II. TECHNICAL SECTION

A. SOCIAL SECURITY AMENDMENTS SINCE THE 1991 REPORT

Since the 1991 Annual Report was transmitted to Congress, on May 17, 1991, there have been no legislative changes enacted which would have a significant effect on the financial status of the HI program.

B. 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 HI program are handled through this fund.

The primary source of income to the trust fund is amounts appropriated to it under permanent authority on the basis of contributions paid by workers, their employers, and individuals with self-employment income, in work covered by the HI program. Beginning January 1, 1987, these appropriated amounts include contributions paid by, or on behalf of, workers employed by State and local governments and their employers, with respect to work covered by the program through State agreements. (Prior to 1987, such contributions were deposited directly into the trust fund.) The coverage of the HI program includes workers covered under the old-age, survivors, and disability insurance (OASDI) program, those covered under the railroad retirement program, and certain Federal, State, and local employees not otherwise covered under the OASDI program.

All employees and their employers in employment covered by the program are required to pay contributions with respect to the wages of individual workers, including cash tips. 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. An employee who pays contributions on wages in excess of the annual maximum amount (because of employment with two or more employers) is eligible for a refund of the excess employee contributions. The amount of contributions subject to refund for any period

is a charge against the trust fund. The maximum amount of earnings on which contributions are payable in a year is called the contribution base.

The HI contribution rates applicable to taxable earnings in each of the calendar years 1966 and later are shown in Table 9. For 1993 and later, the contribution rates shown are the rates scheduled in the provisions of present law. The contribution bases for calendar years 1966 to 1992 are also shown. For 1975 to 1978, the contribution bases were determined under the automatic-adjustment provisions in section 230 of the Social Security Act. The bases for 1979 to 1981 were specified in the law, as amended in 1977. For 1981 to 1990, the automatic-adjustment provisions were again applicable, as they will be for 1992 and later. For calendar year 1991, the contribution base is specified in the law, as amended in 1990.

TABLE 9. -- CONTRIBUTION RATES AND MAXIMUM TAXABLE AMOUNT OF ANNUAL EARNINGS

Calendar years	Maximum taxable amount of annual earnings	Contribution rate (Percent of taxable earnings)	
		Employees and employers, each	Self-employed
Past experience:			
1966	$6,600	0.35	0.35
1967	6,600	0.50	0.50
1968-71	7,800	0.60	0.60
1972	9,000	0.60	0.60
1973	10,800	1.00	1.00
1974	13,200	0.90	0.90
1975	14,100	0.90	0.90
1976	15,300	0.90	0.90
1977	16,500	0.90	0.90
1978	17,700	1.00	1.00
1979	22,900	1.05	1.05
1980	25,900	1.05	1.05
1981	29,700	1.30	1.30
1982	32,400	1.30	1.30
1983	35,700	1.30	1.30
1984	37,800	1.30	2.60
1985	39,600	1.35	2.70
1986	42,000	1.45	2.90
1987	43,800	1.45	2.90
1988	45,000	1.45	2.90
1989	48,000	1.45	2.90

TABLE 9. -- CONTRIBUTION RATES AND MAXIMUM TAXABLE AMOUNT OF ANNUAL EARNINGS

Calendar years	Maximum taxable amount of annual earnings	Contribution rate (Percent of taxable earnings)	
		Employees and employers, each	Self-employed
Past experience:			
1990	51,300	1.45	2.90
1991	125,000	1.45	2.90
1992	130,200	1.45	2.90
Changes scheduled in present law:			
1993 & later	Subject to automatic adjustment	1.45	2.90

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

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

Another substantial source of trust fund income is interest credited from investments in government securities 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 HI 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 HI 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 HI 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.

Two sections of the statute authorize HI benefits for uninsured persons aged 65 and over. Section 103 of the Social Security Amendments of 1965 provided transitional entitlement to HI benefits to those who were 65 before 1968 or who attained age 65 after 1967 and had at least three quarters of covered employment. This entitlement does not apply for those who reach 65 after 1973. Section 278 of the Tax Equity and Fiscal Responsibility Act of 1982 added similar transitional entitlement for those federal employees who would retire before having a chance to earn sufficient quarters of Medicare-qualified federal employment. This provision allows those who were employed by the Federal Government during and before January, 1983, to have the necessary quarters of federal employment counted toward their Medicare entitlement. Such payments are made initially from the HI 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 HI 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 HI 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 HI 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 HI trust fund. The reimbursements so made were on a provisional basis and are subject to adjustment, with appropriate interest allowance.

The Social Security Amendments of 1967 and 1972 authorize the Secretary of Health and Human Services to develop and conduct a broad range of experiments and demonstration projects designed to determine various methods of increasing efficiency and economy in providing health care services, while maintaining the quality of such services, under the HI and supplementary medical insurance (SMI) programs. A sizable portion of the costs of such experiments and demonstration projects is paid from the HI and SMI 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 HI 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 trust funds under the control and authority of the United States or any officer of the United States. These obligations may be acquired on original issue at the issue price or by purchase of outstanding obligations at their market price.

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

From December 29, 1981, until January 1, 1988, the Social Security Act authorized borrowing among the OASI, DI, and HI trust funds when necessary "to best meet the need for financing the benefit payments" from the

three funds. Interfund loans under the borrowing authority were made to the OASI trust fund from the DI and HI trust funds in 1982, and were fully repaid by May 1986. In this report, the assets of the HI trust fund at the end of 1982 through 1985, inclusive, do not include the amounts owed to the trust fund. This procedure is followed because the borrowed amounts were available to the borrowing fund for the payment of benefits or other obligations, while such amounts were not readily available to the lending fund.

C. SUMMARY OF THE OPERATIONS OF THE TRUST FUND, FISCAL YEAR 1991

A statement of the revenue and disbursements of the Federal Hospital Insurance Trust Fund in fiscal year 1991, and of the assets of the fund at the beginning and end of the fiscal year, is presented in Table 10.

The total assets of the trust fund amounted to $95,631 million on September 30, 1990. During fiscal year 1991, total revenue amounted to $83,938 million, and total disbursements were $69,638 million. The assets of the trust fund thus increased $14,299 million during the year to a total of $109,930 million on September 30, 1991.

TABLE 10. -- STATEMENT OF OPERATIONS OF THE HOSPITAL INSURANCE TRUST FUND DURING FISCAL YEAR 1991
(In thousands of dollars)

Total assets of the trust fund, beginning of period	$95,631,052
Revenue:	
Appropriation of employment taxes	$74,813,969
Refunds of employment taxes	-160,950
Deposits arising from State agreements	2,448
Interest on investments	8,962,383
Premiums collected from voluntary participants	366,615
Transfer from railroad retirement account	329,000
Transitional uninsured coverage	605,000
Military service credits of 1991	89,338
Military service credit quinquennial adjustment	-1,100,000
Interest on reimbursements, SSA[1]	6,361
Interest on reimbursements, HCFA[1]	0
Interest on reimbursements, Railroad	23,177

TABLE 10. -- STATEMENT OF OPERATIONS OF THE HOSPITAL INSURANCE TRUST FUND DURING FISCAL YEAR 1991
(In thousands of dollars)

Other	308
Total revenue	$83,937,648
Disbursements:	
Benefit payments	$68,704,805
Administrative expenses:	
Treasury administrative expenses	38,908
Salaries and expenses, SSA[2]	305,361
Salaries and expenses, HCFA[3]	562,013
Salaries and expenses, Office of Secretary	19,780
Construction	638
Professional Standards Review Organization	0
Reimbursement of SSA expenses	0
Reimbursement of HCFA expenses	0
Payment Assessment Committee	3,294
Policy and Research	3,535
Total disbursements	$69,638,335
Total assets of the trust fund, end of period	$109,930,366

[1]A positive figure represents a transfer of the HI trust fund from the other trust funds. A negative figure represents a transfer from the HI trust fund to the other trust funds.
[2]For facilities, goods, and services provided by the Social Security Administration (SSA).
[3]Includes administrative expenses of the intermediaries.

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

Included in total revenue during fiscal year 1991 was $74,814 million representing contributions appropriated to the trust fund. As an offset, $161 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, and $2 million was transferred from State and local governments to the trust fund for underpayments from previous State agreements for coverage of State and local government employees.

Net contributions amounted to $74,655 million, representing an increase of 5.7 percent over the amount of $70,655 million for the preceding 12-month period. This growth in contribution income resulted primarily from (1) the higher level of earnings in covered employment and (2) the two increases in

the maximum annual amount of earnings taxable from $48,000 to $51,300 and from $51,300 to $125,000 that became effective January 1, 1990, and January 1, 1991, respectively.

Section II.B. referred to provisions under which the HI 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 1991 amounted to $605 million ($559 million for the non-federal uninsured and $46 million for the federal uninsured), consisting of $596 million for benefit payments and $9 million for administrative expenses.

Section II.B. referred to provisions of the Social Security Act under which certain persons not otherwise eligible for HI protection may obtain such protection by enrolling in the program and paying a monthly premium. Premiums collected from such voluntary participants in fiscal year 1991 amounted to about $367 million.

In accordance with the provisions of the Railroad Retirement Act which coordinate the railroad retirement and the HI 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 $329 million in principal and about $3 million in interest from the railroad retirement program's Social Security Equivalent Benefit Account to the HI trust fund would place this fund in the same position, as of September 30, 1990, in which it would have been if railroad employment had always been covered under the Social Security Act. This amount, together with interest to the date of transfer amounting to about $20 million, was transferred to the trust fund in June 1991.

In accordance with provisions for the appropriation to the trust fund of HI taxes on noncontributory military wage credits as discussed in section II.B., the trust fund was credited on July 1, 1991 with $89 million for calendar year 1991 taxes on wage credits. In addition, $1,100 million was transferred out of the trust fund due to the quinquennial adjustment as described in section II.B..

The remaining $8,969 million of revenue consisted almost entirely of interest credited from the investments held by the trust fund.

Of the $69,638 million in total disbursements, $68,705 million represented benefits paid directly from the trust fund for health services covered under title XVIII of the Social Security Act. Benefit payments increased 4.2 percent in fiscal year 1991 over the corresponding amount of $65,912 million paid during the preceding 12 months.

The remaining $934 million of disbursements was for net administrative expenses. Administrative expenses are allocated and charged directly to each of the four trust funds--OASI, DI, HI, and SMI--on the basis of provisional estimates. Similarly, the expenses of administering other programs of the Health Care Financing Administration are also allocated and charged directly to the general fund of the Treasury on a provisional basis. Periodically, as actual experience develops and is analyzed, adjustments to the allocations of administrative expenses and costs of construction for prior periods are effected by interfund transfers, including transfers between the HI and SMI trust funds and the program management general fund account, with appropriate interest allowances.

Table 11 compares the actual experience in fiscal year 1991 with the estimates presented in the 1990 and 1991 annual reports. Section II.B. 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 11, it should be noted that the "actual" amount of contributions in fiscal year 1991 reflects the aforementioned type of adjustments to contributions for prior fiscal years. On the other hand, the "actual" amount of contributions for fiscal year 1991 does not reflect adjustments to contributions for fiscal year 1991 that were to be made after September 30, 1991.

TABLE 11. -- COMPARISON OF ACTUAL AND ESTIMATED OPERATIONS OF THE HOSPITAL INSURANCE TRUST FUND, FISCAL YEAR 1991
(Dollar amounts in millions)

Item	Actual amount	Comparison of actual experience with estimates for fiscal year 1991 published in-- 1991 report: Estimated amount[1]	1991 report: Actual as percentage of estimate	1990 report: Estimated amount[2]	1990 report: Actual as percentage of estimate
Net contributions	$74,655	$75,104	99	$75,252	99
Benefit payments	$68,705	$69,127	99	$66,773	103

[1]Under Alternative II
[2]Under Alternative II-B

The assets of the HI trust fund at the end of fiscal year 1990 totaled $95,631 million, consisting of $96,249 million in the form of obligations of the U.S. Government or of federally-sponsored agency obligations and, as an offset, an extension of credit of $617 million against securities to be redeemed. The assets of the HI trust fund at the end of fiscal year 1991 totaled $109,930 million, consisting of $109,327 million in the form of U.S. government obligations and an undisbursed balance of $604 million. Table 12 shows the total assets of the fund and their distribution at the end of fiscal years 1990 and 1991.

TABLE 12. -- ASSETS OF THE HOSPITAL INSURANCE TRUST FUND, BY TYPE, AT THE END OF FISCAL YEARS 1990 AND 1991[1]

	September 30, 1990	September 30, 1991
Investments in public-debt obligations sold only to the trust funds (special issues):		
Certificates of indebtedness:		
7 7/8-percent, 1992	-------	$1,975,955,000.00
8 7/8-percent, 1991	$4,150,537,000.00	-------
Bonds:		
8 1/8-percent, 1993-2006	-------	19,033,521,000.00
8 1/4-percent, 1993	622,286,000.00	622,286,000.00
8 3/8-percent, 1992	1,231,586,000.00	-------
8 3/8-percent, 1993-2001	11,602,906,000.00	11,602,906,000.00
8 5/8-percent, 1992	686,250,000.00	415,260,000.00
8 5/8-percent, 1993-2002	9,371,654,000.00	9,371,654,000.00
8 3/4-percent, 1992-2005	40,033,166,000.00	40,033,166,000.00
9 1/4-percent, 1991	1,000,698,000.00	-------

TABLE 12. – ASSETS OF THE HOSPITAL INSURANCE TRUST FUND, BY TYPE, AT THE END OF FISCAL YEARS 1990 AND 1991[1]

9 1/4-percent, 1992-2003	15,609,899,000.00	15,609,899,000.00
9 3/4-percent, 1993-1995	1,240,090,000.00	1,240,090,000.00
10 3/8-percent, 1991	427,023,000.00	------
10 3/8-percent, 1992	427,023,000.00	427,023,000.00
10 3/8-percent, 1998-2000	2,131,610,000.00	2,131,610,000.00
10 3/4-percent, 1991	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, 1993-1996	1,770,094,000.00	1,770,094,000.00
13 1/4-percent, 1993-1997	2,541,541,000.00	2,541,541,000.00
13 3/4-percent, 1991	262,134,000.00	------
13 3/4-percent, 1992	262,134,000.00	262,134,000.00
13 3/4-percent, 1998-1999	1,112,678,000.00	1,112,678,000.00
Total investments	$96,248,539,000.00	$109,326,637,000.00
Undisbursed balance[2]	-617,486,894.57	603,728,746.67
Total assets	$95,631,052,105.43	$109,930,365,746.67

[1]Certificates of indebtedness and bonds are carried at par value, which is the same as book value.
[2]Negative figures represent extension of credit against securities to be redeemed within the following few days.

New securities at a total par value of $101,038 million were acquired during the fiscal year through the investment of revenue and the reinvestment of funds made available from the redemption of securities. The par value of securities redeemed during the fiscal year was $87,960 million. Thus, the net increase in the par value of the investments held by the fund during fiscal year 1991 amounted to $13,078 million.

The effective annual rate of interest earned by the assets of the HI trust fund during the 12 months ending on June 30, 1991, was 9.51 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 1991 was 8.125 percent, payable semiannually.

D. ACTUARIAL METHODOLOGY AND PRINCIPAL ASSUMPTIONS FOR THE HOSPITAL INSURANCE COST ESTIMATES

This section describes the basic methodology and assumptions used in the estimates for the HI program under the intermediate (alternative II) assumptions. In addition, sensitivity testing of program costs under two alternative sets of assumptions is presented.

1. Assumptions

The alternative II economic assumptions used in the estimates can generally be characterized as assuming that economic performance will be substantially more favorable during the 75-year valuation period than during the last 25 years. Both the economic and demographic assumptions underlying the projections shown in this report are consistent with those in the 1992 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance (OASDI) Trust Funds. These assumptions are described in more detail in that report.

2. Program Cost Projection Methodology

The principal steps involved in projecting the future costs of the HI 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 (SNF), home health agency (HHA), and hospice services covered under the program; and (4) projecting increases in administrative costs. The major emphasis is directed toward expenditures for inpatient hospital services, which account for approximately 88 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 1 and 2.

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

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

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

The process of allocating the various types of payments made under the program to the proper incurred period--using incomplete data and estimates of the impact of administrative actions--presents difficult problems, the solutions 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 HI 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) reimbursed on a reasonable cost or per resident cost basis, 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. In other literature, the hospital input price index is also called the hospital market basket percentage increase. For fiscal years through 1992, the prospective payment rates have already been determined. The projections contained in this report are based on the assumption that for fiscal years 1993 through 1995, the prospective payment rates will be increased in accordance with Public Law 101-508, the Omnibus Budget Reconciliation Act of 1990, and these legislated annual payment rate increases are indeed functions of the annual hospital input price indices. For fiscal years 1996 and later, current statute mandates that the annual increase in the payment rate per admission equal the annual hospital input price index.

Increases in aggregate payments for inpatient hospital care covered under the HI 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 HI program).

It has been possible to isolate some of these elements and to identify their roles in previous hospital payment increases. Table 13 shows the estimated 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 alternative II, unless otherwise indicated.

TABLE 13.–COMPONENTS OF HISTORICAL AND PROJECTED INCREASES IN HI INPATIENT HOSPITAL PAYMENTS[1]

(Percent)

Calendar year	Labor			Non-labor			Input price index	Unit input intensity allowance[2]	Units of service		Other Sources	HI inpatient hospital payments
	Average hourly earnings	Hospital hourly earnings level	Hospital hourly earnings	CPI	Hospital price input intensity	Non-labor hospital prices			HI enrollment	Admission incidence		
Historical Data:												
1981	9.4%	0.5%	10.0%	10.3%	0.0%	10.3%	10.1%	1.0%	1.9%	2.7%	3.0%	19.7%
1982	5.8	2.9	8.9	6.0	-0.1	5.9	7.4	1.0	1.8	0.0	4.8	15.7
1983	4.1	1.9	6.1	3.0	1.0	4.0	5.1	1.0	1.7	0.8	2.2	11.2
1984	6.4	-0.9	5.4	3.4	0.9	4.3	4.9	1.0	1.8	-3.8	7.4	11.4
1985	5.4	-0.9	4.5	3.5	-0.5	3.0	3.8	0.0	1.6	-7.4	8.2	5.7
1986	5.3	-1.6	3.6	1.6	0.0	1.6	2.6	-2.5	2.3	-5.6	7.1	3.5
1987	4.8	-0.7	4.1	3.6	-0.5	3.1	3.6	-2.5	1.7	-3.0	5.0	4.7
1988	4.3	0.2	4.5	4.0	1.6	5.7	5.1	-2.6	1.7	-1.2	2.8	5.9
1989	3.2	1.6	4.9	4.8	1.0	5.9	5.4	-1.4	2.0	-2.5	4.7	8.3
1990	5.3	-0.3	5.0	5.3	-0.6	4.7	4.9	-0.2	2.1	-1.0	1.2	7.1
Projection:[3]												
1991	3.3	1.3	4.6	4.1	-0.8	3.3	4.0	-0.9	2.2	-0.8	2.6	7.2
1992	4.0	1.0	5.0	2.9	1.0	3.9	4.5	-1.4	2.2	0.3	3.4	9.3
1993	4.3	0.7	5.0	3.3	0.9	4.2	4.6	-1.0	2.1	0.7	2.5	9.2
1994	4.6	0.7	5.3	3.6	0.8	4.4	4.9	0.2	1.9	1.2	2.5	11.1
1995	5.1	0.5	5.6	3.9	0.7	4.6	5.2	0.2	1.7	1.1	2.5	11.1
2000	5.4	0.5	5.9	4.0	0.5	4.5	5.3	0.0	1.2	1.1	1.6	9.5
2005	5.2	0.5	5.7	4.0	0.5	4.5	5.2	0.0	1.4	0.5	1.0	8.3
2010	5.3	0.5	5.8	4.0	0.5	4.5	5.3	0.0	1.9	0.2	0.8	8.4
2015	5.4	0.5	5.9	4.0	0.5	4.5	5.4	0.0	2.7	-0.1	1.0	9.2
2016	5.4	0.5	5.9	4.0	0.5	4.5	5.4	0.0	2.7	-0.4	1.0	8.9

[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.
[3]Under alternative II.

Note: Historical and projected data reflect the hospital input price index which was recalibrated to a 1987 base year in 1990.

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 HI program, the differential between the proxy for hospital workers' hourly earnings and hourly earnings in the general economy has fluctuated widely. Since 1981, this positive differential has averaged about 0.3 percent, as hospital workers' earnings have risen faster than general earnings. Several factors contributing to this differential can be identified, including (1) growth in third-party reimbursement of hospitals--through Medicare, Medicaid, and comprehensive private plans--which is likely to have weakened hospital resistance to wage demands; (2) increased proportions of highly trained and more highly paid personnel; (3) an increased degree of labor organization and activity; and (4) the fact that hospital employees had historically earned less than similarly skilled workers in other industries. During the initial years of the prospective payment system, it appears that hospital hourly earnings were depressed relative to those in the general economy as hospitals adapted to the prospective payment system. This differential is assumed to decrease to a level of one-half percent over the short term, declining to zero just after the end of the first 25-year projection period.

Increases in hospital price input intensity, which are primarily the result of price increases for non-labor 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 0.3 percent during 1981-1990. Over the short term, hospital price input intensity is assumed to decrease to a level of one-half percent, declining to zero just after the end of the first 25-year period.

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; that is, the unit input intensity allowance is the amount added onto (or subtracted from) the input price index to yield the update factor. (It should be noted that the update factors are generally prescribed

on a fiscal year basis, while Table 13 is on a calendar year basis. Calculations have therefore been performed to estimate the unit input intensity allowance on a calendar year basis.) For fiscal years 1991-1995, the allowances shown are prescribed in Public Law 101-508. (Again, calculations were performed to show the unit input intensity allowance on a calendar year basis.) Beginning in fiscal year 1996, the law provides that future increases in payments to participating hospitals for covered admissions will equal the increase in the hospital input price index. Thus, the unit input intensity allowance, as indicated in Table 13, is assumed to equal zero for the rest of the years in the first 25-year projection period.

Since the beginning of the prospective payment system, increases in inpatient hospital payments from other sources are primarily due to three factors: (1) the improvement in DRG coding as hospitals continue to adjust to the prospective payment system; (2) the trend toward treating less complicated (and thus, less expensive) cases in outpatient settings, resulting in an increase in the average prospective payment per admission; and (3) legislation affecting the payment rates. The effects of several budget reconciliation acts, sequesters as required by the Gramm-Rudman-Hollings Act, and other legislative effects are reflected in other sources, as appropriate. Some of the expansions in hospital payments due to the Medicare Catastrophic Coverage Act of 1988, and the subsequent reductions in hospital payments due to the Medicare Catastrophic Coverage Repeal Act of 1989, are reflected in other sources for 1989 to 1991. A two percent increase for fiscal years 1991 through 2000 and a one percent increase for fiscal years 2001 through 2016 reflected in other sources are attributable to a continuation of the current trend toward treating less complicated cases in outpatient settings and continued improvement in DRG coding. Additionally, part of the increase from other sources can be attributed to the increase in payments for certain costs not included in the DRG payment; these costs are generally increasing at a rate faster than the input price index. Possible other sources of both relative increases and decreases in payments include (1) a shift to more or less expensive admissions (DRGs) due to changes in the demographic characteristics of the covered population; (2) changes in medical practice patterns; and (3) adjustments in the relative payment levels for various DRGs or addition/deletion of DRGs in response to changes in technology. As experience under the prospective payment system continues to develop and is further 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 (volume) of service as measured by increases in inpatient hospital admissions covered under the HI program. Increases in admissions are attributable both to increases in enrollment under the HI 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 HI protection. In addition, increases in the average age of beneficiaries lead to higher levels of admission incidence. Admission incidence levels are also often affected by changes in the laws and regulations that define and guide the HI program's coverage of inpatient hospital care.

c. Skilled Nursing Facility (SNF), Home Health Agency (HHA), and Hospice Costs

Historical experience with the number of days of care covered in SNFs under the HI 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. More recently, changes made in 1988 to coverage guidelines for SNF services resulted in about a 100 percent increase in utilization, and expansions and changes due to the Medicare Catastrophic Coverage Act of 1988, effective January 1, 1989, resulted in about another 30 percent increase in utilization of SNF services. For 1990, the projections contained in this report reflect a reduction in utilization consistent with the SNF transition provisions of the Medicare Catastrophic Coverage Repeal Act of 1989; for 1991, the complete repeal of the catastrophic expansions and changes are reflected. Modest increases in

covered days, based on growth and aging of the population, are projected for 1992 and later, and are included in the 1990 and 1991 estimates as well.

Increases in the average cost per day (where cost is defined to be the total of program reimbursement and beneficiary cost sharing) in skilled nursing facilities under the program are caused principally by increasing payroll costs for nurses and other required skilled labor. Projected rates of increase in cost per day are assumed to be slightly lower than increases in general earnings throughout the projection period, but adjustments to reflect regulations limiting SNF costs per day are included where appropriate. Increases in reimbursement per day reflect the changes in beneficiary cost sharing amounts, including those changes resulting from the catastrophic coverage and catastrophic coverage repeal legislation.

The resulting increases in expenditures for SNF services are shown in Table 14.

TABLE 14. -- RELATIONSHIP BETWEEN INCREASES IN HI PROGRAM EXPENDITURES AND INCREASES IN TAXABLE PAYROLL [1]
(Percent)

Calendar year	Inpatient hospital[2,3]	Skilled nursing facility[3]	Home health agency[3]	Weighted average[3,4]	HI administrative costs[3,5]	HI program expenditures[3,5]	HI taxable payroll	Ratio of expenditures to payrolls[6]
1992	9.3%	6.3%	20.1%	10.2%	8.1%	10.2%	3.8%	6.1%
1993	9.3	6.0	15.3	9.8	6.4	9.8	5.3	4.2
1994	11.2	5.9	8.9	10.9	6.9	10.8	5.9	4.7
1995	11.1	6.1	9.1	10.9	7.3	10.8	6.2	4.4
2000	9.5	6.2	8.8	9.4	6.9	9.4	6.2	3.0
2005	8.3	5.8	8.3	8.3	6.4	8.2	5.9	2.2
2010	8.4	5.5	8.0	8.3	6.4	8.3	5.7	2.5

TABLE 14. -- RELATIONSHIP BETWEEN INCREASES IN HI PROGRAM EXPENDITURES AND INCREASES IN TAXABLE PAYROLL [1]

(Percent)

Calendar year	Inpatient hospital[2,3]	Skilled nursing facility[3]	Home health agency[3]	Weighted average[3,4]	HI administrative costs[3,5]	HI program expenditures[3,5]	HI taxable payroll	Ratio of expenditures to payrolls[6]
2015	9.2	5.6	8.2	9.0	7.0	9.0	5.4	3.4
2016	8.9	5.7	8.3	8.8	6.7	8.8	5.3	3.2

[1]Percent increase in year indicated over previous year, under alternative II.

[2]This column may differ slightly from the last column of Table 13, since Table 13 includes all persons eligible for HI protection while this table excludes noninsured persons.

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

[4]Includes costs for hospice care.

[5]Includes costs of Peer Review Organizations.

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

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

Program experience with HHA payments has shown a generally upward trend. The number of visits had increased sharply from year to year, but some decreases, albeit small in magnitude relative to past increases, were experienced in the mid-1980's; these were followed by modest increases. Recently, however, large increases in the number of visits have occurred, and this trend is projected to continue through 1993. Modest increases, based on growth and aging of the population, are projected thereafter. Reimbursement per visit is assumed to increase at a slightly higher rate than increases in general earnings, but adjustments to reflect regulations limiting HHA reimbursement per visit are included where appropriate. The resulting increases in expenditures for HHA services are shown in Table 14.

Coverage of certain hospice care for terminally ill beneficiaries is a relatively new program benefit, resulting from the enactment of the Tax Equity and Fiscal Responsibility Act of 1982, and payments for hospice care are very small relative to total program benefit payments. Detailed hospice data is, at this time, scant, but increases in hospice benefit payments are estimated based on daily payment rates and annual payment caps, as mandated by law and regulation, and modest growth in the number of covered days. Increases in hospice payments are not shown separately in Table 14 due to their extremely

small contribution to the weighted average increase for all HI types of service, but are included in the average.

d. Administrative Expenses

The costs of administering the HI 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 one to three 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 13.

3. Financing Analysis Methodology

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 expected 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 14.

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, given that the current tax rate applied to taxable payroll is sufficient to support program costs, continuing that 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 (or some combination thereof) will be required to finance the system in the future. Table 14 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 about 2.5 percent per year by 2010, but increase to a level of about 3 percent per year by 2016 for alternative II, just after the post-World War II "baby boom" population starts becoming eligible for benefits. The result of these increases is a continued increase in the year-by-year ratios of program expenditures to taxable payroll, as shown in Table 15.

TABLE 15. -- SUMMARY OF ALTERNATIVE PROJECTIONS FOR THE HOSPITAL INSURANCE PROGRAM
(Percent)

	Increases in aggregate HI inpatient hospital payments[1]				Changes in the relationship between expenditures and payroll[1]			
Calendar year	Average hourly earnings	CPI	Other factors[2]	Total[3]	Program expenditures[3,4,5]	Taxable payroll	Ratio of expenditures to payroll	Expenditures as a percent of taxable payroll[3,4,5]
Alternative I:								
1992	4.3%	2.5%	5.4%	9.0%	9.9%	4.5%	5.1%	2.77%
1993	4.5	2.8	4.2	8.0	8.8	6.2	2.4	2.83
1994	4.8	3.0	5.5	9.7	9.7	6.6	2.9	2.91
1995	5.0	3.0	5.2	9.5	9.4	6.7	2.6	2.99
2000	4.9	3.0	3.0	7.2	7.3	6.0	1.3	3.24
2005	4.6	3.0	1.9	5.9	6.1	5.6	0.5	3.38
2010	4.7	3.0	1.9	6.0	6.2	5.3	0.8	3.55
2015	4.8	3.0	2.6	6.8	6.9	5.2	1.6	3.84
2016	4.9	3.0	2.3	6.5	6.6	5.1	1.4	3.90
Alternative II:								
1992	4.0%	2.9%	5.6%	9.3%	10.2%	3.8%	6.1%	2.80%
1993	4.3	3.3	5.2	9.2	9.8	5.3	4.2	2.91
1994	4.6	3.6	6.7	11.1	10.8	5.9	4.7	3.05
1995	5.1	3.9	6.3	11.1	10.8	6.2	4.4	3.18
2000	5.4	4.0	4.5	9.5	9.4	6.2	3.0	3.76
2005	5.2	4.0	3.5	8.3	8.2	5.9	2.2	4.28
2010	5.3	4.0	3.5	8.4	8.3	5.7	2.5	4.87
2015	5.4	4.0	4.2	9.2	9.0	5.4	3.4	5.75

TABLE 15. -- SUMMARY OF ALTERNATIVE PROJECTIONS FOR THE HOSPITAL INSURANCE PROGRAM
(Percent)

Calendar year	Increases in aggregate HI inpatient hospital payments[1]: Average hourly earnings	CPI	Other factors[2]	Total[3]	Changes in the relationship between expenditures and payroll[1]: Program expenditures[3,4,5]	Taxable payroll	Ratio of expenditures to payroll	Expenditures as a percent of taxable payroll[3,4,5]
2016	5.4	4.0	3.9	8.9	8.8	5.3	3.2	5.94
Alternative III:								
1992	3.8%	3.5%	6.1%	10.0%	10.7%	3.2%	7.3%	2.83%
1993	5.3	5.2	6.4	12.0	12.2	5.9	5.9	3.00
1994	6.8	6.4	7.6	14.7	14.1	7.8	5.8	3.18
1995	6.0	6.2	6.9	13.4	12.9	6.8	5.8	3.36
2000	6.1	5.0	6.0	11.9	11.6	6.4	4.8	4.35
2005	5.9	5.0	4.9	10.7	10.5	6.2	4.0	5.39
2010	5.9	5.0	5.2	11.0	10.7	6.1	4.3	6.70
2015	6.0	5.0	5.8	11.7	11.4	5.8	5.3	8.66
2016	6.0	5.0	5.5	11.4	11.1	5.7	5.1	9.11

[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, units of service as measured by admissions, and other sources.
[3]On an incurred basis.
[4]Includes expenditures attributable to insured beneficiaries only.
[5]Includes costs of Peer Review Organizations.

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

4. 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 13 shows the estimated experience of the HI program for 1981 to 1990. 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 13, 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, for inpatient hospital services as well as the other covered types of services, due to the uncertainty of the underlying economic assumptions and utilization

increases. In addition, there is uncertainty in projecting HI expenditures due to the possibility of future legislation affecting unit payment levels, particularly for inpatient hospital services. Current law is assumed throughout the estimates shown in this report, but legislation affecting the payment levels to hospitals has been enacted nearly annually for about the past ten years, and future legislation is probable.

In view of the uncertainty of future cost trends, projected costs for the HI program have been prepared under three alternative sets of assumptions. A summary of the assumptions and results is shown in Table 15. The set of assumptions labeled "Alternative II" forms the basis for the detailed discussion of hospital cost trends and resulting program costs presented throughout this report. It represents intermediate 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 three alternatives are consistent with those underlying the OASDI report.

As noted earlier, the single most meaningful measure of HI 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 3 percent faster per year than increases in taxable payroll for alternative II, as discussed in the "Financing Analysis Methodology" section. Program costs beyond the first 25-year projection period are based on the assumption that costs per unit of service will gradually decline to increase at the same rate as average hourly earnings increase. Program expenditures, which were about 2.6 percent of taxable payroll in 1991, increase to a level above six percent by the year 2016 and to over eleven percent by the year 2066 under alternative II. Hence, if all of the projection assumptions are realized over time, HI tax rates provided in the present financing schedule (2.9 percent of taxable payroll) will be grossly 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 two percent less rapidly and two percent more rapidly, respectively, than the results under the intermediate assumptions. Costs beyond the first 25-year projection period assume the two percent differential gradually decreases until the year 2041 when program cost

increases relative to taxable payroll are approximately the same as under the intermediate assumptions. Under alternative I, program costs increase about 1.6 percent more per year than increases in taxable payroll during the first 25-year projection period. Program expenditures under this alternative would be about 3.9 percent of taxable payroll in the year 2016, increasing to about 5.8 percent of taxable payroll by 2066. The summarized program costs for the 75-year projection period are about 4.2 percent of taxable payroll; hence, HI 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 5.1 percent more rapidly per year 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 2016 which is about 9.1 percent of taxable payroll, increasing to about 22.4 percent of taxable payroll in the year 2066.

E. ACTUARIAL BALANCE UNDER THE MODIFIED AVERAGE-COST METHOD

In section I.D., the summarized tax rates, cost rates, and actuarial balances under the present-value method, and the present-value methodology were described. In this section II.E., the same summary measures for the HI program, but under the modified average-cost method, are presented, and the modified average-cost methodology is described. The Health Technical Panel to the 1991 Advisory Council on Social Security concluded that both the present-value method and the modified average-cost method have value and should be reported.

Under the modified average-cost method which was used, prior to 1988, to evaluate the actuarial status of the program, the actuarial balance is defined as the difference between the arithmetic means of the annual cost rates (as defined in section I.D.) and the annual tax rates. Thus, under this method, the cost rates and tax rates for each year are given equal weights when summarized into a single measure. The annual cost rates include an amount to maintain the trust fund at a desired target level, if the fund would otherwise drop below that level. In years where the fund is at or exceeds the desired target level, no adjustment is made to lower the fund balance to the target level. In addition, the actuarial balances calculated under the modified average-cost method include the offset to cost due to the starting trust fund balance, and reflect the actual interest earned on the trust fund before it is exhausted.

The actuarial balance using the modified average-cost method can thus be characterized as being mathematically equivalent to the average tax rate

increase needed to maintain the trust fund at the target level over the 75-year projection period, taking into account the beginning trust fund balance and the interest earnings of the trust fund. The implied funding pattern under the modified average-cost method is that the current law trust fund ratios are maintained until the trust fund ratio falls below the target amount (100 percent of the following year's estimated expenditures, in this year's report). After that, the tax rate is increased each year to cover the cost of the program and to maintain the trust fund at the target level.

The results of calculating the actuarial balance using the modified average-cost method are presented in Table 16. The assumptions used to calculate the results are the same as those presented throughout this report.

TABLE 16. -- ACTUARIAL BALANCES OF THE HI PROGRAM, UNDER ALTERNATIVE SETS OF ASSUMPTIONS (MODIFIED AVERAGE-COST METHOD)

	Alternative		
	I	II	III
1992-2016:			
Summarized tax rate[1]	2.90%	2.90%	2.90%
Summarized cost rate[2]	3.33	4.29	5.62
Actuarial balance[3]	-0.43	-1.39	-2.72
1992-2041:			
Summarized tax rate[1]	2.90	2.90	2.90
Summarized cost rate[2]	3.91	6.28	10.49
Actuarial balance[3]	-1.01	-3.38	-7.59
1992-2066:			
Summarized tax rate[1]	2.90	2.90	2.90
Summarized cost rate[2]	4.38	7.65	13.79
Actuarial balance[3]	-1.48	-4.75	-10.89

[1]As scheduled under present law.

[2]Expenditures for benefit payments and administrative costs for insured beneficiaries, on an incurred basis, expressed as a percentage of taxable payroll, computed on the modified average-cost basis, including the cost of maintaining the trust fund at a level of 100% of the following year's estimated expenditures, and including an offset to cost due to the beginning trust fund balance.

[3]Difference between the summarized tax rate (as scheduled under present law) and the summarized cost rate.