Workers' Compensation: 1976–80 Benchmark Revisions

by Daniel N. Price*

Because the two systems directly affect each other, the Social Security Administration (SSA) has had a long-standing interest in workers' compensation. In some cases, workers' compensation fills the gaps in protection not covered by Social Security and, in others, it may duplicate such protection. Since 1965, Social Security disability benefits have been subject to reduction if the beneficiary also receives workers' compensation and the combined benefits exceed 80 percent of previous earnings. SSA has also been directly involved in providing income maintenance for disability from work-related diseases since 1969, when the Federal Black Lung program was established. Every 4 years, SSA prepares a new set of benchmark figures to serve as a basis for its series on national workers' compensation benefits and program operations. The 1980 benchmark figures, presented here, provide an opportunity to review program operations during the decade of the 1970's.

Fifty-one State workers' compensation programs (including one for the District of Columbia), plus several Federal programs, aid workers and the families of workers who become disabled or die from an injury or illness related to their jobs. These programs complement the Social Security system by providing cash payments, medical benefits, and rehabilitation services to disabled workers. Workers' compensation is intended to provide protection against income loss resulting from a disabling injury or illness that is work related. Program benefits are financed from insurance paid for by employers.

Workers' compensation pays medical expenses and cash benefits in four circumstances: temporary total disability, permanent partial disability, permanent total disability, and death. Roughly 4 out of 5 program claims are for medical expenses only. Among cash payment claims, 70 percent or more are for temporary total disability benefits to workers whose injury keeps them from their jobs for relatively short periods. When the total money amount is considered, however, the largest share goes to workers with a permanent partial disability.

An important feature of workers' compensation is the option employers have in insuring the protection mandated by law. They may generally choose to provide their workers with coverage by obtaining a policy with a commercial insurance company. Six States, however, require employers to insure with a publicly operated agency (exclusive State funds). In 12 States, employers may choose to insure with a public fund that competes with private insurers (competitive State funds). In all but three States, employers may self-insure their workers' compensation obligation if they provide proof of their financial ability to do so, such as by posting bond.

The Decade in Brief

The 1970's were eventful years for the workers' compensation system. Concern over program problems was reflected in congressional hearings on proposed Federal standards, in the establishment of the Federal occupational safety and health and Black Lung benefit programs, in the creation of national commissions on workers' compensation in 1970 and 1974, and in a conference on occupational disease in 1976.[1] In response to these and other pressures for reform, States made many

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[1] See **The Report of the National Commission on State Workmen's Compensation Laws**, Washington, D.C., 1972; **Workers' Compensation: Is There a Better Way?** (Report of the Policy Group of the Interdepartmental Workers' Compensation Task Force), 1977; and **Proceedings of the Interdepartmental Workers' Compensation Task Force Conference on Occupational Diseases and Workers' Compensation, 1976.**

major program changes in the early 1970's that improved coverage and benefits.

These changes produced substantial growth in coverage and benefits and in costs to employers as well. By 1980, 79 million workers, or 88 percent of the wage and salary work force, were covered by workers' compensation. Annual benefit payments, including those for Black Lung, amounted to $13.5 billion in that year. Benefits under regular State programs alone reached nearly $12 billion in 1980, 289 percent above the level of 1970.

Total benefits grew rapidly throughout the decade. In the early years, growth was triggered by the more inclusive State programs and by the new Federal Black Lung benefits. In the latter half of the 1970's, growth was spurred by the effects of wage and medical cost inflation and, in 1979, by an expansion of the Black Lung program. Other important contributors to benefit growth were the rise in the size of the covered labor force and some increase in the incidence and severity of work-related disability.

Under the regular programs in 1980, private insurers paid 60 percent of the benefits; State funds, 22 percent; and self-insurers, 19 percent. At the beginning of the decade, self-insurers paid a somewhat smaller share of the total, and both public and private insurance companies paid a higher share.

The 1970's were notable not only for increases in benefits paid, but also because weekly benefits replaced a higher share of lost earnings. As a result of legislative increases in replacement rates and maximum weekly benefit amounts, more States provided benefits that replaced about two-thirds of lost wages. In December 1969, just four States provided workers earning average wages with temporary total disability benefits of at least two-thirds of wages. By January 1982, 38 States provided this level of protection. Most of these improvements occurred from 1970 to 1975.

The cost of employers' premiums rose faster than benefits during the decade. (Besides benefit payments, premiums include the expenses of overhead, claims processing, and State regulatory agencies.) Employers paid $22 billion in premiums in 1980, 353 percent more than in 1970. The large rise reflects insurers' attempts to anticipate future benefits in an inflationary period.

Premium costs reached $1.95 per $100 of payroll in 1980, an increase of 76 percent over 1970. The largest annual increase in this measure was in 1977. After that the growth moderated. By 1980 the rate was $1.95, the same as in 1979.

Various cost figures for private and State funds showed the same general pattern—growth early in the 1970's but, in the last few years of the decade, movement toward earlier levels. In particular, the ratio of benefits paid to premiums, called the loss ratio, for private insurers fell from earlier levels of more than 50 percent to 43 percent in 1978. It remained at that level in 1979 but began climbing again and reached 45 percent in 1980. Similarly, State fund loss ratios fell during the 1970's to 50 percent in 1978 but rose in the next couple years to 62 percent by 1980.

At the end of the decade, program changes involving expansion of coverage and benefits had largely run their course. Instead, attention was focused on the containment of costs through improvements in the operational and administrative side of the program. States began to consider changes in their payment structure for compensating permanent partial disability to more accurately reflect actual income loss. Two States enacted such "wage loss" approaches.

Premium rate-setting procedures of insurers and the relative effectiveness of different types of insurers became one of the major areas of program review in the late 1970's. More employers switched to self-insurance, used insurers to provide limited services, or set up their own insurance companies. State legislatures established commissions to examine the various insurance mechanisms, including public funds. Most recently, at least eight States enacted open rating provisions, which require insurers to offer rates based on individual employer rather than industry wide experience.

At the end of the 1970's the main legislative emphasis among the States was to consolidate the reforms made earlier in the decade. Many operating procedures were revised and provisions were enacted to moderate growing costs.

It remains to be seen whether these areas will continue as the main program concerns in the 1980's. Alternatively, the drive for reform of the previous decade may be resumed to address still unresolved issues of coverage and benefit adequacy.

Coverage

In 1980, 78.8 million workers were covered under workers' compensation laws (table 1). Nationally, changes in the number and proportion of persons covered by workers' compensation from 1970 to 1980 showed a pattern of vigorous change in the early and middle years of the decade, followed by a leveling off of activity in the later years. In general, this pattern was the direct result of the many statutory changes States made in their programs during the early 1970's. For example, during the years 1970–76, the percentage of employed wage and salary workers covered by the program rose by almost 3 percentage points. In contrast, coverage rose by just over 1 percent in the 1977–80 period, when there were fewer major program revisions.

The 4-percentage-point increase in coverage during the decade was notable, but it was not as high as might have been expected. Similar growth occurred during 1960–70, when the extension of coverage was much

Table 1.—Estimated number of workers covered in average month and total annual payroll in covered employment, selected years, 1940–80 [1]

Year	Workers covered in average month: Number (in millions)	Workers covered in average month: Percent of employed wage and salary workers [2]	Total payroll in covered employment: Amount (in billions)	Total payroll in covered employment: Percent of civilian wage and salary disbursements
1940	24.6	70.8	$36	72.1
1946	32.7	76.8	80	76.8
1948	36.0	77.0	105	79.9
1949	35.3	76.9	103	79.1
1950	36.8	77.2	114	80.1
1951	38.6	78.4	132	81.0
1952	39.4	78.9	142	81.0
1953	40.7	80.0	154	81.7
1954	39.8	79.7	153	82.0
1955	41.4	80.0	168	83.4
1956	43.0	80.2	182	83.2
1957	43.3	80.5	190	83.0
1958	42.5	80.2	192	83.4
1959	44.0	80.3	209	84.1
1960	44.9	80.4	220	84.1
1961	45.0	80.3	226	84.2
1962	46.2	80.4	241	84.0
1963	47.3	80.5	254	84.1
1964	48.8	80.8	272	84.0
1965	50.8	81.5	292	83.6
1966	53.6	83.1	321	83.8
1967	55.0	83.1	342	83.3
1968	56.8	83.8	376	83.4
1969	59.0	84.6	414	83.7
1970	59.2	83.8	441	83.5
1971	59.4	83.3	469	83.6
1972	62.3	84.2	512	83.5
1973	66.3	86.3	578	84.9
1974	68.0	86.7	637	85.8
1975	67.2	86.7	678	86.6
1976	69.6	86.4	750	86.6
1977	72.1	86.4	827	86.2
1978	75.6	86.7	922	85.3
1979	78.6	87.7	1,041	86.0
1980	78.8	87.6	1,136	85.7

[1] Before 1959, excludes Alaska and Hawaii.
[2] Beginning 1967, excludes those aged 14 and 15 (as well as younger workers), and includes certain workers previously classified as self-employed.
Source: Data on employed wage and salary workers from **Current Population Survey**, Bureau of Labor Statistics. Data on wage and salary disbursements from Bureau of Economic Analysis, Department of Commerce.

more limited. The unexpectedly moderate rise in coverage may have several causes. A change in the industrial distribution of covered workers was no doubt one. The number of workers in farming and the smallest firms grew less than in other sectors of the economy. As a result, extensions of coverage to these groups, which were part of the changes in many State programs in the 1970's, had less effect than might have been expected. Another cause may be the difficulty of assuring that newly covered firms provide coverage. In some cases, recently covered workers may have been previously excluded because difficulties in implementation were expected.

The number of workers covered by workers' compensation as a proportion of wage and salary workers in each State is shown in chart 1. Half the States covered at least 85 percent of their workers in 1980; four covered less than 70 percent. This coverage pattern was almost the same as that in 1976. Impressive improvement in coverage was registered in both 1976 and 1980, compared with 1968, when only 15 States protected at least 85 percent of their workers and the same number covered less than 70 percent.

As can be seen in chart 1, coverage rates show some geographical pattern. States in the Northeast region and the East North Central and Pacific divisions tend to come closer to providing complete coverage than do States in other areas. This pattern appears to have some relationship to whether the State program requires firms of all sizes to provide coverage. In 1980 the programs of 14 States did not require employers with fewer than a specified number of workers to provide compensation. Chart 2 shows that nine of these States were in the South. (No major changes have occurred in coverage provisions through January 1982.) By contrast, the number of States with size-of-firm exceptions at the beginning of the decade was higher (24 States in 1968), as was the size of covered firm. For example, six States excepted firms with as many as seven to 15 workers. Other coverage limits are related to occupation and industry, which in turn may show regional patterns. Farm employment is one example. Thirty-three States offered some coverage to farm workers in 1980. In 13, farm workers were covered on about the same basis as other workers. In some States and areas, of course, agriculture is a more important part of the economy than in others and the lack of farm-work coverage has more effect on the overall level of protection. (Coverage provisions for farm workers were about the same at the beginning of 1982.)

Other industrial and occupational groups still often excluded from full coverage are domestic work, casual labor, and State or local government employment. For the latter, coverage differs markedly from one jurisdiction to another. Some jurisdictions have no exclusions or exclude specific groups such as elected or appointed officials. Others limit coverage to employees of specified political subdivisions or to employees engaged in hazardous occupations. In others, coverage is optional with the political subdivision.

A list of goals for improving coverage under workers' compensation was prepared by the National Commission on State Workmen's Compensation Laws in 1972. The Department of Labor issues an annual report on how many State laws meet these goals. As of January 1, 1982, 37 States met the Commission goal of covering employees in firms with one or more workers. (Another nine States had previously been shown to comply substantially with this goal, even if not fully.) Thirty-one States also met the goal of covering all government employees, and the laws of 13 others substantially met this goal. However, only 21 States provided any substantial

Chart 1.—Actual coverage as a percent of potential coverage, by jurisdiction, 1980

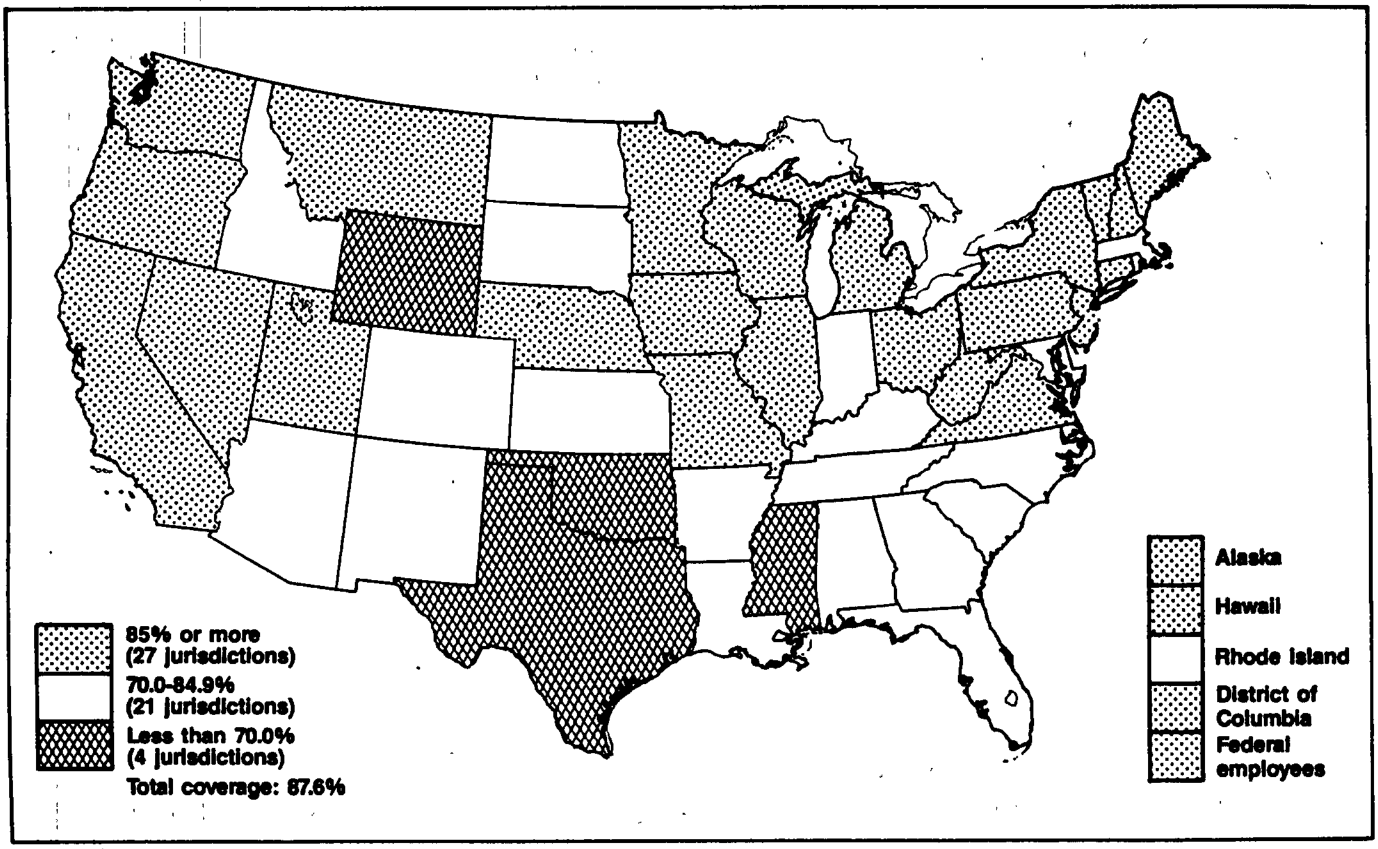
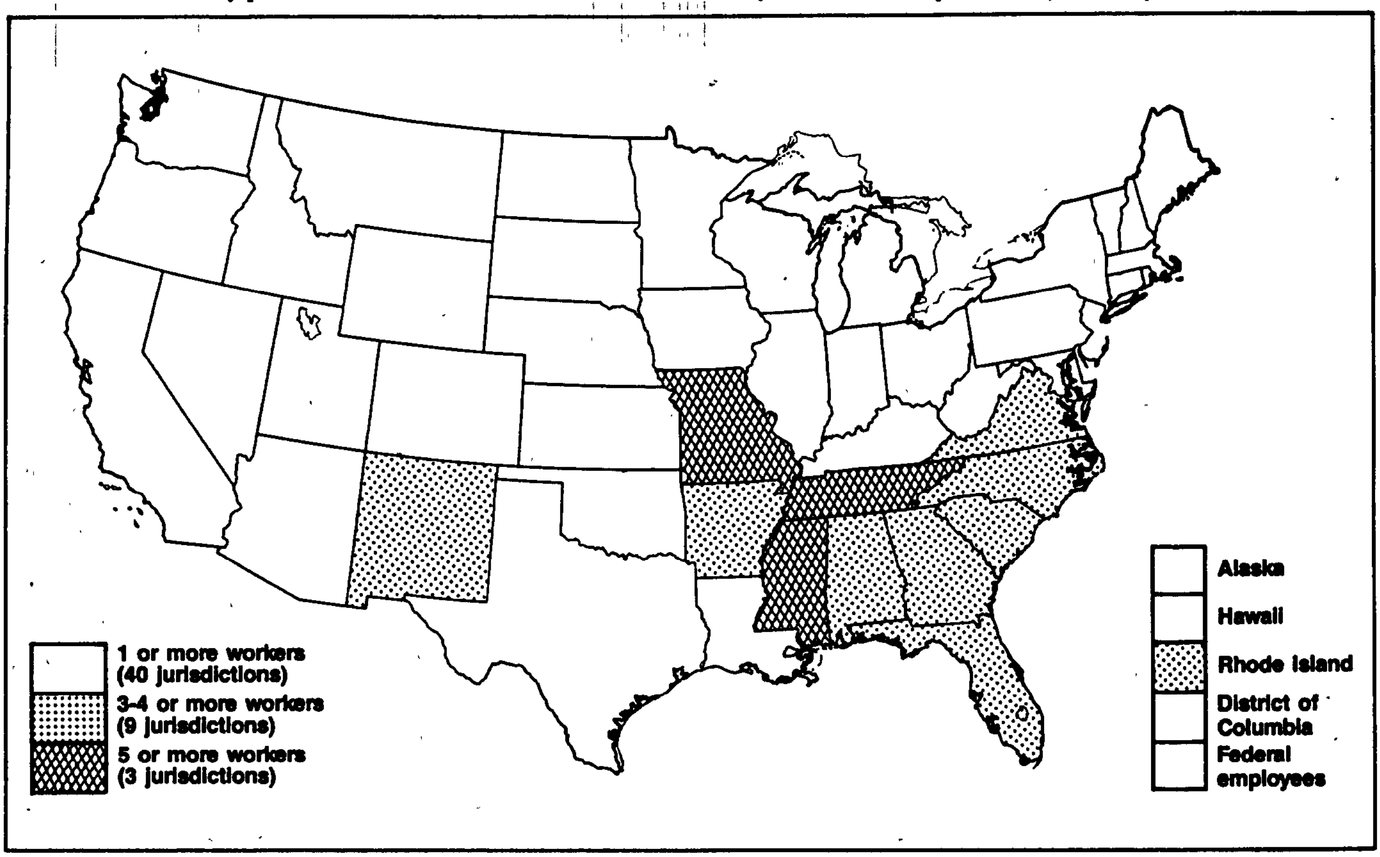


Chart 2.—Statutory provisions: Minimum size of firm covered by workers' compensation, January 1982



protection to farm workers and only nine states covered household workers and casual workers at levels that even approached the Commission goal for these groups. The Commission recommended that these workers be covered to the extent of coverage provided under the Social Security program.

Benefits

Benefit Growth

In 1980, workers' compensation benefits totaled $13.5 billion, a 12.6-percent increase over 1979 (table 2). The annual rate of increase was even higher throughout the 1970's. A rapid increase in total benefits took place during that decade, compared with the two previous decades, as shown below.

Period	Percentage increase in benefit payments
1950-60	111
1960-70	134
1970-80	347

Regular State programs. The main reason for this exceptional growth was the widespread liberalization of State benefit formulas that took place in the early 1970's. This change is illustrated by the average of all State maximum weekly benefit amounts for temporary total disability shown in the tabulation that follows.

Year	Average maximum weekly benefit	Percentage increase from 10 years earlier
1950	$31.70	...
1960	47.91	51
1970	80.18	67
1980	223.09	178

One of the most important benefit changes was the adoption of automatic increases in maximum weekly amounts. Forty-two programs had these provisions, which raise the maximum benefit payable as weekly earnings in the State go up (usually measured by wages in employment covered by unemployment insurance). These flexible provisions have had a major impact on benefits since prices and wages generally rose in the 1970's. Average weekly earnings covered by unemployment insurance rose 95 percent from 1970 to 1980 but only 51 percent from 1960 to 1970.

Program benefits for medical expenses were also affected by inflation in medical care prices during the 1970's. The medical services part of the Consumer Price Index increased by 120 percent in the decade but by only 52 percent in the 1960's.

Black Lung program. The Federal Black Lung benefits program, which began in 1970, accounted for 43 percentage points of the 347-point rise in workers' compensation benefits for the 1970-80 period. Black Lung payments grew rapidly in the first few years, reached $1 billion by 1973, and remained at about that level until 1979-80, when major statutory revisions produced $1.7 billion benefit totals in each of the two years. Table 3 shows the combined total of Black Lung payments made through the Social Security Administration (Part B of the program) and the Department of Labor (Part C). The Labor Department's share of Black Lung payments jumped from less than 6 percent of the total in 1978 to 43 percent in 1979.

Table 2.—Benefit payments, by type, 1939-80[1]

[In millions]

Year	Total	Medical and hospitalization payments	Compensation payments		
			Total	Disability	Survivor
1939	$235	$85	$150	$120	$30
1940	256	95	161	129	32
1941	291	100	191	157	34
1942	329	108	221	185	36
1943	353	112	241	203	38
1944	385	120	265	225	40
1945	408	125	283	241	42
1946	434	140	294	250	44
1947	486	160	326	280	46
1948	534	175	359	309	50
1949	566	185	381	329	52
1950	615	200	415	360	55
1951	709	233	476	416	60
1952	785	260	525	460	65
1953	841	280	561	491	70
1954	876	308	568	498	70
1955	916	325	591	521	70
1956	1,002	350	652	577	75
1957	1,062	360	702	617	85
1958	1,112	375	737	647	90
1959	1,210	410	800	700	100
1960	1,295	435	860	755	105
1961	1,374	460	914	804	110
1962	1,489	495	994	879	115
1963	1,582	525	1,057	932	125
1964	1,707	565	1,142	1,007	135
1965	1,814	600	1,214	1,074	140
1966	2,000	680	1,320	1,170	150
1967	2,189	750	1,439	1,284	155
1968	2,376	830	1,546	1,381	165
1969	2,634	920	1,714	1,529	185
1970	3,031	1,050	1,981	1,751	230
1971	3,563	1,130	2,433	2,068	365
1972	4,061	1,250	2,811	2,351	460
1973	5,103	1,480	3,623	2,953	670
1974	5,781	1,760	4,021	3,351	670
1975	6,598	2,030	4,568	3,843	725
1976	7,584	2,380	5,204	4,394	810
1977	8,630	2,680	5,950	5,075	875
1978	9,793	2,980	6,813	5,848	965
1979	12,027	3,520	8,507	7,232	1,275
1980	13,540	3,920	9,620	8,315	1,305

[1] Before 1959, excludes Alaska and Hawaii. Beginning 1970, includes Federal Black Lung benefits.

Source: Estimated by Social Security Administration on the basis of unpublished policy-year data from the National Council on Compensation Insurance.

Payments by Type of Benefit

Table 3 shows that payments in 1980 included $9.6 billion for cash benefits and $3.9 billion for medical and hospital care—71 percent and 29 percent, respectively,

Table 3.—Benefit payments under regular programs and the Federal Black Lung program, by type, 1970–80

[In millions]

Year	Total	Medical and hospital-ization payments	Compensation payments: Total	Compensation payments: Disability	Compensation payments: Survivor
			Total		
1970	$3,031	$1,050	$1,981	$1,751	$230
1971	3,563	1,130	2,433	2,068	365
1972	4,061	1,250	2,811	2,351	460
1973	5,103	1,480	3,623	2,953	670
1974	5,781	1,760	4,021	3,351	670
1975	6,598	2,030	4,568	3,843	725
1976	7,584	2,380	5,204	4,394	810
1977	8,630	2,680	5,950	5,075	875
1978	9,793	2,980	6,813	5,848	965
1979	12,027	3,520	8,507	7,232	1,275
1980	13,540	3,920	9,620	8,315	1,305
			Regular programs [1]		
1970	$2,921	$1,050	$1,871	$1,672	$199
1971	3,184	1,130	2,054	1,837	217
1972	3,507	1,250	2,257	2,017	240
1973	4,058	1,480	2,578	2,303	275
1974	4,826	1,759	3,067	2,747	320
1975	5,641	2,028	3,613	3,248	365
1976	6,603	2,377	4,226	3,796	430
1977	7,663	2,678	4,985	4,500	485
1978	8,770	2,978	5,792	5,257	535
1979	10,315	3,506	6,809	6,199	610
1980	11,802	3,893	7,909	7,239	670
			Federal Black Lung program [2]		
1970	$110	0	$110	$77	$33
1971	379	0	379	232	147
1972	554	0	554	330	224
1973	1,045	0	1,045	650	395
1974	955	$1	954	604	350
1975	957	2	955	595	360
1976	981	3	978	598	380
1977	967	2	965	575	390
1978	1,023	2	1,021	591	430
1979	1,712	14	1,698	1,033	665
1980	1,739	27	1,712	1,077	635

[1] Includes all workers' compensation programs, except Federal Black Lung.
[2] Cash benefit payments made through the Social Security Administration and, beginning in 1974, cash and medical payments made through the Department of Labor.

of the total. This distribution was similar to that throughout the 1970's.

Little change occurred in the distribution of benefit payments by broad type of benefit for many years among the regular programs. Cash and medical payments have fluctuated around two-thirds and one-third, respectively, through 1980.[2] Some change did occur, however, in the composition of cash benefits. Payments for death benefits under regular programs have slowly declined in importance from about 13 percent of the total in 1939 to about 6 percent in 1980.

Table 4 highlights another shift within the cash payments category that started during the 1950's. Payments for the more serious permanent disabilities rose faster than those for other payment categories. Payments for major permanent partial disability reached 44 percent of the total in 1978, compared with 21 percent in 1954. Payments for the minor partial disability group fell from 37 percent of the total to 22 percent in the same period.

Part of this change, however, reflects more complete reporting in recent years by insurance companies. Data in table 4 are reported on a so-called "first report basis" through 1978. The table also shows "fifth report" data for 1978. Fifth report data, which will be shown for 1978 and later in future updates in this series, reflect more complete information than do first reports. The more fully developed late reports show that major permanent partial benefits account for a larger share of benefit payments—44 percent using fifth reports for 1978, compared with 37 percent using first reports.

Benefits in Relation to Payroll

Benefit payments in 1980 equaled 1.06 percent of payrolls covered under workers' compensation (table 5). Since World War II, this relationship can be divided into four distinct periods:

1949–56—little significant change
1957–62—a rise of several percentage points
1963–69—no significant change
1970–80—a continuing large rise

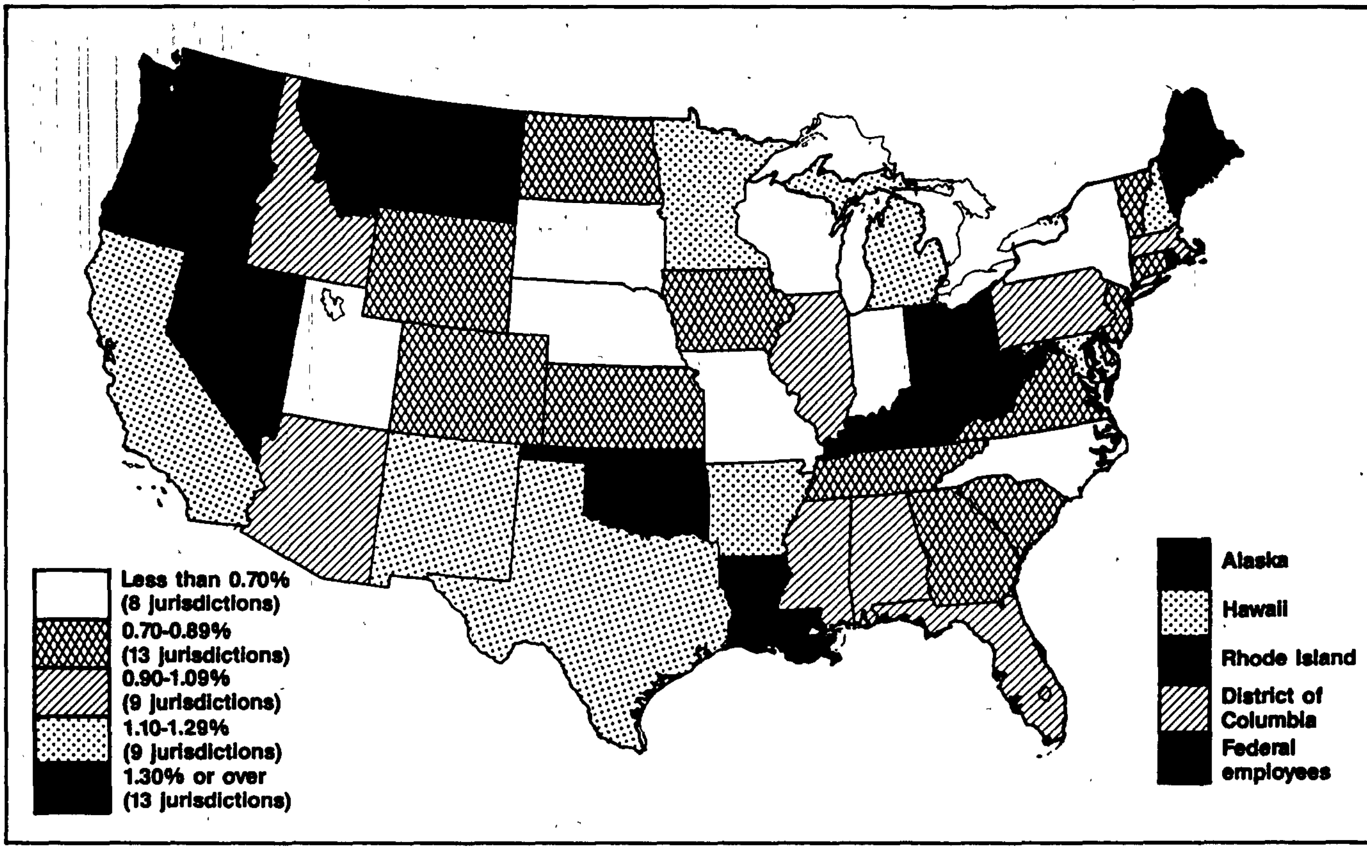
As indicated, the early 1970's provided real improvements in program benefits relative to wage and price levels during the 1970–80 period, resulting in a rise in the benefit-to-payroll ratio. This ratio was also raised by a greater prevalence of more serious claims, illustrated in table 4. Also, table 5 indicates that some increases in the severity of occupational injuries and illnesses may have occurred during the 1970's. For both manufacturing and nonfarm private industry, the number of lost workdays per lost workday case showed some rise from 1971 to 1980.

The relationship of benefits to payrolls, by State, is shown in chart 3. Only eight jurisdictions paid benefits equal to less than 0.70 percent of payroll in 1980; in 22 States the ratio was 1.10 percent or above. In 1972 the ratio was less than 0.70 percent in 28 States and 1.10 percent or more in just three States. The distribution of States in 1972 was about the same as it had been during the 1960's.

Some regional patterns can be observed in benefit-to-payroll ratios. Chart 3 shows that average benefit-to-payroll ratios tended to be highest in the Pacific and West South Central States. Several factors affect the ratio, such as (1) occupational composition of the labor force, (2) benefit provisions, (3) the effectiveness of safety and rehabilitation programs, (4) regional differences in cost and accessibility of medical care, and (5) administrative procedures in processing claims.

[2] These percentages are different from what would be derived from tables 2 and 6 because those tables include Federal Black Lung benefits in addition to regular program benefits.

Chart 3.—Total benefits as a percent of payrolls in covered employment, by jurisdiction, 1980



Benefits by Type of Insurer

Table 6 shows the distribution of benefits by type of insurance. Since the mid-1970's, a little over half of all payments have been made by private insurance, a third through State funds, and the remainder by self-insurers. For regular programs, about 60 percent of the benefits were through private carriers, 22 percent by State funds, and 19 percent through self-insurance.[3]

Notable growth in payments by self-insurers occurred in the late 1970's. Self-insurance payments accounted for 19 percent of all benefits in 1980, 4 percentage points above the 1970 level.

Growth in self-insurance payments reflects the efforts of employers to hold down surging premium costs in the 1970's. Various ways were developed to reduce the cost of providing workers' compensation protection. Some firms began self-insuring the risk while continuing to have insurance companies provide needed administrative services such as claims processing. These arrangements are called "administrative-service-only" contracts. Other firms established their own insurance companies to handle their workers' compensation business.

Although self-insurance is usually most feasible for large firms, group self-insurance plans have been established in some States. Some of these developments required changes in State laws. Several States made the revisions during the 1970's, including Nevada and Washington, which did not previously allow self-insurance.

Adequacy of Benefits

Wage Replacement Rates

One way of measuring the adequacy of State workers' compensation programs is to determine what part of the wages lost by workers as a result of illness or injury is replaced by program benefits. This measurement is referred to as the replacement rate.

One of the 19 essential recommendations[4] of the National Commission on State Workmen's Compensation Laws was that workers should receive benefits for temporary total disability of at least two-thirds of their gross weekly wage (subject to the State's maximum weekly benefit). As of January 1, 1982, the programs of all but two States provided for benefits at this level. At the beginning of 1970, benefits in 15 States fell short of

[3] These percentages are different from what would be derived from tables 2 and 6 because those tables include Federal Black Lung benefits in addition to regular program benefits.

[4] The Commission made 60 or more recommendations to reform and modernize the State systems. Nineteen of these were deemed essential and particularly suitable for Federal support to guarantee their adoption.

Table 4.—Percentage distribution of compensable cases and of aggregate cash benefits (incurred loss), and average benefit, by disability classification, selected policy years, 1939-78 [1]

Policy year	Total		Type of benefit					
			Total	Death	Disability			
					Permanent total [2]	Permanent partial		Temporary total
	Number (in thousands)	Amount (in millions)				Major [3]	Minor [4]	
	Percentage distribution for compensable cases [5]							
First report basis: [6]								
1939	365.0	...	100.0	1.0	0.1	1.8	12.1	85.0
1954	632.1	...	100.0	.8	.1	2.6	23.2	73.3
1966	843.0	...	100.0	.7	.1	3.2	24.1	71.8
1970	896.3	...	100.0	.6	.1	5.3	22.6	71.4
1974	1,030.7	...	100.0	.5	.2	4.1	20.7	74.5
1978	1,283.0	...	100.0	.4	.2	5.0	18.8	75.7
Fifth report basis: [6]								
1978	1,298.7	...	100.0	.4	.3	5.9	18.2	75.2
	Percentage distribution for cash benefit payments							
First report basis: [6]								
1939	...	$84.0	100.0	16.2	3.9	22.3	26.2	31.4
1954	...	393.5	100.0	11.5	2.0	20.7	36.8	29.1
1966	...	886.5	100.0	11.1	2.1	23.9	38.1	24.9
1970	...	1,263.1	100.0	10.6	2.8	33.9	31.4	21.2
1974	...	1,788.8	100.0	9.7	3.6	31.4	31.3	24.1
1978	...	3,436.5	100.0	8.4	4.0	37.4	26.5	23.8
Fifth report basis: [6]								
1978	...	4,483.7	100.0	7.5	6.2	44.4	22.0	19.8
	Average benefit per compensable case							
First report basis: [6]								
1939	...	...	...	$3,873	$9,415	$2,792	$500	$85
1954	...	...	...	9,207	16,758	5,010	986	247
1966	...	...	...	15,869	28,128	7,832	1,659	364
1970	...	...	...	23,077	28,914	9,070	1,961	418
1974	...	...	...	32,204	37,544	13,327	2,627	518
1978	...	...	...	58,284	68,023	19,982	3,780	841
Fifth report basis: [6]								
1978	...	...	...	64,878	73,408	25,890	4,168	911

[1] Excludes cases receiving medical benefits only. Data for individual policy years not strictly comparable because of shift in States included and in definition of policy year.

[2] Disability rate at 75-100 percent of total.

[3] Disability with severity equal to about 25-75 percent of total.

[4] Disability with severity equal to less than 25 percent of total.

[5] For permanent injury cases, includes, in addition to compensation for loss of earning power, payment during periods of temporary disability. For temporary disability cases, includes only closed cases known not to have involved any permanent injury and open cases in which, in the carrier's judgment, the disability will be only temporary.

[6] First report includes the earliest available data. Subsequent reports have more complete information.

Source: Unpublished data from the National Council on Compensation Insurance.

the two-thirds replacement rate, but most had raised their benefits by 1976.

Maximum Weekly Benefits

Whether or not actual benefits reach a two-thirds replacement rate also depends on the maximum weekly benefit set by the State. If the maximum weekly benefit is set too low, many will receive benefits limited by the maximum rather than the specified replacement rate.

Chart 4 shows, for selected years, the proportion of workers at their State's average weekly wage who could receive benefits of at least 65 percent of their wage, when the effects of both the prescribed replacement rate and maximum weekly benefit are applied. The improvement in replacement rates shown in the chart was the direct result of increases in maximum weekly benefits. During the 1970's, most States adopted flexible maximums, recommended by the National Commission, with the level of the maximum set at 100 percent or more of the average wage in the State's covered employment. As of January 1, 1982, however, 20 States still had maximum benefits for temporary total disability that were below their average weekly wage, including nine States that did not have flexible maximum provisions. Six of these States were among the 14 in which workers with earnings at the State average would receive benefits of less than 65 percent of wages.

Benefit replacement rates for individual States at the beginning of 1982 are shown in the left-hand panel of chart 5. Nationally, weekly benefits amounted to $190 for workers at average wages without dependents. This equaled 63 percent of the national average weekly wage. The benefit-to-wage rate was about the same as in December 1977. In December 1969, the average benefit was $68, 53 percent of average wages. Weekly benefits in five States failed to replace 50 percent of wages as 1982 began. About 12 percent of all covered workers

Table 5.—Aggregate benefit payments as percent of payroll in covered employment and occupational disability incidence rates in manufacturing and in nonfarm private industry, selected years, 1940–80 [1]

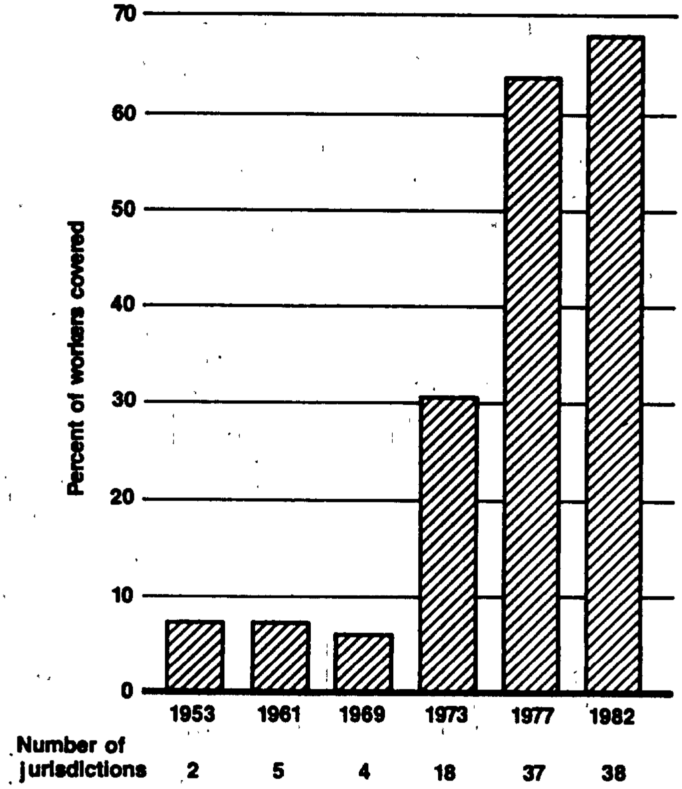
Year	Benefits as percent of payroll [2]	Manufacturing, average number of—		Nonfarm private industry, average number of—	
		Lost workday cases [3]	Lost workdays per lost workday case	Lost workday cases [3]	Lost workdays per lost workday case
1940	0.72	15.3	(4)	(4)	(4)
1946	.54	19.9	(4)	(4)	(4)
1948	.51	17.2	(4)	(4)	(4)
1949	.55	14.5	(4)	(4)	(4)
1950	.54	14.7	(4)	(4)	(4)
1951	.54	15.5	(4)	(4)	(4)
1952	.55	14.3	(4)	(4)	(4)
1953	.55	13.4	(4)	(4)	(4)
1954	.57	11.5	(4)	(4)	(4)
1955	.55	12.1	(4)	(4)	(4)
1956	.55	12.0	(4)	(4)	(4)
1957	.56	11.4	(4)	(4)	(4)
1958	.58	[5] 11.4	(4)	(4)	(4)
1959	.58	12.4	(4)	(4)	(4)
1960	.59	12.0	(4)	(4)	(4)
1961	.61	11.8	(4)	(4)	(4)
1962	.62	11.9	(4)	(4)	(4)
1963	.62	11.9	(4)	(4)	(4)
1964	.63	12.3	(4)	(4)	(4)
1965	.61	12.8	(4)	(4)	(4)
1966	.61	13.6	(4)	(4)	(4)
1967	.63	14.0	(4)	(4)	(4)
1968	.62	14.0	(4)	(4)	(4)
1969	.62	14.8	(4)	(4)	(4)
1970	.66	15.2	(4)	(4)	(4)
1971	.67	[6] 4.3	[6] 13	[6] 3.7	[6] 13
1972	.68	4.2	15	3.3	14
1973	.70	4.5	15	3.4	15
1974	.75	4.7	15	3.5	16
1975	.83	4.5	17	3.3	17
1976	.87	4.8	16	3.5	17
1977	.92	5.1	16	3.8	16
1978	.94	5.6	15	4.1	16
1979	1.01	5.9	15	4.3	16
1980	1.06	5.4	16	4.0	17

[1] Before 1959, excludes Alaska and Hawaii.
[2] Excludes benefits financed from general funds, primarily most of the Federal Black Lung benefits program.
[3] Per 100 full-time workers, beginning 1971. Data for 1940–70 are the average number of disabling work injuries per million employee-hours worked.
[4] Data not available. Before 1971, series for manufacturing related days lost to hours worked among all workers.
[5] Beginning 1958, series based on revised Standard Industrial Classification Manual. Comparable 1958 figure under earlier series was 10.8.
[6] Data for July–December.
Source: Work-injury rates derived from published and unpublished data of the Bureau of Labor Statistics.

were in these States. Eight out of 15 States where benefits replaced less than two-thirds of wages were in the southern part of the country.

Waiting periods. Actual replacement rates provided by benefits are also influenced by waiting-period provisions. All States have waiting periods before periodic cash benefits are payable. Medical-care protection is not restricted this way. The most common waiting periods are 3, 5, or 7 days. Waiting periods help control program costs and abuses.

Chart 4.—Proportion of workers and number of jurisdictions with a benefit/wage replacement rate of 65 percent or more for temporary total disability, 1953–82 [1]



[1] Replacement rate based on weekly benefit amount without dependents' allowance in December of year (except January of 1982) for workers with a weekly wage equal to the State average weekly wage in the previous year.

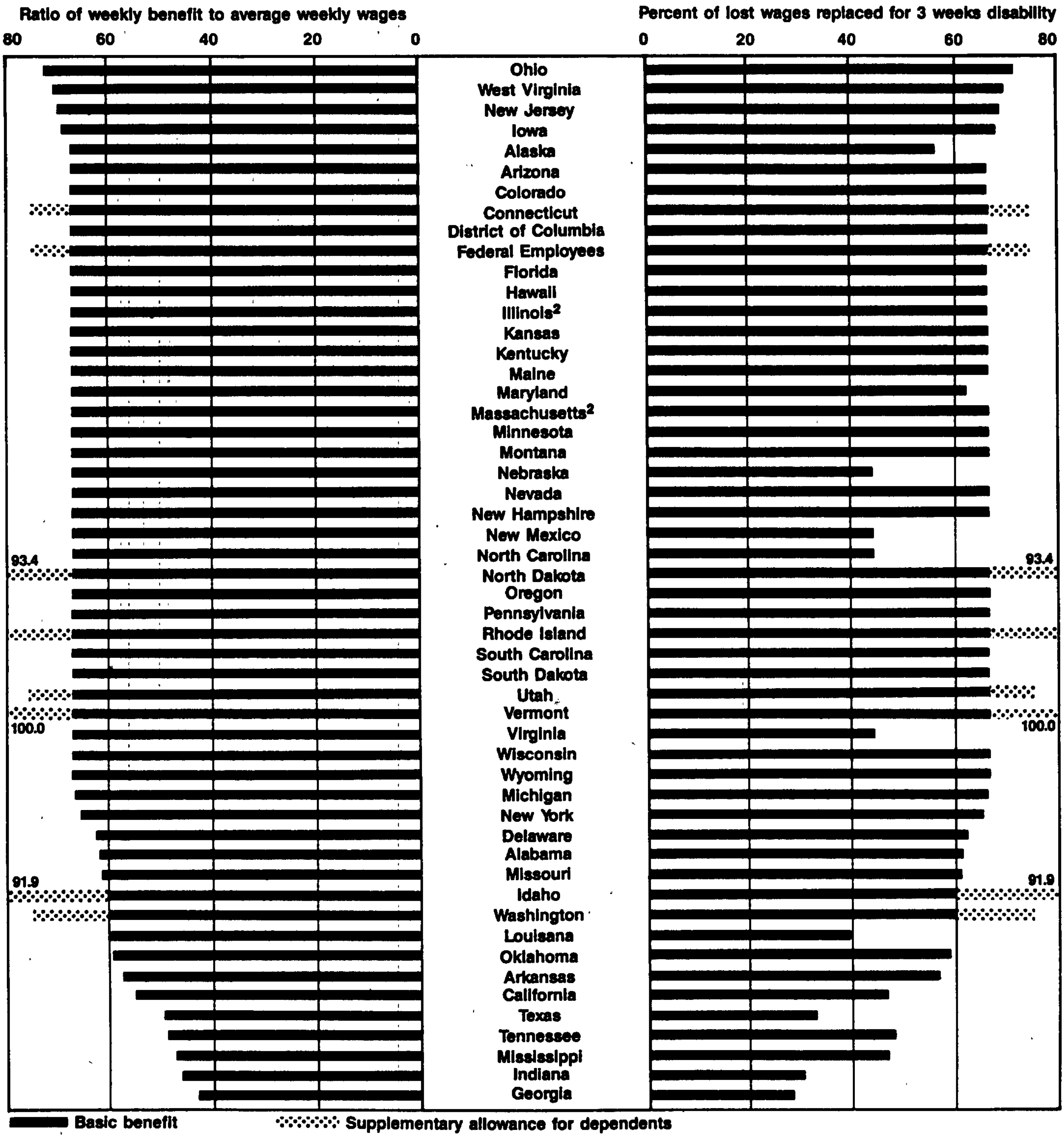
Changes in waiting-period requirements took place slowly before 1970 but occurred quite frequently during the first half of the 1970's. The tabulation below shows that a large majority of the States (32) imposed a 7-day waiting period for benefits in 1969. By 1977, only 22 States did so and 24 others had a 3-day provision. There was little change in waiting-period provisions after 1977.

Date	Programs	Waiting period (days)			
		3	5	7	Other
December 1961	52	12	4	34	2
December 1969	52	14	5	32	1
December 1977	52	24	5	22	1
January 1982	52	24	5	21	2

Benefits in all States are paid retroactively for the waiting period if the disability lasts for a certain minimum period. One of the recommendations made by the National Commission was that waiting periods should not exceed 3 days and that no more than 14 days should be required to qualify for retroactive benefits. In January 1982, slightly less than half the States met this goal.

Changes in provisions for retroactive benefit pay-

Chart 5.—Measures of interstate variation: Weekly benefit payable for temporary total disability as a percent of average weekly wage, 1981, and percent of lost wages replaced for worker with 1981 average weekly wage for tempoary total disability lasting 3 weeks, January 1982[1]



[1] Maximum weekly benefit for worker with and without eligible dependents under laws paying dependents' allowances; average wage for workers covered by unemployment insurance program.

[2] Dependents' allowances provided, but maximum same for workers earning average wage whether or not they have dependents.

ments occurred more gradually than changes in other benefit provisions. The number of programs providing payment of waiting-period benefits after at least 14 days of disability was 15 in 1961, 19 in 1969, 24 in 1977, and 25 in 1982.

A typical replacement rate provided by workers' com-

Table 6.—Benefit payments, by type of insurance, 1939-80 [1]

[Amounts in thousands]

Year	Total: Amount	Total: Percent	Private insurance (losses paid by carriers) [2]: Amount	Private insurance: Percent	State and Federal fund disbursements [3]: Amount	State and Federal: Percent	Self-insurance payments [4]: Amount	Self-insurance: Percent
1939	$234,723	100.0	$122,183	52.0	$68,464	29.2	$44,067	18.8
1940	255,653	100.0	134,653	52.7	72,528	28.4	48,472	18.9
1941	290,812	100.0	159,823	55.0	77,408	26.6	53,581	18.4
1942	328,669	100.0	190,239	57.9	81,247	24.7	57,183	17.4
1943	353,035	100.0	213,123	60.4	80,574	22.8	59,338	16.8
1944	385,236	100.0	236,655	61.4	85,990	22.3	62,591	16.3
1945	408,374	100.0	252,570	61.9	91,255	22.3	64,549	15.8
1946	434,232	100.0	269,799	62.1	96,053	22.1	68,380	15.8
1947	485,794	100.0	301,833	62.1	110,303	22.7	73,658	15.2
1948	533,584	100.0	334,699	62.7	120,989	22.7	77,896	14.6
1949	566,295	100.0	353,140	62.4	131,734	23.3	81,421	14.4
1950	614,702	100.0	381,329	62.0	148,693	24.2	84,680	13.8
1951	709,047	100.0	444,416	62.7	170,445	24.0	94,186	13.3
1952	784,956	100.0	490,958	62.5	193,107	24.6	100,891	12.9
1953	841,126	100.0	524,176	62.3	210,337	25.0	106,613	12.7
1954	876,216	100.0	540,497	61.7	225,473	25.7	110,246	12.6
1955	915,665	100.0	562,515	61.4	238,445	25.9	114,705	12.5
1956	1,002,007	100.0	618,109	61.7	259,074	25.9	124,824	12.4
1957	1,062,171	100.0	660,903	62.2	271,406	25.6	129,862	12.2
1958	1,111,599	100.0	649,402	62.5	284,780	25.6	132,417	11.9
1959	1,209,808	100.0	752,580	62.2	315,990	26.1	141,238	11.7
1960	1,294,945	100.0	809,921	62.5	324,580	25.1	160,444	12.4
1961	1,374,176	100.0	850,872	61.9	347,433	25.3	175,871	12.8
1962	1,488,816	100.0	923,989	62.1	370,722	24.9	194,105	13.0
1963	1,582,459	100.0	987,580	62.4	388,242	24.5	206,637	13.1
1964	1,707,189	100.0	1,069,577	62.7	411,876	24.1	225,736	13.2
1965	1,813,807	100.0	1,124,013	62.0	445,382	24.5	244,412	13.5
1966	2,000,316	100.0	1,239,120	61.9	486,167	24.3	275,029	13.8
1967	2,189,294	100.0	1,362,938	62.3	523,683	23.9	302,673	13.8
1968	2,375,988	100.0	1,481,606	62.4	556,340	23.4	338,042	14.2
1969	2,633,917	100.0	1,640,964	62.3	606,675	23.0	386,278	14.7
1970	3,030,603	100.0	1,843,264	60.8	754,892	24.9	432,447	14.3
1971	3,563,084	100.0	2,004,534	56.3	1,098,440	30.8	460,110	12.9
1972	4,061,419	100.0	2,178,617	53.6	1,379,206	34.0	503,596	12.4
1973	5,103,129	100.0	2,513,545	49.3	1,998,018	39.2	591,566	11.6
1974	5,780,993	100.0	2,970,811	51.4	2,086,015	36.1	724,167	12.5
1975	6,597,767	100.0	3,421,688	51.9	2,324,351	35.2	851,728	12.9
1976	7,584,058	100.0	3,975,784	52.4	2,569,510	33.9	1,038,764	13.7
1977	8,630,356	100.0	4,628,695	53.6	2,749,647	31.9	1,252,014	14.5
1978	9,793,078	100.0	5,256,227	53.7	3,039,412	31.0	1,497,439	15.3
1979	12,027,271	100.0	6,156,997	51.2	4,022,091	33.4	1,848,183	15.4
1980	13,540,344	100.0	7,022,707	51.9	4,332,190	32.0	2,185,447	16.1

[1] Before 1959, excludes Alaska and Hawaii.

[2] Net cash and medical benefits paid by private insurance carriers under standard workers' compensation policies. Data from **Spectator: Insurance by States of Fire, Marine, Casualty, Surety, and Miscellaneous Lines**; published and unpublished reports of State insurance commissions; and A. M. Best Company.

[3] Net cash and medical benefits paid by competitive and exclusive State funds and the Federal systems. Beginning 1970, includes Federal Black Lung benefits. Includes payment of supplemental pensions from general funds. Compiled from State reports (published and unpublished) and from **Spectator: Insurance by States of Fire, Marine, Casualty, Surety, and Miscellaneous Lines** and the **Argus F.C. and S. Chart** (annual issues) and other insurance publications. For some funds, data for fiscal years.

[4] Cash and medical benefits paid by self-insurers, plus the value of medical benefits paid by employers carrying workers' compensation policies that do not include the standard medical coverage. Estimated from available State data.

pensation can be estimated by taking the State's waiting-period and retroactive-payment provisions into account when computing the rate from benefits and lost wages for an average period of disability. Survey data from the Bureau of Labor Statistics show that in 1980 an average of 17 days of work were lost by each disabled worker in nonfarm private industry (table 5). This is the rough equivalent of 21–22 calendar days. The right-hand side of chart 5 shows estimated State replacement rates for workers who received a temporary total disability benefit for 3 weeks. The national average replacement rate was 59 percent in January 1982, just 1 percentage point above the proportion for December 1977. In December 1969, the rate was 44 percent.

Dependents' allowances. Ten programs supplement benefits for temporary total disability by providing allowances for spouses and children. Eight of these programs, as well as one other, also provide dependents' allowances for permanent total disability. Dependents' allowances actually increased temporary benefits in only eight programs when workers had wages as high as the statewide average (chart 5). In the other programs, benefits are capped by the maximum payment even when dependents are present. The role of dependents' allowances in workers' compensation grew slowly between the end of World War II and 1970, but has declined since. The number of programs providing these supplements for temporary disability was 11 in 1940, reached a peak of 18 in 1970, and fell to 10 in 1982.

Among programs with dependents' allowances, the replacement rate was 65 percent for workers without dependents, compared with 77 percent for workers with the maximum number of dependents. Because few programs have dependents' allowances, their effect on the national average replacement rate was minimal, raising it from 63 percent to 64 percent. The national replacement rate was 60 percent for a worker disabled for 3 weeks when maximum dependents' allowances are included, just 1 percentage point above the rate for workers without dependents.

Net Replacement Rates

It is interesting to look at replacement rates based on take-home pay instead of total pay. In 1981, national average gross weekly earnings covered by workers' compensation amounted to $302. For workers with no dependents, Federal taxes of $48 and Social Security contributions of $20 were subtracted to produce a net weekly wage of $234. Such a worker would have received a monthly workers' compensation benefit of $190 in January 1982, about 81 percent of his or her take-home pay. Rates for single workers and workers with a spouse and two children are shown in the tabulation below for 1982 and earlier years, for programs with and without a dependents' allowance. Replacement rates improved for each group between December 1961 and January 1982.

Year[1]	Single worker	Worker with spouse and 2 children, in jurisdictions—	
		With dependents' allowances	Without dependents' allowances
1961	62	67	56
1965	61	73	54
1969	68	73	60
1973	70	75	66
1977	77	83	71
1982	81	88	74

[1] As of December, except January for 1982.

Not only higher benefit levels but increases in taxes contributed to rising net replacement rates. In both 1969 and 1982, for example, net replacement ratios were higher than trends in benefit levels would suggest because of a temporary surtax in 1968 and the effect of wage inflation on taxes in 1981. On the other hand, net replacement rates in 1977 would have been higher if it had not been for the 1976 general tax credit, which temporarily reduced tax withholding.

The long-term consistency of net replacement rates among family groups is worth noting. Net replacement rates for single workers are lower than for workers who receive dependents' allowances but higher than for workers with dependents in States without such allowances. This pattern reflects the expected result of dependents' allowances, and the fact that because single workers are taxed at higher rates they have lower net wages and higher net replacement rates for a given benefit level.

Not all States have an income tax, and among those that do the structure and rates vary widely. As a result, no uniform procedure exists for adjusting estimates of net replacement rates for such taxes. An example can be constructed using typical State tax provisions, however. If the 1981 income tax provisions of Georgia[5] are applied to the above case of a single worker with national average gross earnings of $302, an $11 deduction is made for State income tax. This produces take-home pay of $223 a week. The resulting net replacement rate of 85 percent is 4 percentage points above the rate with no State tax deduction.

Permanent Disability and Death Benefits

Benefits for permanent total or partial disability or for death are an important part of the workers' compensation program. As indicated in table 4, permanent disability and death claims accounted for four-fourths of total cash payments in 1978 because of the large amount paid per case. In recent years, increased attention has been given to the legislative and administrative problems arising from the adjudication of these types of claims. The benefit formula for permanent total disability in practically all States provides a wage-replacement rate of two-thirds or more. As of January 1982, these benefits were payable for the duration of disability or for life without monetary limits in all but seven States. However, wage replacement rates for permanent disability are likely to be lower than for temporary disability because, as of January 1982, the maximum weekly benefit amounts for permanent disability in 21 States still failed to meet the National Commission goals. The Commission recommended that maximums be adjusted automatically as wages rise, and that they be set at 100 percent or more of the State's average weekly wage. Even though many States still do not meet this goal, improvement in this area has occurred since the beginning of the decade, when only one program met this goal.

[5] Georgia was selected as a typical State from information in Robert J. Myers, **Social Security**, Richard D. Irwin, Inc., 1981, pages 148–150. Among 44 States with an income tax, Georgia was reported as being 23rd in income tax revenues per $1,000 of personal imcome.

Replacement rates for survivors of workers who died from work-related causes were likely to be lower. In January 1982, 10 programs did not meet the Commission goal of a two-thirds replacement rate, 24 did not provide maximum survivor benefits of at least 100 percent of statewide average earnings, and 21 did not provide survivor benefits throughout widowhood or until remarriage.

Survivor benefits followed the same general pattern as other workers' compensation benefits during the 1970's. A large number of States improved benefits early in the decade. Then the pace of change slowed. Fourteen programs paid survivor benefits throughout widowhood or until remarriage in 1969. The number had risen to 31 by 1977 and 5 years later, in 1982, it was still 31.

It is far more difficult to determine if permanent partial disability benefits properly compensate for lost wages than it is to do so for other types of workers' compensation benefits. Measuring the degree of disability involves making complex and sometimes controversial judgments. Resulting benefit awards may be too low or too high. How much wage loss should be compensated in many cases is at best an educated guess about how a worker's future earnings will be affected by the disability. Problems in evaluating the adequacy of permanent partial disability benefits are reflected in the inability of the National Commission to reach agreement on any essential standards for States.

A 1979 study[6] based on data from three States showed that overall replacement rates for contested permanent partial disability cases were 46 percent in California, 59 percent in Florida, and 75 percent in Wisconsin. In each State, rates were higher in uncontested cases than in contested cases. The study also reported a very wide range of replacement rates within each State. In Florida, for example, when workers were studied by age and the proportion disabled, there was wide variation in replacement rates. Benefits replaced as little as 16 percent of lost earnings among workers aged 20-29 with 1-5 percent disability, and as much as 220 percent for workers aged 50-59 with the same disability rating. Even for clearly defined partial disabilities—so called "schedule" cases—the statutory level of payment showed great variability in January 1982. For example, payment for the loss of an eye was lowest in North Dakota—$6,000—and highest in Connecticut—$72,580.

Some States are implementing different systems to provide more equitable compensation for partial disability. Two States, Florida and Louisiana, have already established these "wage loss" systems, which are designed to provide benefits for actual wage loss. This approach replaces the traditional practice of making benefit awards and closing the case when the injured worker has achieved maximum recovery. It is too early to judge the success of these new programs.

Employer Costs

The amount spent for benefits or reserved for future benefits is one of the employers' costs of workers' compensation.[7] In addition, overhead costs are included in the premiums employers pay. Overhead costs cover policywriting, ratemaking, payroll audit, claims investigation and adjustment, safety inspection, legal services, and general administration. Some of these overhead costs are eliminated or reduced when employers self-insure. Insurance provided by commercial carriers includes commissions, taxes, underwriting profit, and also license fees in many cases. The substantial increases in workers' compensation costs through the 1970's appear in table 7. The $22.2 billion cost to employers in 1980 was more than four times the 1970 total. Annual increases were 14 percent or more in 7 years during the decade. At the end of the 1950's and 1960's, costs were about twice their level at the start of the decade, and grew by as much as 14 percent in only 1 year. Much of the rise in premiums reflected growth in the covered labor force and in wage levels. But these factors are accounted for by taking costs as a percentage of payroll (see table 7). The data show that there were major "real" increases in premium costs during the 1970's. In 1980, costs were $1.95 per $100 of payroll, 84 cents per $100 higher than at the start of the decade. By contrast, the increases of 4 cents for the 1950's and 18 cents for the 1960's were quite modest.

The rise in the ratio of costs to payroll slowed by the end of the decade. The largest annual rise of 15 percent occurred in 1977 and was followed by increases of 9 percent and 5 percent in the next 2 years. The cost-to-payroll ratio was the same in 1979 and 1980, but the dollar amount of costs rose 9 percent as a result of growth in employment, wages, and medical care costs.

An interesting study suggests that the growth in the cost-to-payroll ratio over the past two decades might have been larger if certain demographic and economic changes had not reduced costs per covered worker.[8] The study suggested that, when wages, prices, injury

[6] John F. Burton, Jr. and Wayne Vroman, "A Report on Permanent Partial Disability under Workers' Compensation," **Research Report of the Interdepartmental Workers' Compensation Task Force,** vol. 6, April 1978.

[7] Except in a few States that require minimal employee contributions—primarily toward the cost of medical care—or that pay supplemental pensions from general revenues, workers' compensation benefits are entirely employer-financed.

[8] See "The Effects of Demographic and Economic Change on Workers' Compensation Costs, 1960-1980." This paper, prepared by Alan E. Dillingham of Illinois State University, was presented at the Conference on Research in Workers' Compensation, July 19-21, 1981, Storrs, Connecticut.

Table 7.—Estimated costs of workers' compensation to employers as percent of payroll in covered employment, selected years, 1940–80

Year	Amount [1] (in millions)	Percent of payroll
1940	$421	1.19
1946	726	.91
1948	1,013	.96
1949	1,009	.98
1950	1,013	.89
1951	1,185	.90
1952	1,333	.94
1953	1,483	.97
1954	1,499	.98
1955	1,532	.91
1956	1,666	.92
1957	1,734	.91
1958	1,746	.91
1959	1,869	.89
1960	2,055	.93
1961	2,156	.95
1962	2,323	.96
1963	2,510	.99
1964	2,713	1.00
1965	2,908	1.00
1966	3,279	1.02
1967	3,655	1.07
1968	4,034	1.07
1969	4,460	1.08
1970	4,894	1.11
1971	5,191	1.11
1972	5,832	1.14
1973	6,771	1.17
1974	7,881	1.24
1975	8,977	1.32
1976	11,140	1.49
1977	14,151	1.71
1978	17,191	1.86
1979	20,330	1.95
1980	22,158	1.95

[1] Premiums written by private carriers and State funds and benefits paid by self-insurers increased by 5–10 percent to allow for administrative costs. Also includes benefit payments and administrative costs of Federal system. Where necessary, fiscal year data converted to calendar year data. Before 1959, excludes Alaska and Hawaii. Excludes costs of benefits financed from general funds, primarily most of the Federal Black Lung benefits program.

rates, and, presumably, statutory benefit provisions are held constant, the program cost per covered worker declined from 1960 to 1980 because the proportion of certain high cost groups in the labor force declined. These groups are:

(1) Men (more women entered the labor force).
(2) Older workers (the "baby boom" generation entered the labor force and the retirement age declined).[9]
(3) Workers in construction, mining, and manufacturing industries, and blue-collar workers (particularly unskilled).

[9] **Ibid.** Dillingham finds higher costs per unit of exposure among older workers even though injury rates are higher for younger workers. The author states that the pattern for cost per unit of exposure may be due in part to the occupational and industrial mix in the available aggregated data.

These factors probably had a moderating effect on the actual increase in workers' compensation costs.

Because costs grew rapidly in the 1970's, employers and insurers began to reexamine the program's operation. As already mentioned, a trend developed toward self-insurance and other cost-saving techniques. Also, State legislatures are studying rate setting mechanisms to improve competition and cost effectiveness in the insurance industry.

Through 1982, eight States enacted laws requiring insurers to fix rates individually instead of using standard industry-wide rate schedules. These "open" or "competitive" rating requirements make insurers tailor offerings to their own and individual employer's cost experience. Some of the new laws permit insurers to use standard rates and offer experience-based credits to individual employers, allowing them to compete more effectively for workers' compensation business. Several States with open rating reported substantial drops in premium rates shortly after the new practices went into effect.

Loss and Expense Ratios

The ratio between benefit payments and premiums is referred to as the loss ratio and shows how much of every dollar spent by an employer is returned to the worker as benefits. The following tabulation shows program costs, benefits, and the resulting loss ratio for all insurers for selected years in terms of the actual benefits paid out in a year and the premiums written in that year.

Year	Costs[1] (in millions)	Benefit payment: Amount[1] (in millions)	Benefit payment: As percent of costs
1950	$1,013	$615	60.7
1960	2,055	1,295	63.0
1970	4,894	2,889	59.0
1975	8,977	5,600	62.4
1976	11,140	6,550	58.8
1977	14,151	7,611	53.8
1978	17,191	8,742	50.9
1979	20,330	10,519	51.7
1980	22,158	12,029	54.3

[1] Benefits and costs for 1970 and later are net of the amounts financed by general revenues (primarily Federal Black Lung benefits and supplemental payments made by a few States).

Between 1950 and the early 1970's the ratio remained within a fairly limited range, around 60 percent. A sharp decline occurred from 1975 to 1978 to just over 50 percent, and in 1979 and 1980 the ratio began to return toward earlier levels.

The downswing of the loss ratio of benefits paid to premiums written in the mid-1970's resulted from the interaction of various parts of the premium ratemaking process. Most important were more liberal coverage and benefit provisions, higher wage levels and medical care costs, and some increase in severe injuries. For example, provisions authorizing rising statutory benefit rates tend to decrease the loss ratio, as follows. For the current year, benefits actually paid include amounts to workers injured in earlier periods under lower benefit formulas than those in effect in the current year. The premiums obtained (that is, "written") in the current year include amounts intended to pay for benefits that will be determined by future, higher statutory rates. Thus, the loss ratio can be expected to decline as premium ratemakers try to anticipate and build into premiums written at a given date the effects of rising statutory benefit rates on the amounts that will be paid to workers injured at a later date. Other things that may have added to costs and lowered loss ratios in the 1970's were a greater number of contested decisions,[10] increased program awareness, and more awards as a result of occupational disease.

Premium rates rose faster than benefits in the mid-1970's as insurers tried to cover the effects of program change, inflation, and other factors having a bearing on future benefits. By the end of the 1970's, program changes became less frequent, ratemaking increases leveled off, and loss ratios seemed to be returning to earlier levels.

Some cautions should be observed in using the combined loss ratio for all types of insurers. First, the overall ratio hides wide variations in ratios for different types of insurance. For example, the ratio for self-insurers and the Federal employees' program is 90-95 percent because the computation is based on payments during the year plus administrative expenses. For private insurers, though, and for some State funds, the loss ratio is lower than it would be if dividends paid by insurers to employers were taken into account. The cost to employers insured by these companies is overstated because part of their premiums may be returned later as dividends.

Also, for private insurers and State funds, a loss ratio based on benefits paid during the year is lower than one based on benefits that are incurred. Premium income must be reserved to pay future benefits, which may be higher than current payments for cases from earlier years when wages and compensation were lower. This difference is especially great when insured payrolls are rising rapidly. Further, it must be kept in mind that premiums are intended to cover not only benefits insured but the cost of rehabilitation and safety programs as well.

[10] For example, a doubling of contested cases in New Jersey from 1962 to 1973 was reported in Merton C. Bernstein, "Litigation Representation and Claimant Protection in Workers' Compensation," **Research Report of the Interdepartmental Workers' Compensation Task Force**, vol. 4, June 1979.

Private Insurers

The 1980 loss ratio for private insurers, based on benefits actually paid, was 45 percent (table 8). Just as the loss ratio for all types of insurers combined fell in the mid-1970's, so did the ratio for private carriers. And by 1978-80, private carrier loss ratios stabilized and gave signs of returning to the range characteristic of earlier years.

Loss ratios for private insurers based on incurred experience also appear in table 8. This is an important measure since it is commonly used by insurance companies in reviewing and revising premium rates. The 67-percent incurred loss ratio in 1980 compared with the 45-percent paid loss ratio illustrates the difference described earlier between these figures. Uncertainty over benefits and cost levels produced rapid increases in in-

Table 8.—Comparative ratios of benefits to premiums, private carriers, 1950-80[1]

[Amounts in millions]

Year	Direct premiums written in relation to losses (benefits) paid[2]			Premiums earned in relation to losses (benefits) incurred[4]		
	Direct premiums written[3]	Direct losses paid	Loss ratio	Premiums earned[3]	Losses incurred	Loss ratio
Total	$120,606.1	$59,127.9	49.0	$108,745.2	$75,279.3	69.2
1950	721.5	381.3	52.8	696.6	427.7	61.4
1951	844.5	444.4	52.6	789.9	518.5	65.6
1952	956.3	491.0	51.3	903.7	371.9	63.3
1953	1,074.1	524.2	48.8	1,010.6	605.4	59.9
1954	1,067.3	540.5	50.6	1,010.8	561.4	55.5
1955	1,078.4	562.5	52.2	1,027.9	594.3	57.8
1956	1,152.8	618.1	53.6	1,103.4	649.3	58.8
1957	1,234.1	660.9	53.6	1,173.5	706.7	60.2
1958	1,235.0	694.4	56.2	1,193.9	746.6	62.5
1959	1,322.5	752.6	56.9	1,271.4	821.7	64.6
1960	1,452.3	809.9	55.8	1,367.9	874.2	63.9
1961	1,530.9	850.9	55.6	1,434.0	930.8	64.9
1962	1,651.1	924.0	56.0	1,562.6	982.1	62.8
1963	1,782.3	987.6	55.4	1,671.3	1,071.7	64.1
1964	1,924.8	1,069.6	55.6	1,827.8	1,153.4	63.1
1965	2,074.4	1,124.0	54.2	1,966.6	1,236.4	62.9
1966	2,366.4	1,239.1	52.4	2,229.4	1,412.8	63.4
1967	2,640.2	1,362.9	51.6	2,500.4	1,584.7	63.4
1968	2,940.0	1,481.6	50.4	2,796.9	1,727.2	61.8
1969	3,255.0	1,641.0	50.4	3,089.9	1,930.3	62.5
1970	3,578.4	1,843.3	51.5	3,356.5	2,124.3	63.3
1971	3,749.3	2,004.5	53.5	3,516.3	2,396.3	68.1
1972	4,180.6	2,178.6	52.1	3,887.4	2,704.0	69.6
1973	4,868.7	2,513.5	51.6	4,523.7	3,113.4	68.8
1974	5,602.0	2,970.8	53.0	5,174.9	3,725.7	72.0
1975	6,343.8	3,421.7	53.9	5,747.7	4,275.6	74.4
1976	7,832.2	3,975.8	50.8	6,909.8	5,434.7	78.7
1977	9,919.6	4,628.7	46.7	8,841.0	6,913.9	78.2
1978	12,154.6	5,256.2	43.2	10,243.7	7,650.5	74.7
1979	14,329.5	6,157.0	43.0	12,307.7	8,660.0	70.4
1980	15,743.5	7,022.7	44.6	13,608.0	9,173.8	67.4

[1] Before 1959, excludes Alaska and Hawaii.

[2] Data for 1950-58 from **Spectator: Insurance by States** (annual issues). Data for 1959-66 compiled from published and unpublished reports of the State insurance commissions. Beginning 1967, data from A. M. Best Company.

[3] Excludes premium discounts and retrospective adjustments but not dividends.

[4] From National Council on Compensation Insurance, **Insurance Expense Exhibit (Countrywide)**, annual issues.

curred losses during the mid-1970's, but by 1977 the incurred-loss ratio began to return to previous levels, as did other loss ratios.

Table 9 shows total employer premiums paid to stock and mutual insurance companies, which provide most of the workers' compensation coverage from private insurers. The table also shows the main expense categories covered by premiums and selected program indicators or ratios. Loss ratios for stock companies are higher than for mutual companies because dividends returned to employers are not included in the table. The National Council on Compensation Insurance reports dividends paid by stock companies in 1980 equaled 5.5 percent of premiums and those by mutual companies equaled 15.3 percent. If dividends are factored in, the loss ratios of the two types of companies become higher and a little closer together. Moreover, the loss ratio for mutual companies becomes higher than that for stock companies for 1980:

72.7 percent—stock companies
75.7 percent—mutual companies

Expense ratios—the ratio of expenses to premiums—are similarly affected when dividends are included.

Table 9 also shows a net gain ratio. This ratio is defined as premiums minus losses and expenses (before excluding dividends) as a percentage of premiums. As measured by the net gain ratio, mutual companies have generally made more money from workers' compensation than have stock companies. The 1980 figures, a 3.6-percent gain for stock companies and 14.4 percent for mutual companies, represent a continuation of annual improvement in underwriting gain ratios in the past few years. By contrast, in the two preceding 4-year periods, net gain levels declined. The following tabulation gives the pattern for stock company net gain ratios annually throughout the 1970's.

Year	Percent
1970	6.9
1971	2.0
1972	-.5
1973	.4
1974	-3.1
1975	-5.0
1976	-8.4
1977	-7.2
1978	-3.7
1979	.0
1980	3.6

Profits reflected in the net gain ratios are, of course, not a complete measure of insurance business profits. Capi-

Table 9.—Countrywide workers' compensation experience of stock and mutual companies, 1939-80

[Amounts in thousands]

Year [1]	Premiums earned	Losses (benefits) incurred	Loss ratio	Expenses incurred	Expense ratio	Net gain ratio [2]
	Stock companies [3]					
1939-47	$1,934,554	$1,110,676	57.4	$733,512	37.9	4.7
1948-56	3,920,104	2,318,171	59.1	1,403,189	35.8	5.1
1957-64	6,131,817	3,924,643	64.0	2,119,200	34.6	1.5
1965-68	6,217,537	3,936,791	63.3	1,948,892	31.3	5.4
1969-72	9,576,112	6,367,446	66.5	2,872,614	30.0	3.5
1973-76	16,144,093	12,184,220	75.5	4,688,766	29.0	-4.5
1977-80	32,681,083	23,944,724	73.3	9,103,100	27.9	-1.1
1977	6,322,192	5,018,125	79.4	1,762,175	27.9	-7.2
1978	7,346,313	5,607,891	76.3	2,009,008	27.3	-3.7
1979	8,926,651	6,391,313	71.6	2,534,473	28.4	.0
1980	10,085,927	6,927,395	68.7	2,797,444	27.7	3.6
	Mutual companies [3]					
1939-47	$1,200,334	$684,948	57.1	$273,267	22.8	20.1
1948-56	2,614,500	1,533,125	58.6	626,992	24.0	17.4
1957-64	3,421,181	2,140,765	62.6	891,391	26.1	11.3
1965-68	2,979,624	1,846,522	62.0	759,943	25.5	12.5
1969-72	3,926,109	2,556,717	65.1	991,898	25.3	9.6
1973-76	5,573,957	3,871,636	69.5	1,350,577	24.2	6.3
1977-80	11,441,993	7,852,408	68.6	2,427,286	21.2	10.2
1977	2,262,580	1,678,476	74.2	469,017	20.7	5.1
1978	2,700,827	1,922,687	71.2	560,684	20.7	8.1
1979	3,154,631	2,120,470	67.2	681,600	21.6	11.2
1980	3,323,955	2,130,775	64.1	715,985	21.5	14.4

[1] Annual figures for 1939-76 previously published in workers' compensation articles that appeared in the **Social Security Bulletin** in March 1954, August 1958, October 1966, October 1970, October 1974, and May 1979.

[2] Underwriting gains before dividends to stockholders and policyholders; excludes investment income.

[3] Disregards dividends to policyholders; if taken into account, dividends would result in higher loss and expense ratios.

Source: Data for 1939-64 are compiled from annual reports of the New York State Insurance Department and from the annual casualty-surety editions of the **Eastern Underwriter** and refer to countrywide business of private carriers operating in the State of New York (representing about 80 percent of all business underwritten for United States employers by insurance companies). Beginning 1965, data are from annual issues of National Council on Compensation Insurance, **Insurance Expense Exhibit (Countrywide)** and refer to countrywide business of all private carriers operating in the United States.

tal gains are also an important source of profit, especially for stock companies. Investment returns on future benefit reserves can be substantial. Investment income in 1980 averaged about 11 percent for both stock and mutual insurance companies. Some States have examined the relationship of investment to profit. Recently, Massachusetts and Minnesota have required that rate-making procedures establish negative underwriting profit ratios to take investment gains into account.[11] Also, States are turning to open rating systems with competitive premium rate-setting more in line with true cost and profit.

[11] Raymond Hill and Robert Hunter, **Workers' Compensation Insurance Ratemaking: Regulation of Profit Margins and Investment Income**, 1981 (Department of Labor Contract No. 41 USC 25C3).

The various items included in insurers' administrative expenses are shown in table 10 as a percentage of program premiums. Expenses, especially those related to the acquisition of business, have typically been higher for stock companies than for mutual companies. Stock companies sell most of their policies through independent agents or brokers, but most sales by mutual companies are made by their own employees, resulting in lower commission expenses. Acquisition costs have declined, especially for nonparticipating stock companies, narrowing the difference in such costs between stock and mutual companies from 10 percentage points of premiums in 1950 to just 5 percentage points in 1980. From 1976 to 1980, small changes were reported but no consistent new pattern was formed.

Table 10.—Administrative expenses incurred as percentage of net premiums earned,[1] by category of expense and major type of private carrier, selected years, 1950–80[2]

Year	Total	Investigation and adjustment of claims	Acquisition, field supervision, and collection expenses [3]	Taxes, licenses, and fees	Safety inspection and engineering	Payroll audit	Other [4]
			Nonparticipating stock companies				
1950	40.9	10.3	17.4	3.8	1.6	2.7	5.1
1955	36.5	8.7	15.8	3.5	1.4	2.3	4.8
1960	36.9	9.4	15.4	3.6	1.2	1.9	5.4
1965	34.6	8.9	14.5	3.7	1.1	1.4	5.0
1970	30.9	8.5	12.0	3.8	1.0	1.0	4.6
1975	30.8	8.3	11.7	4.1	(5)	(5)	6.7
1976	29.7	8.5	10.9	4.0	(5)	(5)	6.3
1977	29.5	9.3	10.4	3.8	(5)	(5)	6.0
1978	28.8	8.6	10.2	3.9	(5)	(5)	6.1
1979	29.3	9.4	9.7	3.8	(5)	(5)	6.4
1980	28.9	8.8	10.2	3.6	(5)	(5)	6.3
			Participating stock companies				
1950	28.6	8.2	11.5	2.4	1.1	1.1	4.3
1955	28.3	7.9	11.9	2.3	1.0	.9	4.3
1960	26.8	8.3	11.0	2.3	.7	.6	3.9
1965	25.1	8.1	9.9	2.3	.7	.6	3.5
1970	25.2	8.7	8.4	2.8	.6	.6	4.1
1975	24.7	8.1	7.4	4.1	(5)	(5)	5.1
1976	24.3	8.6	7.4	4.0	(5)	(5)	4.3
1977	24.3	9.3	6.7	3.8	(5)	(5)	4.5
1978	24.6	10.0	5.8	3.9	(5)	(5)	4.9
1979	26.7	9.2	7.6	4.2	(5)	(5)	5.7
1980	25.6	7.9	8.3	3.8	(5)	(5)	5.6
			Mutual companies				
1950	25.0	8.0	7.4	3.1	2.3	1.2	3.0
1955	25.0	7.7	7.5	2.8	2.3	1.1	3.6
1960	25.6	8.3	7.4	3.0	2.2	1.0	3.7
1965	26.6	8.9	7.4	3.5	2.1	1.0	3.7
1970	24.0	8.1	6.4	3.6	1.8	.9	3.2
1975	24.6	8.3	6.5	4.1	(5)	(5)	5.7
1976	22.5	8.2	5.3	3.9	(5)	(5)	5.1
1977	20.7	8.1	4.6	3.7	(5)	(5)	4.4
1978	20.7	8.5	3.9	3.8	(5)	(5)	4.5
1979	21.6	9.0	4.3	3.7	(5)	(5)	4.6
1980	21.5	8.2	4.5	3.5	(5)	(5)	5.3

[1] Net premiums earned excludes premium discounts and retrospective adjustments but not dividends.
[2] Before 1959, excludes Alaska and Hawaii.
[3] Includes commission and brokerage expenses.
[4] Includes general administration and rating bureau expenses. Beginning 1972, data include safety inspection and payroll audit costs.
[5] Included in "other."

Source: National Council on Compensation Insurance, **Insurance Expense Exhibit (Countrywide)**, annual issues.

State Funds

Financial data for the 18 State funds are shown in table 11. The publicly operated insurance funds followed the same general pattern as the privately operated companies. Premiums rose rapidly in the first two-thirds of the 1970's and began to stabilize at the end of the decade. State fund premiums in 1980 amounted to $2.9 billion, slightly less than in 1979, marking the first year since 1957 without an annual rise. Annual premiums of most State funds rose slowly, if at all.

State fund loss ratios fell sharply as premiums rose faster than benefits between 1975 and 1978 and then moved upwards again in 1979 and 1980. The loss ratio in 1980 was 12 percentage points above the 1978 low, roughly half way back to the level of loss ratios for 1970–74.

Table 11.—Benefit payments and administrative expenses in relation to premiums written, 18 State funds, 1950–80[1]

[Amounts in millions]

Year	Premiums written [2]	Benefits paid [3]: Amount	Benefits paid [3]: Percent of premiums	Administrative expenses [4]: Amount	Administrative expenses [4]: Percent of premiums
1950–63, total ...	$4,222.3	$3,053.2	72.3	$388.4	9.2
1950	172.1	126.7	73.6	16.5	9.6
1951	204.9	140.9	68.3	18.6	9.1
1952	228.6	158.3	69.2	20.4	8.9
1953	250.1	170.4	68.1	21.9	8.8
1954	265.9	183.2	68.9	24.1	9.1
1955	279.6	192.6	68.9	24.4	8.7
1956	324.3	209.5	64.6	26.0	8.0
1957	300.8	216.7	72.0	26.3	8.7
1958	302.4	225.9	74.7	29.6	9.8
1959	328.4	247.6	75.4	31.2	9.5
1960	366.9	266.0	72.5	33.6	9.2
1961	370.7	287.0	77.4	36.0	9.7
1962	394.8	307.8	78.0	38.4	9.7
1963	432.8	320.6	74.1	41.4	9.6
1964–80, total ...	$21,873.4	$13,354.8	61.1	$2,253.9	10.3
1964	469.8	337.4	71.8	57.9	12.3
1965	493.9	351.3	71.1	61.3	12.4
1966	531.9	374.2	70.4	66.0	12.4
1967	591.8	394.6	66.7	68.9	11.6
1968	621.7	415.4	66.8	76.4	12.3
1969	664.2	450.2	67.8	81.5	12.3
1970	698.9	487.1	69.7	87.8	12.6
1971	775.9	539.4	69.5	96.4	12.4
1972	899.1	608.2	67.6	108.3	12.0
1973	1,014.2	720.2	71.0	121.7	12.0
1974	1,171.2	850.9	72.7	139.2	11.9
1975	1,283.1	977.9	76.2	142.7	11.1
1976	1,665.8	1,092.1	65.6	159.4	9.6
1977	2,297.1	1,169.7	50.9	191.0	8.3
1978	2,754.2	1,363.7	49.5	221.6	8.0
1979	2,999.4	1,592.1	53.1	252.6	8.4
1980	2,941.2	1,830.4	62.2	321.2	10.9

[1] For some States, fiscal year data have been converted to calendar year data.
[2] Disregards dividends to policyholders but allows for premium discounts.
[3] Excludes payment of supplemental pensions from general revenues.
[4] Excludes loss-adjustment expenses for certain competitive State funds before 1964. Includes administrative expenses financed through appropriations from general revenues, generally not separable.

Source: **Spectator: Insurance by States** (annual issues); **Argus Casualty and Surety Chart** (annual issues); and State reports.

In comparing workers' compensation programs operated by State funds and by private insurers, the following three points are worth noting:

(1) Loss ratios have traditionally been higher for State funds than for private companies.
(2) During the 1970's, loss ratios in both sectors showed a similar reaction to improvements in benefit and coverage provisions, rising wages, and higher medical care costs.
(3) Loss ratios of State funds showed a wider range of response to these events than did those of private insurers.

Some of the variation between loss ratios of State funds and private companies reflect operational differences that affect these figures. Therefore, loss ratios should not be strictly compared. First, the premium income of State funds is more likely to reflect anticipated changes in dividends or rates. Private carriers, especially mutual companies, usually adjust for such differences when paying dividends to their policyholders. As mentioned earlier, this adjustment is not taken into account in table 8. Second, premiums of State funds sometimes exclude items included in those of private insurers, such as maintaining reserves, publicly financed administrative and legal services, taxes and special assessments, and profit. Also, large benefit totals paid under the 12 competitive State funds reflect the fact that some of the States may include payments to a large proportion of hazardous risks who may often be refused insurance by private companies. Finally, some private insurers may have more extensive and more expensive claim investigation programs than State funds. These factors combine to increase loss ratios for State funds.

Similarly, administrative expenses of State funds should be compared with private carrier expenses with caution. Competitive State funds spend very little to acquire customers, and exclusive State funds spend practically nothing. Therefore, the expense ratios are lower than those of private insurers. Also, as already mentioned, State funds often do not pay certain items included in private expenses—taxes, administrative expenses absorbed by other government departments, and so forth.

State fund expense ratios averaged 11 percent in 1980, slightly above the proportions for the previous 4 years, but similar to the ratios before then. By contrast, private insurer expense ratios have always exceeded 20 percent for mutual companies and 27 percent for stock companies.

State Agency Administrative Costs

In addition to direct program costs, workers' compensation contributes to the cost of the public agencies that operate and administer the State programs. Each State, except the three in which programs are court administered,[12] has an agency that runs its program, handles appeals, and enforces program provisions. Table 12 shows administrative costs of 41 of these agencies. (The other six serve States with exclusive State funds, where administrative costs cannot be separated from other program financial data.)

In fiscal year 1980, estimated State agency costs totaled $150 million, 9 percent above 1979 and an increase well below the 17-percent rise in the previous year. State agency costs have always been modest, usually around 1 percent of premiums.[13] Agency costs were somewhat higher than 1 percent from 1950 to 1973, but since then have been less than 1 percent. In 1980, agency costs amounted to 0.7 percent of premiums.

[12] Beginning in 1983, only three States (Alabama, New Mexico, and Tennessee) continued to have court administered programs when Louisiana established a regulatory agency.

Table 12.—Administrative costs of State agencies, by type of financing, fiscal years 1950-80[1]

[Amounts in millions]

Fiscal year	Total administrative costs	Financed through legislative appropriations: Amount	Financed through legislative appropriations: Percent	Financed through assessments on carriers: Amount	Financed through assessments on carriers: Percent
1950	$12.4	$4.6	37	$7.8	63
1951	12.9	4.8	37	8.1	63
1952	14.1	5.1	36	9.0	64
1953	15.5	5.3	34	10.2	66
1954	16.1	5.6	35	10.5	65
1955	16.7	5.8	35	10.9	65
1956	17.3	6.0	35	11.3	65
1957	19.1	6.5	34	12.6	66
1958	21.1	7.4	35	13.7	65
1959	23.3	7.7	33	15.6	67
1960	23.9	8.1	34	15.8	66
1961	24.9	8.7	35	16.2	65
1962	26.3	9.3	35	17.0	65
1963	28.8	10.6	37	18.2	63
1964	30.1	10.8	36	19.3	64
1965	32.3	12.1	37	20.3	63
1966	35.6	13.3	37	22.3	63
1967	40.4	15.2	38	25.2	62
1968	43.6	16.0	37	27.6	63
1969	49.1	18.8	38	30.3	62
1970	53.9	20.0	37	33.9	63
1971	58.4	20.1	34	38.3	66
1972	66.8	22.4	34	44.4	66
1973	72.1	24.5	34	47.6	66
1974	78.7	27.0	34	51.7	66
1975	87.5	32.4	37	55.1	63
1976	99.5	36.4	37	63.2	64
1977	109.3	41.5	38	67.8	62
1978	118.4	45.6	39	72.8	61
1979	138.3	50.3	36	88.0	64
1980	150.1	58.2	39	91.9	61

[1] Includes the District of Columbia. Excludes States with exclusive funds (7 States through 1965, 6 States thereafter), where the task of administering the law is generally merged with that of providing insurance protection. Excludes the Federal system and 4 States where the laws are court-administered. Before 1960, excludes Alaska and Hawaii. Relates to expenditures of State administrative bodies in supervising operations of insurance carriers and in exercising adjudicative and enforcement powers.

Source: Compiled from State budget, finance, and treasury documents and annual reports of State administrative agencies.

State agencies are funded from assessments on private insurers or through legislative appropriations. When insurance companies pay, costs are included in the premiums paid by employers. When legislative assessments pay, agency expenses represent an additional program cost other than those paid through premiums.

In 1980, 22 States paid agency costs from appropriations and 19 through insurer assessments. More than half the States have used appropriations for many years. The proportion of costs financed by each method has not changed greatly. From 1950 to 1980, about 61-67 percent has come from assessments and the rest through appropriations. As in earlier years, relatively more money was spent in 1980 for State agencies financed by assessments. Costs averaged 2.6 percent of benefits for assessment States and 1.0 percent for appropriation States. Costs in only four of 19 assessment States were less than 1 percent of program benefits, compared with 14 of 22 appropriation States.

Appendix—Workers' Compensation Benchmarks

Data Collection by the States

Generally, employers furnish workers' compensation protection to their employees by buying a policy with a commercial insurance company or—in 18 States—through a public fund. Alternatively, they may self-insure the risk in all but three States. Regulatory agencies supervise the administration of the law. In addition, State insurance commissions oversee the insurance and self-insurance regulations. Few States have a coordinated workers' compensation program operated directly by one public agency.

Since most States are not directly involved in setting rates, collecting premiums, administering claims, and paying benefits, they are not in a position to gather the type of data that are the by-products of other social insurance programs. For example, less than a third of the States collect any data on the number of covered workers or the amount of covered payrolls under workers' compensation. About half the States do not publish basic data on the amount of benefit paid by type of insurance or by type of benefit. Over a number of years, the Social Security Administration, therefore, developed procedures to estimate some key indicators to

[13] Premium costs used here are from table 7, which includes all States. The administrative cost/premium ratios given here, therefore, understate the true ratio, but are nevertheless useful for obtaining a general estimate of the magnitude of the ratios and for examining trends over time.

keep track of the experience under workers' compensation.

Estimation Procedures

Coverage. One way of evaluating a national social insurance program like workers' compensation is to examine the number of workers protected, especially in relation to the work force. Because coverage data are not available from program operations as they are for Social Security and many other public income maintenance programs, the Social Security Administration had to develop a methodology for estimating the number of covered workers.

Information compiled by insurance companies and used as the basis for these coverage estimates is based on policy years that generally overlap calendar years, and it cannot be fully evaluated until the end of the policy year. A time lag in the availability of converted calendar year data is thus inevitable. The Social Security Administration's estimating methodology provides benchmark estimates for workers covered in an average month in the latest full calendar year for which private carrier coverage estimates can be computed. The new benchmark estimates presented here are for calendar year 1977 and reflect the usual 4-year update cycle. Once new benchmark figures are developed, coverage estimates are also made for years between benchmarks and for years beyond the benchmark period. In this article the employment trend data, adjusted by the estimated effects of legislative changes in coverage, are projected to provide national estimates of coverage for 1978–80, with individual State figures reported for 1980.

The coverage estimates are compiled by developing an estimated covered-payroll amount for each State and then converting this amount to the number of workers based on the relationship between payroll and the number of workers covered under unemployment insurance.

The primary source of payroll data is the National Council on Compensation Insurance. For 1977, payroll data were reported by 10 competitive State funds and by private insurance companies in 43 States and the District of Columbia. The Social Security Administration converts these policy year payroll figures into calendar year payroll estimates and supplements them with payroll estimates for self-insurers and for other State funds. The latter figures are obtained from State administrative agencies and various other sources.

The end result of these procedures is an estimate of the average monthly number of workers covered by the workers' compensation program in each State. The estimated average monthly number of workers is, of course, much smaller than the total number of individuals covered at some time during the year. The estimates include all employees of firms that actually carry workers' compensation insurance or that submit the required proof of financial ability to self-insure, as well as employees of self-insured State and local government agencies, regardless of whether State law requires proof of financial security to self-insure. Employees of firms who voluntarily purchase workers' compensation insurance are also included, since they cannot be separated from those required to insure.

This method of estimating coverage has the advantage of being applicable to all States on a uniform basis. Not only are primary data compiled from national sources such as the National Council on Compensation Insurance and the unemployment insurance program, but the concept of coverage is applied uniformly in each State.

The State totals also include an estimate of workers covered by the Longshoremen's and Harbor Workers' Compensation Act, practically all of whom are insured by private carriers. The number of Federal workers covered under the Federal Employees' Compensation Act is estimated separately and not distributed among the States. The estimates exclude railroad workers in interstate commerce and seamen in the United States Merchant Marine, who are covered by statutory provisions for employer liability rather than by a workers' compensation law.

Benchmark coverage figures for 1977 and coverage projections through 1980 are shown, by State, in table 1. Differences in coverage levels from one period to another and the difference in levels from State to State are a composite of several factors such as statutory changes, labor force trends, and variations in the quality of available data. The National Council on Compensation Insurance payroll data now include more States than they did, and better estimating techniques are available for some States. Nevertheless, the estimates are not uniformly good. Obtaining data on coverage by self-insured firms is especially difficult in a number of States. A range is used to embrace the probable coverage situation where a lack of confidence about a single figure exists.

Benefits. Benefit estimates in tables 2, 3, and 6 are for actual cash payments and for the cost of medical care provided in a calendar year. That is, the SSA series is for direct losses paid, rather than in terms of incurred losses. The data are a composite of payments by type of insurance. Private carrier benefits are from the A. M. Best Company, a national data compiling agency for private insurance.

Payments made through State funds are primarily from published and unpublished reports of the State funds and in some cases from the National Underwriter Company and other secondary sources. Since 1970, benefits under the Federal Black Lung benefits program are included in this series. These data are from administrative records of the Social Security Administration and the Department of Labor.

Table I.—Estimated average monthly number of wage and salary workers covered by workers' compensation, 1977 and 1980

[In thousands]

State	1977	1980
Total	71,880-72,270	78,578-78,968
Alabama	920	985
Alaska	115-135	120-140
Arizona	655	815
Arkansas	530	575
California	8,230	9,480
Colorado	840	990
Connecticut	1,100	1,220
Delaware	160-190	175-205
District of Columbia	352	376
Florida	2,410	2,835
Georgia	1,510	1,690
Hawaii	315	375
Idaho	250	270
Illinois	3,900-4,100	4,100-4,300
Indiana	1,670	1,690
Iowa	990	1,010
Kansas	705	770
Kentucky	895	935
Louisiana	1,035	1,190
Maine	350	380
Maryland	1,120	1,230
Massachusetts	1,930	2,130
Michigan	2,800-2,900	2,850-2,950
Minnesota	1,400	1,550
Mississippi	525	570
Missouri	1,540	1630
Montana	215	230
Nebraska	510-550	545-585
Nevada	265	345
New Hampshire	315	360
New Jersey	2,480	2,700
New Mexico	285	370
New York	5,790	6,090
North Carolina	1,730	1,920
North Dakota	178	198
Ohio	3,760	3,910
Oklahoma	625	730
Oregon	865	960
Pennsylvania	4,020	4,180
Rhode Island	305	320
South Carolina	855	940
South Dakota	174	182
Tennessee	1,160	1,220
Texas	3,380	4,040
Utah	400	450
Vermont	153	171
Virginia	1,630	1,790
Washington	1,350	1,470
West Virginia	535	565
Wisconsin	1,680	1,820
Wyoming	106	128
Federal employees	2,867	3,003

The Social Security Administration prepares estimates of benefits paid by self-insurers from a variety of sources. As available, current benefit information from State agencies is relied upon. Alternatively, estimates are derived from program statistics other than actual benefits payments such as the number of closed cases or assessments paid, by type of insurer. As part of the procedure for developing the benchmark revisions in this article, the Social Security Administration also asks the State agencies to review estimates for self-insurance benefits (as well as for the other benefit and coverage data) to update and improve the available information.

A new source of information has emerged in the past few years to help estimate self-insurance benefits. The Supplemental Data System (SDS) is a Federal-State cooperative program of the Bureau of Labor Statistics that provides standardized occupational injury and illness data derived from State workers' compensation records. For several States the number of cases reported is classified by type of insurer, which provides a useful tool for measuring the relationship of self-insurance to commercial insurance in these States. That relationship can be used to help make estimates of self-insurance benefits paid.

Employer costs. Like the coverage and benefit measures, calendar year totals for premium costs to employers in table 6 are assembled from data for each type of insurance. Published and unpublished reports on premiums are available for private carrier and public funds. The cost for employers insured by private carriers is the sum of premiums written by all such carriers in each State as reported by A. M. Best Company.

State fund premium totals are derived from several sources. Some State funds publish annual reports. In other States, premium information is obtained from unpublished reports of the State fund or of the State insurance commission. In some instances, secondary sources are relied upon, such as the annual **Argus F. C. and S. Chart** published by the National Underwriter Company. All State fund data reported on a fiscal year basis are converted to calendar year estimates to establish comparability between States.

An estimated 5–10 percent for the cost of administering self-insurance plans is added to self-insurance benefit payments to account for the administrative costs that the employer pays directly or through taxes to cover administrative costs of the State regulatory agency. This total produces a hypothetical premium for that sector. Total premium costs are estimated on a national basis only since there is no consistent method available for deriving self-insurance premiums by State.