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1987 ANNUAL REPORT OF THE BOARD OF TRUSTEES  
OF THE FEDERAL HOSPITAL INSURANCE TRUST  
FUND

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COMMUNICATION

FROM

THE BOARD OF TRUSTEES, FEDERAL  
HOSPITAL INSURANCE TRUST FUND

TRANSMITTING

THE 1987 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE  
FEDERAL HOSPITAL INSURANCE TRUST FUND, PURSUANT TO 42  
U.S.C. 401(c)(2), 1395i(b)(2), 1395t(b)(2)



MARCH, 31, 1987.—Referred to the Committee on Ways and Means and  
ordered to be printed.

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U.S. GOVERNMENT PRINTING OFFICE

91-011

WASHINGTON : 1987

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TRUSTEES OF THE FEDERAL HOSPITAL  
INSURANCE TRUST FUND

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THE BOARD OF TRUSTEES, FEDERAL  
HOSPITAL INSURANCE TRUST FUND

Transmitting

THE 1987 ANNUAL REPORT OF THE BOARD, PURSUANT TO  
SECTION 1817(b) OF THE SOCIAL SECURITY ACT  
AS AMENDED

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Prepared by

THE OFFICE OF THE ACTUARY  
HEALTH CARE FINANCING ADMINISTRATION



LETTER OF TRANSMITTAL

Board of Trustees of the  
Federal Hospital Insurance Trust Fund  
Washington, D.C., March 30, 1987

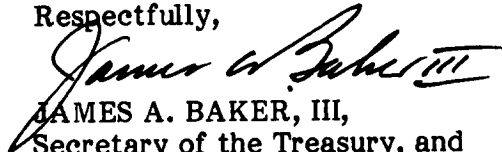
HONORABLE JAMES C. WRIGHT, JR.  
Speaker of the House of Representatives  
Washington, D.C.

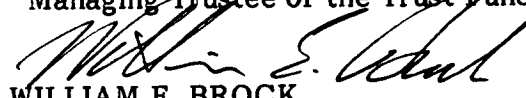
HONORABLE GEORGE BUSH  
President of the Senate  
Washington, D.C.


GENTLEMEN:


We have the honor of transmitting to you the 1987 Annual Report of the Board of Trustees of the Federal Hospital Insurance Trust Fund (the 22nd such report), in compliance with the provisions of section 1817(b) of the Social Security Act.


Respectfully,


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

  
WILLIAM E. BROCK,  
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



## C O N T E N T S

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|  | Page |
|--|------|
| The Board of Trustees .....  | 1    |
| Executive Summary .....  | 2    |
| Social Security Amendments Since the 1986 Trustees Report .....  | 13   |
| Nature of the Trust Fund .....   | 19   |
| Summary of the Operations of the Trust Fund, Fiscal Year 1986 .....  | 28   |
| Expected Operations and Status of the Trust Fund During the<br>Period October 1, 1986, to December 31, 1989 .....  | 36   |
| Actuarial Status of the Trust Fund .....   | 42   |
| Conclusion .....   | 55   |
| Appendices:  |      |
| A. Actuarial Methodology and Principal Assumptions<br>for the Hospital Insurance Cost Estimates .....  | 57   |
| B. Determination and Announcement of the Medicare Part A<br>(Hospital Insurance) Inpatient Hospital Deductible<br>and Monthly Premium Rate for the Uninsured Aged,<br>for Calendar Year 1987 ..... | 74   |
| C. Statement of Actuarial Opinion .....  | 80   |



1987 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 1987 annual report, the twenty-second such report.

2  
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 1986, 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 127 million workers through payroll taxes. Payroll taxes during 1986 amounted to \$54.6 billion, accounting for 92.1 percent of all HI income. Interest payments to the HI fund amounted to 6.1 percent of all HI income for 1986. The remaining 1.8 percent of calendar year 1986 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 \$50.4 billion in HI disbursements, \$49.8 billion was for benefit payments while the remaining \$0.7 billion was spent for administrative expenses. HI administrative expenses were 1.3 percent of total disbursements. In calendar year 1986, the HI trust fund was credited with an additional \$10.6 billion, representing the final repayment of the interfund loan made to the Federal Old-Age and Survivors Insurance Trust Fund in December 1982.

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. However, the HI program maintains a trust fund to provide a small reserve against fluctuations in program experience, such as those occurring in hospital admissions or inflation. The HI program should also build a reserve to anticipate changes in the demographic composition of the population. However, the projected reserves are inadequate for this purpose. The trust fund holds all of the income not currently needed to pay benefits and related expenses. The assets of the fund may not be used for any other purpose; however, they 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 1983 and later are shown in Table I. The maximum taxable amounts of annual earnings are shown for 1983 through 1987. After 1987, 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  
ON ANNUAL EARNINGS

| <u>Calendar<br/>year</u>          | <u>Maximum taxable<br/>amount of<br/>annual earnings</u> | <u>Contribution Rate</u><br>(Percent of taxable earnings) |                           |
|-----------------------------------|--|---|---------------------------|
|                                   |  | <u>Employees and<br/>employers, each</u>                  | <u>Self-<br/>Employed</u> |
| 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                      |
| Changes scheduled in present law: |  |   |                           |
| 1988 & later                      | Subject to<br>automatic<br>increase                      | 1.45  | 2.90                      |

### Actuarial Status of the Trust Fund

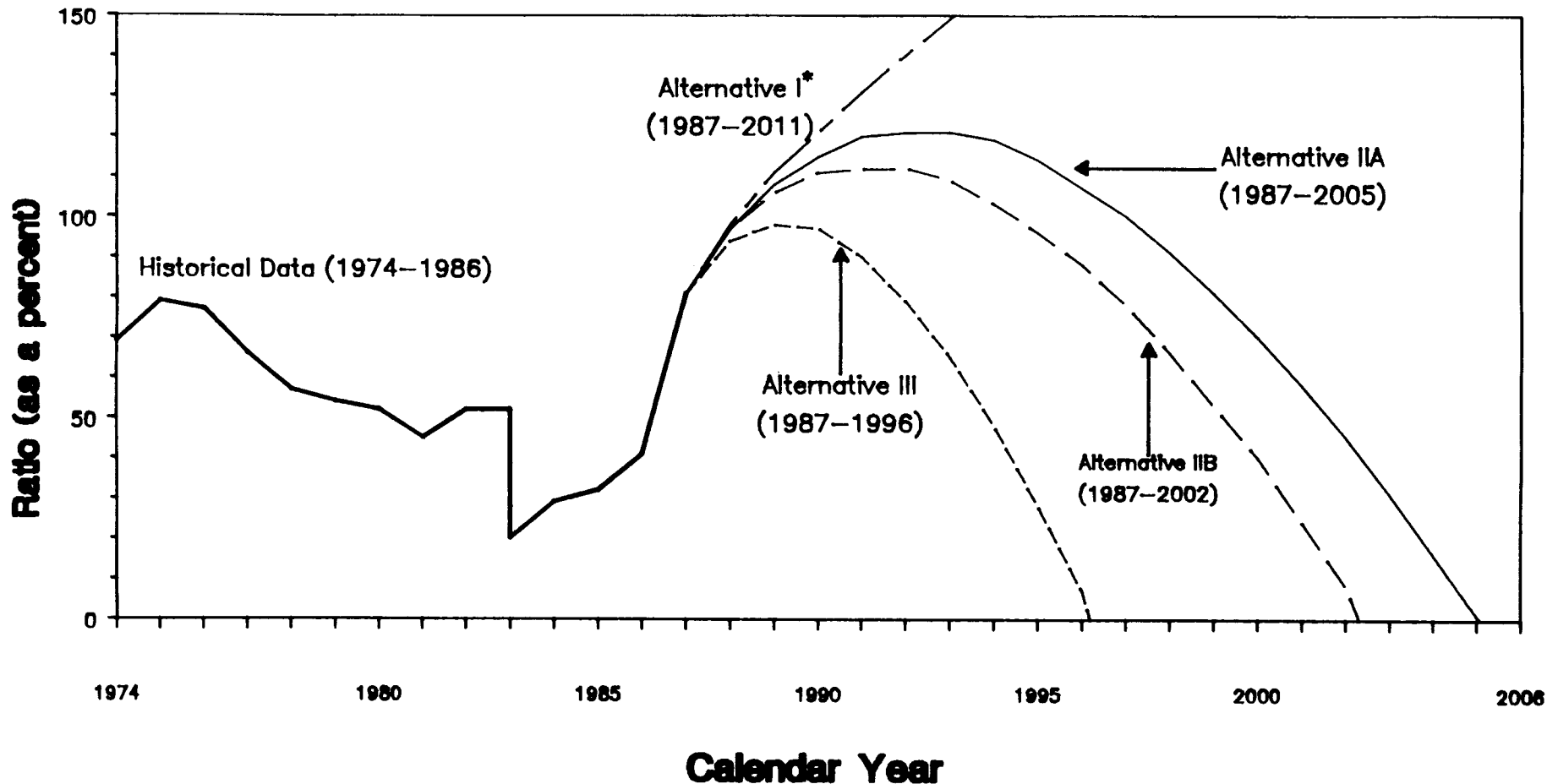
The Board of Trustees has adopted the general financing principle that annual income to the hospital insurance program should be at least equal to annual outlays of the program plus an amount to maintain a balance in the trust fund equal to a minimum of one-half year's disbursements. At the beginning of 1987, 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 II-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 1992 and then decline steadily until the fund is completely exhausted just 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. Under the more pessimistic set of assumptions (alternative III), the trust fund is projected to increase to a level of about 98 percent in 1989 and then decrease rapidly until the fund is exhausted in 1996.

Table 11 in this report summarizes the estimated operations of the HI trust fund under the four alternative sets of assumptions. Figure I 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 remains solvent under alternative I during this 25-year projection period.

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 total 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 percent of taxable payroll. Table II compares the actuarial balance under each of the four sets of assumptions for the 75-year projection period 1987-2061. 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. The cost figures in Table II and Figure 2 include amounts for maintaining the trust fund at the level of at least a half-year's disbursements as recommended by the Board of Trustees. Under alternative I, maintenance amounts are included only in the last 25-year projection period.

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 III presents a comparison of the projected experience in the 1986 and 1987 reports. As Table III indicates, the projections in the 1987 report show that the fund will be depleted several years later than in the 1986 report under all alternative projections. This change is primarily due to legislation passed since the 1986 report was issued and to the more optimistic economic assumptions underlying the projections in the 1987 report. Table IV shows the major reasons for the change in the 75-year actuarial balance of the HI program from the 1986 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 II.--SEVENTY-FIVE YEAR ACTUARIAL BALANCE OF THE  
HOSPITAL INSURANCE PROGRAM UNDER ALTERNATIVE  
SETS OF ASSUMPTIONS

|                                       | <u>I</u> | <u>Alternative</u> |             | <u>III</u> |
|---------------------------------------|----------|--------------------|-------------|------------|
|                                       |          | <u>II-A</u>        | <u>II-B</u> |            |
| 1987-2011:                            |          |                    |             |            |
| Average contribution rate <u>1/</u>   | 2.90%    | 2.90%              | 2.90%       | 2.90%      |
| Average cost of the program <u>2/</u> | 2.71     | 3.21               | 3.34        | 4.41       |
| Actuarial balance                     | +0.19    | -0.31              | -0.44       | -1.51      |
| 2012-2036:                            |          |                    |             |            |
| Average contribution rate <u>1/</u>   | 2.90     | 2.90               | 2.90        | 2.90       |
| Average cost of the program <u>2/</u> | 2.97     | 5.16               | 5.49        | 10.47      |
| Actuarial balance                     | -0.07    | -2.26              | -2.59       | -7.57      |
| 2037-2061:                            |          |                    |             |            |
| Average contribution rate <u>1/</u>   | 2.90     | 2.90               | 2.90        | 2.90       |
| Average cost of the program <u>2/</u> | 3.43     | 6.36               | 6.77        | 13.78      |
| Actuarial balance                     | -0.53    | -3.46              | -3.87       | -10.88     |
| 1987-2061:                            |          |                    |             |            |
| Average contribution rate <u>1/</u>   | 2.90     | 2.90               | 2.90        | 2.90       |
| Average cost of the program <u>2/</u> | 3.04     | 4.91               | 5.20        | 9.55       |
| Actuarial balance                     | -0.14    | -2.01              | -2.30       | -6.65      |

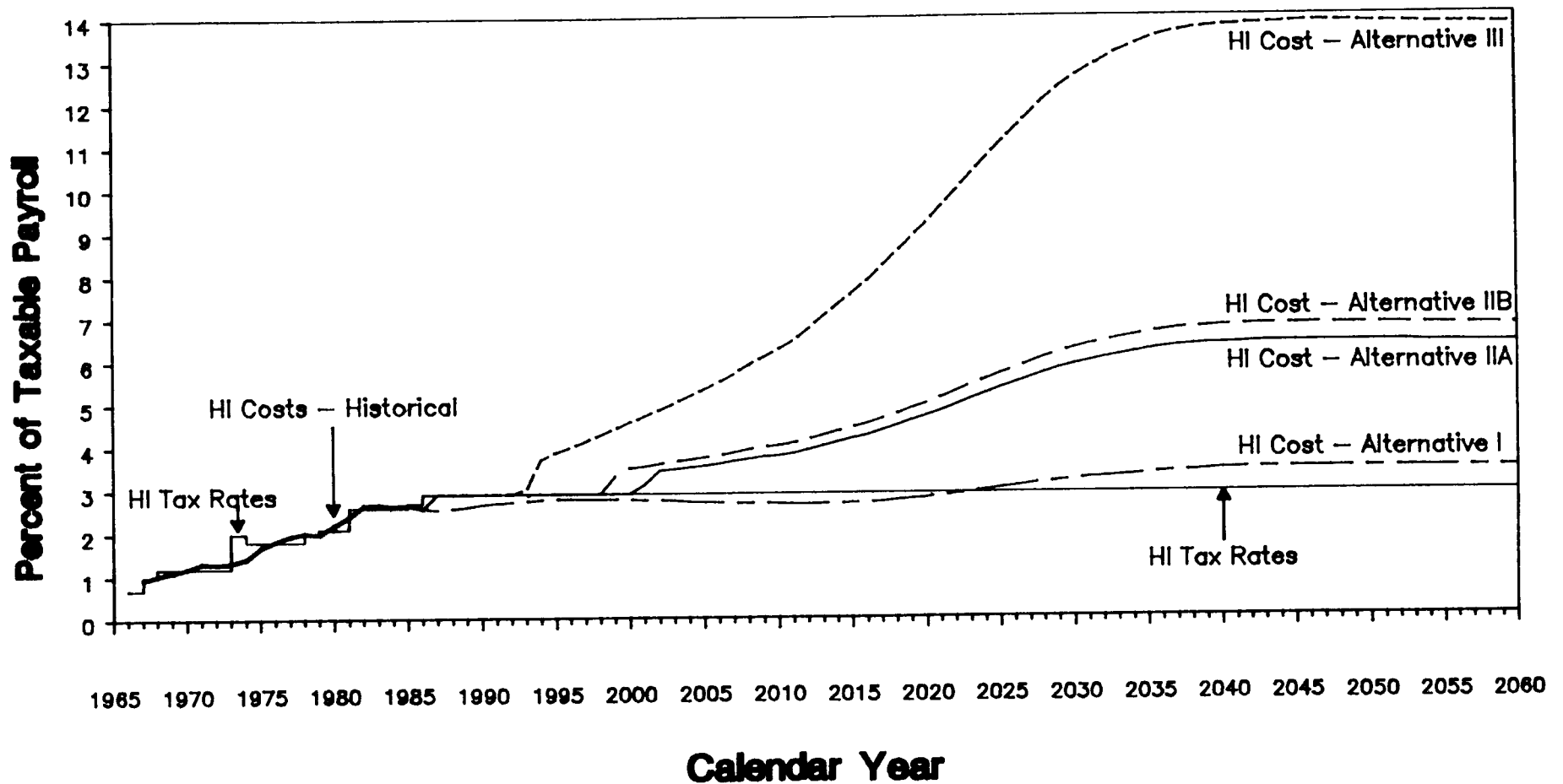
1/ As scheduled under present law.

2/ Expressed as a percent of taxable payroll. Includes amounts for trust fund maintenance. Under alternative I, maintenance amounts are included only in the last 25-year projection period.

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

# Figure 2

## Estimated HI Cost and Tax Rates



Note: HI projected cost includes an allowance for 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. Under alternative I, maintenance amounts are included only in the last 25-year projection period.



TABLE III.--STATUS OF THE HOSPITAL INSURANCE TRUST FUND

| <u>Alternative Assumptions</u> | <u>Year in which the trust fund is exhausted as published in the</u> |                    | <u>75-year actuarial balance <u>1/</u> of the HI program as published in the</u> |                    |
|--------------------------------|--|--------------------|--|--------------------|
|                                | <u>1986 Report</u>   | <u>1987 Report</u> | <u>1986 Report</u>   | <u>1987 Report</u> |
| I (Optimistic)                 | <u>2/</u>  | <u>3/</u>          | -0.52%   | -0.14%             |
| II-A (Intermediate)            | 1998   | 2005               | -2.65  | -2.01              |
| II-B (Intermediate)            | 1996   | 2002               | -3.02  | -2.30              |
| III (Pessimistic)              | 1993   | 1996               | -8.03  | -6.65              |

1/ The actuarial balance of the hospital insurance program 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 percent of taxable payroll, for the same period.

2/ The trust fund is solvent at least through the end of the first 25-year projection period.

3/ The trust fund is solvent at least through the end of the second 25-year projection period.

Table IV.--CHANGE IN THE 75-YEAR ACTUARIAL BALANCE SINCE THE 1986  
TRUSTEES REPORT

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|   |        |
|---|--------|
| 1. Actuarial Balance, Alternative II-B, 1986 Report | -3.02% |
| 2. Changes:   |        |
| a. Valuation period                                 | -0.07  |
| b. Base estimate                                    | +0.05  |
| c. Legislation since the 1986 Report                |        |
| 1. Consolidated Omnibus Budget Reconciliation Act   | +0.30  |
| 2. Omnibus Budget Reconciliation Act of 1986        | -0.06  |
| d. Economic and demographic assumptions             | +0.34  |
| e. Hospital assumptions                             | +0.16  |
| f. Net effect, all changes                          | +0.72  |
| 3. Actuarial Balance, Alternative II-B, 1987 Report | -2.30  |

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### Conclusion of the Board of Trustees

The present financing schedule for the hospital insurance program is sufficient to ensure the payment of benefits and maintain the fund at a level of at least one-half year's disbursements over the next 12 to 14 years if the assumptions underlying the estimates are realized. The trust fund is exhausted just after the turn of the century under both alternatives II-A and II-B. Under the more pessimistic alternative III, the fund is exhausted in 1996. Under the more optimistic alternative I, the trust fund is solvent at least through the first two 25-year projection periods.

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 slightly more than 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 just after the turn of the century under the intermediate assumptions, and could occur as early as 1996 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. 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.

## SOCIAL SECURITY AMENDMENTS SINCE THE 1986 TRUSTEES REPORT

Public Law 99-272, the "Consolidated Omnibus Budget Reconciliation Act of 1985," was enacted April 7, 1986 and contained several provisions that have an impact on the Federal Hospital Insurance Trust Fund. The major changes include:

- (1) The Secretary of Health and Human Services (HHS) is required to provide an increase of  $1/2$  percent in the prospective payment rates during the last 5 months of fiscal year 1986 for the Federal portion of the prospective payment and the last 5 months of the cost reporting period beginning in fiscal year 1986 for the hospital-specific portion of the prospective payment. The applicable percentage increase for hospitals exempt from prospective payment will be  $5/24$  of one percent for cost reporting periods beginning in fiscal year 1986. In fiscal years 1987 and 1988, the applicable percentage increase can be no greater than the increase in the hospital market basket. The effective date is May 1, 1986, for hospitals with cost reporting years beginning October 1. For all other hospitals, the effective date is the eighth month of their cost reporting periods.
- (2) The indirect teaching adjustment factor in the hospital prospective payment formula is reduced from 11.59 percent to 8.1 percent for hospital discharges occurring during the period May 1, 1986 to September 30, 1988, and to 8.7 percent for discharges occurring after September 30, 1988. The statute includes a specific mathematical formula so that the adjustment is applied on a curvilinear rather than a linear basis. The effective date is May 1, 1986.

- (3) For inpatient hospital services, return on equity capital payments are phased out over three years, eliminating all payments by fiscal year 1990. The rate of return for skilled nursing and other facilities is reduced to the interest rate paid on the HI trust fund. For inpatient hospital services, the modification applies to cost reporting periods beginning on or after October 1, 1986. For skilled nursing and other facilities, the change applies to cost reporting periods beginning on or after October 1, 1985.
- (4) The sunset provision for hospice care is repealed. In addition, the routine home care daily rate of payment is set at \$63.17 per day, and the daily rate of payment for other services is increased by \$10.00. The repeal of the sunset provision is effective upon enactment. The daily payment rate for routine home care is effective April 1, 1986; the increase in the daily payment rate for other services is effective July 1, 1985.
- (5) Skilled Nursing Facilities (SNFs) providing less than 1500 days of care per year have the option of being paid a prospective rate set at 105 percent of the regional mean for all SNFs in the region. This change is effective for cost reporting periods beginning on or after October 1, 1986.

- (6) Medicare coverage is extended to virtually all State and local employees hired after December 31, 1985 on a mandatory basis. Coverage is effective for services performed after December 31, 1985.
- (7) Medicare is made secondary payor for all workers age 65 and over and their spouses who elect to be covered by employment-based health insurance through an employer with 20 or more employees. This is effective May 1, 1986.
- (8) Reimbursement for graduate medical education will be based on hospital-specific per resident amounts. Approved full-time equivalent (FTE) amounts will be derived from the first prospective payment system year cost reports and updated to 1985-86 for those hospitals not on a July 1 cost-reporting year. For the first cost-reporting period on or after July 1, 1985, the updated FTE amount is increased by one percent; subsequent periods will be increased by changes in the CPI. This change is effective for cost-reporting periods beginning on or after July 1, 1985.
- (9) The Chief Actuary of the Health Care Financing Administration is permitted to comment on the economic assumptions underlying the Annual Report of the Board of Trustees. This change is effective upon enactment.

- (10) Other provisions which revised Title XVIII but which did not have a major financial impact on the program include a one year extension of the Prospective Payment System (PPS) transition; payments for hospitals which serve a disproportionate share of low income patients; and limiting the penalty for late enrollment for those uninsured aged who voluntarily enroll in Part A.

Public Law 99-509, the "Omnibus Budget Reconciliation Act of 1986," was enacted October 21, 1986 and contained several provisions that have an impact on the Federal Hospital Insurance Trust Fund. The major changes include:

- (1) For calendar year 1987, the inpatient hospital deductible is set at \$520. For future years, the deductible will be indexed annually by the applicable percentage increase used for the prospective payment rate, adjusted to reflect changes in real case mix. Regulations to update the inpatient hospital deductible and all coinsurance amounts must be issued between September 1 and September 15 in the year preceding the year they will apply. This change is effective January 1, 1987.
- (2) The payment rates for hospitals on prospective payment and the target rate-of-increase limits for hospitals exempt from prospective payment are increased by 1.15 percent for fiscal year 1987 and will be equal to the market basket index minus 2 percent for fiscal year 1988. For fiscal year 1988, the Secretary of Health and Human Services is required to inform the Congress by April 1, 1987 of his initial estimate of the update



factor; thereafter, his estimate is due March 1 of the preceding fiscal year. The rate of increase applies to cost reporting periods beginning October 1, 1986.

- (3) There is an aggregate reduction of capital-related payments to hospitals under prospective payment. Payments will be reduced by 3.5 percent for portions of cost reporting periods occurring in fiscal year 1987, followed by 7 percent in fiscal year 1988, and 10 percent in 1989. Sole community hospitals are excluded from the reductions in capital-related costs. This change is effective October 1, 1986.
- (4) Periodic Interim Payment (PIP) is eliminated for inpatient services in hospitals under prospective payment with the following exclusions:
- a hospital whose intermediary fails to demonstrate compliance with the prompt payment requirements in (5), below;
  - a hospital that has a disproportionate share adjustment of at least 5.1 percent during fiscal year 1987,
  - a rural hospital with fewer than 100 beds, paid on a PIP basis as of June 30, 1987, that continues to meet PIP requirements,
  - hospitals reimbursed under a State hospital reimbursement system if PIP is an integral part of the system,
  - extended care services,
  - home health services, and
  - hospice care.

The elimination of the Periodic Interim Payment will apply to claims received on or after July 1, 1987.

- (5) Prompt payment provisions requiring intermediaries to pay at least 95 percent of all "clean" non-PIP claims by a given number of calendar days after receipt are effective November 1, 1986.
- (6) Medicare is made secondary payor for all disabled Medicare beneficiaries who elect to be covered by employment-based health insurance as a current employee (or family member of such employee) of a large employer (at least 100 employees). Coverage is effective from January 1, 1987 through December 31, 1991.
- (7) Other provisions which revised Title XVIII but which did not have a major financial impact on the program include the repeal of the 2-for-1 conversion requirement for certain Health Maintenance Organizations (HMOs); clarifying direct costs of graduate medical education; limitation of payment for home health services; standards for organ procurement agencies; payment for nurse anesthetists; and coverage of hospitals in Puerto Rico under a Prospective Payment System (PPS).

## 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 major sources of receipts of the trust fund are (1) amounts appropriated to it under permanent appropriation on the basis of contributions paid by workers and their employers, and by individuals with self-employment income, in work covered by the hospital insurance program and (2) amounts deposited in it representing contributions paid by workers employed by State and local Governments and by such employers with respect to work covered by the program. The coverage of the hospital insurance program includes workers covered under the old-age, survivors, and disability insurance 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. Cash tips, covered as wages beginning in 1966 under the 1965 amendments, are an exception. Employees pay contributions with respect to cash tips but, prior to 1978, employers did not. Since 1978, under the 1977 amendments, employers have been required to pay 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 1988 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 1966-87 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.

Except for amounts received under State agreements (to effectuate coverage under the program for State and local Government employees) and deposited directly in the trust fund, 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 hospital insurance contributions, old-age, survivors, and disability insurance 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 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 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.

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, as the actual experience develops and is analyzed.

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.

The Social Security Act authorizes 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. The timing and amounts of the loans are largely at the discretion of the Managing Trustee, although no loans can be made after 1987. Loans may not be made from a trust fund if its assets (excluding any amounts borrowed) represent less than 10 percent of its current annual rate of expenditures.

The law also specifies that interest on borrowed amounts will be paid monthly at a rate "equal to the rate which the lending trust fund would earn on the amount involved if the loan were an investment."

In this report, the assets of a trust fund include any amounts owed to other trust funds. The assets of a trust fund to which amounts are owed do not include such amounts. This procedure is followed because borrowed amounts are available for the payment of benefits or other obligations of the borrowing fund, while such amounts are not readily available to the lending fund.

At the end of each year through 1988, if the combined assets of the OASI and DI trust funds exceed 15 percent of the estimated outgo in the next year, such excess over 15 percent must be used to repay any amounts owed to the HI trust fund. The same rule applies to loans from the OASI and DI trust funds to the HI trust fund, although no such loans are anticipated. In any case, all interfund loans must be completely repaid before 1990.

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

| Calendar<br>Years                 | Maximum taxable<br>amount of<br>annual earnings | Contribution rate<br>(Percent of taxable earnings) |                   |
|-----------------------------------|---|--|-------------------|
|                                   |   | Employees and<br>employers, each                   | Self-<br>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              |
| Changes scheduled in present law: |   |  |                   |
| 1988 & later                      | Subject to<br>automatic<br>increase             | 1.45   | 2.90              |

## SUMMARY OF THE OPERATIONS OF THE TRUST FUND, FISCAL YEAR 1986

A statement of the income and disbursements of the Federal Hospital Insurance Trust Fund in fiscal year 1986, 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 \$21,277 million on September 30, 1985. During fiscal year 1986, total receipts amounted to \$67,056 million,<sup>1/</sup> and total disbursements were \$49,685 million. The assets of the trust fund thus increased \$17,370 million during the year to a total of \$38,648 million on September 30, 1986.

Included in total receipts during fiscal year 1986 were \$47,845 million representing contributions appropriated to the trust fund and \$5,320 million 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, \$145 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.

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<sup>1/</sup> Includes a loan repayment of \$10,613 million from the Federal Old-Age and Survivors Insurance Trust Fund.

Net contributions amounted to \$53,020 million, representing an increase of 14.0 percent over the amount of \$46,490 million 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 \$37,800 to \$39,600 and from \$39,600 to \$42,000 that became effective January 1, 1985, and January 1, 1986 respectively; and (3) the two increases in the combined tax rate from 2.6 percent to 2.7 percent and from 2.7 percent to 2.9 percent effective January 1, 1985, and January 1, 1986, respectively.

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 1986 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 \$321 million from the railroad retirement account to the hospital insurance trust fund would place this fund in the same position, as of September 30, 1985, 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 \$43 million, was transferred to the trust fund in June 1986.

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, 1986 with \$91 million for calendar year 1986 taxes on wage credits, and was debited \$805 million due to the 1985 quinquennial adjustment to the lump sum amount transferred in 1983 for costs arising from pre-1957 deemed wage credits.

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 1986 amounted to \$566 million, consisting of \$573 million for benefit payments, \$8 million for administrative expenses, and -\$15 million for interest on adjustments to costs in prior fiscal years.

The remaining \$3,167 million of receipts consisted almost entirely of interest on the investments of the trust fund and interest on interfund borrowing.

The final repayment of principal and interest of the interfund loan to the old-age and survivors insurance trust fund from the hospital insurance trust fund is shown in table 2.

Of the \$49,685 million in total disbursements, \$49,018 million represented benefits paid directly from the trust fund for health services covered under Title XVIII of the Social Security Act. Benefit payments increased 2.5 percent in fiscal year 1986 over the corresponding amount of \$47,841 million paid during the preceding 12 months.

The remaining \$667 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 affected 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 1986 with the estimates presented in the 1985 and 1986 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 1986 reflects the aforementioned type of adjustments to contributions for prior fiscal years. On the other hand, the "actual" amount of contributions for fiscal year 1986 does not reflect adjustments to contributions for fiscal year 1986 that were to be made after September 30, 1986.

The assets of the hospital insurance trust fund at the end of fiscal year 1985 totaled \$21,277 million, consisting of \$21,131 million in the form of obligations and an undisbursed balance of \$146 million. The assets of the hospital insurance trust

fund at the end of fiscal year 1986 totaled \$38,648 million, consisting of \$38,314 million in the form of obligations of the U.S. Government or of federally-sponsored agency obligations and an undisbursed balance of \$334 million. Table 4 shows the total assets of the fund and their distribution at the end of fiscal years 1985 and 1986.

New securities at a total par value of \$87,573 million 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 \$70,409 million. Thus, the net increase in the par value of the investments held by the fund during fiscal year 1986 amounted to \$17,164 million.

The effective annual rate of interest earned by the assets of the hospital insurance trust fund during the 12 months ending on June 30, 1986, was 11.0 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 1986 was 8.375 percent, payable semiannually.



TABLE 2.—STATEMENT OF OPERATIONS OF THE HOSPITAL INSURANCE TRUST FUND  
DURING FISCAL YEAR 1986  
(In thousands of dollars)

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|   |                   |
|---|-------------------|
| Total assets of the trust fund, beginning of period | \$21,277,241      |
| Receipts:   |                   |
| Appropriation of employment taxes                   | \$47,845,171      |
| Refunds of employment taxes                         | (145,300)         |
| Deposits arising from State agreements              | 5,320,057         |
| Interest on investments:                            |                   |
| Collected   | 2,764,489         |
| Paid to general fund-normalized tax crediting       | 0                 |
| Amortization of premium and discount net            | 18,267            |
| Other   | 27                |
| Interest on interfund borrowing                     | 382,935           |
| Premiums collected from voluntary participants      | 39,567            |
| Transfer from railroad retirement account           | 321,100           |
| Transitional uninsured coverage                     | 566,000           |
| Adjustment for pre-1957 military service credits    | (805,000)         |
| Military service credits of 1986                    | 91,000            |
| Interest on reimbursements, SSA 1/                  | (387)             |
| Interest on reimbursements HCFA 1/                  | 1,171             |
| Interest on reimbursements, railroad                | 43,291            |
| Total receipts                                      | \$56,442,387      |
| Interfund loan transfer 1/                          | <u>10,613,270</u> |
| Expenditures:                                       |                   |
| Benefit payments                                    | 49,017,992        |
| Administrative expenses:                            |                   |
| Treasury administrative expenses                    | 29,589            |
| Salaries and expenses, SSA                          | 290,511           |
| Salaries and expenses, HCFA 2/                      | 341,418           |
| Salaries and expenses, Office of Secretary          | 8,629             |
| Construction  | 8,464             |
| Professional Standard Review Organization           | 462               |
| Reimbursement of SSA expenses 3/                    | 0                 |
| Reimbursement of HCFA expenses 3/                   | (15,139)          |
| Payment Assessment Committee                        | 2,354             |
| Public Health Service                               | 893               |
| Other   | 1                 |
| Total expenditures                                  | <u>49,685,172</u> |
| Total assets of the trust fund, end of period       | \$38,647,727      |

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1/ A positive figure represents a transfer to 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.

3/ A positive figure represents a transfer from the hospital insurance trust fund to the other trust funds. A negative figure represents a transfer to the hospital insurance trust fund from the other trust funds.

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

TABLE 3.--COMPARISON OF ACTUAL AND ESTIMATED OPERATIONS OF THE  
HOSPITAL INSURANCE TRUST FUND, FISCAL YEAR 1986  
(Dollar amounts in millions)

| Item              | Actual<br>Amount | Comparison of actual experience with estimates<br>for fiscal year 1986 published in-- |  |                     |  |
|-------------------|------------------|---|--|---------------------|--|
|                   |                  | 1986 Report 1/  |  | 1985 Report 1/      |  |
|                   |                  | Estimated<br>Amount   | Actual as<br>percentage<br>of estimate | Estimated<br>Amount | Actual as<br>percentage<br>of estimate |
| Net contributions | \$53,020         | \$52,674  | 101                                    | \$52,767            | 100                                    |
| Benefit payments  | \$49,018         | \$48,591  | 101                                    | \$48,753            | 101                                    |

1/ Alternative II-B.

TABLE 4.—ASSETS OF THE HOSPITAL INSURANCE TRUST FUND BY TYPE  
AT THE END OF FISCAL YEARS 1985 AND 1986 <sup>1/</sup>

|  | September 30, 1985  | September 30, 1986  |
|--|---------------------|---------------------|
| Investments in public-debt obligations sold only<br>to this fund (special issues): |                     |                     |
| Certificates of indebtedness:  |                     |                     |
| 10 3/8-percent, 1986.....  | \$822,475,000.00    | -----               |
| 10 5/8-percent, 1986.....  | 1,248,147,000.00    | -----               |
| 7 1/4-percent, 1987.....   | -----               | \$837,712,000.00    |
| 7 3/4-percent, 1987.....   | -----               | 80,040,000.00       |
| Bonds:   |                     |                     |
| 8 1/4-percent, 1993.....   | 622,286,000.00      | 622,286,000.00      |
| 8 3/8-percent, 1987.....   | -----               | 905,522,000.00      |
| 8 3/8-percent, 1988.....   | -----               | 1,231,586,000.00    |
| 8 3/8-percent, 1989.....   | -----               | 1,231,586,000.00    |
| 8 3/8-percent, 1990.....   | -----               | 1,231,586,000.00    |
| 8 3/8-percent, 1991.....   | -----               | 1,231,586,000.00    |
| 8 3/8-percent, 1992.....   | -----               | 1,231,586,000.00    |
| 8 3/8-percent, 1993.....   | -----               | 1,162,901,000.00    |
| 8 3/8-percent, 1994.....   | -----               | 1,059,024,000.00    |
| 8 3/8-percent, 1995.....   | -----               | 1,059,024,000.00    |
| 8 3/8-percent, 1996.....   | -----               | 1,059,024,000.00    |
| 8 3/8-percent, 1997.....   | -----               | 1,059,023,000.00    |
| 8 3/8-percent, 1998.....   | -----               | 1,231,586,000.00    |
| 8 3/8-percent, 1999.....   | -----               | 1,231,586,000.00    |
| 8 3/8-percent, 2000.....   | -----               | 1,231,586,000.00    |
| 8 3/8-percent, 2001.....   | -----               | 2,509,152,000.00    |
| 8 3/4-percent, 1993.....   | 123,297,000.00      | 123,297,000.00      |
| 8 3/4-percent, 1994.....   | 849,460,000.00      | 849,460,000.00      |
| 9 3/4-percent, 1993.....   | 130,210,000.00      | 130,210,000.00      |
| 9 3/4-percent, 1994.....   | 130,210,000.00      | 130,210,000.00      |
| 9 3/4-percent, 1995.....   | 979,670,000.00      | 979,670,000.00      |
| 10 3/8-percent, 1987.....  | 427,022,000.00      | 83,104,000.00       |
| 10 3/8-percent, 1988.....  | 427,022,000.00      | 427,022,000.00      |
| 10 3/8-percent, 1989.....  | 427,022,000.00      | 427,022,000.00      |
| 10 3/8-percent, 1990.....  | 427,022,000.00      | 427,022,000.00      |
| 10 3/8-percent, 1991.....  | 427,023,000.00      | 427,023,000.00      |
| 10 3/8-percent, 1992.....  | 427,023,000.00      | 427,023,000.00      |
| 10 3/8-percent, 1998.....  | 427,022,000.00      | 427,022,000.00      |
| 10 3/8-percent, 1999.....  | 427,022,000.00      | 427,022,000.00      |
| 10 3/8-percent, 2000.....  | 1,277,566,000.00    | 1,277,566,000.00    |
| 10 3/4-percent, 1987.....  | 588,410,000.00      | 588,410,000.00      |
| 10 3/4-percent, 1988.....  | 588,410,000.00      | 588,410,000.00      |
| 10 3/4-percent, 1989.....  | 588,410,000.00      | 588,410,000.00      |
| 10 3/4-percent, 1990.....  | 588,410,000.00      | 588,410,000.00      |
| 10 3/4-percent, 1991.....  | 588,410,000.00      | 588,410,000.00      |
| 10 3/4-percent, 1992.....  | 588,410,000.00      | 588,410,000.00      |
| 10 3/4-percent, 1998.....  | 588,410,000.00      | 588,410,000.00      |
| 13 -percent, 1993.....   | 197,606,000.00      | 197,606,000.00      |
| 13 -percent, 1994.....   | 197,606,000.00      | 197,606,000.00      |
| 13 -percent, 1995.....   | 197,606,000.00      | 197,606,000.00      |
| 13 -percent, 1996.....   | 1,177,276,000.00    | 1,177,276,000.00    |
| 13 1/4-percent, 1993.....  | 272,853,000.00      | 272,853,000.00      |
| 13 1/4-percent, 1994.....  | 272,853,000.00      | 272,853,000.00      |
| 13 1/4-percent, 1995.....  | 272,853,000.00      | 272,853,000.00      |
| 13 1/4-percent, 1996.....  | 272,853,000.00      | 272,853,000.00      |
| 13 1/4-percent, 1997.....  | 1,450,129,000.00    | 1,450,129,000.00    |
| 13 3/4-percent, 1986.....  | 5,652,000.00        | -----               |
| 13 3/4-percent, 1987.....  | 262,135,000.00      | 262,135,000.00      |
| 13 3/4-percent, 1988.....  | 262,135,000.00      | 262,135,000.00      |
| 13 3/4-percent, 1989.....  | 262,135,000.00      | 262,135,000.00      |
| 13 3/4-percent, 1990.....  | 262,135,000.00      | 262,135,000.00      |
| 13 3/4-percent, 1991.....  | 262,134,000.00      | 262,134,000.00      |
| 13 3/4-percent, 1992.....  | 262,134,000.00      | 262,134,000.00      |
| 13 3/4-percent, 1998.....  | 262,134,000.00      | 262,134,000.00      |
| 13 3/4-percent, 1999.....  | 850,544,000.00      | 850,544,000.00      |
| Total public-debt obligations<br>sold only to this fund<br>(special issues).....   | \$20,721,142,000.00 | \$37,885,060,000.00 |
| Investments in federally-sponsored agency<br>obligations:                          |                     |                     |
| Participation certificates:  |                     |                     |
| Federal Assets Liquidation Trust-  |                     |                     |
| Government National Mortgage Association:  |                     |                     |
| 5.10-percent, 1987.....  | 50,000,000.00       | 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).....  | (44,746,342.50)     | (26,479,157.10)     |
| Total investments.....   | \$21,131,395,657.50 | \$38,313,580,842.90 |
| Undisbursed balance.....   | 145,845,581.01      | 334,145,911.98      |
| Total assets.....  | \$21,277,241,238.51 | \$38,647,726,754.88 |

<sup>1/</sup> 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, 1986 TO DECEMBER 31, 1989

The expected operations of the trust fund during fiscal years 1987-89 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 II-B, which are presented in detail in Appendix A. The economic assumptions underlying these two alternative sets of assumptions are described in detail in the 1987 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds.

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 1987.

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

The investment of new assets received during fiscal years 1987-89 is assumed to be in the form of special public-debt obligations bearing interest rates ranging from 7.125 percent to 8.25 percent, payable semiannually. The average effective annual rate of interest on the assets held by the hospital insurance trust fund on September 30, 1986, was 9.9 percent.

Disbursements for benefits are projected to increase in fiscal years 1987-89, 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 1988 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 year 1988, the prospective payment rates will be increased by the hospital input price index minus two percent from the levels determined for fiscal year 1987 (as required by Section 9302 of Public Law 99-509).

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 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. 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 1989.

TABLE 5.--OPERATIONS OF THE HOSPITAL INSURANCE TRUST FUND DURING FISCAL YEARS 1967-89  
(In millions)

| Fiscal<br>Year 1/ | Payroll<br>taxes | Income  |  |  |  |   | Disbursements   |                         |                                    | Trust Fund                  |  |                         |                           |
|-------------------|------------------|---|--|--|--|---|-----------------|-------------------------|------------------------------------|-----------------------------|--|-------------------------|---------------------------|
|                   |                  | Transfers from<br>railroad<br>retirement<br>account | Reimburse-<br>ment for<br>uninsured<br>persons | Premiums<br>from<br>voluntary<br>enrollees | Payments<br>for military<br>wage credits | Interest on<br>investments<br>and other income 2/ | Total<br>income | Benefits<br>payments 3/ | Adminis-<br>trative<br>expenses 4/ | Total<br>disburse-<br>ments | Interfund<br>borrowing<br>transfers 5/ | Net<br>increase<br>fund | Fund<br>at end<br>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                    |
| Alternative II-A  |                  |   |  |  |  |   |                 |                         |                                    |                             |  |                         |                           |
| 1987              | 57,413           | 360   | 447  | 47   | 93                                       | 4,030   | 62,390          | 48,164                  | 836                                | 49,000                      |  | 13,390                  | 52,038                    |
| 1988              | 61,115           | 353   | 475  | 50   | 93                                       | 4,978   | 67,064          | 53,031                  | 877                                | 53,908                      |  | 13,156                  | 65,194                    |
| 1989              | 64,961           | 349   | 457  | 55   | 95                                       | 5,828   | 71,745          | 59,156                  | 943                                | 60,099                      |  | 11,646                  | 76,840                    |
| Alternative II-B  |                  |   |  |  |  |   |                 |                         |                                    |                             |  |                         |                           |
| 1987              | 57,112           | 360   | 447  | 47   | 93                                       | 4,027   | 62,086          | 48,164                  | 836                                | 49,000                      |  | 13,086                  | 51,734                    |
| 1988              | 60,544           | 351   | 475  | 50   | 93                                       | 4,971   | 66,484          | 53,031                  | 878                                | 53,909                      |  | 12,575                  | 64,309                    |
| 1989              | 64,094           | 346   | 458  | 55   | 95                                       | 5,829   | 70,877          | 59,259                  | 943                                | 60,202                      |  | 10,675                  | 74,984                    |

39

1/ For 1967 through 1976, fiscal years cover the interval from July 1 through June 30; the three-month interval from July 1, 1976, through September 30, 1976, is labeled "T.Q.," the transition quarter; fiscal years 1977-84 cover the interval from October 1 through September 30.

2/ Other income includes recoveries of amounts reimbursed from the trust fund which are not obligations of the trust fund and other 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 loan to the OASI trust fund would still be an asset of the HI trust fund. However, since these assets are not immediately available for payment of HI benefits, they are subtracted out of the HI fund in the year the loan is made. A negative amount is a loan to the OASI trust fund. Repayments of principal are added back into the fund in the year repayment is made. A positive amount is a repayment of 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 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 transfer of -\$805 million as provided for by Section 151 of P.L. 98-21.

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

TABLE 6.—OPERATIONS OF THE HOSPITAL INSURANCE TRUST FUND DURING CALENDAR YEARS 1966-89  
(In millions)

| Calendar Year    | Payroll taxes | Income                                     |                                     |                                   |   |   | Disbursements |                      |                            |                     | Trust Fund                       |                   |                     |
|------------------|---------------|--|-------------------------------------|-----------------------------------|---|---|---------------|----------------------|----------------------------|---------------------|----------------------------------|-------------------|---------------------|
|                  |               | Transfers from railroad retirement account | Reimbursement for uninsured persons | Premiums from voluntary enrollees | Reimbursement for military wage credits | Interest on investments and other income 1/ | Total income  | Benefits payments 2/ | Administrative expenses 3/ | Total disbursements | Interfund borrowing transfers 4/ | Net increase 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                                     | 2,058                                       | 38,034        | 35,631               | 513                        | 36,144              | \$-12,437                        | -10,583           | 8,164               |
| 1983             | 37,259        | 358  | 878                                 | 27                                | 3,456 8/                                | 2,557                                       | 44,535        | 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              |

Projection:

Alternative II-A

|      |        |     |     |    |    |       |        |        |     |        |  |        |        |
|------|--------|-----|-----|----|----|-------|--------|--------|-----|--------|--|--------|--------|
| 1987 | 58,350 | 360 | 447 | 49 | 93 | 4,423 | 63,722 | 48,303 | 839 | 49,142 |  | 14,580 | 54,537 |
| 1988 | 61,687 | 353 | 475 | 50 | 93 | 5,356 | 68,014 | 55,074 | 890 | 55,964 |  | 12,050 | 66,587 |
| 1989 | 65,892 | 349 | 457 | 56 | 95 | 6,142 | 72,991 | 60,496 | 961 | 61,457 |  | 11,534 | 78,121 |

Alternative II-B

|      |        |     |     |    |    |       |        |        |     |        |  |        |        |
|------|--------|-----|-----|----|----|-------|--------|--------|-----|--------|--|--------|--------|
| 1987 | 57,943 | 360 | 447 | 49 | 93 | 4,415 | 63,307 | 48,303 | 839 | 49,142 |  | 14,165 | 54,122 |
| 1988 | 61,076 | 351 | 475 | 50 | 93 | 5,339 | 67,384 | 55,087 | 891 | 55,978 |  | 11,406 | 65,528 |
| 1989 | 64,917 | 346 | 458 | 56 | 95 | 6,116 | 71,988 | 60,659 | 960 | 61,619 |  | 10,369 | 75,897 |

1/ Other income includes recoveries of amounts reimbursed from the trust fund which are not obligations of the trust fund and other 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 loan to the OASI trust fund would still be an asset of the HI trust fund. However, since these assets are not immediately available for payment of HI benefits, they are subtracted out of the HI fund in the year the loan is made. A negative amount is a loan to the OASI trust fund. Repayments of principal are added back into the fund in the year repayment is made. A positive amount is a repayment of 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 five-quarter period covering the transition quarter and fiscal year 1977.

7/ Includes \$2 million in reimbursement from 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/ Includes the lump sum general revenue transfer of \$3,456 million as provided for by Section 151 of P.L. 98-21.

9/ Includes the lump sum general revenue transfer of -\$805 million as provided for by Section 151 of P.L. 98-21.

NOTE: Totals do not necessarily equal the sum 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)

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| <u>Calendar Year</u> | <u>Ratio</u> |
|----------------------|--------------|
| 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           |
| Projection:          |              |
| Alternative II-A     |              |
| 1987                 | 81           |
| 1988                 | 97           |
| 1989                 | 108          |
| Alternative II-B     |              |
| 1987                 | 81           |
| 1988                 | 97           |
| 1989                 | 106          |

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## ACTUARIAL STATUS OF THE TRUST FUND

The Board of Trustees has adopted the general financing principle that annual income to the hospital insurance program should be at least equal to annual outlays of the program plus an amount 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. In addition, the fund should begin to build a reserve to prepare for the shift in the demographic makeup of the population which occurs before the middle of the next century.

In keeping with the Board's principle, the total cost of the program for projected years is the sum of (1) expenditures under the program and (2) an allowance for maintaining the fund at the level of at least a half year's disbursements. 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 rates 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 allowance for maintaining the trust fund balance at the level of at least a half year's outgo is after accounting for the fund's interest earnings. At the beginning of 1987, the trust fund balance was above the minimum desired level.

The historical costs of the hospital insurance program, expressed as percentages of taxable payroll, are shown in table 8. The projected costs of the program under alternatives II-A and II-B, expressed as percentages of taxable payroll, and the tax rates scheduled under current law for selected years over the 75-year period 1987-2061, are shown in table 9. The ratio of expenditures to taxable payroll has increased from 0.94 percent in 1967 to 2.58 percent in 1986, reflecting both the higher rate of increase in hospital costs than in earnings subject to hospital insurance taxes and the extension of hospital insurance benefits to disabled and end-stage renal disease beneficiaries. Further increases in this ratio 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.)

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 total 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 along with interest income will be sufficient to provide for benefits and administrative expenses for insured persons and 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 cost of the program, expressed as a percent of taxable payroll, for the same period. The actuarial balance under alternatives II-A and II-B for the 75-year period 1987-2011 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 4.91 percent of taxable payroll, composed of 4.92 percent for program expenditures and -0.01 percent for maintenance of the trust fund. The average cost of the program under alternative II-B is 5.20 percent of taxable payroll, composed of 5.20 percent for program expenditures and 0.00 percent for maintenance of the trust fund. A negative or zero average maintenance amount occurs because with the current tax rate scheduled in the law the trust fund builds up a reserve above the minimum desired level in the early projection years, and then draws upon that reserve to support program costs until the fund falls below the minimum desired level.

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 1986-2011 are summarized in table 11 for all four alternatives. Table 12 compares the actuarial balance for the 75-year period 1987-2061, 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, 1989, 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 1992 and then decline steadily until it is completely exhausted just 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. Under alternative III, the trust fund as a percent of a year's disbursements is projected to increase to a level of about 98 percent in 1989 and then decrease rapidly until the fund is exhausted in 1996. These projections do not reflect any reduction in disbursements due to proposed changes in regulations which were included in the 1988 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. 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. 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. 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 a percent 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 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 differential gradually decreases until the year 2036 when program cost increases, relative to taxable payroll, are approximately the same as under both sets of intermediate assumptions. Under alternative I, amounts for maintaining the fund at the minimum desired level are included only in the last 25-year projection period, since

current tax rates are sufficient to support the program and maintain the fund above the minimum desired level throughout the first 50 years of the projection period.

The 75-year actuarial balance of the hospital insurance program under alternative II-B, as seen in table 10, is -2.30 percent of taxable payroll. The corresponding actuarial balance as reported in the 1986 annual report was -3.02 percent of taxable payroll. The major reasons for the change in the 75-year actuarial balance are:

- (1) Change in valuation period: Deletion of 1986 and the addition of 2061 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 -0.07 percent.
- (2) Updating the projection base: The cost as a percent of payroll for 1986 was less than estimated in the 1986 annual report. The net effect of this change is +0.05 percent on the actuarial balance.
- (3) Legislation since the 1986 report: Two major legislative changes were enacted since the 1986 report. These are described in detail in the "Social Security Amendments Since the 1986 Trustees Report" section of this report. The net effect of these changes is +0.24 percent.



- (4) Economic and demographic assumptions: Changes in the economic and demographic assumptions described in Appendix A result in a +0.34 percent change on the actuarial balance. Projected outlays are lower than in the 1986 report because projected inflation rates in the Consumer Price Index (CPI), hourly earnings, and hourly wages are lower. However, the affect of lower hourly wages on contribution income is partly mitigated by the assumption that workers will work more hours per year and that the growth in the work force will be greater in the short term.
- (5) Hospital assumptions: Changes in the hospital assumptions described in Appendix A result in a +0.16 percent change on the actuarial balance. The primary factor contributing to the change is a lower non-labor hospital price assumption resulting from a rebasing of the hospital input price index.

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

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| <u>Calendar<br/>Year</u> | <u>Expenditures<br/>Under the Program</u> <u>1/</u> |
|--------------------------|---|
| 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 <u>2/</u>                                      |
| 1984                     | 2.63  |
| 1985                     | 2.65  |
| 1986                     | 2.58  |

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- 1/ Costs attributable to insured beneficiaries only. 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/ 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 .19 percent of taxable payroll.

NOTE: Taxable payroll is adjusted to take into account the lower contribution rates on self-employment income before 1984, on tips, and on multiple-employer "excess wages," as compared with the combined employer-employee rate.

TABLE 9.--COST AND TAX RATES OF THE HOSPITAL INSURANCE PROGRAM  
EXPRESSED AS A PERCENT OF TAXABLE PAYROLL

| Calendar<br>Year        | Expenditures<br>under the<br>program 1/ | Trust fund<br>maintenance 2/ | Total cost<br>of the<br>program 3/ | Tax rate<br>scheduled<br>in the law 4/ | Difference |
|-------------------------|---|------------------------------|------------------------------------|--|------------|
| <b>Alternative II-A</b> |   |                              |                                    |  |            |
| 1987                    | 2.55%                                   | 0.35%                        | 2.90%                              | 2.90%                                  | 0.00%      |
| 1988                    | 2.60                                    | 0.30                         | 2.90                               | 2.90                                   | 0.00       |
| 1989                    | 2.68                                    | 0.22                         | 2.90                               | 2.90                                   | 0.00       |
| 1990                    | 2.78                                    | 0.12                         | 2.90                               | 2.90                                   | 0.00       |
| 1995                    | 3.13                                    | -0.23                        | 2.90                               | 2.90                                   | 0.00       |
| 2000                    | 3.34                                    | -0.44                        | 2.90                               | 2.90                                   | 0.00       |
| 2005                    | 3.54                                    | 0.02                         | 3.56                               | 2.90                                   | -0.66      |
| 2010                    | 3.78                                    | 0.01                         | 3.79                               | 2.90                                   | -0.89      |
| 2015                    | 4.15                                    | 0.02                         | 4.17                               | 2.90                                   | -1.27      |
| 2020                    | 4.69                                    | 0.01                         | 4.70                               | 2.90                                   | -1.80      |
| 2025                    | 5.32                                    | 0.02                         | 5.34                               | 2.90                                   | -2.44      |
| 2030                    | 5.87                                    | 0.01                         | 5.88                               | 2.90                                   | -2.98      |
| 2035                    | 6.19                                    | 0.02                         | 6.21                               | 2.90                                   | -3.31      |
| 2040                    | 6.33                                    | 0.02                         | 6.35                               | 2.90                                   | -3.45      |
| 2045                    | 6.37                                    | 0.02                         | 6.39                               | 2.90                                   | -3.49      |
| 2050                    | 6.36                                    | 0.02                         | 6.38                               | 2.90                                   | -3.48      |
| 2055                    | 6.34                                    | 0.02                         | 6.36                               | 2.90                                   | -3.46      |
| 2060                    | 6.34                                    | 0.01                         | 6.35                               | 2.90                                   | -3.45      |
| <b>Averages:</b>        |   |                              |                                    |  |            |
| 1987-2011               | 3.26                                    | -0.05                        | 3.21                               | 2.90                                   | -0.31      |
| 2012-2036               | 5.15                                    | 0.01                         | 5.16                               | 2.90                                   | -2.26      |
| 2037-2061               | 6.35                                    | 0.01                         | 6.36                               | 2.90                                   | -3.46      |
| 1987-2061               | 4.92                                    | -0.01                        | 4.91                               | 2.90                                   | -2.01      |
| <b>Alternative II-B</b> |   |                              |                                    |  |            |
| 1987                    | 2.57                                    | 0.33                         | 2.90                               | 2.90                                   | 0.00       |
| 1988                    | 2.63                                    | 0.27                         | 2.90                               | 2.90                                   | 0.00       |
| 1989                    | 2.73                                    | 0.17                         | 2.90                               | 2.90                                   | 0.00       |
| 1990                    | 2.84                                    | 0.06                         | 2.90                               | 2.90                                   | 0.00       |
| 1995                    | 3.22                                    | -0.32                        | 2.90                               | 2.90                                   | 0.00       |
| 2000                    | 3.48                                    | 0.03                         | 3.51                               | 2.90                                   | -0.61      |
| 2005                    | 3.73                                    | 0.02                         | 3.75                               | 2.90                                   | -0.85      |
| 2010                    | 4.01                                    | 0.01                         | 4.02                               | 2.90                                   | -1.12      |
| 2015                    | 4.41                                    | 0.02                         | 4.43                               | 2.90                                   | -1.53      |
| 2020                    | 4.98                                    | 0.02                         | 5.00                               | 2.90                                   | -2.10      |
| 2025                    | 5.66                                    | 0.01                         | 5.67                               | 2.90                                   | -2.77      |
| 2030                    | 6.23                                    | 0.03                         | 6.26                               | 2.90                                   | -3.36      |
| 2035                    | 6.58                                    | 0.03                         | 6.61                               | 2.90                                   | -3.71      |
| 2040                    | 6.73                                    | 0.03                         | 6.76                               | 2.90                                   | -3.86      |
| 2045                    | 6.77                                    | 0.02                         | 6.79                               | 2.90                                   | -3.89      |
| 2050                    | 6.76                                    | 0.03                         | 6.79                               | 2.90                                   | -3.89      |
| 2055                    | 6.74                                    | 0.02                         | 6.76                               | 2.90                                   | -3.86      |
| 2060                    | 6.74                                    | 0.02                         | 6.76                               | 2.90                                   | -3.86      |
| <b>Averages:</b>        |   |                              |                                    |  |            |
| 1987-2011               | 3.39                                    | -0.05                        | 3.34                               | 2.90                                   | -0.44      |
| 2012-2036               | 5.47                                    | 0.02                         | 5.49                               | 2.90                                   | -2.59      |
| 2037-2061               | 6.75                                    | 0.02                         | 6.77                               | 2.90                                   | -3.87      |
| 1987-2061               | 5.20                                    | 0.00                         | 5.20                               | 2.90                                   | -2.30      |

- 1/ Costs attributable to insured beneficiaries only. 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/ Allowance for maintaining the trust fund balance at the level of at least a half-year's outgo after accounting for the offsetting affect of interest earnings.
- 3/ Totals do not necessarily equal the sum of rounded components.
- 4/ Rates for employees and employers combined.

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

TABLE 10.--SEVENTY-FIVE YEAR ACTUARIAL BALANCE OF THE HOSPITAL  
INSURANCE PROGRAM, EXPRESSED AS A PERCENT OF TAXABLE PAYROLL 1/

|   | Alternative<br><u>II-A</u> | Alternative<br><u>II-B</u> |
|---|----------------------------|----------------------------|
| Average contribution rate,<br>scheduled under present law .....                                 | 2.90%                      | 2.90%                      |
| Average cost of the program .....   |                            |                            |
| Expenditures for benefit payments<br>and administrative costs for<br>insured beneficiaries..... | 4.92                       | 5.20                       |
| Maintaining the trust fund at the<br>level of at least one-half year's<br>expenditures.....     | -0.01                      | 0.00                       |
| Total cost of the program <u>2/</u> ....  | 4.91                       | 5.20                       |
| Actuarial balance.....  | -2.01                      | -2.30                      |

1/ Average for the 75-year period 1987-2061.

2/ Totals do not necessarily equal sum of rounded components.

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

TABLE 11.--ESTIMATED OPERATIONS OF THE HOSPITAL INSURANCE TRUST FUND  
DURING CALENDAR YEARS 1986-2010, UNDER ALTERNATIVE SETS OF ASSUMPTIONS  
(Dollar amounts in billions)

| Calendar Year    | Total income | Total disbursements | Interfund borrowing transfers 1/ | Net increase in fund | Fund at end of year | Ratio of assets to disbursements (percent) |
|------------------|--------------|---------------------|----------------------------------|----------------------|---------------------|--|
| ALTERNATIVE I    |              |                     |                                  |                      |                     |  |
| 1986 3/          | \$59.3       | \$50.4              | \$10.6                           | \$19.5               | \$40.0              | 41   |
| 1987             | 63.9         | 49.1                |                                  | 14.8                 | 54.8                | 81   |
| 1988             | 68.5         | 55.9                |                                  | 12.6                 | 67.4                | 98   |
| 1989             | 73.7         | 60.8                |                                  | 12.9                 | 80.3                | 111  |
| 1990             | 79.0         | 66.1                |                                  | 12.9                 | 93.2                | 121  |
| 1991             | 84.1         | 71.1                |                                  | 13.0                 | 106.2               | 131  |
| 1992             | 89.0         | 75.7                |                                  | 13.3                 | 119.5               | 140  |
| 1993             | 93.7         | 80.2                |                                  | 13.5                 | 133.0               | 149  |
| 1994             | 98.4         | 84.7                |                                  | 13.7                 | 146.7               | 157  |
| 1995             | 103.3        | 89.3                |                                  | 14.0                 | 160.7               | 164  |
| 2000             | 135.7        | 116.0               |                                  | 19.8                 | 246.3               | 195  |
| 2005             | 179.0        | 148.2               |                                  | 30.8                 | 375.7               | 233  |
| 2010             | 233.6        | 187.5               |                                  | 46.1                 | 573.4               | 281  |
| ALTERNATIVE II-A |              |                     |                                  |                      |                     |  |
| 1986 3/          | 59.3         | 50.4                | 10.6                             | 19.5                 | 40.0                | 41   |
| 1987             | 63.7         | 49.1                |                                  | 14.6                 | 54.5                | 81   |
| 1988             | 68.0         | 56.0                |                                  | 12.1                 | 66.6                | 97   |
| 1989             | 73.0         | 61.5                |                                  | 11.5                 | 78.1                | 108  |
| 1990             | 78.2         | 67.8                |                                  | 10.4                 | 88.5                | 115  |
| 1991             | 83.3         | 74.1                |                                  | 9.2                  | 97.8                | 120  |
| 1992             | 88.4         | 80.5                |                                  | 7.8                  | 105.6               | 121  |
| 1993             | 93.2         | 87.2                |                                  | 6.1                  | 111.7               | 121  |
| 1994             | 98.2         | 94.2                |                                  | 4.0                  | 115.7               | 119  |
| 1995             | 103.2        | 101.6               |                                  | 1.6                  | 117.3               | 114  |
| 1996             | 108.5        | 109.1               |                                  | -0.6                 | 116.7               | 107  |
| 1997             | 114.1        | 116.9               |                                  | -2.8                 | 113.8               | 100  |
| 1998             | 120.0        | 125.3               |                                  | -5.3                 | 108.5               | 91   |
| 1999             | 126.2        | 134.3               |                                  | -8.1                 | 100.4               | 81   |
| 2000             | 132.6        | 144.0               |                                  | -11.4                | 89.0                | 70   |
| 2001             | 139.1        | 154.1               |                                  | -15.0                | 73.9                | 58   |
| 2002             | 145.7        | 164.9               |                                  | -19.2                | 54.8                | 45   |
| 2003             | 152.5        | 176.5               |                                  | -24.0                | 30.8                | 31   |
| 2004             | 159.5        | 188.8               |                                  | -29.3                | 1.5                 | 16   |
| 2005             | 166.7        | 201.9               |                                  | -35.3                | 4/                  | 1  |
| ALTERNATIVE II-B |              |                     |                                  |                      |                     |  |
| 1986 3/          | 59.3         | 50.4                | 10.6                             | 19.5                 | 40.0                | 41   |
| 1987             | 63.3         | 49.1                |                                  | 14.2                 | 54.1                | 81   |
| 1988             | 67.4         | 56.0                |                                  | 11.4                 | 65.5                | 97   |
| 1989             | 72.0         | 61.6                |                                  | 10.4                 | 75.9                | 106  |
| 1990             | 77.3         | 68.4                |                                  | 8.9                  | 84.8                | 111  |
| 1991             | 82.7         | 75.4                |                                  | 7.4                  | 92.1                | 112  |
| 1992             | 88.3         | 82.6                |                                  | 5.7                  | 97.8                | 112  |
| 1993             | 93.7         | 90.1                |                                  | 3.7                  | 101.5               | 109  |
| 1994             | 99.3         | 98.0                |                                  | 1.2                  | 102.7               | 103  |
| 1995             | 104.9        | 106.5               |                                  | -1.6                 | 101.1               | 96   |
| 1996             | 110.7        | 115.2               |                                  | -4.5                 | 96.6                | 88   |
| 1997             | 116.7        | 124.3               |                                  | -7.7                 | 88.9                | 78   |
| 1998             | 122.8        | 134.2               |                                  | -11.4                | 77.5                | 66   |
| 1999             | 129.2        | 144.9               |                                  | -15.7                | 61.8                | 53   |
| 2000             | 135.8        | 156.4               |                                  | -20.6                | 41.2                | 40   |
| 2001             | 142.5        | 168.5               |                                  | -26.1                | 15.2                | 24   |
| 2002             | 149.3        | 181.4               |                                  | -32.1                | 5/                  | 8  |
| ALTERNATIVE III  |              |                     |                                  |                      |                     |  |
| 1986 3/          | 59.3         | 50.4                | 10.6                             | 19.5                 | 40.0                | 41   |
| 1987             | 62.0         | 49.1                |                                  | 12.9                 | 52.8                | 81   |
| 1988             | 64.5         | 56.1                |                                  | 8.4                  | 61.2                | 94   |
| 1989             | 68.9         | 62.6                |                                  | 6.4                  | 67.6                | 98   |
| 1990             | 72.3         | 69.8                |                                  | 2.6                  | 70.2                | 97   |
| 1991             | 77.4         | 78.4                |                                  | -1.0                 | 69.1                | 90   |
| 1992             | 82.4         | 88.0                |                                  | -5.6                 | 63.6                | 79   |
| 1993             | 87.5         | 98.5                |                                  | -11.1                | 52.5                | 65   |
| 1994             | 92.4         | 110.1               |                                  | -17.7                | 34.9                | 48   |
| 1995             | 97.2         | 122.7               |                                  | -25.5                | 9.4                 | 28   |
| 1996             | 101.9        | 136.1               |                                  | -34.2                | 6/                  | 7  |

1/ A loan of \$12.4 billion to the OASI trust fund was made in 1982. This loan was still an asset of the HI trust fund; however, since these assets were not immediately available for payment of HI benefits, they were subtracted from the HI fund balance. The positive amounts shown represent repayments of principal to the HI trust fund.

2/ Ratio of assets in the trust fund at the beginning of the year to disbursements during the year.

3/ Figures for 1986 represent actual experience.

4/ Trust fund depleted in calendar year 2005.

5/ Trust fund depleted in calendar year 2002.

6/ Trust fund depleted in calendar year 1996.

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

TABLE 12.--SEVENTY-FIVE YEAR ACTUARIAL BALANCE OF THE  
HOSPITAL INSURANCE PROGRAM UNDER ALTERNATIVE  
SETS OF ASSUMPTIONS

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|                                       | <u>I</u> | <u>Alternative</u> |             | <u>III</u> |
|---------------------------------------|----------|--------------------|-------------|------------|
|                                       |          | <u>II-A</u>        | <u>II-B</u> |            |
| 1987-2011:                            |          |                    |             |            |
| Average contribution rate <u>1/</u>   | 2.90%    | 2.90%              | 2.90%       | 2.90%      |
| Average cost of the program <u>2/</u> | 2.71     | 3.21               | 3.34        | 4.41       |
| Actuarial balance                     | +0.19    | -0.31              | -0.44       | -1.51      |
| 2012-2036:                            |          |                    |             |            |
| Average contribution rate <u>1/</u>   | 2.90     | 2.90               | 2.90        | 2.90       |
| Average cost of the program <u>2/</u> | 2.97     | 5.16               | 5.49        | 10.47      |
| Actuarial balance                     | -0.07    | -2.26              | -2.59       | -7.57      |
| 2037-2061:                            |          |                    |             |            |
| Average contribution rate <u>1/</u>   | 2.90     | 2.90               | 2.90        | 2.90       |
| Average cost of the program <u>2/</u> | 3.43     | 6.36               | 6.77        | 13.78      |
| Actuarial balance                     | -0.53    | -3.46              | -3.87       | -10.88     |
| 1987-2061:                            |          |                    |             |            |
| Average contribution rate <u>1/</u>   | 2.90     | 2.90               | 2.90        | 2.90       |
| Average cost of the program <u>2/</u> | 3.04     | 4.91               | 5.20        | 9.55       |
| Actuarial balance                     | -0.14    | -2.01              | -2.30       | -6.65      |

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1/ As scheduled under present law.

2/ Expressed as a percent of taxable payroll. Includes amounts for trust fund maintenance. Under alternative I, maintenance amounts are included only in the last 25-year projection period.

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

## CONCLUSION

The balance in the Federal Hospital Insurance Trust Fund at the beginning of 1987 was at the level of 81 percent of estimated outgo for calendar year 1987. 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 and maintain the trust fund at a level of at least 50 percent of one year's outgo over the next twelve to fourteen years under the intermediate assumptions. Even though the trust fund is expected to be able to pay benefits and administrative expenses as they become due until just after the turn of the century under the intermediate assumptions (2002 under alternative II-B, 2005 under alternative II-A), 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 close actuarial balance even for the first 25-year projection period under alternative II-B assumptions, either outlays will have to be reduced by 13 percent or income increased by 15 percent (or some combination thereof).

Over the 75-year projection period, the average tax rate necessary to provide for benefits and administrative expenses plus maintain the fund at a level of at least a half-year's disbursements exceeds the average tax rate scheduled in the law, producing an average deficit of 2.30 percent of taxable payroll under alternative II-B and 2.01 percent under alternative II-A. For the first 25-year projection period, the average deficit is 0.31 and 0.44 percent of taxable payroll for alternative II-A and alternative II-B, respectively. The average deficit grows to 2.26 and 2.59 percent of taxable payroll for alternatives II-A and II-B respectively, during the second 25-year projection period, and to 3.46 and 3.87 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 slightly more than 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 HI trust fund is projected to become exhausted even before the major demographic shift begins to occur. Exhaustion is projected to occur just after the turn of the century under the intermediate assumptions, and could occur as early as 1996 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. 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 just 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.



## APPENDIX A

ACTUARIAL METHODOLOGY AND PRINCIPAL ASSUMPTIONS FOR  
THE HOSPITAL INSURANCE COST ESTIMATES

The basic methodology and assumptions for alternative II-A and alternative II-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.

## 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 diagnostic 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. For fiscal year 1989 and later, the increase in the payment rate for each hospital admission is determined by the Secretary of Health and Human Services, with the advice of the Prospective Payment Assessment Commission, a special commission appointed to study and make recommendations with regard to the level of payments to hospitals. The law specifies that the only increase in the payment rates that can be provided without specific justification is one-quarter of one percent plus the increase in the hospital input price index. Therefore, it is anticipated that in most years the Secretary will recommend an increase in payment per admission equal to one-quarter of one percent plus the increase in the hospital input price index, although the law provides that the Secretary may select an alternative increase. The projections contained in this report are based on the assumption that for fiscal year 1988, the prospective payment rates will be increased by the hospital input price index minus two percent from the levels determined for 1987 (as required by Section 9302 of P.L. 99-509), and in fiscal year 1989 and later, program payments to participating hospitals for each covered admission will be increased by one-quarter of one percent plus the increase in the hospital input price index.

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 II-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 differential has averaged about 0.5 percent. 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.

It is contemplated that future increases in payments to participating hospitals for covered admissions in most years will be equal to one-quarter of one percent plus the increase in the hospital input price index. Thus, the unit input intensity allowance, as indicated in table A1, is assumed to equal one-quarter of one percent 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. However, it should be noted that the level of the unit input intensity allowance is completely within the discretion of the Secretary of Health and Human Services and could vary significantly from the assumed value from year to year. 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.

For the years 1986 through 1988, 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) legislation affecting the payment rates; and (3) the impact of the "Balanced Budget and Emergency Deficit Control Act of 1985" on the fiscal year 1986 payment rates. For the years 1989 through 1995, a small one-half percent increase from other sources is attributable to a continuation of the current trend toward treating less complicated (and thus, less expensive) cases in outpatient settings, resulting in an increase in the average prospective payment per admission for inpatient hospital services. 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 plus one-quarter of one percent. Possible other sources of both relative increases and decreases in payments include (1) a shift to more or less expensive admissions (diagnosis related groups) 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 diagnosis related groups or addition/deletion of diagnosis related groups 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 has increased sharply from year to year. Relatively large increases are assumed for the next few years, followed by a projected pattern of increases 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 1.0 percent and 1.1 percent per year by 2011 for alternatives II-A and II-B, respectively. 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 1985. 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 Secretary of Health and Human Services' discretion in setting 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 1.0 percent and 1.1 percent faster than increases in taxable payroll for alternative II-A and II-B, respectively. 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 2.6 percent of taxable payroll, increase to a level of about 4 percent by the year 2011 under both alternatives II-A and II-B and to about 6.5 percent by the year 2061. 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 2036 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 during the first 25-year projection period. Program expenditures under this alternative would be about 2.6 percent of taxable payroll in the year 2011, increasing to about 3.4 percent of taxable payroll by 2061. 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 3.5 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 2011 which is about 6.4 percent of taxable payroll, increasing to about 13.6 percent of taxable payroll in the year 2061.

TABLE A1.--COMPONENTS OF HISTORICAL AND PROJECTED INCREASES IN HI INPATIENT HOSPITAL PAYMENTS 1/  
(Percent)

| Calendar<br>Year | Labor                         |                                      |                                | Non-Labor |                                      |                                 | Input<br>Price<br>Index | Unit Input<br>Intensity<br>Allowance 2/ | Units of Service |                        | Other<br>Sources | HI Inpatient<br>Hospital<br>Payments |
|------------------|-------------------------------|--------------------------------------|--------------------------------|-----------|--------------------------------------|---------------------------------|-------------------------|---|------------------|------------------------|------------------|--------------------------------------|
|                  | Average<br>hourly<br>Earnings | Hospital Hourly<br>Earnings<br>Level | Hospital<br>Hourly<br>Earnings | CPI       | Hospital<br>Price Input<br>Intensity | Non-Labor<br>Hospital<br>Prices |                         |   | HI<br>Enrollment | Admission<br>Incidence |                  |                                      |
| Historical Data: |                               |                                      |                                |           |                                      |                                 |                         |   |                  |                        |                  |                                      |
| 1975             | 7.8                           | 0.5                                  | 8.3                            | 9.1       | 3.5                                  | 12.9                            | 10.2                    | 1.00                                    | 3.4              | 0.1                    | 6.4              | 22.5                                 |
| 1976             | 6.8                           | 0.4                                  | 7.2                            | 5.7       | 1.9                                  | 7.7                             | 7.4                     | 1.00                                    | 2.9              | 1.5                    | 5.3              | 19.2                                 |
| 1977             | 7.0                           | 0.5                                  | 7.5                            | 6.5       | 0.6                                  | 7.1                             | 7.3                     | 1.00                                    | 3.0              | 4.6                    | 0.4              | 17.2                                 |
| 1978             | 9.0                           | -1.2                                 | 7.7                            | 7.6       | -0.8                                 | 6.7                             | 7.3                     | 1.00                                    | 2.7              | -1.9                   | 5.3              | 14.9                                 |
| 1979             | 8.7                           | -0.8                                 | 7.8                            | 11.4      | -1.1                                 | 10.2                            | 8.8                     | 1.00                                    | 2.7              | 3.1                    | 0.2              | 16.5                                 |
| 1980             | 8.2                           | 1.4                                  | 9.7                            | 13.5      | 0.8                                  | 14.4                            | 11.8                    | 1.00                                    | 2.1              | 2.4                    | 2.4              | 20.8                                 |
| 1981             | 8.4                           | 1.8                                  | 10.3                           | 10.3      | -0.5                                 | 9.8                             | 10.1                    | 1.00                                    | 1.9              | 2.8                    | 2.9              | 19.7                                 |
| 1982             | 5.9                           | 2.8                                  | 8.9                            | 6.0       | 0.3                                  | 6.3                             | 7.7                     | 1.00                                    | 1.8              | 0.0                    | 4.6              | 15.8                                 |
| 1983             | 4.0                           | 2.2                                  | 6.3                            | 3.0       | 1.2                                  | 4.2                             | 5.4                     | 1.00                                    | 1.7              | 1.0                    | 1.7              | 11.2                                 |
| 1984             | 6.1                           | -0.6                                 | 5.5                            | 3.4       | 0.7                                  | 4.1                             | 4.9                     | 1.00                                    | 1.4              | -3.7                   | 7.2              | 10.9                                 |
| 1985             | 5.8                           | -1.3                                 | 4.4                            | 3.5       | -0.5                                 | 3.0                             | 3.8                     | -0.05                                   | 2.2              | -7.6                   | 8.1              | 5.9                                  |
| Projection:      |                               |                                      |                                |           |                                      |                                 |                         |   |                  |                        |                  |                                      |
| Alternative II-A |                               |                                      |                                |           |                                      |                                 |                         |   |                  |                        |                  |                                      |
| 1986             | 4.2                           | -0.5                                 | 3.7                            | 1.6       | 0.4                                  | 2.0                             | 3.0                     | -2.79                                   | 2.2              | -3.1                   | 3.8              | 3.0                                  |
| 1987             | 4.2                           | -0.2                                 | 4.0                            | 3.0       | 0.4                                  | 3.4                             | 3.7                     | -2.30                                   | 2.0              | 1.0                    | -0.3             | 4.2                                  |
| 1988             | 4.5                           | 1.0                                  | 5.5                            | 3.6       | 0.5                                  | 4.1                             | 4.9                     | -1.04                                   | 1.9              | 0.0                    | 1.9              | 7.8                                  |
| 1989             | 4.8                           | 1.0                                  | 5.8                            | 3.6       | 0.5                                  | 4.1                             | 5.1                     | 0.25                                    | 1.9              | 1.5                    | 1.0              | 10.1                                 |
| 1990             | 4.9                           | 1.0                                  | 5.9                            | 3.2       | 0.5                                  | 3.7                             | 5.0                     | 0.25                                    | 1.9              | 1.8                    | 0.9              | 10.2                                 |
| 1995             | 4.4                           | 1.0                                  | 5.4                            | 3.0       | 0.5                                  | 3.5                             | 4.7                     | 0.25                                    | 1.3              | 1.3                    | 0.3              | 8.0                                  |
| 2000             | 4.8                           | 1.0                                  | 5.8                            | 3.0       | 0.5                                  | 3.5                             | 5.0                     | 0.25                                    | 0.9              | 1.0                    | -0.1             | 7.1                                  |
| 2005             | 5.0                           | 0.5                                  | 5.5                            | 3.0       | 0.5                                  | 3.5                             | 4.8                     | 0.25                                    | 1.3              | 0.5                    | 0.0              | 6.9                                  |
| 2010             | 5.0                           | 0.0                                  | 5.0                            | 3.0       | 0.0                                  | 3.0                             | 4.3                     | 0.25                                    | 1.9              | -0.2                   | 0.1              | 6.4                                  |
| Alternative II-B |                               |                                      |                                |           |                                      |                                 |                         |   |                  |                        |                  |                                      |
| 1986             | 4.2                           | -0.5                                 | 3.7                            | 1.6       | 0.4                                  | 2.0                             | 3.0                     | -2.79                                   | 2.2              | -3.1                   | 3.8              | 3.0                                  |
| 1987             | 3.5                           | 0.5                                  | 4.0                            | 3.2       | 0.2                                  | 3.4                             | 3.7                     | -2.30                                   | 2.0              | 1.0                    | -0.3             | 4.2                                  |
| 1988             | 4.5                           | 1.0                                  | 5.5                            | 4.5       | 0.5                                  | 5.0                             | 5.3                     | -1.44                                   | 1.9              | 0.0                    | 1.9              | 7.8                                  |
| 1989             | 4.6                           | 1.0                                  | 5.6                            | 4.3       | 0.5                                  | 4.8                             | 5.3                     | 0.25                                    | 1.9              | 1.5                    | 1.1              | 10.4                                 |
| 1990             | 5.5                           | 1.0                                  | 6.6                            | 4.5       | 0.5                                  | 5.0                             | 5.9                     | 0.25                                    | 1.9              | 1.8                    | 0.8              | 11.0                                 |
| 1995             | 5.1                           | 1.0                                  | 6.2                            | 4.0       | 0.5                                  | 4.5                             | 5.5                     | 0.25                                    | 1.3              | 1.3                    | 0.3              | 8.8                                  |
| 2000             | 5.4                           | 1.0                                  | 6.5                            | 4.0       | 0.5                                  | 4.5                             | 5.7                     | 0.25                                    | 0.9              | 1.0                    | -0.2             | 7.8                                  |
| 2005             | 5.4                           | 0.5                                  | 5.9                            | 4.0       | 0.5                                  | 4.5                             | 5.4                     | 0.25                                    | 1.3              | 0.5                    | -0.1             | 7.5                                  |
| 2010             | 5.5                           | 0.0                                  | 5.5                            | 4.0       | 0.0                                  | 4.0                             | 5.0                     | 0.25                                    | 1.9              | -0.2                   | 0.0              | 7.0                                  |

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 <sup>1/</sup>  
(Percent)

| <u>Calendar year</u> | <u>Inpatient hospital 2/ 3/</u> | <u>Skilled nursing facility 3/</u> | <u>Home health agency 3/</u> | <u>Weighted average 3/ 4/</u> | <u>HI admin-istrative costs 3/</u> | <u>HI program expendi-tures 3/</u> | <u>HI taxable payroll</u> | <u>Ratio of expendi-tures to payroll 5/</u> |
|----------------------|---------------------------------|------------------------------------|------------------------------|-------------------------------|------------------------------------|------------------------------------|---------------------------|---|
| Alternative II-A     |                                 |                                    |                              |                               |                                    |                                    |                           |   |
| 1987                 | 4.4%                            | 6.9%                               | 11.8%                        | 4.9%                          | 23.8%                              | 5.2%                               | 6.1%                      | -0.9%                                       |
| 1988                 | 7.9                             | 9.7                                | 11.3                         | 8.2                           | 5.9                                | 8.1                                | 6.3                       | 1.7   |
| 1989                 | 10.3                            | 9.0                                | 11.2                         | 10.3                          | 7.5                                | 10.3                               | 7.0                       | 3.1   |
| 1990                 | 10.3                            | 8.6                                | 9.5                          | 10.3                          | 8.1                                | 10.3                               | 6.4                       | 3.6   |
| 1995                 | 8.0                             | 7.6                                | 7.4                          | 8.0                           | 6.5                                | 8.0                                | 5.6                       | 2.3   |
| 2000                 | 7.1                             | 7.0                                | 7.0                          | 7.2                           | 6.0                                | 7.2                                | 5.9                       | 1.2   |
| 2005                 | 6.9                             | 6.6                                | 6.7                          | 6.9                           | 5.9                                | 6.9                                | 5.7                       | 1.2   |
| 2010                 | 6.4                             | 6.5                                | 6.5                          | 6.4                           | 5.8                                | 6.4                                | 5.4                       | 1.0   |
| Alternative II-B     |                                 |                                    |                              |                               |                                    |                                    |                           |   |
| 1987                 | 4.4%                            | 6.9%                               | 11.8%                        | 4.9%                          | 23.8%                              | 5.2%                               | 5.4%                      | -0.2%                                       |
| 1988                 | 8.0                             | 9.7                                | 11.3                         | 8.2                           | 6.0                                | 8.2                                | 6.0                       | 2.1   |
| 1989                 | 10.6                            | 9.0                                | 11.2                         | 10.7                          | 7.3                                | 10.6                               | 6.4                       | 3.9   |
| 1990                 | 11.1                            | 9.0                                | 10.0                         | 11.0                          | 8.7                                | 11.0                               | 6.8                       | 3.9   |
| 1995                 | 8.8                             | 8.0                                | 7.9                          | 8.8                           | 7.1                                | 8.8                                | 6.3                       | 2.4   |
| 2000                 | 7.9                             | 8.0                                | 8.1                          | 7.9                           | 6.8                                | 7.9                                | 6.3                       | 1.5   |
| 2005                 | 7.5                             | 7.7                                | 7.7                          | 7.5                           | 6.6                                | 7.5                                | 6.1                       | 1.4   |
| 2010                 | 7.0                             | 7.5                                | 7.5                          | 7.0                           | 6.4                                | 7.0                                | 5.9                       | 1.1   |

<sup>1/</sup> Percent increase in year indicated over previous year.

<sup>2/</sup> This column differs slightly from the last column of table A1, since table A1 includes all persons eligible for HI protection while this table excludes noninsured persons.

<sup>3/</sup> Costs attributable to insured beneficiaries only. Benefits and administrative costs for noninsured persons are financed through general revenue transfers and premium payments, rather than through payroll taxes.

<sup>4/</sup> 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.

<sup>5/</sup> 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 tips and 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)

| Calendar<br>year | Increases in aggregate<br>HI inpatient hospital payments 1/ |      |                     |       | Changes in the relationship<br>between expenditures and payroll 1/ |                    |  | Expenditures as<br>a percent of<br>taxable payroll |
|------------------|---|------|---------------------|-------|--|--------------------|--|--|
|                  | Average<br>hourly<br>earnings                               | CPI  | Other<br>factors 2/ | Total | Program<br>expendi-<br>tures 3/                                    | Taxable<br>payroll | Ratio of<br>expenditures<br>to payroll |  |
|                  |   |      |                     |       |  |                    |  |  |
| ALTERNATIVE I    |   |      |                     |       |  |                    |  |  |
| 1987             | 3.7%  | 2.6% | 0.9%                | 4.2%  | 5.2%   | 6.1%               | -0.9%                                  | 2.54%  |
| 1988             | 4.4   | 3.1  | 3.5                 | 7.5   | 7.9  | 6.8                | 1.0                                    | 2.57   |
| 1989             | 4.8   | 3.0  | 4.6                 | 8.8   | 9.1  | 7.1                | 1.9                                    | 2.62   |
| 1990             | 4.6   | 2.7  | 4.6                 | 8.6   | 8.8  | 6.4                | 2.2                                    | 2.68   |
| 1995             | 3.6   | 2.0  | 2.4                 | 5.4   | 5.6  | 5.0                | 0.6                                    | 2.79   |
| 2000             | 4.2   | 2.0  | 1.7                 | 5.2   | 5.4  | 5.8                | -0.3                                   | 2.76   |
| 2005             | 4.2   | 2.0  | 1.2                 | 4.7   | 4.9  | 5.4                | -0.5                                   | 2.70   |
| 2010             | 4.4   | 2.0  | 0.5                 | 4.1   | 4.4  | 5.1                | -0.6                                   | 2.66   |
| ALTERNATIVE II-A |   |      |                     |       |  |                    |  |  |
| 1987             | 4.2   | 3.0  | 0.5                 | 4.2   | 5.2  | 6.1                | -0.9                                   | 2.55   |
| 1988             | 4.5   | 3.6  | 3.5                 | 7.8   | 8.1  | 6.3                | 1.7                                    | 2.60   |
| 1999             | 4.8   | 3.6  | 5.6                 | 10.1  | 10.3   | 7.0                | 3.1                                    | 2.68   |
| 1990             | 4.9   | 3.2  | 5.8                 | 10.2  | 10.3   | 6.4                | 3.6                                    | 2.78   |
| 1995             | 4.4   | 3.0  | 4.0                 | 8.0   | 8.0  | 5.6                | 2.3                                    | 3.13   |
| 2000             | 4.8   | 3.0  | 2.8                 | 7.1   | 7.2  | 5.9                | 1.2                                    | 3.34   |
| 2005             | 5.0   | 3.0  | 2.5                 | 6.9   | 6.9  | 5.7                | 1.2                                    | 3.54   |
| 2010             | 5.0   | 3.0  | 2.0                 | 6.4   | 6.4  | 5.4                | 1.0                                    | 3.78   |
| ALTERNATIVE II-B |   |      |                     |       |  |                    |  |  |
| 1987             | 3.5   | 3.2  | 0.8                 | 4.2   | 5.2  | 5.4                | -0.2                                   | 2.57   |
| 1988             | 4.5   | 4.5  | 3.2                 | 7.8   | 8.2  | 6.0                | 2.1                                    | 2.63   |
| 1989             | 4.6   | 4.3  | 5.7                 | 10.4  | 10.6   | 6.4                | 3.9                                    | 2.73   |
| 1990             | 5.5   | 4.5  | 5.6                 | 11.0  | 11.0   | 6.8                | 3.9                                    | 2.84   |
| 1995             | 5.1   | 4.0  | 4.0                 | 8.8   | 8.8  | 6.3                | 2.4                                    | 3.22   |
| 2000             | 5.4   | 4.0  | 2.8                 | 7.8   | 7.9  | 6.3                | 1.5                                    | 3.48   |
| 2005             | 5.4   | 4.0  | 2.5                 | 7.5   | 7.5  | 6.1                | 1.4                                    | 3.73   |
| 2010             | 5.5   | 4.0  | 1.9                 | 7.0   | 7.0  | 5.9                | 1.1                                    | 4.01   |
| ALTERNATIVE III  |   |      |                     |       |  |                    |  |  |
| 1987             | 3.3   | 3.4  | 0.8                 | 4.2   | 5.2  | 3.4                | 1.8                                    | 2.64   |
| 1988             | 4.2   | 5.4  | 3.4                 | 8.3   | 8.6  | 3.8                | 4.6                                    | 2.76   |
| 1989             | 5.9   | 6.0  | 5.6                 | 11.9  | 11.9   | 6.9                | 4.7                                    | 2.89   |
| 1990             | 5.5   | 5.7  | 5.9                 | 11.8  | 11.7   | 4.4                | 7.0                                    | 3.09   |
| 1995             | 5.9   | 5.0  | 5.9                 | 11.8  | 11.6   | 7.2                | 4.1                                    | 3.80   |
| 2000             | 6.0   | 5.0  | 4.3                 | 10.2  | 10.1   | 6.5                | 3.4                                    | 4.49   |
| 2005             | 6.0   | 5.0  | 3.9                 | 9.8   | 9.7  | 6.3                | 3.2                                    | 5.26   |
| 2010             | 6.3   | 5.0  | 3.4                 | 9.4   | 9.2  | 6.1                | 2.9                                    | 6.19   |

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/ Includes expenditures attributable to insured beneficiaries only.

NOTE: Taxable payroll is adjusted to take into account the lower contribution rates on tips and 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 1987 1/I. Background

As required by the Social Security Act (the Act), the Secretary of Health and Human Services (HHS) must publish every year the new Medicare Part A (Hospital Insurance) inpatient hospital deductible and Part A premium rates. Section 1813(b) of the Act as amended by section 9125 of the Consolidated Omnibus Budget Reconciliation Act (COBRA) Pub. L. 99-272, requires the Secretary to determine and publish, between July 1 and September 15 of the year, the amount of the inpatient hospital deductible applicable for the following calendar year. Section 1818(d)(2) of the Act requires the Secretary to determine and publish, during the next to last quarter of each calendar year, the amount of the monthly Part A premium for voluntary enrollment of the uninsured aged for the following calendar year.

The inpatient hospital deductible for 1987 was published in the Federal Register on September 15, 1986. The new deductible was announced as \$572. The daily coinsurance amounts were: (a) \$143 for the 61st through the 90th day of hospitalization; (b) \$286 for lifetime reserve days; and (c) \$71.50 for the 21st through 100th day of extended care services in a skilled nursing facility (51 FR 32691).

1/ The notice entitled "Medicare Program; Omnibus Budget Reconciliation Act of 1986; Effect of Provisions on Part A Deductible, Part A and B Premiums, and Economic Index," which was published in the Federal Register on November 20, 1986 (Vol. 51, No. 224, p. 42007), discusses (1) the 1987 Part A deductible (and associated coinsurance amounts), (2) the 1987 Part A premium for the uninsured aged, (3) the 1987 Part B monthly actuarial rates and premium rate, and (4) the Medicare Economic Index for physicians participating in Part B for the fee screen year beginning January 1, 1987, each as determined and announced both before and after the passage of the Omnibus Budget Reconciliation Act of 1986. The portions of the notice which are pertinent to the Medicare Part A (Hospital Insurance) program appear here in extracted form.

The Part A premium for the uninsured aged for the 12 months beginning January 1, 1987 was published in the Federal Register on October 1, 1986. The premium was announced as \$248 (51 FR 35053).

On October 21, 1986, new legislation was enacted. The Omnibus Budget Reconciliation Act of 1986, Pub. L. 99-509, amended those sections of the Act controlling the Part A deductible and premium. This notice explains the effect of these changes.

## II. Part A Deductible for Calendar Year 1987

Section 1813 of the Act (42 U.S.C. 1395e) provides for an inpatient hospital deductible and certain coinsurance amounts to be deducted from the amount payable by Medicare for inpatient hospital services furnished an individual. Section 1813(b)(2) of the Act as amended by section 9125 of COBRA, Pub. L. 99-272, requires the Secretary to determine and publish, between July 1 and September 15 of the year, the amount of the inpatient hospital deductible applicable for the following calendar year. As noted above, we announced, in a Federal Register notice on September 15, 1986, that the inpatient hospital deductible for 1987 was to be \$572.

Section 9301 of the Omnibus Budget Reconciliation Act of 1986, Pub. L. 99-509, provides that the Part A deductible for 1987 will be \$520. The daily coinsurance amounts will be: (a) \$130 for the 61st through 90th days of hospitalization; (b) \$260 for lifetime reserve days; and (c) \$65 for the 21st through 100th days of extended care services in a skilled nursing facility.

In subsequent years (that is, beginning with the deductible to be published in September 1987) the Part A deductible will be adjusted by the applicable percentage increase (as defined in section 1886(b)(3)(B) of the Act) which is applied under section 1886(d)(3)(A) for discharges in the fiscal year that begins on October 1 of the preceding calendar year, and adjusted to reflect changes in real case mix (determined on the basis of the most recent case-mix data available). Any amount which is not a multiple of \$4 will be rounded to the nearest multiple of \$4 (or, if it is midway between two multiples of \$4, to the next higher multiple of \$4).

A new section 1813(b)(3) provides that a hospital stay which falls into two calendar years will have the deductible applied based on the first day of the hospitalization. Applicable cost sharing under Part A would continue to be determined based on the annual deductible in effect for the year in which the cost sharing days are incurred.

Under section 9301(b) of Pub. L. 99-509, this amendment applies to inpatient hospital services and post-hospital extended care services furnished on or after January 1, 1987, and is to be applied in calculating the Part A premium to be paid by the uninsured aged for months beginning with January 1, 1987. Section 9301(c) requires the Secretary to provide for the publication of the inpatient hospital deductible, and the affected coinsurance and premium amounts within 30 days of the date of enactment; that is, by November 20, 1986.

### III. Part A Premium for Calendar Year 1987

Section 1818 of the Act provides for voluntary enrollment in 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.) Section 1818(d)(2) of the Act, as amended by section 606(b) of the Social Security Amendments of 1983 (Pub. L. 98-21) requires the Secretary to determine and publish, during the next to last quarter of each calendar year, the amount of the monthly Part A premium for voluntary enrollment for the following calendar year.

Based on the formula specified in the statute, the monthly hospital insurance premium for the uninsured aged for the 12-month period beginning January 1, 1987 was announced as \$248. With the enactment of section 9301 of Pub. L. 99-509 (which set the Part A deductible at \$520 for 1987), the Part A premium rate for calendar year 1987 had to be recalculated. The necessity was recognized by Congress in section 9301(b) of Pub. L. 99-509, which, in providing for the effective date of the new Part A deductible for 1987, noted its application to the 1987 Part A premium. Therefore, effective January 1, 1987, the new monthly premium rate will be \$226.

Under section 1818(d)(2) of the Act, which was not amended by Pub. L. 99-509, to calculate the Part A premium for calendar year 1987, the 1973 base year premium (\$33) is multiplied by the ratio of: (1) the 1987 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.

Since under section 1813(b)(1) of the Act, as amended by Pub. L. 99-509, the 1987 inpatient hospital deductible is \$520, and the 1973 deductible was actuarially determined to be \$76 <sup>2/</sup>, the monthly hospital insurance premium is  $\$33 \times (520/76) = \$225.79$ , which is rounded to \$226.

#### IV. Regulatory Impact Statement

This notice merely announces amounts required by legislation for the Part A deductible and Part A premium. This notice is not a proposed rule or a final rule issued after a proposal, and does not alter any regulations. 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).

<sup>2/</sup> 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, 1987 was calculated using the \$76 deductible for 1973, since this more closely satisfies the intent of the law.

V. Paperwork Reduction Act

The changes in this notice would not impose information collection requirements. Consequently, they need not be reviewed by the Executive Office for Management and Budget under the authority of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.).

Dated: November 13, 1986

William L. Roper  
Administrator  
Health Care Financing Administration

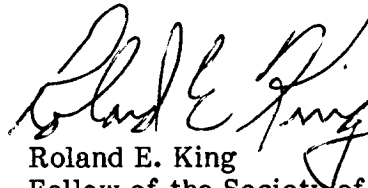
Approved: November 14, 1986

Otis R. Bowen  
Secretary  
Department of Health and Human  
Services

## APPENDIX C

## STATEMENT OF ACTUARIAL OPINION

It is my opinion that (1) the methodology used herein is based upon sound principles of actuarial practice, and (2) all the assumptions used and the resulting cost estimates are in the aggregate reasonable for the purpose of evaluating the actuarial and financial status of the Federal Hospital Insurance Trust Fund, taking into account the experience and expectations of the program.

A handwritten signature in black ink, appearing to read "Roland E. King". The signature is fluid and cursive, with the first name "Roland" being the most prominent.

Roland E. King  
Fellow of the Society of Actuaries  
Member of the American Academy of  
Actuaries  
Chief Actuary,  
Health Care Financing Administration