that will assure that the quality of health care is not adversely affected.

Because of the magnitude of the projected actuarial deficit in the HI program and the probability that the HI trust fund will be exhausted shortly after the end of this century, the Board believes that early corrective action is essential in order to avoid the need for later, potentially precipitous changes. The Board, therefore, urges that the Congress take early remedial measures to bring future HI program costs and financing into balance, and to maintain an adequate trust fund against contingencies.

SOCIAL SECURITY AMENDMENTS SINCE THE 1987 REPORT

Since the 1987 Annual Report was transmitted to Congress, several laws affecting the HI program have been enacted. the more important legislative changes are described below.

The Balanced Budget and Emergency Deficit Control Reaffirmation Act of 1987 (Public Law 100-119) was enacted on September 29, 1987, and contained the following changes:

(1) The prospective payment update factor was zero percent for discharges occurring during the extension period beginning on October 1, 1987, and ending on November 20, 1987.

(2) The transition from a blended payment based upon regional and national rates to a wholly national rate in the Federal portion of a hospital's payment was delayed until November 21, 1987.

(3) The blend of a 25 percent hospital-specific rate and a 75 percent Federal rate was extended to include the first 51 days of each hospital's cost reporting period which began during fiscal year 1988.

(4) The 3.5 percent reduction in payments for capital was extended through November 20, 1987.

(5) The percentage increase in payment per admission for hospitals exempt from the prospective payment system (PPS) was zero percent for the first 51 days of the hospital's cost reporting period which began during fiscal year 1988.

The Omnibus Budget Reconciliation Act of 1987 (Public Law 100-203) was enacted on December 22, 1987, and contained the following changes:

(1) Payment reductions of 2.324 percent, required by the November 20, 1987 sequester order, are continued until December 31, 1987, for all services, and until March 31, 1988, for all inpatient hospital services.

(2) Effective April 1, 1988, the hospital prospective payment rates are increased (over prior year) as follows: Hospitals in urban areas with populations exceeding one million will receive updates of 1.5 percent in fiscal year 1988, and 2 percent less than the hospital input price index (IPI) in fiscal year 1989. Hospitals in other urban areas will receive updates of 1 percent in fiscal year 1988, and 2.5 percent less than the IPI in fiscal year 1989. Hospitals in rural areas will receive updates of 3 percent in fiscal year 1988, and 1.5 percent less than the IPI in fiscal year 1989. Hospitals exempt from PPS will receive an update of 2.7 percent in fiscal year 1988, and an update equal to the IPI in fiscal year 1989. All hospitals will receive an update equal to the IPI in fiscal year 1990 and later.

(3) A regional minimum payment amount (regional floor) is established for PPS hospitals and is effective from April 1, 1988, to September 30, 1990. A hospital will be paid the greater amount of either the national rate or the sum of 85 percent of the national rate plus 15 percent of the regional rate.

(4) In fiscal years 1989 and 1990, the indirect medical education adjustment is reduced to approximately 7.6 percent. In fiscal year 1991, the adjustment will increase to approximately 8.3 percent.

(5) The disproportionate share adjustment is extended one year to include discharges occurring before October 1, 1990. For urban hospitals with 100 or more beds, the cap of 15 percent on the disproportionate share adjustment has been removed. For qualifying hospitals who receive 30 percent of their revenues from state and local sources, the disproportionate share adjustment is increased to 25 percent.

(6) By October 1, 1990, the Secretary of Health and Human Services is required to recompute the wage indices used in computing the prospective payment system payments. These indices will be recomputed every three years thereafter.

(7) Payment for capital costs is reduced by 7 percent between November 21 and December 31, 1987, and by 12 percent from January 1 through September 30, 1988. For fiscal year 1989, the reduction is 15 percent.

(8) No Medicare payment may be issued, mailed, or transmitted before a certain number of days have elapsed since receipt. This time period is 10 days effective July 1, 1988, and 14 days for fiscal year 1989.

(9) Individuals who reestablish entitlement to disability benefits, irrespective of their time off the rolls, may be covered by Medicare without a waiting period if their current impairment is the same as, or directly related to, that in their previous period of disability.

(10) Employers are required to pay HI taxes on the full amount of covered tips, effective January 1, 1988.

Detailed information regarding these changes can be found in documents prepared by and for the Congress.

NATURE OF THE TRUST FUND

The Federal Hospital Insurance Trust Fund was established on July 30, 1965, as a separate account in the United States Treasury. All the financial operations of the hospital insurance program are handled through this fund.

The primary source of income to the trust fund is amounts appropriated to it under permanent authority on the basis of contributions paid by workers, their employers, and individuals with self-employment income, in work covered by the hospital insurance program. Beginning January 1, 1987, these appropriated amounts include contributions paid by, or on behalf of, workers employed by State and local governments and their employers, with respect to work covered by the program through State agreements. (Prior to 1987, such contributions were deposited directly into the trust fund.) The coverage of the hospital insurance program includes workers covered under the old-age, survivors, and disability insurance (OASDI) program, those covered under the railroad retirement program, and Federal employees.

All employees, and their employers, in employment covered by the program are required to pay contributions with respect to the wages of individual workers, including cash tips. (Prior to 1978, employees paid contributions with respect to cash tips but employers did not. From 1978 to 1987, employers paid contributions on that part of the tip income deemed to be wages under the Federal minimum wage law.) All covered self-employed persons are required to pay contributions with respect to their self-employment income.

In general, an individual's contributions are computed on annual wages or self-employment income, or both wages and self-employment income combined, up to a specified maximum annual amount, with the contributions being determined first on the wages and then on any self-employment income up to the maximum annual amount.

The hospital insurance contribution rates applicable to taxable earnings in each of the calendar years 1966 and later are shown in table 1. For 1989 and later, the contribution rates shown are the rates scheduled in the provisions of present law. The maximum amount of annual earnings taxable in each year 1966-88 are also shown. For 1975-78, the contribution and benefit bases were determined under the automatic increase provisions in section 230 of the Social Security Act. In 1979, 1980, and 1981, the bases increased to the specified amounts as provided under the 1977 amendments. After 1981, the automatic increase provisions are again applicable.

All contributions are collected by the Internal Revenue Service and deposited in the general fund of the Treasury as internal revenue collections. The contributions received are automatically appropriated to

the trust fund, on an estimated basis. The exact amount of contributions received is not known initially since HI contributions, OASDI contributions, and individual income taxes are not separately identified in collection reports received by the Treasury Department. Periodic adjustments are subsequently made to the extent that the estimates are found to differ from the amounts of contributions actually payable on the basis of reported earnings.

Prior to May 1983 and after June 1984, the estimated internal revenue collections were transferred to the trust funds immediately upon receipt. For May 1983 through June 1984, estimated total collections for each month were credited to the trust funds on the first day of the month. As the actual collections were received during the month, they were deposited in the general fund of the Treasury and remained there. The trust funds paid interest to the general fund to reimburse it for the interest lost because of this provision.

An employee who worked for more than one employer during the course of a year and paid contributions on wages in excess of the statutory maximum can receive a refund of the contributions he paid on such excess wages. The amount of contributions subject to refund for any period is a charge against the trust fund.

Another substantial source of trust fund income is interest received on investments held by the fund. The investment procedures of the fund are described later in this section, on page 13.

The income and expenditures of the trust fund are also affected by the provisions of the Railroad Retirement Act which provide for a system of coordination and financial interchange between the railroad retirement program and the hospital insurance program.

Sections 217(g) and 229(b) of the Social Security Act, prior to modification by the Social Security Amendments of 1983, authorized annual reimbursement from the general fund of the Treasury to the hospital insurance trust fund for costs arising from the granting of deemed wage credits for military service prior to 1957, according to quinquennial determinations made by the Secretary of Health and Human Services. These sections, as modified by the Social Security Amendments of 1983, provided for a lump sum transfer in 1983 for costs arising from such wage credits. In addition, the lump sum transfer included combined employer-employee HI taxes on the noncontributory wage credits for military service after 1965 and before 1984. After 1983, HI taxes on military wage credits are credited to the fund on July 1 of each year. The Social Security Amendments of 1983 also provided for (1) quinquennial adjustments to the lump sum amount transferred in 1983 for costs arising from pre-1957 deemed wage credits and (2) adjustments as deemed necessary to any previously transferred amounts representing HI taxes on noncontributory wage credits.

Section 231 of the Social Security Act authorizes reimbursement from the general fund of the Treasury to the hospital insurance trust fund for any costs arising from the granting of deemed wage credits to individuals who were interned during World War II at a place within the United States operated by the Federal Government for the internment of persons of Japanese ancestry.

Under section 103 of the Social Security Amendments of 1965, hospital insurance benefits are provided to certain uninsured persons aged 65 and over. Such payments are made initially from the hospital insurance trust fund, with reimbursement from the general fund of the Treasury for the costs, including administrative expenses, of the payments. The reimbursements so made are on a provisional basis and are subject to adjustment, with appropriate interest allowances, as the actual experience develops and is analyzed.

Section 1818 of the Social Security Act provides that certain persons not eligible for hospital insurance protection either on an insured basis or on the uninsured basis described in the previous paragraph may obtain protection by enrolling in the program and paying a monthly premium.

Section 201(i) of the Social Security Act authorizes the Managing Trustee to accept and deposit in the trust fund unconditional money gifts or bequests made for the benefit of the fund or any activity financed through the fund.

Expenditures for benefit payments and administrative expenses under the hospital insurance program are paid from the trust fund. All expenses incurred by the Department of Health and Human Services and by the Treasury Department in carrying out the provisions of title XVIII of the Social Security Act pertaining to the hospital insurance program and of the Internal Revenue Code relating to the collection of contributions are charged to the trust fund. The Secretary of Health and Human Services certifies benefit payments to the Managing Trustee, who makes the payments from the trust fund in accordance therewith.

Prior to fiscal year 1984, hospitals, at their option, were permitted to combine their billing for both hospital and physician components of radiology and pathology services rendered to hospital inpatients by hospital-based physicians. Where hospitals elected this billing procedure, payments were made initially from the hospital insurance trust fund. The reimbursements so made were on a provisional basis and are subject to adjustment, with appropriate interest allowance.

The Social Security Amendments of 1967 and 1972 authorize the Secretary of Health and Human Services to develop and conduct a broad range of experiments and demonstration projects designed to determine various methods of increasing efficiency and economy in providing

health care services, while maintaining the quality of such services, under the hospital insurance and supplementary medical insurance programs. A sizable portion of the costs of such experiments and demonstration projects is paid from the hospital insurance and supplementary medical insurance trust funds.

Congress has authorized expenditures from the trust funds for construction, rental and lease, or purchase contracts of office buildings and related facilities for use in connection with the administration of the hospital insurance program. Both the capital costs of construction financed directly through the trust funds and the rental and lease, or purchase contract costs of acquiring facilities are included in trust fund expenditures. In 1972-75, construction of several large facilities was authorized under purchase contract authority, wherein initial capital costs were borne by the private sector. Under this method of facilities acquisition, trust fund expenditures for use and ultimate Government ownership of a facility are made over periods of from 10 to 30 years. Whatever the manner of acquisition, the net worth of facilities and other fixed capital assets is not carried in the statement of the assets of the trust fund presented in this report. This is because the value of fixed capital assets does not represent funds available for benefit or administrative expenditures and, therefore, is not viewed as being a consideration in assessing the actuarial status of the funds.

That portion of the trust fund which, in the judgment of the Managing Trustee, is not required to meet current expenditures for benefits and administration, is invested, on a daily basis, in interest-bearing obligations of the U.S. Government (including special public-debt obligations described below), in obligations guaranteed as to both principal and interest by the United States, or in certain federally sponsored agency obligations that are designated in the laws authorizing their issuance as lawful investments for fiduciary and trust funds under the control and authority of the United States or any officer of the United States. These obligations may be acquired on original issue at the issue price or by purchase of outstanding obligations at their market price.

The Social Security Act authorizes the issuance of special public-debt obligations for purchase exclusively by the trust fund. The law requires that such special public-debt obligations shall bear interest at a rate based on the average market yield (computed on the basis of market quotations as of the end of the calendar month next preceding the date of such issue) on all marketable interest- bearing obligations of the United States forming a part of the public debt which are not due or callable until after the expiration of 4 years from the end of such month. These special issue securities are always redeemable at par value, and so are not subject to the uncertainty of price fluctuations as interest rates change.

From December 29, 1981, until January 1, 1988, the Social Security Act authorized borrowing among the OASI, DI, and HI trust funds when necessary "to best meet the need for financing the benefit payments" from the three funds. Interfund loans under the borrowing authority were made to the OASI trust fund from the DI and HI trust funds in 1982, and were fully repaid by May 1986. In this report, the assets of the HI trust fund at the end of 1982 through 1985, inclusive, do not include the amounts owed to the trust fund. This procedure is followed because the borrowed amounts were available to the borrowing fund for the payment of benefits or other obligations, while such amounts were not readily available to the lending fund.

TABLE 1.—CONTRIBUTION RATES AND MAXIMUM TAXABLE AMOUNT OF ANNUAL EARNINGS

Calendar years	Maximum taxable amount of annual earnings	Contribution rate (Percent or taxable earnings)	
		Employees and employers, each	Self-employed
Past experience:			
1966	$6,600	0.35	0.35
1967	6,600	0.50	0.50
1968-71	7,800	0.60	0.60
1972	9,000	0.60	0.60
1973	10,800	1.00	1.00
1974	13,200	0.90	0.90
1975	14,100	0.90	0.90
1976	15,300	0.90	0.90
1977	16,500	0.90	0.90
1978	17,700	1.00	1.00
1979	22,900	1.05	1.05
1980	25,900	1.05	1.05
1981	29,700	1.30	1.30
1982	32,400	1.30	1.30
1983	35,700	1.30	1.30
1984	37,800	1.30	2.60
1985	39,600	1.35	2.70
1986	42,000	1.45	2.90
1987	43,800	1.45	2.90
1988	45,000	1.45	2.90
Changes scheduled In present law:			
1989 & later	Subject to automatic adjustment	1.45	2.90

SUMMARY OF THE OPERATIONS OF THE TRUST FUND, FISCAL YEAR 1987

A statement of the income and disbursements of the Federal Hospital Insurance Trust Fund in fiscal year 1987, and of the assets of the fund at the beginning and end of the fiscal year, is presented in table 2.

The total assets of the trust fund amounted to $38.648 billion on September 30, 1986. During fiscal year 1987, total receipts amounted to $62.751 billion, and total disbursements were $50.803 billion. The assets of the trust fund thus increased $11.949 billion during the year to a total of $50.596 billion on September 30, 1987.

Included in total receipts during fiscal year 1987 were $55.944 billion representing contributions appropriated to the trust fund and $1.989 billion representing amounts received in accordance with State agreements for coverage of State and local Government employees and deposited in the trust fund. As an offset, $113 million was transferred from the trust fund into the Treasury as repayment for the estimated amount of contributions subject to refund to employees who worked for more than one employer during the course of a year and paid contributions on wages in excess of the statutory maximum earnings base.

Net contributions amounted to $57.820 billion, representing an increase of 9.0 percent over the amount of $53.020 billion for the preceding 12-month period. This growth in contribution income resulted primarily from (1) the higher level of earnings in covered employment; (2) the two increases in the maximum annual amount of earnings taxable from $39,600 to $42,000 and from $42,000 to $43,800 that became effective January 1, 1986, and January 1, 1987, respectively; and (3) the increase in the combined tax rate from 2.7 percent to 2.9 percent effective January 1, 1986.

The section entitled "Nature of the Trust Fund" referred to provisions under which the hospital insurance trust fund is to be reimbursed from the general fund of the Treasury for costs of paying benefits under this program on behalf of certain uninsured persons. The reimbursement in fiscal year 1987 amounted to $447 million, consisting of $454 million for benefit payments, $8 million for administrative expenses, and -$15 million for interest on adjustments to costs in prior fiscal years.

The section entitled "Nature of the Trust Fund" referred to provisions of the Social Security Act under which certain persons aged 65 and over but not otherwise eligible for hospital insurance protection may obtain such protection by enrolling in the program and paying a monthly premium. Premiums collected from such voluntary participants in fiscal year 1987 amounted to about $40 million.

In accordance with the provisions of the Railroad Retirement Act which coordinate the railroad retirement and the hospital insurance programs and which govern the financial interchange arising from the allocation of costs between the two systems, the Railroad Retirement Board and the Secretary of Health and Human Services determined that a transfer of about $330 million from the railroad retirement account to the hospital insurance trust fund would place this fund in the same position, as of September 30, 1986, in which it would have been if railroad employment had always been covered under the Social Security Act. This amount, together with interest to the date of transfer amounting to about $38 million, was transferred to the trust fund in June 1987.

In accordance with provisions for the appropriation to the trust fund of HI taxes on noncontributory military wage credits as discussed in the section entitled "Nature of the Trust Fund," the trust fund was credited on July 1, 1987 with $94 million for calendar year 1987 taxes on wage credits.

On January 1, 1987, the Northern Mariana Islands (NMI) Social Security System became part of the U.S. Social Security and Medicare programs. At this time, a portion of the NMI Social Security Retirement Fund, amounting to about $8 million, was transferred to the trust fund.

The remaining $3.973 billion of receipts consisted almost entirely of interest on the investments of the trust fund.

Of the $50.803 billion in total disbursements, $49.967 billion represented benefits paid directly from the trust fund for health services covered under title XVIII of the Social Security Act. Benefit payments increased 1.9 percent in fiscal year 1987 over the corresponding amount of $49.018 billion paid during the preceding 12 months.

The remaining $836 million of disbursements was for net administrative expenses. Administrative expenses are allocated and charged directly to each of the four trust funds -- old-age and survivors insurance, disability insurance, hospital insurance, and supplementary medical insurance - on the basis of provisional estimates. Similarly, the expenses of administering other programs of the Health Care Financing Administration are also allocated and charged directly to the general fund of the Treasury on a provisional basis. Periodically, as actual experience develops and is analyzed, adjustments to the allocations of administrative expenses and costs of construction for prior periods are effected by interfund transfers, including transfers between the hospital insurance and supplementary medical insurance trust funds and the program management general fund account, with appropriate interest allowances.

Table 3 compares the actual experience in fiscal year 1987 with the estimates presented in the 1986 and 1987 annual reports. The section entitled "Nature of the Trust Fund" referred to the appropriation of contributions to the trust funds on an estimated basis, with subsequent periodic adjustments to account for differences from the amounts of contributions actually payable on the basis of reported earnings. In interpreting the figures in table 3, it should be noted that the "actual" amount of contributions in fiscal year 1987 reflects the aforementioned type of adjustments to contributions for prior fiscal years. On the other hand, the "actual" amount of contributions for fiscal year 1987 does not reflect adjustments to contributions for fiscal year 1987 that were to be made after September 30, 1987.

The assets of the hospital insurance trust fund at the end of fiscal year 1986 totaled $38.648 billion, consisting of $38.314 billion in the form of obligations of the U.S. Government or of federally-sponsored agency obligations and an undisbursed balance of $334 million. The assets of the hospital insurance trust fund at the end of fiscal year 1987 totaled $50.596 billion, consisting of $50.77 0 billion in the form of obligations and, as an offset, an extension of credit of $173 million against securities to be redeemed. Table 4 shows the total assets of the fund and their distribution at the end of fiscal years 1986 and 1987.

New securities at a total par value of $73.456 billion were acquired during the fiscal year through the investment of receipts and the reinvestment of funds made available from the redemption of securities. The par value of securities redeemed during the fiscal year was $61.016 billion. Thus, the net increase in the par value of the investments held by the fund during fiscal year 1987 amounted to $12.439 billion.

The effective annual rate of interest earned by the assets of the hospital insurance trust fund during the 12 months ending on June 30, 1987, was 10.1 percent. (This period is used because interest on special issues is paid semiannually on June 30 and December 31.) The interest rate on public-debt obligations issued for purchase by the trust fund in June 1987 was 8.625 percent, payable semiannually.

TABLE 2.—STATEMENT OF OPERATIONS OF THE HI TRUST FUND DURING FISCAL YEAR 1987
(In thousands of dollars)

Total assets of the trust fund, beginning of period	$38,647,727
Receipts:	
Appropriation of employment taxes	55,943,629
Refunds of employment taxes	-112,650
Deposits arising from State agreements	1,989,450
Interest on Investments	3,956,464
Amortization of premium and discount (Net)	17,024
Premiums collected from voluntary participants	40,334
Transfer from railroad retirement account	329,900
Transitional uninsured coverage	447,000
Military service credits of 1987	94,000
Interest on reimbursements, SSA[1]	-147
Interest on reimbursements, HCFA	0
Interest on reimbursements, Railroad Retirement	38,105
Income from the Merger of the Northern Mariana Islands Retirement Fund with the U.S. Social Security and Medicare programs	8,219
Other (Gifts)	26
Total receipts	$62,751,353
Disbursements:	
Benefit payments	$49,967,012
Administrative expenses:	
Treasury administrative expenses	27,294
Salaries and expenses, SSA	245,559
Salaries and expenses. HCFA[2]	526,107
Salaries and expenses, Office of Secretary	19,374
Construction	14,563
Professional Standards Review Organization	219
Reimbursement of SSA expenses	0
Reimbursement of HCFA expenses	0
Payment Assessment Committee	2,908
Public Health Service	0
Other	-310
Total disbursements	50,802,726
Total assets of the trust fund. end of period	$50,596,354

[1]A positive figure represents a transfer of the hospital insurance trust fund from the other trust funds. A negative figure represents a transfer from the hospital insurance trust fund to the other trust funds.
[2]Includes administrative expenses of the intermediaries.

NOTE: Totals do not necessarily equal the sums of rounded components.

TABLE 3.—COMPARISON OF ACTUAL AND ESTIMATED OPERATIONS OF THE HOSPITAL INSURANCE TRUST FUND, FISCAL YEAR 1987
(Dollar amounts in millions)

		Comparison of actual experience with estimates for fiscal year 1990 published in–			
		1987 report[1]		1986 report[1]	
Item	Actual amount	Estimated amount[1]	Actual as percentage of estimate	Estimated amount[2]	Actual as percentage of estimate
Net contributions	$57,820	$57,112	101	$56,916	102
Benefit payments	$49,967	$48,164	104	$52,513	95

[1]Alternative II-B

TABLE 4.—ASSETS OF THE HOSPITAL INSURANCE TRUST FUND, BY TYPE, AT THE END OF FISCAL YEARS 1986 AND 1987 [1]

	September 30, 1986	September 30, 1987
Investments In public-debt obligations sold only to the trust funds (special Issues):		
Certificates of Indebtedness:		
7 1/4-percent, 1987	$837,712,000.00	—
7 3/4-percent, 1987	80,040,000.00	—
9 -percent, 1988	—	$4,367,948,000.00
Bonds:		
8 1/4-percent, 1993	622,286,000.00	622,286,000.00
8 3/8-percent, 1987-88	2,137,108,000.00	—
8 3/8-percent, 1989-2001	16,529,250,000.00	16,529,250,000.00
8 3/4-percent, 1993-1994	972,757,000.00	972,757,000.00
8 5/8-percent, 1989-2002	—	12,116,654,000.00
9 3/4-percent, 1993-1995	1,240,090,000.00	1,240,090,000.00
10 3/8-percent, 1987	83,104,000.00	—
10 3/8-percent, 1988-2000	4,266,722,000.00	4,259,732,000.00
10 3/4-percent, 1987	588,410,000.00	—
10 3/4-percent, 1988-1998	3,530,460,000.00	3,530,460,000.00
13 -percent, 1993-1996	1,770,094,000.00	1,770,094,000.00
13 1/4-percent, 1993-1997	2,541,541,000.00	2,541,541,000.00
13 3/4-percent, 1987	262,135,000.00	—
13 3/4-percent, 1988-1999	2,423,351,000.00	2,423,351,000.00
Total public-debt obligations sold only to the trust funds (special issues)	$37,885,060,000.00	$50,374,163,000.00
Investments in federally-sponsored agency obligations:		
Participation certificates:		
Federal Assets liquidation Trust-		
Government National Mortgage Association:		
5.10-percent, 1987	50,000,000.00	—
6.40-percent, 1987	75,000,000.00	75,000,000.00
6.05-percent, 1988	65,000,000.00	65,000,000.00
6.45-percent, 1988	35,000,000.00	35,000,000.00
6.20-percent, 1988	230,000,000.00	230,000,000.00
Unamortized Premium & Discount (Net)	-26,479,157.10	-9,455,552.40
Total Investments	$38,313,580,842.90	$50,769,707,447.60
Undisbursed balance	334,145,910.98	-173,353,560.84
Total assets	$38,647,726,754.88	$50,596,353,886.76

[1] Certificates of indebtedness and bonds are carried at par value, which is the same as book value. Book value for participation certificates is par value plus net unamortized premium and discount.

EXPECTED OPERATIONS AND STATUS OF THE TRUST FUND DURING THE PERIOD OCTOBER 1, 1987 to DECEMBER 31, 1990

The expected operations of the trust fund during fiscal years 1988-90 are shown in table 5, together with the past experience of the program. The projection shown in table 5—and the entirety of this section—is based on two intermediate sets of projection assumptions labeled "Alternative II-A" and "Alternative 11-B," which are presented in detail in appendix A.

Income received through the financial interchange between the railroad retirement account and the trust fund under the provisions of the Railroad Retirement Act is estimated on the same basis as income from hospital insurance contributions. Estimates of the corresponding outgo are included in the disbursement items.

Estimated income to the trust fund which is appropriated from general revenues to reimburse the program for the cost of coverage of noninsured persons is the same as the estimates of disbursements for such persons, net of corrections for differences between costs and amounts transferred for previous years. Premium income and disbursements for other noninsured persons over age 65 who may enroll in the hospital insurance program on a voluntary basis are based on an estimated enrollment of 18,000 in fiscal year 1988.

The transfers from general revenues for military wage credits are based on provisions of the Social Security Amendments of 1983 (Public Law 98-21), as described in the "Nature of the Trust Fund" section.

The investment of new assets received during fiscal years 1988-90 is assumed to be in the form of special public-debt obligations bearing interest rates ranging from 8.375 percent to 9.125 percent, payable semiannually. The average effective annual rate of interest on the assets held by the hospital insurance trust fund on September 30, 1987, was 9.8 percent.

Disbursements for benefits are projected to increase in fiscal years 1988-90, primarily as a result of the increase in hospital payment rates and hospital admissions under the program. The expenditures for benefit payments shown in table 5 differ from those shown in the 1989 Federal Budget. These estimates are based on more recent demographic and economic projections, and they do not reflect the implementation of proposed changes in regulations which were included in the budget. The expenditures for benefit payments shown in this section are based on the assumption that for fiscal years 1989 and later, the prospective payment rates will be increased in accordance with Public Law 100-203, the Omnibus Reconciliation Act of 1987, as described in the "Social Security Amendments Since the 1987 Report" section.

The actual operations of the hospital insurance program are organized, in general, on a calendar year basis. Earnings subject to taxation and the applicable tax rates are established by calendar year, as are the inpatient hospital deductible and other cost-sharing amounts. The projected operations of the trust fund on a calendar year basis are shown in table 6, according to the same assumptions as used in table 5. A preliminary estimate of the December 1990 lump sum transfer, to be determined in the 1990 quinquennial Military Service Determination, is also included in table 6. The provisions prescribing this transfer are described in the "Nature of the Trust Fund" section. The ratios of assets in the trust fund at the beginning of each calendar year to total disbursements during that year are shown in table 7 for past years and as projected through 1990.

TABLE 5.—OPERATIONS OF THE HI TRUST FUND DURING FISCAL YEARS 1967-90

(In millions)

	Income							Disbursements				Trust Fund	
Fiscal year[1]	Payroll taxes	Railroad retirement account transfers	Reimburse-ment for uninsured persons	Premiums from voluntary enrollees	Payments for military wage credits	Interest on investments and other income[2]	Total Income	Benefits Payments[3]	Adminis-trative Expenses[4]	Total disburse-ments	Interfund borrowing transfers[5]	Net increase in fund	Fund at end of year
Historical Data:													
1967	2,689	$16	$327	—	$11	$46	$3,089	$2,508	$89	$2,597	—	$492	$1,343
1968	3,514	44	273	—	11	61	3,902	3,736	79	3,815	—	88	1,431
1969	4,423	54	749	—	22	96	5,344	4,654	104	4,758	—	586	2,017
1970	4,785	64	617	—	11	137	5,614	4,804	149	4,953	—	661	2,677
1971	4,898	66	863	—	11	180	6,018	5,442	150	5,592	—	426	3,103
1972	5,226	66	503	—	48	188	6,031	6,108	167	6,276	—	-245	2,859
1973	7,663	63	381	—	48	196	8,352	6,648	194	6,842	—	1,510	4,369
1974	10,602	99	451	$4	48	405	11,610	7,806	259	8,065	—	3,545	7,914
1975	11,291	132	481	6	48	609	12,568	10,353	259	10,612	—	1,956	9,870
1976	12,031	138	610	8	48	709	13,544	12,267	312	12,579	—	966	10,836
T.Q.	3,366	143	0[6]	2	0	5	3,516	3,315	89	3,404	—	112	10,948
1977	13,649	0[7]	803[6]	11	141	770	15,374	14,906	301	15,207	—	167	11,115
1978	16,677	214[7]	688	12	143[8]	809	18,543	17,411	451	17,862	—	681	11,796
1979	19,927	191	734	17	141	901	21,910	19,891	452	20,343	—	1,567	13,363
1980	23,244	244	697	17	141	1,072	25,415	23,790	497	24,288	—	1,127	14,490
1981	30,425	276	659	21	141	1,341	32,863	28,907	353	29,260	—	3,603	18,093
1982	34,390	351	808	25	207	1,829	37,611	34,343	521	34,864	—	2,747	20,840
1983	36,387	358	878	26	3,663[9]	2,629	43,940	38,102	522	38,624	-$12,437	-7,121	13,719
1984	41,364	351	752	35	250	2,812	45,563	41,476	633	42,108	—	3,455	17,174
1985	46,490	371	766	38	86	3,182	50,933	47,841	813	48,654	1,824	4,103	21,277
1986	53,020	364	566	40	-714[10]	3,167	56,442	49,018	667	49,685	10,613	17,370	38,648
1987	57,820	368	447	40	94	3,982	62,751	49,967	836	50,803	—	11,949	50,596
Projection:													
Alternative II-A													
1988	61,622	352	475	47	93	5,167	67,756	51,840	944	52,784	—	14,972	65,568
1989	65,129	338	515	55	94	6,390	72,521	55,842	1,011	56,853	—	15,668	81,236
1990	69,392	321	411	58	95	7,721	77,998	62,311	1,097	63,408	—	14,590	95,826
Alternative II-B													
1988	61,508	352	475	47	93	5,167	67,642	51,832	944	52,776	—	14,866	65,462
1989	64,773	337	515	55	94	6,404	72,178	55,883	1,010	56,893	—	15,285	80,747
1990	68,776	319	411	58	95	7,742	77,401	62,448	1,094	63,542	—	13,859	94,606

[1]Fiscal years 1976 and earlier consist of the 12 months ending on June 30 of each year; the three-month interval from July 1, 1976, through September 30, 1976, labeled "T.Q.," is the transition quarter; fiscal years 1977 and later consist of the 12 months ending on September 30 of each year.
[2]Other Income Includes recoveries of amounts reimbursed from the trust fund which are not obligations of the trust fund and a small amount of miscellaneous Income.
[3]Includes costs of Peer Review Organizations (beginning with the implementation of the Prospective Payment System on October 1, 1983).
[4]Includes costs of experiments and demonstration projects.
[5]A negative amount is a loan to the OASI trust fund; a positive amount is a repayment of loan principal to the HI trust fund.
[6]The 1977 transfer is for benefits and administrative expenses during the five-quarter period covering the transition quarter and fiscal year 1977
[7]The 1978 transfer is for contributions during the five-quarter period covering the transition quarter and fiscal year 1977.
[8]Includes $2 million in reimbursement from the general revenues for costs arising from the granting of deemed wage credits to persons of Japanese ancestry who were interned during World War II.
[9]Includes the lump sum general revenue transfer of $3,456 million, as provided for by section 151 of P.L 98-21.
[10]Includes the lump sum general revenue adjustment of -$805 million, as provided for by section 151 of P.L 98-21.

NOTE: Totals do not necessarily equal the sums of rounded components.

TABLE 6.—OPERATIONS OF THE HOSPITAL INSURANCE TRUST FUND DURING CALENDAR YEARS 1966-90

(In millions)

	Income							Disbursements				Trust Fund	
Calendar year	Payroll taxes	Railroad retirement account transfers	Reimburse-ment for uninsured persons	Premiums from voluntary enrollees	Payments for military wage credits	Interest on investments and other income[1]	Total Income	Benefits Payments[2]	Adminis-trative Expenses[3]	Total disburse-ments	Interfund borrowing transfers[4]	Net increase in fund	Fund at end of year
Historical Data:													
1966	$1,858	$16	$26	—	$11	$32	$1,943	$891	$108	$999	—	$944	$944
1967	3,152	44	301	—	11	51	3,559	3,353	77	3,430	—	129	1,073
1968	4,116	54	1,022	—	22	74	5,287	4,179	99	4,277	—	1,010	2,083
1969	4,473	64	617	—	11	113	5,279	4,739	118	4,857	—	422	2,505
1970	4,881	66	863	—	11	158	5,979	5,124	157	5,281	—	698	3,202
1971	4,921	66	503	—	48	193	5,732	5,751	150	5,900	—	-168	3,034
1972	5,731	63	381	—	48	180	6,403	6,318	185	6,503	—	-99	2,935
1973	9,944	99	451	$2	48	278	10,821	7,057	232	7,289	—	3,532	6,467
1974	10,844	132	471	5	48	523	12,024	9,099	272	9,372	—	2,652	9,119
1975	11,502	138	621	7	48	664	12,980	11,315	266	11,581	—	1,399	10,517
1976	12,727	143	0[5]	9	141	746	13,766	13,340	339	13,679	—	88	10,605
1977	14,114	0[6]	803[5]	12	143[7]	784	15,856	15,737	283	16,019	—	-163	10,442
1978	17,324	214[6]	688	13	141	834	19,213	17,682	496	18,178	—	1,035	11,477
1979	20,768	191	734	16	141	975	22,825	20,623	450	21,073	—	1,751	13,228
1980	23,848	244	697	18	141	1,149	26,097	25,064	512	25,577	—	521	13,749
1981	32,959	276	659	22	207	1,603	35,725	30,342	384	30,726	—	4,999	18,748
1982	34,586	351	808	24	207	2,022	37,998	35,631	513	36,144	-$12,437	-10,583	8,164
1983	37,259	358	878	27	3,456[8]	2,593	44,570	39,337	540	39,877	—	4,693	12,858
1984	42,288	351	752	33	250	3,046	46,720	43,257	629	43,887	—	2,834	15,691
1985	47,576	371	766	41	-719[9]	3,362	51,397	47,580	834	48,414	1,824	4,808	20,499
1986	54,583	364	566	43	91	3,619	59,267	49,758	664	50,422	10,613	19,458	39,957
1987	58,648	368	447	38	94	4,469	64,064	49,496	793	50,289	—	13,775	53,732
Projection:													
Alternative II-A													
1988	62,369	352	475	51	93	5,769	69,109	52,133	950	53,083	—	16,026	69,758
1989	65,960	338	515	56	94	7,047	74,010	57,322	1,031	58,353	—	15,657	85,415
1990	70,365	321	411	59	-745[10]	8,324	78,735	63,886	1,119	65,005	—	13,730	99,145
Alternative II-B													
1988	62,203	352	475	51	93	5,770	68,944	52,128	950	53,078	—	15,866	69,598
1989	65,547	337	515	56	94	7,053	73,602	57,383	1,030	58,413	—	15,189	84,787
1990	69,695	319	411	59	-605[11]	8,327	78,206	64,064	1,115	65,179	—	13,027	97,814

[1]0ther Income Includes recoveries of amounts reimbursed from the trust fund which are not obligations of the trust fund and a small amount of miscellaneous Income.

[2]Includes costs of Peer Review Organizations (beginning with the implementation of the Prospective Payment System on October 1, 1983).

[3]Includes costs of experiments and demonstration projects.

[4]A negative amount is a loan to the OASI trust fund; a positive amount is a repayment of loan principal to the HI trust fund.

[5]No transfer is made in 1976 because of the change in transfer dates from December to March. The 1977 transfer is for benefits and administrative expenses during the 15-month period beginning July 1976 and ending September 1977.

[6]No transfer is made in 1977 because of the change in transfer dates from August to June. The 1978 transfer is for contributions during the 15-month period beginning July 1976 and ending September 1977.

[7]Includes $2 million in reimbursement from the general revenues for costs arising from the granting of deemed wage credits to persons of Japanese ancestry who were interned during World War II.

[8]The lump sum general revenue transfer, as provided for by section 151 of P.L 98-21.

[9]Includes the lump sum general revenue adjustment of -$805 million, as provided for by section 151 of P.L 98-21.

[10]Includes the preliminary estimate of the lump sum general revenue adjustment of -$840 million, as provided for by section 151 of P.L 98-21.

[11]Includes the preliminary estimate of the lump sum general revenue adjustment of -$700 million, as provided for by section 151 of P.L 98-21.

NOTE: Totals do not necessarily equal the sums of rounded components.

TABLE 7.—RATIO OF ASSETS IN THE FUND AT THE BEGINNING OF THE YEAR TO DISBURSEMENTS DURING THE YEAR FOR THE HOSPITAL INSURANCE TRUST FUND

(In percent)

Calendar Year	Ratio
Historical Data:	
1967	28%
1968	25
1969	43
1970	47
1971	54
1972	47
1973	40
1974	69
1975	79
1976	77
1977	66
1978	57
1979	54
1980	52
1981	45
1982	52
1983	20
1984	29
1985	32
1986	41
1987	79
Projection:	
Alternative II-A	
1988	101
1989	120
1990	131
Alternative II-B	
1988	101
1989	119
1990	130

ACTUARIAL STATUS OF THE TRUST FUND

The Board of Trustees recommends that it is advisable to maintain a balance in the trust fund equal to a minimum of one-half year's expenditures. This principle reflects the view that a small fund is needed for the contingency that future income and outgo may differ substantially from projected levels, and to provide time for legislative action to remedy unexpected imbalances. At the beginning of 1988, the trust fund balance was above the minimum desired level.

In last year's report, the cost of the program for projected years was defined as the sum of (1) expenditures under the program and (2) an allowance for building and maintaining the fund at the level of at least a half year's disbursements after accounting for the offsetting effect of interest earnings. In this year's report, the cost of the program is defined as expenditures only, without an allowance for building and maintaining the fund. This approach is more in line with the reporting methods of the OASDI report.

The adequacy of the financing of the hospital insurance program is measured by comparing the costs of the program, expressed as percentages of taxable payroll, to the tax rate specified in the law. In projecting expenditures under the program, only costs attributable to insured beneficiaries are considered, since benefits and administrative costs for noninsured persons are financed through general revenue transfers and premium payments rather than through payroll taxes.

The historical costs of the hospital insurance program, expressed as percentages of taxable payroll, are shown in table 8. The ratio of expenditures to taxable payroll has increased from 0.94 percent in 1967 to 2.53 percent in 1987, reflecting both the higher rate of increase in program costs than in earnings subject to hospital insurance taxes and the extension of hospital insurance benefits to disabled and end stage renal disease beneficiaries. The projected costs of the program under alternatives II-A and li-B, expressed as percentages of taxable payroll, and the tax rates scheduled under current law for selected years over the 75-year period 1988-2062, are shown in table 9. Further increases in the ratio of expenditures to taxable payroll under both alternative II-A and alternative II-B result from the projection that the cost of the hospital insurance program will continue to increase at a higher rate than taxable earnings. (See appendix A for a description of the methodology and assumptions used in these projections.)

Table 9 also indicates additional amounts needed for the cost of trust fund building and maintenance over the course of the 75-year projection period. During the early years of the projection period, income exceeds expenditures and the trust fund (expressed as a percent of the following year's outlays) increases, indicating that the tax rates scheduled in the law are already sufficient for trust fund building and maintenance.

However, during the period after the trust fund declines below the level of fifty percent, there remains an unmet cost of maintaining the fund at the minimum level of fifty percent of the following year's outlays.

As mentioned, the adequacy of the financing of the hospital insurance program under current law is measured by comparing on a year-by-year basis the actual tax rates specified by law with the corresponding costs of the program, expressed as percentages of taxable payroll. If these two items are exactly equal in each year of the projection period and all projection assumptions are realized, tax revenues will be sufficient to provide for benefits and administrative expenses for insured persons. A small additional amount would be needed to maintain the trust fund at the level of one-half year's expenditures. In practice, however, tax rate schedules generally are designed with rate changes occurring only at intervals of several years, rather than with continual yearly increases to match exactly with projected cost increases. To the extent that small differences between the yearly costs of the program and the corresponding tax rates occur for short periods of time and are offset by subsequent differences in the reverse direction, the substance of the financing objectives will have been met.

The actuarial balance of the hospital insurance program is defined to be the difference between the average tax rate for the valuation period and the average expenditures of the program expressed as a percentage of taxable payroll, for the same period. The actuarial balances under alternatives II-A and II-B, as well as alternatives I and III which are described later, for the 75-year period 1988-2062 are shown in table 10. The average tax rate for the period is 2.90 percent. The average cost of the program under alternative II-A is 5.01 percent of taxable payroll. An additional 0.01 percent would be needed for building and maintenance of the trust fund. The average cost of the program under alternative II-B is 5.25 percent of taxable payroll. An additional 0.02 percent would be needed for building and maintenance of the trust fund.

Since future economic, demographic, and health care usage and cost experience may differ considerably from either set of intermediate assumptions on which the cost estimates were based, projections have also been prepared on the basis of two additional alternative sets of assumptions. The estimated operations of the hospital insurance trust fund during calendar years 1987-2010 are summarized in table 11 for all four alternatives. Table 12 compares the actuarial balances for the 75-year period 1988-2062, as well as the first, second, and third 25-year projection periods, under each of the four alternatives. The assumptions underlying alternatives II-A and II-B, the intermediate projections, are presented in substantial detail in appendix A. The assumptions used in preparing projections under alternatives I and III are also summarized in appendix A. The projections shown in the statement of expected operations and status of the trust fund through December 31, 1990,

contained earlier in this report, are based on the assumptions contained in alternatives II-A and II-B.

The four alternative sets of assumptions were selected in order to indicate the general range in which the cost of the program reasonably might be expected to fall. The alternative I assumptions are somewhat more optimistic than both alternative II assumptions, resulting in a lower average cost over the projection period and a stronger trust fund development. The alternative III assumptions are somewhat more pessimistic than both alternative II assumptions, resulting in a higher average cost over the projection period and a weaker trust fund development. Alternative III thus reflects the possible impact, in the near future, of conditions which are significantly more adverse than those assumed under either of the intermediate alternatives. Alternatives I and III provide for a fairly wide range of possible experience. Actual experience reasonably may be expected to fall within the range, but no guarantee can be made that this will be the case, particularly in light of the wide variations in experience that have occurred since the beginning of the program. The projected trust fund development under alternative III also provides a measure of the strength of the financing of the program. An adequate financing schedule ought to be sufficiently strong to withstand, for a period of several consecutive years, conditions in the general economy and in the hospital sector which are substantially more adverse than anticipated under either alternative II-A or alternative II-B.

Under both alternatives II-A and II-B, the trust fund as a percent of a year's disbursements is projected to increase until about 1994 and then decline steadily until it is completely exhausted shortly after the turn of the century. Under alternative I, the trust fund is projected to remain solvent throughout the first two 25-year projection periods, with trust fund exhaustion occurring in 2044. Under alternative III, the trust fund as a percent of a year's disbursements is projected to increase to a level of about 123 percent in 1991 and then decrease rapidly until the fund is exhausted in 1999. These projections do not reflect any reduction in disbursements due to proposed changes in regulations which were included in the 1989 Federal Budget but which have not been implemented.

The divergence in outcomes among the four alternatives is reflected both in the estimated operations of the trust fund and in the 75-year average costs. The variations in the underlying assumptions, as shown in appendix A, can be characterized as (1) moderate in terms of magnitude of the differences on a year- by-year basis, and (2) persistent over the duration of the projection period. During the first 25-year projection period, under both sets of intermediate assumptions, program expenditures are projected to grow at a rate which gradually declines to a level of about one percent more than taxable payroll by 2011. However,

program expenditures are expected to grow at a rate of 1.6 percent and 1.8 percent more than taxable payroll for alternatives II-A and II-B, respectively, in 2012, when the major demographic shift, as described below, begins. Under alternative I, program expenditures are projected to grow at a somewhat lower rate which gradually declines to a level slightly lower than the rate for taxable payroll in 2011, and increases to a level equal to the rate for taxable payroll in 2012. Similarly, alternative III follows a pattern whereby program expenditures initially increase at a somewhat higher rate, gradually declining to a difference of about 3 percent by 2011, and increasing to a difference of about 3.7 percent in 2012. Recent experience has indicated that economic conditions producing results as adverse as those under alternative III can occur. In view of this and because of the wide range of possible experience, it is important that a balance be maintained in the hospital insurance trust fund as a reserve for contingencies.

A valuation period of 75 years is needed to present fully the future contingencies that reasonably may be expected, such as the impact of the large shift in the demographic composition of the population which occurs after the turn of the century. As table 9 indicates, estimated expenditures under the program, expressed as percentages of taxable payroll, increase rapidly during the second 25 years of the projection period. This rapid increase in costs occurs because the relatively large number of persons born during the period between the end of World War II and the early 1960's (known as the "baby boom") will reach retirement age and begin to receive benefits, while the relatively small number of persons born during later years will comprise the labor force. During the last 25 years of the projection period, the projected expenditures under the program stabilize.

Costs beyond the initial 25-year projection period for alternatives II-A and II-B are based upon the assumption that costs per unit of service will increase at the same rate as earnings increase. Thus, changes in the outyears primarily reflect the impact of the changing demographic composition of the population. Costs beyond the initial 25-year projection period for alternatives I and III begin by assuming that program cost increases, relative to taxable payroll increases, are approximately 2 percent less rapid and 2 percent more rapid, respectively, than the results under both sets of intermediate assumptions. The 2 percent differentials gradually decrease until the year 2037 when program cost increases, relative to taxable payroll, are approximately the same as under both sets of intermediate assumptions. Under alternative I, the currently scheduled tax rates are sufficient, during the first two 25-year projection periods and the early years of the last 25-year period, to support the program and allow for building the trust fund well above the minimum desired level. However, during the last 25-year projection period, it is necessary in most years to include an amount for maintaining the fund above the minimum desired level.

The 75-year actuarial balance, as defined in this year's report, of the hospital insurance program under alternative II-B, as seen in table 10, is -2.35 percent of taxable payroll. The corresponding actuarial balance as reported in the 1987 Annual Report was -2.30 percent of taxable payroll. The major reasons for the change in the 75-year actuarial balance are:

(1) Change in valuation period: Deletion of 1987 and the addition of 2062 to the 75-year projection period substitutes a relatively bad year for a good year with respect to the operations of the hospital insurance trust fund. The net effect on the actuarial balance is -0.06 percent.

(2) Updating the projection base: The cost as a percent of payroll for 1987 was less than estimated in the 1987 report. The net effect of this change is +0.09 percent on the actuarial balance.

(3) Legislation since the 1987 report: Two major legislative changes were enacted since the 1987 report. These are described on pages 8 through 9 of this report. The net effect of these changes is +0.39 percent.

(4) Economic and demographic assumptions: Changes in the economic and demographic assumptions described in Appendix A result in a -0.23 percent change on the actuarial balance. Projections of the population covered by the program are higher than in the 1987 report, while projections of covered workers are lower.

(5) Hospital assumptions: Changes in the hospital assumptions described in appendix A result in a -0.24 percent change on the actuarial balance. The primary factors contributing to the change are a higher labor hospital price assumption and a longer continuation of the current trend toward treating less complicated (and thus, less expensive) cases in outpatient settings than in the 1987 report, resulting in an increase in the average prospective payment per admission.

The actuarial balances shown in tables 9, 10, and 12 are computed on an average cost basis, as in previous years (except for the exclusion of trust fund building and maintenance). This is the simple arithmetic average over the 25- or 75-year periods of the difference between the annual cost and annual contribution rates as a percentage of taxable payroll. Health Care Financing Administration staff is reviewing the alternative "level cost" method of displaying present values, which is being introduced this year in the OASDI report. The level cost method has been developed to reflect more accurately the consequences of the OASI and DI trust fund build-up and resulting interest income, factors which are currently less important to the HI system.

TABLE 8.—COST OF THE HOSPITAL INSURANCE PROGRAM, EXPRESSED AS A PERCENT OF TAXABLE PAYROLL

Calendar year	Expenditures under the program[1]
1967	0.94%
1968	1.04
1969	1.12
1970	1.20
1971	1.32
1972	1.30
1973	1.33
1974	1.42
1975	1.69
1976	1.83
1977	1.95
1978	2.01
1979	1.99
1980	2.20
1981	2.39
1982	2.65
1983	2.67[2]
1984	2.64
1985	2.65
1986	2.58
1987	2.53

[1]Estimated costs attributable to Insured beneficiaries only, on an Incurred basis. Benefits and administrative costs for noninsured persons are expected to be financed through general revenue transfers and premium payments, rather than through payroll taxes. Gratuitous credits for military service after 1956 are Included In taxable payroll.

[2]Deemed credits for military service before 1984 were attributed to the year in which such service had occurred. If all such credits had been attributed in 1983, expenditures under the program in 1983 would have been lower by 0.17 percent of taxable payroll.

TABLE 9.—COST AND TAX RATES OF THE HOSPITAL INSURANCE PROGRAM, EXPRESSED AS A PERCENT OF TAXABLE PAYROLL [1]

Calendar year	Expenditures under the program [1]	Tax rates scheduled in the law [2]	Actuarial balance [3]	Trust fund building and maintenance [4]	Cost plus fund maintenance [5]	Augmented balance [6]
Alternative II-A						
1988	2.51%	2.90%	0.39%	n.a.	n.a.	n.a.
1989	2.56	2.90	0.34	n.a.	n.a.	n.a.
1990	2.68	2.90	0.22	n.a.	n.a.	n.a.
1995	3.03	2.90	-0.13	n.a.	n.a.	n.a.
2000	3.31	2.90	-0.41	n.a.	n.a.	n.a.
2005	3.53	2.90	-0.63	0.02%	3.55%	-0.65%
2010	3.77	2.90	-0.87	0.01	3.78	-0.88
2015	4.12	2.90	-1.22	0.02	4.14	-1.24
2020	4.66	2.90	-1.76	0.02	4.68	-1.78
2025	5.29	2.90	-2.39	0.03	5.32	-2.42
2030	5.85	2.90	-2.95	0.04	5.89	-2.99
2035	6.22	2.90	-3.32	0.03	6.25	-3.35
2040	6.40	2.90	-3.50	0.03	6.43	-3.53
2045	6.48	2.90	-3.58	0.04	6.52	-3.62
2050	6.55	2.90	-3.65	0.04	6.59	-3.69
2055	6.63	2.90	-3.73	0.03	6.66	-3.76
2060	6.70	2.90	-3.80	0.04	6.74	-3.84
Averages:						
1988-2012	3.26	2.90	-0.36	-0.04	3.22	-0.32
2013-2037	5.23	2.90	-2.33	0.03	5.26	-2.36
2038-2062	6.55	2.90	-3.65	0.04	6.59	-3.69
1988-2062	5.01	2.90	-2.11	0.01	5.02	-2.12
Alternative II-B						
1988	2.52	2.90	0.38	n.a.	n.a.	n.a.
1989	2.58	2.90	0.32	n.a.	n.a.	n.a.
1990	2.71	2.90	0.19	n.a.	n.a.	n.a.
1995	3.11	2.90	-0.21	n.a.	n.a.	n.a.
2000	3.42	2.90	-0.52	n.a.	n.a.	n.a.
2005	3.68	2.90	-0.78	0.02	3.70	-0.80
2010	3.96	2.90	-1.06	0.01	3.97	-1.07
2015	4.34	2.90	-1.44	0.02	4.36	-1.46
2020	4.90	2.90	-2.00	0.03	4.93	-2.03
2025	5.57	2.90	-2.67	0.03	5.60	-2.70
2030	6.16	2.90	-3.26	0.04	6.20	-3.30
2035	6.54	2.90	-3.64	0.04	6.58	-3.68
2040	6.73	2.90	-3.83	0.04	6.77	-3.87
2045	6.81	2.90	-3.91	0.05	6.86	-3.96
2050	6.89	2.90	-3.99	0.04	6.93	-4.03
2055	6.96	2.90	-4.06	0.05	7.01	-4.11
2060	7.04	2.90	-4.14	0.05	7.09	-4.19
Averages:						
1988-2012	3.37	2.90	-0.47	-0.04	3.33	-0.43
2013-2037	5.50	2.90	-2.60	0.04	5.54	-2.64
2038-2062	6.89	2.90	-3.99	0.04	6.93	-4.03
1988-2062	5.25	2.90	-2.35	0.02	5.27	-2.37

[1]Costs attributable to insured beneficiaries only, on an incurred basis. Benefits and administrative costs for noninsured persons are financed through general revenue transfers and premium payments, rather than through payroll taxes. Gratuitous credits for military service after 1956 are included in taxable payroll.
[2]Rates for employees and employers combined.
[3]Difference between the tax rate scheduled in the law and program expenditures.
[4]Allowance for building and maintaining the trust fund balance at the level of at least a half-year's outgo after accounting for the offsetting effect of interest earnings. "N.a." indicates "not applicable."
[5]Sum of program expenditures and trust fund building and maintenance. Totals do not necessarily equal the sums of rounded components. "N.a." indicates "not applicable."
[6]Difference between the tax rate scheduled in the law and the cost plus fund maintenance of the program.

NOTE: The balances shown in this table do not use the new level-financing methodology used in the OASDI report.

TABLE 10.—SEVENTY-FIVE YEAR ACTUARIAL BALANCES OF THE HOSPITAL INSURANCE PROGRAM, UNDER ALTERNATIVE SETS OF ASSUMPTIONS

	Alternative			
	I	II-A	II-B	III
Average contribution rate [2]	2.90%	2.90%	2.90%	2.90%
Average-cost basis:				
Average program expenditures [3,4]	3.05	5.01	5.25	9.53
Actuarial balance [5]	-0.15	-2.11	-2.35	-6.63
Trust fund building and maintenance [3,6]	+0.00	+0.01	+0.02	+0.12
Program cost including trust fund building and maintenance [3,7]	3.05	5.02	5.27	9.65
Augmented balance [8]	-0.15	-2.12	-2.37	-6.75

[1]For the 75-year period 1988-2062.
[2]As scheduled under present law.
[3]Expressed as a percentage of taxable payroll.
[4]Expenditures for benefit payments and administrative costs for insured beneficiaries, on an incurred basis.
[5]Difference between the average contribution rate (tax rate scheduled in the law) and program expenditures.
[6]Allowance for building and maintaining the trust fund balance at the level of at least a half-year's outgo after accounting for the offsetting effect of interest earnings.
[7]Sum of program expenditures and trust fund building and maintenance.
[8]The augmented balance is the difference between the average contribution rate and the average cost of the program, including trust fund building and maintenance.

NOTE: The balances shown in this table do not use the new level-financing methodology used in the OASDI report.

TABLE 11.—ESTIMATED OPERATIONS OF THE HOSPITAL INSURANCE TRUST FUND DURING CALENDAR YEARS 1987·2010, UNDER ALTERNTIVE SETS OF ASSUMPTIONS

(Dollar amounts in billions)

Calendar Year	Total Income	Total disbursements	Net Increase In fund	Fund at end of year	Ratio of assets to disbursements[1] (percent)
ALTERNATIVE I:					
1987[2]	$64.1	$50.3	$13.8	$53.7	79
1988	69.3	53.0	16.2	70.0	101
1989	74.3	57.6	16.8	86.7	122
1990	78.5	63.4	15.1	101.8	137
1991	85.5	68.5	17.0	118.8	149
1992	91.1	73.4	17.8	136.6	162
1993	96.6	78.1	18.5	155.0	175
1994	102.1	83.0	19.1	174.1	187
1995	107.4	87.9	19.5	193.6	198
2000	139.1	114.6	24.5	304.9	245
2005	181.4	145.5	35.9	458.6	291
2010	235.6	183.7	52.0	683.3	344
ALTERNATIVE II-A:					
1987[2]	64.1	50.3	13.8	53.7	79
1988	69.1	53.1	16.0	69.8	101
1989	74.0	58.4	15.7	85.4	120
1990	78.7	65.0	13.7	99.1	131
1991	85.1	71.2	13.9	113.0	139
1992	90.7	77.4	13.3	126.3	146
1993	96.2	84.0	12.2	138.5	150
1994	101.7	91.0	10.7	149.2	152
1995	107.3	98.4	8.8	158.0	152
1996	113.0	106.2	6.8	164.8	149
1997	118.8	114.3	4.5	169.3	144
1998	124.9	122.9	2.0	171.3	138
1999	131.2	132.2	-1.1	170.2	130
2000	137.6	142.0	-4.4	165.8	120
2001	144.3	152.0	-7.7	158.0	109
2002	151.1	162.7	-11.6	146.5	97
2003	158.1	174.1	-16.1	130.4	84
2004	165.3	186.2	-20.9	109.5	70
2005	172.7	198.6	-25.9	83.6	55
2006	180.1	212.0	-31.9	51.7	39
2007	187.6	226.7	-39.1	12.6	23
2008	195.0	243.2	-48.2	([3])	5
ALTERNATIVE II-B:					
1987[2]	64.1	50.3	13.8	53.7	79
1988	68.9	53.1	15.9	69.6	101
1989	73.6	58.4	15.2	84.8	119
1990	78.2	65.2	13.0	97.8	130
1991	84.3	71.7	12.7	110.5	136
1992	90.3	78.5	11.8	122.2	141
1993	96.3	85.9	10.4	132.7	142
1994	102.5	93.8	8.7	141.4	142
1995	108.7	102.2	6.5	147.9	138
1996	115.1	111.2	3.9	151.8	133
1997	121.5	120.4	1.1	152.9	126
1998	128.2	130.4	-2.2	150.7	117
1999	134.9	141.2	-6.3	144.4	107
2000	141.9	152.7	-10.8	133.6	95
2001	149.0	164.5	-15.5	118.0	81
2002	156.2	177.2	-21.0	97.0	67
2003	163.6	190.9	-27.3	69.7	51
2004	171.2	205.3	-34.1	35.7	34
2005	179.0	220.3	-41.3	([4])	16
ALTERNATIVE III:					
1987[2]	64.1	50.3	13.8	53.7	79
1988	68.2	53.1	15.1	68.8	101
1989	71.6	58.7	12.9	81.8	117
1990	77.2	66.8	10.4	92.2	122
1991	82.8	75.1	7.7	99.9	123
1992	86.8	82.8	4.0	103.9	121
1993	92.8	92.6	0.2	104.1	112
1994	98.9	103.8	-4.9	99.3	100
1995	104.7	116.1	-11.3	87.9	86
1996	110.4	129.2	-18.9	69.0	68
1997	115.7	143.3	-27.7	41.4	48
1998	120.4	158.5	-38.1	3.3	26
1999	125.1	175.4	-50.2	([5])	2

[1]Ratio of assets in the fund at the beginning of the year to disbursements during the year.
[2]Figures for 1987 represent actual experience.
[3]Trust fund depleted in calendar year 2008.
[4]Trust fund depleted in calendar year 2005.
[5]Trust fund depleted in calendar year 1999.

NOTE: Totals do not necessarily equal the sums of rounded components.

TABLE 12.—ACTUARIAL BALANCES OF THE HOSPITAL INSURANCE PROGRAM, UNDER ALTERNATIVE SETS OF ASSUMPTIONS

	Alternative			
	I	II-A	II-B	III
1988-2012:				
Average contribution rate[1]	2.90%	2.90%	2.90%	2.90%
Average program expenditures[2]	2.68	3.26	3.37	4.36
Actuarial balance[3]	+0.22	-0.36	-0.47	-1.46
2013-2037:				
Average contribution rate[1]	2.90	2.90	2.90	2.90
Average program expenditures[2]	2.98	5.23	5.50	10.37
Actuarial balance[3]	-0.08	-2.33	-2.60	-7.47
2038-2062:				
Average contribution rate[1]	2.90	2.90	2.90	2.90
Average program expenditures[2]	3.48	6.55	6.89	13.85
Actuarial balance[3]	-0.58	-3.65	-3.99	-10.95
1988-2062:				
Average contribution rate[1]	2.90	2.90	2.90	2.90
Average program expenditures[2]	3.05	5.01	5.25	9.53
Actuarial balance[3]	-0.15	-2.11	-2.35	-6.63

[1]As scheduled under present law.
[2]Expenditures for benefit payments and administrative costs for Insured beneficiaries, on an incurred basis, expressed as a percentage of taxable payroll.
[3]Difference between the average contribution rate (tax rate scheduled in the law) and program expenditures.

NOTE: The balances shown in this table do not use the new level-financing methodology used in the OASDI report.

CONCLUSION

The balance in the Federal Hospital Insurance Trust Fund at the beginning of 1988 was at the level of 101 percent of estimated outgo for calendar year 1988. This is above the 50 percent level recommended by the Board of Trustees. The tax rates specified in the law are sufficient, along with interest earnings and assets in the fund, to support program expenditures over the next seventeen to twenty years under the intermediate assumptions. However, any significant adverse deviation from these projections could result in the inability of the fund to meet its obligations much sooner than projected. In order to bring the hospital insurance program into actuarial balance even for the first 25-year projection period under the alternative II-B assumptions, either outlays will have to be reduced by 14 percent or income increased by 16 percent (or some combination thereof).

Over the 75-year projection period, the average tax rate necessary to provide for benefits and administrative expenses exceeds the average tax rate scheduled in the law, producing an average deficit of 2.35 percent of taxable payroll under alternative II-B and 2.11 percent under alternative II-A. For the first 25-year projection period, the average deficit is 0.36 and 0.47 percent of taxable payroll for alternative II-A and alternative II-B, respectively. The average deficit grows to 2.33 and 2.60 percent of taxable payroll for alternatives II-A and 11-B, respectively, during the second 25-year projection period, and to 3.65 and 3.99 percent of taxable payroll for alternatives II-A and II-B, respectively, during the third 25-year projection period.

There are currently over four covered workers supporting each HI enrollee. This ratio will begin to decline rapidly early in the next century. By the middle of that century, there will be only about two covered workers supporting each enrollee. As the post-World War II "baby boom" becomes eligible for benefits, the increase in program costs as a percentage of taxable payroll rises dramatically, from 0.9 percent in 2010 to 1.8 percent in 2012 under alternative II-B (see table A2 on page 49). Not only are the anticipated reserves and financing of the HI program inadequate to offset this demographic change, but under all but the most optimistic assumptions, the HI trust fund is projected to become exhausted even before the major demographic shift begins to occur. Exhaustion is projected to occur shortly after the turn of the century under the intermediate assumptions, and could occur as early as 1999 if the pessimistic assumptions are realized.

The Board notes that promising steps to begin reducing the rate of growth in payments to hospitals have already been taken, including the implementation of prospective payment and diagnosis-related groups and the legislation described on pages 8 through 9 of this report. Initial experience under the prospective payment system for hospitals suggests that this payment mechanism is an effective means of constraining the

growth in hospital payments and improving the efficiency of the hospital industry. Efforts focused on improving the efficiency and reducing the costs of the health care delivery system need to be continued, in close combination with mechanisms that will assure that the quality of health care is not adversely affected.

Because of the magnitude of the projected actuarial deficit in the HI program and the probability that the HI trust fund will be exhausted shortly after the turn of the century, the Board believes that early corrective action is essential in order to avoid the need for later, potentially precipitous changes. The Board, therefore, urges that the Congress take early remedial measures to bring future HI program costs and financing into balance, and to maintain an adequate trust fund against contingencies.

APPENDIX A

ACTUARIAL METHODOLOGY AND PRINCIPAL ASSUMPTIONS FOR THE HOSPITAL INSURANCE COST ESTIMATES

The basic methodology and assumptions for alternative II-A and alternative 11-B used in the estimates for the hospital insurance program are described in this appendix. These alternatives reflect two different levels of expectation of future performance of the economy. In addition, sensitivity testing of program costs under alternative sets of assumptions is presented.

The economic and demographic assumptions underlying the alternative projections are described in detail in the 1988 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds. The Trustees have planned further study and review of some of the assumptions underlying the projections. The following assumptions, in particular, will be reviewed by the Trustees with regard to their appropriateness for future reports:

(1) Impact of Acquired Immune Deficiency Syndrome (AIDS) on mortality rates — Although much about AIDS and modes of transmission of infection with the human immunodeficiency virus (HIV) is well understood, there is considerable uncertainty regarding future medical advances and the extent to which behaviors by people at risk can be modified. Death rates for AIDS were included based on estimates through 1991 prepared by the Centers for Disease Control, Public Health Service. The Public Health Service Executive Task Force on AIDS will be developing an updated assessment of the prevalence of the HIV infection. The Trustees will consider this assessment and other evidence in order to estimate the impact of AIDS on the projections for future reports. In the interim, the assumption that no new HIV infections will occur after 1991 was adopted for this report;

(2) Annual increase in average real wages and earnings — The Trustees have lowered the real earnings assumption from 1.5 percent for the 1987 report to 1.4 percent for the 1988 report, on the basis of accumulating evidence and the National Income and Product Account Revisions of 1985. They will study the impact of demographics and other factors on real wage increases in order to determine if further changes in this assumption are appropriate for future reports;

(3) Net immigration — The Trustees have adopted for the intermediate alternatives the assumption that a net number of 400,000 legal and 200,000 illegal immigrants will enter the country annually for the next 75 years, reflecting best estimates of current levels. This

assumption will be reexamined for future reports as the impact of recent changes in the laws affecting immigration become apparent and as data on future immigration become available; and

(4) Ultimate fertility rates — The assumptions relating to the long-range ultimate fertility rates will be reviewed in the light of the next set of long-range population projections to be released by the Bureau of the Census.

1. PROGRAM COSTS

The principal steps involved in projecting the future costs of the hospital insurance program are (1) establishing the present cost of services provided to beneficiaries, by type of service, to serve as a projection base; (2) projecting increases in payment amounts for inpatient hospital services under the program; (3) projecting increases in payment amounts for skilled nursing facility and home health agency services covered under the program; and (4) projecting increases in administrative costs. The major emphasis will be directed toward expenditures for inpatient hospital services, which account for approximately 93 percent of total benefits.

a. Projection Base

In order to establish a suitable base from which to project the future costs of the program, the incurred payments for services provided must be reconstructed for the most recent period for which a reliable determination can be made. To do this, payments to providers must be attributed to dates of service, rather than to payment dates. In addition, the nonrecurring effects of any changes in regulations, legislation, or administration of the program and of any items affecting only the timing and flow of payments to providers must be eliminated. As a result, the rates of increase in the incurred cost of the program differ from the increases in cash disbursement shown in tables 5 and 6.

For those expenses still reimbursed on a reasonable cost basis, the costs for covered services are determined on the basis of provider cost reports. Payments to a provider initially are made on an "interim" basis; to adjust interim payments to the level of retroactively determined costs, a series of payments or recoveries is effected through the course of cost settlement with the provider. The net amounts paid to date to providers in the form of cost settlements are known; however, the incomplete data available do not permit a precise determination of the exact amounts incurred during a specific period of time. Due to the time required to obtain cost reports from providers, to verify these reports, and to perform audits (where appropriate), final settlements have lagged behind the liability for such payments of recoveries by as much as several years for some providers. Hence, the final cost of services reimbursed on a reasonable cost basis has not been completely determined for the most

recent years of the program, and some degree of uncertainty remains even for earlier years.

Even for inpatient hospital operating payments paid for on the basis of diagnosis-related groups (DRGs), most payments are initially made on an interim basis, and final payments are determined on the basis of bills containing detailed diagnostic information which are later submitted by the hospital.

Additional problems are posed by changes in legislation or regulation, or in administrative or reimbursement policy, which have a substantial effect on either the amount or incidence of payment. The extent and timing of the incorporation of such changes into interim payment rates and cost settlement amounts cannot be determined precisely.

The process of allocating the various types of payments made under the program to the proper incurred period — using incomplete data and estimates of the impact of administrative actions — presents difficult problems, the solution to which can be only approximate. Under the circumstances, the best that can be expected is that the actual incurred cost of the program for a recent period can be estimated within a few percent. This increases the projection error directly, by incorporating any error in estimating the base year into all future years.

b. Payments for Inpatient Hospital Costs

Beginning with hospital accounting years starting on or after October 1, 1983, the hospital insurance program began paying almost all participating hospitals a prospectively determined amount for providing covered services to beneficiaries. With the exception of certain expenses (such as capital-related and medical education expenses) still reimbursed on the basis of reasonable costs as defined by law, the payment rate for each admission depends upon the DRG to which the admission belongs.

The law contemplates that the annual increase in the payment rate for each admission will be related to a hospital input price index, which measures the increase in prices for goods and services purchased by hospitals for use in providing care to hospital inpatients. For hospital accounting years beginning before October 1, 1988, the prospective payment rates have already been determined. The projections contained in this report are based on the assumption that for fiscal year 1989 and later, the prospective payment rates will be increased in accordance with Public Law 100-203, the Omnibus Budget Reconciliation Act of 1987, as described in the "Social Security Amendments since the 1987 Report" section.

Increases in aggregate payments for inpatient hospital care covered under the hospital insurance program can be analyzed into four broad categories:

(1) Labor factors -- the increase in the hospital input price index which is attributable to increases in hospital workers' hourly earnings;

(2) Non-labor factors -- the increase in the hospital input price index which is attributable to factors other than hospital workers' hourly earnings, such as the costs of energy, food, and supplies;

(3) Unit input intensity allowance --the increase in inpatient hospital payments per admission which are in excess of those attributable to increases in the hospital input price index; and

(4) Volume of services -- the increase in total output of units of service (as measured by hospital admissions covered by the hospital insurance program).

It has been possible to isolate some of these elements and to identify their roles in previous hospital cost increases. Table A1 shows the values of the principal components of the increases for historical periods for which data are available and the projected trends used in the estimates. The following discussions apply to projections under both alternative II-A and alternative 11-B, unless otherwise indicated.

Increases in hospital workers' hourly earnings can be analyzed and projected in terms of the assumed increases in hourly earnings in employment in the general economy and the difference between hourly earnings increases in the general economy and the proxy for hospital hourly earnings used in the hospital input price index.

Since the beginning of the hospital insurance program, the differential between the proxy for hospital workers' hourly earnings and hourly earnings in the general economy has fluctuated widely. Since 1975, this positive differential has averaged about 0.5 percent, as hospital workers' earnings have risen faster than general earnings. Several factors contributing to this differential can be identified, including (1) growth in third-party reimbursement of hospitals — through Medicare, Medicaid, and comprehensive private plans — which is likely to have weakened hospital resistance to wage demands; (2) increased proportions of highly trained and more highly paid personnel; (3) an increased degree of labor organization and activity; and (4) the fact that hospital employees had historically earned less than similarly skilled workers in other industries. During the initial years of the prospective payment system, it appears that hospital hourly earnings were depressed relative to those in the general economy as hospitals adapted to the prospective payment system. Over the short term, this differential is assumed to return to a level of one percent, declining gradually to zero by the end of the first 25-year projection period.

Increases in hospital price input intensity, which are primarily the result of price increases for goods and services that hospitals purchase which do not parallel increases in the Consumer Price Index (CPI), are

measured as the difference between the non-labor component of the hospital input price index and the CPI. Although the level has fluctuated erratically in the past, this differential has averaged about 0.5 percent during 1975-1986. Over the short term, hospital price input intensity is assumed to remain at a level of one-half percent, and decline to zero by the end of the first 25-year projection period.

Public Law 100-203 prescribes that future increases in payments to participating hospitals for covered admissions in most years will equal the increase in the hospital input price index. Thus, the unit input intensity allowance, as indicated in table A1, is assumed to equal zero in most years during the first 25-year projection period. After the first 25-year projection period, the input price index plus the unit input intensity allowance is assumed to increase at the same rate as average earnings increase. For years prior to the beginning of the prospective payment system, the unit input intensity allowance has been set at one percent for illustrative purposes, with historical increases in excess of one percent allocated to other sources. For years after the beginning of the prospective payment system, the unit input intensity allowance is the allowance provided for in the prospective payment update factor.

Since the beginning of the prospective payment system, increases in inpatient hospital payments from other sources are primarily due to three factors: (1) the improvement in DRG coding as hospitals continue to adjust to the prospective payment system; (2) the trend toward treating less complicated (and thus, less expensive) cases in outpatient settings, resulting in an increase in the average prospective payment per admission; and (3) legislation affecting the payment rates. For the years 1989 through 2000, a one-half percent increase from other sources is attributable to a continuation of the current trend toward treating less complicated cases in outpatient settings. The long-term average increase from other sources is due to payments for certain costs not included in the DRG payment increasing at a rate faster than the input price index. Possible other sources of both relative increases and decreases in payments include (1) a shift to more or less expensive admissions (DRGs) due to changes in the demographic characteristics of the covered population; (2) changes in medical practice patterns; and (3) adjustments in the relative payment levels for various DRGs or addition/deletion of DRGs in response to changes in technology. As experience under the prospective payment system develops and is analyzed, it may be possible to establish a predictable trend for this component.

Other factors which contribute to increases in payments for inpatient hospital services include increases in units of service as measured by increases in inpatient hospital admissions covered under the hospital insurance program. Increases in admissions are attributable both to increases in enrollment under the hospital insurance program and to increases in admission incidence (admissions per beneficiary). The

historical and projected increases in enrollment reflect the more rapid increase in the population aged 65 and over than in the total population of the United States, and the coverage of certain disabled beneficiaries and persons with end stage renal disease. Increases in the enrollment are expected to continue, reflecting a continuation of the demographic shift into categories of the population which are eligible for hospital insurance protection. In addition, increases in the average age of beneficiaries lead to higher levels of admission incidence.

c. Skilled Nursing Facility and Home Health Agency Costs

Historical experience with the number of days of care covered in skilled nursing facilities under the hospital insurance program has been characterized by wide swings. The number of covered days dropped very sharply in 1970 and continued to decline through 1972. This was the result of strict enforcement of regulations separating skilled nursing care from custodial care. Because of the small fraction of nursing home care covered under the program, this reduction primarily reflected the determination that Medicare was not liable for payment rather than reduced usage of services. The 1972 amendments extended benefits to persons who require skilled rehabilitative services regardless of their need for skilled nursing services (the former prerequisite for benefits). This change and subsequent related changes in regulations have resulted in significant increases in the number of services covered by the program. Recent data have indicated fluctuations in utilization of these services; modest increases are projected.

Increases in the average cost per day in skilled nursing facilities under the program are caused principally by increasing payroll costs for nurses and other skilled labor required. Projected rates of increase are assumed to be about the same as increases in general earnings throughout the projection period. The resulting increases in the cost of skilled nursing facility services are shown in table A2.

Program experience with home health agency costs has shown a generally upward trend. The number of visits had increased sharply from year to year but recent increases have been smaller. Modest increases are projected, similar to that for skilled nursing facilities. Cost per service is assumed to increase at about the same rate as increases in general earnings. The resulting home health agency cost increases are shown in table A2.

d. Administrative Expenses

The costs of administering the hospital insurance program have remained relatively small, in comparison with benefit amounts, throughout the history of the program. The ratio of administrative expenses to benefit payments has generally fallen within the range of 1 to 3 percent. The short-range projection of administrative cost is based

on estimates of workloads and approved budgets for intermediaries and the Health Care Financing Administration. In the long range, administrative cost increases are based on assumed increases in workloads, primarily due to growth and aging of the population, and on assumed unit cost increases of slightly less than the increases in average hourly earnings shown in table A1.

2. FINANCING

In order to analyze costs and to evaluate the financing of a program supported by payroll taxes, program costs must be compared on a year-by-year basis with the taxable payroll which provides the source of income for these costs. Since the vast majority of total program costs are related to insured beneficiaries and since general revenue appropriations and premium payments are available to support the uninsured segments, the remainder of this report will focus on the financing for insured beneficiaries.

a. Taxable Payroll

Taxable payroll increases can be separated into a part due to increases in covered earnings and a part due to increases in the number of covered workers. The taxable payroll projection used in this report is based on economic assumptions consistent with those used in the OASDI report. Increases in taxable payroll assumed for this report are shown in table A2.

b. Relationship Between Program Costs and Taxable Payroll

The single most meaningful measure of program cost increases, with reference to the financing of the system, is the relationship between program cost increases and taxable payroll increases. If the rates of increase in both series are the same, a level tax rate over time will be adequate to support the program. However, to the extent that program costs increase more rapidly than taxable payroll, either a schedule of increasing tax rates or a reduction in program costs will be required to finance the system over time. Table A2 shows the resulting increases in program costs relative to taxable payroll over the first 25-year projection period. These relative increases reduce gradually to a level of approximately 0.7 percent and 0.9 percent per year by 2010, but increase to a level of approximately 1.6 percent and 1.8 percent per year by 2012 for alternatives II-A and II-B, respectively, due to the post-World War II "baby boom" becoming eligible for benefits. The result of these increases is a continued increase in the year-by-year ratios of program expenditures to taxable payroll, as shown in table A3.

3. SENSITIVITY TESTING OF COSTS UNDER ALTERNATIVE ASSUMPTIONS

Over the past 20 years, aggregate inpatient hospital costs for Medicare beneficiaries have increased substantially faster than increases in average earnings and prices in the general economy. Table A1 shows the experience of the HI program for 1975 to 1986. As mentioned earlier, the HI program now makes payments to most participating hospitals on a prospective basis (with the exception of certain expenses). Thus, the trends in aggregate HI inpatient hospital costs prior to 1983, as shown in the historical section of table A1, have little relation to the projected HI inpatient hospital payments. The prospective payment system has made the outlays of the HI program potentially less vulnerable to excessive rates of growth in the hospital industry. However, there is some uncertainty in projecting HI expenditures due to the uncertainty of the underlying economic assumptions and utilization increases. In addition, there is some uncertainty in projecting HI inpatient hospital payments due to the possibility of future legislation affecting the payment levels to hospitals.

In view of the uncertainty of future cost trends, projected costs for the hospital insurance program have been prepared under four alternative sets of assumptions. A summary of the assumptions and results is shown in table A3. The sets of assumptions labeled "Alternative II-A" and "Alternative II-B" form the basis for the detailed discussion of hospital cost trends and resulting program costs presented throughout this report. They represent intermediate sets of cost increase assumptions, compared with the lower cost and more optimistic alternative I and the higher cost and less optimistic alternative III. Increases in the economic factors (average hourly earnings and CPI) for the four alternatives are consistent with those underlying the OASDI report.

As noted earlier, the single most meaningful measure of hospital insurance program cost increases, with reference to the financing of the system, is the relationship between program cost increases and taxable payroll increases. The extent to which program cost increases exceed increases in taxable payroll will determine how steeply tax rates must be increased or program costs curtailed to finance the system over time.

By the end of the first 25-year projection period, program costs are projected to increase about 1.6 percent and 1.8 percent faster than increases in taxable payroll for alternatives II-A and II-B, respectively, as discussed in the "Financing" section of this appendix. Program costs beyond the first 25-year projection period are based on the assumption that costs per unit of service will increase at the same rate as earnings increase. Program expenditures, which are currently about 2.5 percent of taxable payroll, increase to a level of about 4 percent by the year 2012 under both alternatives II-A and 11-B and to about 7 percent by the year 2062. Hence, if all of the projection assumptions are realized over time,

hospital insurance tax rates provided in the present financing schedule (2.9 percent of taxable payroll) will be inadequate to support the cost of the program.

During the first 25-year projection period, alternatives I and III contain assumptions which result in program costs increasing, relative to taxable payroll increases, approximately 2 percent less rapidly and 2 percent more rapidly, respectively, than the results under both sets of intermediate assumptions. Costs beyond the first 25-year projection period assume the 2 percent differential gradually decreases until the year 2037 when program cost increases relative to taxable payroll are approximately the same as under both sets of intermediate assumptions. Under alternative I, program costs increase slightly more than increases in taxable payroll curing the first 25-year projection period. Program expenditures under this alternative would be about 2.7 percent of taxable payroll in the year 2012, increasing to about 3.6 percent of taxable payroll by 2062. The average program costs for the 75-year projection period are about 3.0 percent of taxable payroll; hence, hospital insurance tax rates provided in the present financing schedule will be inadequate even under the optimistic alternative I assumptions. Under alternative III, program costs increase about 3.8 percent more rapidly than increases in taxable payroll during the first 25-year projection period. The result of this differential is a level of program expenditures in the year 2012 which is about 6.4 percent of taxable payroll, increasing to about 14.2 percent of taxable payroll in the year 2062.

TABLE A1.—COMPONENTS OF HISTORICAL AND PROJECTED INCREASES IN HI INPATIENT HOSPITAL PAYMENTS [1]

(Percent)

	Labor			Non-labor					Units of service			
Calendar year	Average hourly earnings	Hospital hourly earnings level	Hospital hourly earnings	CPI	Hospital price input intensity	Non-labor hospital prices	Input price index	Unit input intensity allowance[2]	HI enrollment	Admission incidence	Other Sources	HI inpatient hospital payments
Historical Data:												
1975	8.2%	0.6%	8.8%	9.1%	3.5%	12.9%	10.5%	1.0%	3.4%	0.1%	6.1%	22.5%
1976	7.8	-0.2	7.6	5.7	1.7	7.5	7.6	1.0	2.9	1.5	5.1	19.2
1977	6.8	0.0	6.8	6.5	0.6	7.1	6.9	1.0	3.0	4.6	0.8	17.2
1978	8.0	-0.3	7.7	7.6	-0.8	6.7	7.3	1.0	2.7	-1.9	5.3	14.9
1979	8.5	-0.6	7.8	11.4	-1.1	10.2	8.8	1.0	2.7	3.1	0.2	16.5
1980	7.7	1.9	9.7	13.5	0.7	14.3	11.7	1.0	2.1	2.4	2.5	20.8
1981	9.0	1.2	10.3	10.3	-0.5	9.8	10.1	1.0	1.9	2.7	3.0	19.7
1982	5.9	2.8	8.9	6.0	0.3	6.3	7.7	1.0	1.8	0.0	4.6	15.7
1983	4.5	1.7	6.3	3.0	1.2	4.2	5.4	1.0	1.7	1.1	1.7	11.3
1984	5.8	-0.3	5.5	3.4	0.7	4.1	4.9	1.0	1.8	-3.9	7.1	11.0
1985	4.7	-0.3	4.4	3.5	-0.5	3.0	3.8	0.0	1.6	-7.4	8.7	6.2
1986	5.2	-1.5	3.6	1.6	-0.1	1.5	2.7	-2.6	1.9	-3.2	5.5	4.2
Projection:												
Alternative II-A												
1987	4.3	-0.2	0.1	3.6	0.0	3.6	3.9	-2.6	2.0	-1.9	2.1	3.5
1988	3.1	1.7	4.9	3.6	0.7	4.3	0.6	-2.0	2.2	0.0	0.4	4.9
1989	4.8	1.0	5.8	3.9	0.5	4.4	5.2	-1.5	2.2	1.5	0.6	8.2
1990	4.9	1.0	5.9	3.6	0.5	0.1	5.2	0.0	1.9	1.8	2.0	11.3
1995	0.6	1.0	5.6	3.0	0.5	3.5	4.8	0.0	1.4	1.3	0.4	8.1
2000	4.9	1.0	5.9	3.0	0.5	3.5	5.0	0.0	0.8	0.9	0.5	7.3
2005	4.9	0.5	5.4	3.0	0.5	3.5	4.8	0.0	1.2	0.5	0.0	6.6
2010	5.0	0.0	5.0	3.0	0.5	3.5	4.5	0.0	1.7	-0.2	0.0	6.1
2012	5.0	0.0	5.0	3.0	0.0	3.0	4.4	0.0	2.9	-0.5	-0.1	6.8
Alternative II-B												
1987	4.3	-0.2	4.1	3.6	0.0	3.6	3.9	-2.6	2.0	-1.9	2.1	3.5
1988	2.8	2.0	4.9	3.9	0.4	4.3	4.6	-2.4	2.2	0.0	0.5	5.0
1989	4.7	1.0	5.7	4.5	0.5	5.0	5.4	-1.5	2.2	1.5	0.5	8.3
1990	4.8	1.0	5.8	4.3	0.5	4.8	5.4	0.0	1.9	1.8	2.1	11.6
1995	5.4	1.0	6.5	4.0	0.5	4.5	5.7	0.0	1.4	1.3	0.4	9.0
2000	5.5	1.0	6.6	4.0	0.5	4.5	5.8	0.0	0.8	0.9	0.5	8.1
2005	5.5	0.5	6.0	4.0	0.5	4.5	5.5	0.0	1.2	0.5	0.0	7.3
2010	5.6	0.0	5.6	4.0	0.5	4.5	5.2	0.0	1.7	-0.2	0.0	6.8
2012	5.6	0.0	5.6	4.0	0.0	4.0	5.1	0.0	2.9	-0.5	-0.1	7.5

[1] Percent increase in year indicated over previous year, on an incurred basis.
[2] Reflects the allowances provided for in the prospective payment update factors.

Note: Historical and projected data reflect a recalibration of the hospital input price index which occurred in 1986.

TABLE A2.—RELATIONSHIP BETWEEN INCREASES IN HI PROGRAM EXPENDITURES AND INCREASES IN TAXABLE PAYROLL [1]

(Percent)

Calendar Year	Inpatient hospital[2,3]	Skilled nursing facility[3]	Home health agency[3]	Weighted average[3,4]	HI administrative costs[3,5]	HI program expenditures[3]	HI taxable payroll	Ratio of expenditures to payrolls[6]
Alternative II-A								
1988	5.1%	9.0%	7.6%	5.3%	18.7%	5.6%	6.1%	-0.5%
1989	8.3	9.7	9.0	8.4	8.7	8.4	6.4	1.9
1990	11.5	9.1	8.8	11.4	8.7	11.3	6.4	4.6
1995	8.2	7.2	7.5	8.2	6.8	8.2	5.7	2.3
2000	7.3	6.7	7.0	7.4	5.8	7.3	5.7	1.5
2005	6.6	6.6	6.6	6.7	5.6	6.6	5.6	1.0
2010	6.1	6.3	6.1	6.1	5.4	6.1	5.3	0.7
2012	6.8	6.8	6.6	6.8	6.3	6.8	5.1	1.6
Alternative II-B								
1988	5.1	8.3	7.1	5.3	18.7	5.6	5.8	-0.2
1989	8.5	9.7	9.0	8.6	8.5	8.6	6.1	2.3
1990	11.7	8.2	8.4	11.6	8.5	11.5	6.0	5.2
1995	9.1	7.6	8.0	9.0	7.4	9.0	6.3	2.5
2000	8.1	7.3	7.4	8.1	6.3	8.0	6.2	1.8
2005	7.3	7.0	7.1	7.3	6.2	7.3	6.1	1.2
2010	6.8	6.6	6.6	6.8	5.9	6.8	5.8	0.9
2012	7.5	7.3	7.1	7.5	6.8	7.5	5.7	1.8

[1]Percent increase in year indicated over previous year.

[2]This column differs slightly from the last column of A1, since Table A1 includes all persons eligible for HI protection while this table excludes noninsured persons.

[3]Costs attributable to insured beneficiaries only, on an incurred basis. Benefits and administrative costs for noninsured persons are expected to be financed through general revenue transfers and premium payments, rather than through payroll taxes.

[4]Includes costs for hospice care, as provided for by the Tax Equity and Fiscal Responsibility Act of 1982 as amended by the Consolidated Omnibus Budget Reconciliation Act of 1985.

[5]Includes costs of Peer Review Organizations.

[6]Percent increase in the ratio of program expenditures to taxable payroll. This is equivalent to the differential between the Increase In program costs and the Increase in taxable payroll.

NOTE: Taxable payroll is adjusted to take into account the lower contribution rates on multiple-employer "excess wages," as compared with the combined employer-employee rate.

TABLE A3.—SUMMARY OF ALTERNATIVE PROJECTIONS FOR THE HOSPITAL INSURANCE PROGRAM
(Percent)

	Increases In aggregate HI Inpatient hospital payments[1]				Changes In the relationship between expenditures and payroll[1]			
Calendar Year	Average hourly earnings	CPI	Other factors[2]	Total[3]	Program expenditures[3,4]	Taxable payroll	Ratio of expenditures to payroll	Expenditures as a percent of taxable payroll[3,4]
Alternative I:								
1988	3.2%	3.3%	1.3%	4.6%	5.2%	6.5%	-1.1%	2.50%
1989	4.6	3.2	2.6	6.7	7.1	6.6	0.5	2.51
1990	4.7	3.0	5.7	9.9	10.0	6.4	3.3	2.59
1995	3.9	2.0	2.5	5.7	5.9	5.1	0.7	2.72
2000	4.3	2.0	1.7	5.2	5.4	5.4	0.0	2.75
2005	4.4	2.0	0.8	4.4	4.6	5.2	-0.6	2.70
2010	4.4	2.0	0.3	3.9	4.1	5.0	-0.8	2.67
2012	4.4	2.0	0.9	4.6	4.8	4.8	0.0	2.65
Alternative II-A:								
1988	3.1	3.6	1.5	4.9	5.6	6.1	-0.5	2.51
1989	4.8	3.9	3.6	8.2	8.4	6.4	1.9	2.56
1990	4.9	3.6	6.7	11.3	11.3	6.4	4.6	2.68
1995	4.6	3.0	4.0	8.1	8.2	5.7	2.3	3.03
2000	4.9	3.0	3.0	7.3	7.3	5.7	1.5	3.31
2005	4.9	3.0	2.2	6.6	6.6	5.6	1.0	3.53
2010	5.0	3.0	1.7	6.1	6.1	5.3	0.7	3.77
2012	5.0	3.0	2.3	6.8	6.8	5.1	1.6	3.87
Alternative II-B:								
1988	2.8	3.9	1.7	5.0	5.6	5.8	-0.2	2.52
1989	4.7	4.5	3.5	8.3	8.6	6.1	2.3	2.58
1990	4.8	4.3	6.7	11.6	11.5	6.0	5.2	2.71
1995	5.4	4.0	4.0	9.0	9.0	6.3	2.5	3.11
2000	5.5	4.0	3.0	8.1	8.0	6.2	1.8	3.42
2005	5.5	4.0	2.2	7.3	7.3	6.1	1.2	3.68
2010	5.6	4.0	1.7	6.8	6.8	5.8	0.9	3.96
2012	5.6	4.0	2.3	7.5	7.5	5.7	1.8	4.07
Alternative III:								
1988	2.0	4.4	2.0	5.1	5.6	4.3	1.2	2.56
1989	4.8	5.9	3.7	9.2	9.4	4.5	4.7	2.68
1990	6.0	6.4	7.4	14.0	13.8	6.8	6.6	2.85
1995	5.9	5.0	6.1	12.0	11.8	7.4	4.2	3.57
2000	6.2	5.0	4.6	10.6	10.4	6.5	3.7	4.31
2005	6.2	5.0	3.8	9.8	9.7	6.5	3.0	5.06
2010	6.2	5.0	3.2	9.2	9.1	6.2	2.8	5.98
2012	6.3	5.0	3.9	10.0	9.8	6.0	3.7	6.38

[1]Percent increase in the year Indicated over the previous year.
[2]Other factors Include hospital hourly earnings, hospital price input intensity, unit input intensity allowance, and units of service as measured by admissions.
[3]On an incurred basis.
4Includes expenditures attributable to insured beneficiaries only.

NOTE: Taxable payroll is adjusted to take into account the lower contribution rates on multiple-employer "excess wages," as compared with the combined employer-employee rate.

APPENDIX B

DETERMINATION AND ANNOUNCEMENT OF THE MEDICARE PART A (HOSPITAL INSURANCE) INPATIENT HOSPITAL DEDUCTIBLE AND MONTHLY PREMIUM RATE FOR THE UNINSURED AGED, FOR CALENDAR YEAR 1988[3]

I. Inpatient Hospital Deductible and Coinsurance Amounts

Section 1813 of the Social Security Act (the Act) (42 U.S.C. 1395(e)) provides for an inpatient hospital deductible and certain coinsurance amounts to be deducted from the amount payable by Medicare for inpatient hospital services and extended care services furnished an individual. Section 1813(b)(2) of the Act, as amended by section 9301 of the Omnibus Budget Reconciliation Act (OBRA) of 1986, Pub. L. 99-509, requires the Secretary to determine and publish by September 15 of each year the amount of the inpatient hospital deductible applicable for the following calendar year.

The 1988 inpatient hospital deductible and coinsurance amounts discussed below have been computed as required by section 1813 of the Act. The costs associated with this notice are the result of legislative requirements implemented by this notice. The amount of the deductible for 1988 under the formula has been determined to be $540. This represents a 4 percent increase over the deductible for 1987, which was $520. The 1987 deductible had increased 6 percent over that for 1986. The $520 amount for 1987 was prescribed by Congress in section 1813(b)(1) of the Social Security Act, as amended by section 9301 of OBRA.

Section 9301 of Pub. L. 99-509 amended section 1813 of the Act to establish a new method for computing the amount of the inpatient hospital deductible. Under the formula specified in the law, the deductible for calendar year 1988 must be equal to $520 (the deductible for the preceding year) multiplied by the percentage increase (that is, the update factor) for the prospective payment rates for inpatient hospital services effective October 1, 1987, and adjusted to reflect real case mix. The amount so determined is rounded to the nearest multiple of $4.

The applicable percentage increase for Medicare prospective payment rates is 2.7 percent, as announced in the Federal Register on September 1, 1987 (52 FR 33034). The case-mix adjustment factor is 1.46 percent.

A case-mix index is calculated for each hospital reflecting the relative costliness of that hospital's mix of cases compared to a national average

[3] Extracted from the notice entitled "Medicare Program; Inpatient Hospital Deductible and Coinsurance Amounts and Part A Premium for the Uninsured Aged for 1988," which was published in the Federal Register on September 16, 1987 (Vol. 52, No. 179, p. 35056).

mix of cases. We computed the increase in average case mix for hospitals paid under the Medicare prospective payment system (PPS) in fiscal year 1987. We used PPS bills available to us as of the end of July 1987. This is a total of about 6 million discharges for FY 1987. The increase in average case mix in FY 1987 is computed to be 1.46 percent.

In the June 11, 1987 notice of the Secretary's recommended update for PPS hospitals (52 FR 22386), we made no adjustment to the update factor for case mix, since at that time the data indicated an increase in case mix of 0.6 percent in FY 1987, which was small compared to increases in prior years. We considered all of this increase as due to changes in real case mix. Even though the measure of case-mix increase for FY 1987 has increased to 1.46 percent, we did not recommend any adjustment to the PPS update for FY 1988. Hence, we considered all of the 1.46 percent increase as changes in real case mix. By law, we must increase the deductible by the real case-mix increase of 1.46 percent.

Thus, the inpatient hospital deductible for calendar year 1988 is $520 times 1.027 times 1.0146, which equals $541.84 and is rounded to $540.

Because the coinsurance amounts in section 1813 of the Act are fixed percentages of the inpatient hospital deductible for services furnished in the same calendar year, the increase in the deductible has the effect of also increasing the amount of coinsurance the Medicare beneficiary must pay. Thus, for inpatient hospital services or extended care services furnished in 1988, the daily coinsurance for the 61st through 90th days of hospitalization (1/4 of the inpatient hospital deductible) will be $135; the daily coinsurance for lifetime reserve days (1/2 of the inpatient hospital deductible) will be $270; and the daily coinsurance for the 21st through 100th days of extended care services in a skilled nursing facility (1/8 of the inpatient hospital deductible) will be $67.50.

The estimated cost to beneficiaries due to these increases is $200 million. This amount is based on an estimated 7.3 million beneficiaries who will have 7.9 million benefit periods and use 2.9 million hospital coinsurance days, 1.1 million lifetime reserve days, and 4.2 million skilled nursing facility coinsurance days in 1988.

II. Part A Premium for the Uninsured Aged

Under the authority in section 1818(d)(2) of the Social Security Act (42 U.S.C. 1395i-2(d)(2)), I have determined that the monthly Medicare hospital insurance premium for the uninsured aged for the 12 months beginning January 1, 1988 is $234.

Section 1818 of the Social Security Act (Act) provides for voluntary enrollment in the hospital insurance program (Part A of Medicare), subject to payment of a monthly premium, of certain persons age 65 and older who are uninsured for social security or railroad retirement benefits and do not otherwise meet the requirements for entitlement to hospital insurance. (Persons insured under the Social Security or

Railroad Retirement Acts need not pay premiums for hospital insurance.)

The formula specified in this section requires that, for the period beginning January 1, 1988, the 1973 base year premium ($33) be multiplied by the ratio of (1) the 1988 inpatient hospital deductible to (2) the 1973 inpatient hospital deductible, rounded to the nearest multiple of $1, or, if midway between multiples of $1, to the next higher multiple of $1.

Under section 1813(b)(2) of the Act, the 1988 inpatient hospital deductible was determined to be $540. The 1973 deductible was actuarially determined to be $76, although the 1973 deductible was actually promulgated to be only $72, to comply with a ruling of the Cost of Living Council. (See 37 FR 21452, October 11, 1972.) The monthly premium for the 12-month period beginning January 1, 1988 has been calculated using the $76 deductible for 1973, since this more closely satisfies the intent of the law. Thus, the monthly hospital insurance premium is $33 × (540/76) = $234.47, which is rounded to $234.

The monthly hospital insurance premium for the uninsured aged for the 12-month period beginning January 1, 1988, will increase to $234. That amount is 4 percent higher than the $226 monthly premium amount for the 12-month period beginning January 1, 1987.

The estimated cost of this increase to the approximately 18 thousand enrollees who do not otherwise meet the requirements for entitlement to hospital insurance will be about $2 million.

III. Regulatory Impact Statement

This notice merely announces amounts required by legislation. This notice is not a proposed rule or a final rule issued after a proposal, and does not alter any regulation or policy. Therefore, we have determined, and the Secretary certifies, that no analyses are required under Executive Order 12291 or the Regulatory Flexibility Act (5 U.S.C. 601 through 612).

Dated: September 10, 1987.

William L. Roper,
Administrator,
Health Care Financing Administration

Approved: September 11, 1987.

Otis R. Bowen,
Secretary,
Department of Health and Human Services

APPENDIX C

STATEMENT OF ACTUARIAL OPINION

It is my opinion that the methodology used herein is based upon sound principles of actuarial practice. With regard to the assumptions used, I strongly concur with the Trustees' intent to review several of the assumptions with regard to their appropriateness. This intent is expressed on pages 39 and 40 of this report and in the 1988 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds. With regard to the resulting cost estimates, it is my opinion that the most appropriate measure of the full cost of the program includes the cost for maintaining a balance in the trust fund equal to a minimum of one-half year's expenditures.

Roland E. King
Fellow of the Society of Actuaries
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