

Workers' Compensation: 1984-88 Benchmark Revisions

*by William J. Nelson, Jr.**

About 93.1 million workers were covered under workers' compensation laws in 1988—an increase of 11 percent from the 1984 total. Benefit amounts totaled \$30.7 billion—an increase of about 56 percent since 1984. Of the total payments made under the workers' compensation program, \$17.6 billion went to disabled workers, \$1.6 billion to their survivors, and \$11.5 billion for medical care.

The Social Security Administration (SSA) is interested in measuring economic security in the United States, and workers' compensation plays a large role in that measurement. This article represents one part of our overall effort to determine the roles the various income-maintenance programs play in helping citizens of the United States achieve economic security. The figures presented here provide readers with an opportunity to review workers' compensation program operations during much of the 1980's.

Workers' compensation is also important to SSA because that program is directly related to the Social Security Disability Insurance program. 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. In addition, SSA has been directly involved in providing income maintenance for disability from work-related diseases since 1969 when the Federal Black Lung benefits program was established.

*Division of Statistics Analysis, Office of Research and Statistics, Social Security Administration.

Workers' compensation, the oldest social insurance program in the United States, was established to provide benefits to workers disabled from work-related injury or illness and to dependents of workers whose deaths resulted from such injury or illness. The laws established under workers' compensation provide that employers compensate employees for medical costs and lost wages resulting from occupational injury or illness regardless of fault.

Before enactment of these laws, well-established common law principles held that an injured worker had the right to recover damages only if it were proven that the injury occurred as a result of the employer's negligence. The difficulties in obtaining payment under this system led many States to enact employees' liability acts. Under these provisions, employer defenses were restricted, but cases often resulted in delays due to court action and considerable expense without the assurance of indemnification. As the economy shifted from largely agricultural to industrial, however, claims became more frequent and pressure mounted for legislation that was more favorable to the worker.

The first workers' compensation program, enacted in 1908, extended coverage to specified Federal civilian employees engaged in hazardous work; the program was broadened in 1916. Today, Federal programs have extended coverage to all Federal workers through the Federal Employees Compensation Act and to private employees under the District of Columbia Workers' Compensation Act. Private longshore and harbor worker employees are protected under the Longshoremen's and Harbor Workers' Compensation Act, a Federal program enacted in 1927.

Each of the 50 States has its own workers' compensation program with State laws differing greatly in the extent of coverage, level of benefits, and the insurance method used to underwrite the risk of job injury. The first of the State programs was developed in 1911, and, within 10

years, all but 6 States had some form of workers' compensation in existence.

The Federal Black Lung benefits program—a specialized workers' compensation program—was established in 1970 under the Federal Coal Mine Health and Safety Act and provides cash benefits to totally disabled coal miners and to their dependents and survivors. Medical benefits are also payable on the basis of a diagnosis of pneumoconiosis (black lung disease). The program is administered by the SSA (for claims initiated before July 1973 and, in certain survivor cases, before December 1983) and the Department of Labor.

Although all plans are based on the principle that employers should provide reasonable income and medical benefits to those incurring work-related disabilities, regardless of fault, these programs have continued to undergo change and refinement to meet the needs of both the worker and the employer. Coverage has been expanded, benefits raised, and eligibility requirements liberalized. In the period 1984-88 alone, more than 1,000 amendments to workers' compensation laws were enacted. Today, 56 separate programs, including those of Puerto Rico and the Virgin Islands, constitute the workers' compensation program. This report covers the laws in the 50 States and the District of Columbia, as well as the Federal Employees Compensation Act, the Black Lung benefits program, and the Longshoremen's and Harbor Workers' Compensation Act.

These benchmark revisions update and expand the benefit and cost data that are estimated annually for the workers' compensation program.¹ Data sources and estimating procedures used for these revisions are described in the appendix. For more detailed information on workers' compensation laws as well as general information on costs and benefits, see "Social Security Programs in the United States."²

Coverage

Approximately 91.3 million workers were protected under workers'

compensation laws in an average month in 1988 (table 1). This increase (11 percent from 1984) generally paralleled the change in the labor force, resulting in the coverage of 87 percent of the total workforce. This ratio has remained relatively stable since 1973 despite coverage extensions and changes from elective to compulsory coverage in many States. Since 1984, coverage changes resulting from statutory amendments to State laws have been minimal and occurred in such occupations as: volunteer workers (including fire/rescue personnel and others in hazardous occupations), farm workers, and sole proprietors and partners.

Exclusions

Coverage is compulsory for most private employment except in New Jersey, South Carolina, and Texas. In these jurisdictions, elective coverage permits employers to accept or reject coverage under the law; if employers reject it, they lose the customary common-law defenses used against suits filed by employees. In all States except New Hampshire, however, workers' compensation laws specifically exclude some jobs. Among the occupational and industrial jobs most likely to be excluded from full workers' compensation coverage are farm and domestic labor, casual labor, and State and local government employment. Although farm workers are covered on the same basis as the other employees in 12 States and the District of Columbia, such employment is restricted in 23 States and excluded in 15 others. This nonuniform coverage of farm workers causes some distortions in geographic coverage patterns, depending on the extent of agricultural work within the State. Similarly, 23 States and the District of Columbia provide at least some coverage to domestic workers.

Also affecting the level of coverage in each State is whether the State program requires firms of all sizes to provide coverage. In 1988, 14 States did not require employers with fewer than a specified number of workers to provide compensation. Chart 1 shows

that nine of these States were in the South Atlantic and East South Central States.

Coverage of State and local government employees also differs markedly from one jurisdiction to another. Some jurisdictions exclude specific groups such as elected or appointed officials, while others limit coverage to employees of specified political subdivisions or to employees engaged in hazardous occupations. In still others, coverage is optional, while 30 programs provide full coverage with no exclusions.

Benefits

Benefit Growth

Workers' compensation benefits totaled \$30.7 billion in 1988. This amount includes periodic cash payments, lump-sum payments, medical service reimbursements incurred during periods of disability, and death and survivor benefits (table 2). This total is an increase of about 56 percent from the 1984 amount. The growth in benefits over the past 5 years has not been uniform across the United States. Benefit levels have more than doubled in the New England, East South Central, and Mountain regions for the 1984-88 period, while they were below the national average of 82 percent in the East North Central, West North Central, and Pacific divisions.

The growth in benefit levels in the early 1980's was a continuation of the rapid increases experienced during the 1970's when widespread liberalization of State benefit formulas occurred, in part, as a result of overall wage and price increases. During this time, automatic increases in maximum weekly benefit amounts became law in many States. This legislation resulted in higher benefits because the maximums generally were adjusted based on the level of wages covered by unemployment insurance.

Unlike the regular State programs, the Federal Black Lung benefits program has paid out a declining amount of benefits over the past 5 years (table 3). Approximately \$1.5 billion was paid in black lung

benefits in 1988, a decline from a peak of \$1.7 billion annually in the 1979-81 period. The amount of benefits paid under this program is expected to continue decreasing as older beneficiaries die and a smaller number of new claimants is added to the rolls. In 1979, black lung payments accounted for more than 14 percent of all workers' compensation benefits; in 1988, less than 5 percent of all payments were made under the Black Lung program.

Type of Benefits

During 1988, less than 63 percent of all payments made under workers' compensation programs were as cash compensation (\$19.2 billion), with \$17.6 billion paid to disabled workers and the remainder (\$1.6 billion) to survivors. Payments for medical care (\$11.5 billion) comprised the remaining benefit payments (37 percent).

Payments made for medical care under the regular programs (defined here as all programs except Federal Black Lung) have been increasing relative to cash compensation payments during the 1980's. These payments now constitute about 39 percent of all regular benefits paid, compared with 35 percent in 1983. Indemnity benefits to survivors declined, accounting for 3 percent of all regular program benefits in 1988, compared with nearly 5 percent in 1983.

By contrast, survivor benefits constituted a much larger proportion of benefits paid (48 percent) under the Federal Black Lung program. Total cash compensation payments accounted for \$1.4 billion, or more than 92 percent of the \$15 billion total in 1988; medical payments accounted for the remaining 8 percent (\$117 million).

The amount of private insurance payments under workers' compensation programs by type of benefit, including the extent of disability, are shown in table 4. These data represent compensable cases for a given year (rather than beneficiaries receiving benefits during the year) and exclude cases in which only medical benefits were paid. Compensable cases involving injury or illness can be

Table 1.—Estimated number of workers covered in average month and total annual payroll in covered employment, by selected years, 1940-88 ¹

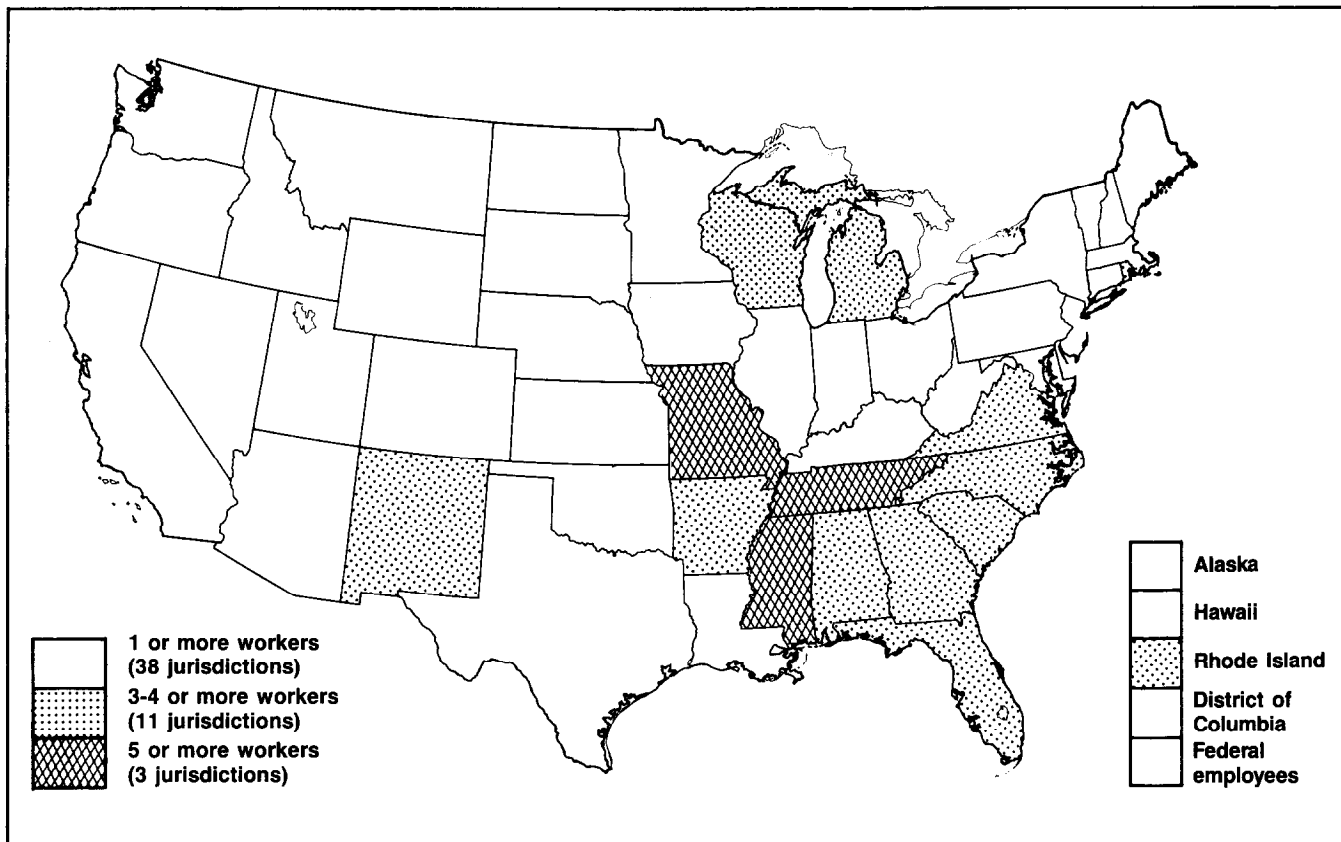
Year	Workers covered in average month		Total annual payroll in covered employment	
	Number (in millions)	Percent of employed wage and salary workers ²	Amount (in billions)	Percent of civilian wage and salary disbursements
1940.....	24.6	70.8	\$36	72.1
1946.....	32.7	76.8	80	76.8
1948.....	36.0	77.0	105	79.9
1949.....	35.3	76.9	103	79.1
1950.....	36.8	77.2	114	79.9
1951.....	38.6	78.4	132	80.8
1952.....	39.4	78.9	142	80.9
1953.....	40.7	80.0	154	81.5
1954.....	39.8	79.7	153	81.8
1955.....	41.4	80.0	168	83.2
1956.....	43.0	80.2	182	82.7
1957.....	43.3	80.5	190	82.7
1958.....	42.5	80.2	192	83.1
1959.....	44.0	80.3	209	83.8
1960.....	44.9	80.4	220	83.8
1961.....	45.0	80.3	226	83.7
1962.....	46.2	80.4	241	83.7
1963.....	47.3	80.5	254	83.7
1964.....	48.8	80.8	272	83.6
1965.....	50.8	81.5	292	83.2
1966.....	53.6	83.1	321	83.5
1967.....	55.0	83.1	342	83.1
1968.....	56.8	83.8	376	83.0
1969.....	59.0	84.6	414	83.1
1970.....	59.2	83.8	441	83.2
1971.....	59.4	83.3	469	83.2
1972.....	62.3	84.2	512	83.0
1973.....	66.3	86.3	578	84.2
1974.....	68.0	86.7	637	85.0
1975.....	67.2	86.7	678	85.7
1976.....	69.6	86.4	750	85.7
1977.....	72.1	86.4	827	85.3
1978.....	75.6	86.7	922	84.3
1979.....	78.6	87.7	1,041	85.0
1980.....	78.8	86.7	1,136	85.6
1981.....	78.3	86.0	1,247	85.5
1982.....	77.0	85.6	1,301	85.2
1983.....	78.0	85.6	1,382	85.3
1984.....	81.9	86.1	1,516	85.4
1985.....	84.3	86.6	1,618	84.0
1986.....	86.0	86.1	1,725	84.4
1987.....	88.4	86.3	1,845	84.0
1988.....	91.3	87.2	2,000	84.2

¹ Before 1959, excludes Alaska and Hawaii.

² Beginning 1967, excludes those under age 16 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, Department of Labor. Data on wage and salary disbursements from Bureau of Economic Analysis, Department of Commerce.

Chart 1.—Statutory provisions: Minimum size of firm covered by workers' compensation, January 1988



grouped into four disability classifications:

Temporary total.—More than 72 percent of all compensable cases in policy year 1986 were those in which the worker suffered a temporary total disability. In these cases, the employee was unable to work at all while recovering from the injury but is expected to fully recover. Temporary disability benefits are paid under most State laws as long as the disability lasts and the condition continues to improve with medical treatment. As of January 1, 1989, the maximum weekly temporary total disability benefit ranged from \$198 in Mississippi to \$700 in Alaska. Nearly 25 percent of all compensation benefits were paid in such cases of temporary disability in 1986, compared with about 18 percent in 1982.

Permanent total.—If the worker is found to be permanently and totally disabled for any type of gainful employment, most State laws provide weekly benefits either for life or for

the duration of the disability. Both temporary and permanent total disability are usually compensated at the same rate, established as a percentage of weekly earnings at the time of the accident. This percentage is usually set at 66⅔—although a maximum (cap) on the weekly benefit amount will reduce this percentage in some cases. Permanent disability cases (including total and partial) account for about one-fourth of all compensable cases but nearly three-fourths of all cash payments. From 1978 to 1988, the average benefit per compensable case involving permanent total disability nearly tripled, from \$73,408 to \$201,102.

Temporary partial.—This relatively small group of workers includes those who have returned to work on a restricted basis while awaiting maximum recovery. The weekly benefit is typically two-thirds of the difference in wages before and after the injury.

Permanent partial.—About \$2 out of every \$3 in disability benefits were paid to those workers whose permanent

disability was partial and thus may or may not have affected their ability to work. In 1986, these benefits averaged \$64,974 per compensable case if the severity of the disability was major (25-75 percent) and \$10,242 if the severity was minor (less than 25 percent). These payments were made to compensate for the injury (including permanent loss of function and/or a resulting handicap) and to offset any future reduction in earnings resulting from the disability. Major partial disability cases accounted for 8.9 percent of all compensable cases in 1986, compared with 6.0 percent in 1982. Payments for such disabilities represented one-half of all benefits in 1986, compared with 53 percent in 1982. From 1978 to 1986, the average benefit for major permanent partial cases increased by more than 150 percent (from \$25,890 to \$64,974), while that paid in minor cases jumped by 146 percent (from \$4,168 to \$10,242).

Survivor benefits were payable in 0.3 percent of all compensable cases, with

an average benefit totaling \$121,448. Such payments constituted 3.3 percent of all benefits in 1986, compared with 7.5 percent in 1978. These benefits are usually set at two-thirds of the deceased worker's wages and are paid to the surviving spouse usually for life or until remarriage. Such benefits may also be paid as a lump sum. Surviving children may receive benefits until age 16 or age 18 if disabled.

Type of Insurer

Workers' compensation laws provide three insurance options to protect workers against job-related disabilities—private or commercial insurance, publicly operated insurance, and self-insurance. Employers in most jurisdictions are allowed to purchase private insurance or to self-insure. The latter is an option for large employers who can provide proof of financial ability to carry their own risk.

In six States, private or commercial insurance is not available, requiring employers to either self-insure (four States) or to insure with an exclusive State fund. In his text, *Social Insurance and Economic Security (1991)*, George Rejda argues that these exclusive State Funds were established primarily for the following reasons: (1) workers' compensation is social insurance and private companies should not profit from the business, (2) exclusive State Funds should have reduced expenses because of economies of scale and no sales effort, and (3) exclusive State Funds have greater concern for the welfare of the worker.³ Federal employees are protected through a federally financed and operated system.

Approximately 57 percent of all benefits were paid by private insurers in 1988 (table 5), a higher proportion than in any year since 1970. Disbursements from State and Federal funds represented 24.3 percent of the total in 1988, having declined after reaching a peak of 39.2 percent in 1973. It should be noted that Federal fund disbursements increased sharply in 1973 due to expansion of the Federal Black Lung benefits program.

Table 2.— Benefit payments, by type of payment, 1939-88 ¹

[Amounts 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	475	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.....	9,796	2,980	6,816	5,851	965
1979.....	12,027	3,520	8,507	7,232	1,275
1980.....	13,618	3,947	9,671	8,359	1,312
1981.....	15,054	4,431	10,623	9,224	1,399
1982.....	16,407	5,058	11,349	9,862	1,488
1983.....	17,575	5,681	11,894	10,385	1,509
1984.....	19,685	6,424	13,261	11,666	1,595
1985.....	22,217	7,498	14,719	13,060	1,659
1986.....	24,613	8,642	15,971	14,328	1,643
1987.....	27,318	9,912	17,406	15,775	1,631
1988.....	30,733	11,518	19,215	17,613	1,602

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.

The remaining \$5.7 billion was paid by self-insurers, an option that has accounted for an increasing share of the total since 1973 as employers attempted to curtail escalating premiums. In 1988, self-insurance payments accounted for 18.7 percent of all payments, compared with 11.6 percent in 1973.

Relationship of Benefits to Payrolls

Benefit payments represented 1.49 percent of payrolls covered under workers' compensation in 1988, extending the annual increases that began in the early 1970's (table 6). This ratio remained in a relatively narrow range of 0.54 to 0.63 percent through the 1950's and 1960's, but expanded as benefit improvements were made in the 1970's. The increase in the benefit/payroll ratio reflects the growing costs of medical and hospital benefits and the rising utilization of such services due to longer periods of absence from work. According to the Department of Labor, an average of 19 workdays per case were lost due to job-related injuries in manufacturing jobs in 1988,⁴ a gradual increase from the 15 days reported in the early 1970's. Additionally, the number of lost workday cases per 100 full-time manufacturing workers increased to 5.7 in 1988 after averaging about 4.8 in the 1980-87 period.

The number of lost workdays per claim is expected to continue increasing as the median age of the worker rises. Older workers tend to have greater severities for given injuries offset in part by a lower frequency of injuries.⁵

Benefit Adequacy

The effectiveness of an income-maintenance program such as workers' compensation is measured in terms of the degree to which it replaces the wages lost by the disabled worker. This measurement is referred to as the replacement rate. Each State program establishes its own replacement rate and its own maximum weekly benefit amount. The latter figure is set to control benefit growth.

Replacement Rates and Maximum Benefits

At the beginning of 1989, the replacement rate set in all States except Idaho and Washington equaled or exceeded 66½ percent of the worker's

average gross weekly wage (subject to the State's maximum weekly benefit).⁶ This rate represented improvements in 13 States since 1970 as States implemented recommendations of the National Commission on State Workmen's Compensation Laws

Table 3.—Benefit payments under the regular programs and the Federal Black Lung program, by type of payment, 1970-88

Year	[Amounts in millions]				
	Total	Medical and hospitalization payments	Compensation payments		
			Total	Disability	Survivor
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.....	8,773	2,978	5,795	5,260	535
1979.....	10,315	3,506	6,809	6,199	610
1980.....	11,879	3,920	7,959	7,282	677
1981.....	13,319	4,395	8,923	8,191	733
1982.....	14,740	5,012	9,728	8,947	781
1983.....	15,884	5,560	10,324	9,514	810
1984.....	18,044	6,315	11,728	10,845	884
1985.....	20,614	7,421	13,193	12,265	928
1986.....	23,031	8,521	14,510	13,589	921
1987.....	25,773	9,794	15,948	15,046	902
1988.....	29,234	11,401	17,833	16,956	877
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
1981.....	1,735	35	1,700	1,033	667
1982.....	1,667	46	1,621	914	706
1983.....	1,691	121	1,570	871	699
1984.....	1,641	108	1,533	822	711
1985.....	1,603	77	1,526	795	731
1986.....	1,582	120	1,462	740	722
1987.....	1,545	118	1,426	698	729
1988.....	1,499	117	1,382	657	725

¹ Includes all workers' compensation programs except Federal Black Lung benefits program.

² Cash benefit payments made through the Social Security Administration and, beginning in 1974, cash and medical payments made through the Department of Labor.

Table 4.—Percentage distribution of compensable cases, aggregate cash benefits (incurred loss), and average benefit, by disability classification, selected policy years, 1939-86¹

Policy year	Total		Type of benefit					
			Total	Death	Disability			Temporary total
	Permanent total ²	Permanent partial						
		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	1030.7	...	100.0	.5	.2	4.1	20.7	74.5
1978	1283.0	...	100.0	.4	.2	5.0	18.8	75.7
Fifth report basis: ⁶								
1978	1298.7	...	100.0	.4	.3	5.9	18.2	75.2
1982	1346.7	...	100.0	.4	.3	6.0	16.7	76.7
1986	1050.6	...	100.0	.3	.3	8.9	17.9	72.5
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
1982 .....	...	7,149.2	100.0	6.5	6.5	53.0	16.4	17.6
1986 .....	...	12,184.5	100.0	3.3	6.7	49.8	15.8	24.5
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 .....	...	...	...	32,304	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
1982 .....	...	...	...	98,446	123,316	46,742	5,205	1,220
1986 .....	...	...	...	121,448	201,102	64,974	10,242	3,910

¹ Excludes medical benefits only cases. Data for individual policy years not comparable because of shift in States included and in definitions 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 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.

Table 5.—Benefit payments, by type of insurance, 1939-88¹

[Amounts in thousands]

Year	Total		Type of insurance					
			Private insurance (losses paid by carriers) ²		State and Federal fund disbursements ³		Self-insurance payments ⁴	
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	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	6,2591	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.....	48,5794	100.0	301,833	62.1	110,303	22.7	73,658	15.2
1948.....	53,3584	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	2,569,492	33.9	1,038,764	13.7
1977.....	8,630,466	100.0	4,628,695	53.6	2,750,416	31.9	1,251,355	14.5
1978.....	9,795,732	100.0	5,256,227	53.7	3,042,956	31.1	1,496,549	15.3
1979.....	12,027,271	100.0	6,156,997	51.2	4,022,091	33.4	1,848,183	15.4
1980.....	13,618,162	100.0	7,028,576	51.6	4,330,284	31.8	2,259,302	16.6
1981.....	15,053,959	100.0	7,876,064	52.3	4,595,205	30.5	2,582,690	17.2
1982.....	16,407,140	100.0	8,646,668	52.7	4,767,650	29.1	2,992,822	18.2
1983.....	17,575,336	100.0	9,265,303	52.7	5,060,858	28.8	3,249,170	18.5
1984.....	19,685,368	100.0	10,609,775	53.9	5,404,553	27.5	3,671,040	18.7
1985.....	22,216,870	100.0	12,340,933	55.5	5,743,594	25.9	4,132,343	18.6
1986.....	24,612,953	100.0	13,827,237	56.2	6,247,874	25.4	4,537,842	18.4
1987.....	27,317,840	100.0	15,453,355	56.6	6,782,360	24.8	5,082,125	18.6
1988.....	30,732,783	100.0	17,512,113	57.0	7,476,670	24.3	5,744,000	18.7

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 by 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 Federal systems. Beginning 1970, includes Federal black lung benefits. Includes payment of supplemental pensions from general funds. Compiledfrom State reports (published and unpublished) and from *Spectator: Insurance by States of Fire, Marine, Casualty, Surety, and Miscellaneous Lines* and the *Argus Fire, Casualty, and Surety 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.

calling for an increase to the two-thirds level.⁷

For workers in 35 States and the District of Columbia whose wages were below the State average, the imposition of a maximum (or cap) has no effect. For example, in Illinois where the replacement rate in 1988 is set at 66⅔ percent, workers with weekly wages of \$452 (the State average weekly wage) could receive weekly compensation of \$301, well below the State maximum of \$554. In fact, any Illinois worker with gross weekly wages up to \$831 in 1988 would still have 66⅔ percent of wages replaced under workers' compensation.

In 17 States, however, a worker with wages equal to those of the average worker in the State would not receive the 66⅔ percent replacement rate because of the State's maximum. For instance, in 1988, the average weekly wage in California was about \$462. Although the State used a 66⅔ percent replacement rate that would provide the worker with a weekly benefit of about \$308, application of the State's maximum would limit that payment to \$224 for an effective replacement rate of 48.5 percent (chart 2).

Although State maximums restrict compensation payments in some cases, most States have addressed benefit adequacy by implementing flexible maximums that increase annually based on the State's average weekly wages. Much of the move toward flexible maximums occurred during the 1970's as States responded to the recommendation of the National Commission, establishing maximums at 100 percent or more of the average covered wage in the State. Without such automatic increases, benefit levels often failed to keep pace with wage increases—a common situation during the 1950's and 1960's.

Waiting Periods

The extent to which overall wage loss is replaced under workers' compensation laws is also affected by the length of the waiting period in each State. The waiting period—usually set at 3, 5, or 7 days—is the length of

Table 6.—Aggregate benefit payments as percent of payroll in covered employment and occupational disability incidence rates in manufacturing and in nonfarm private industry, by selected years, 1940-88¹

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.....	1.07	5.4	16	4.0	17
1981.....	1.08	5.1	16	3.8	16
1982.....	1.16	4.4	17	3.5	17
1983.....	1.17	4.3	17	3.4	17
1984.....	1.21	4.7	17	3.7	17
1985.....	1.30	4.6	17	3.6	18
1986.....	1.37	4.7	18	3.6	18
1987.....	1.43	5.3	18	3.8	18
1988.....	1.49	5.7	19	4.0	19

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 employees worked.

⁴ Data not available. Before 1971, the

manufacturing series 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 from the Bureau of Labor Statistics, Department of Labor.

time that must elapse after the date of disability onset before benefits may be paid. When the disability lasts longer than the specified period stated in the State's workers' compensation law, the payment of benefits is retroactive to the date of injury.

The length of this retroactive period varies from 5 days in Nevada and North Dakota to 6 weeks in Louisiana and Nebraska. Thus, if a worker is disabled for 28 days in Nevada,

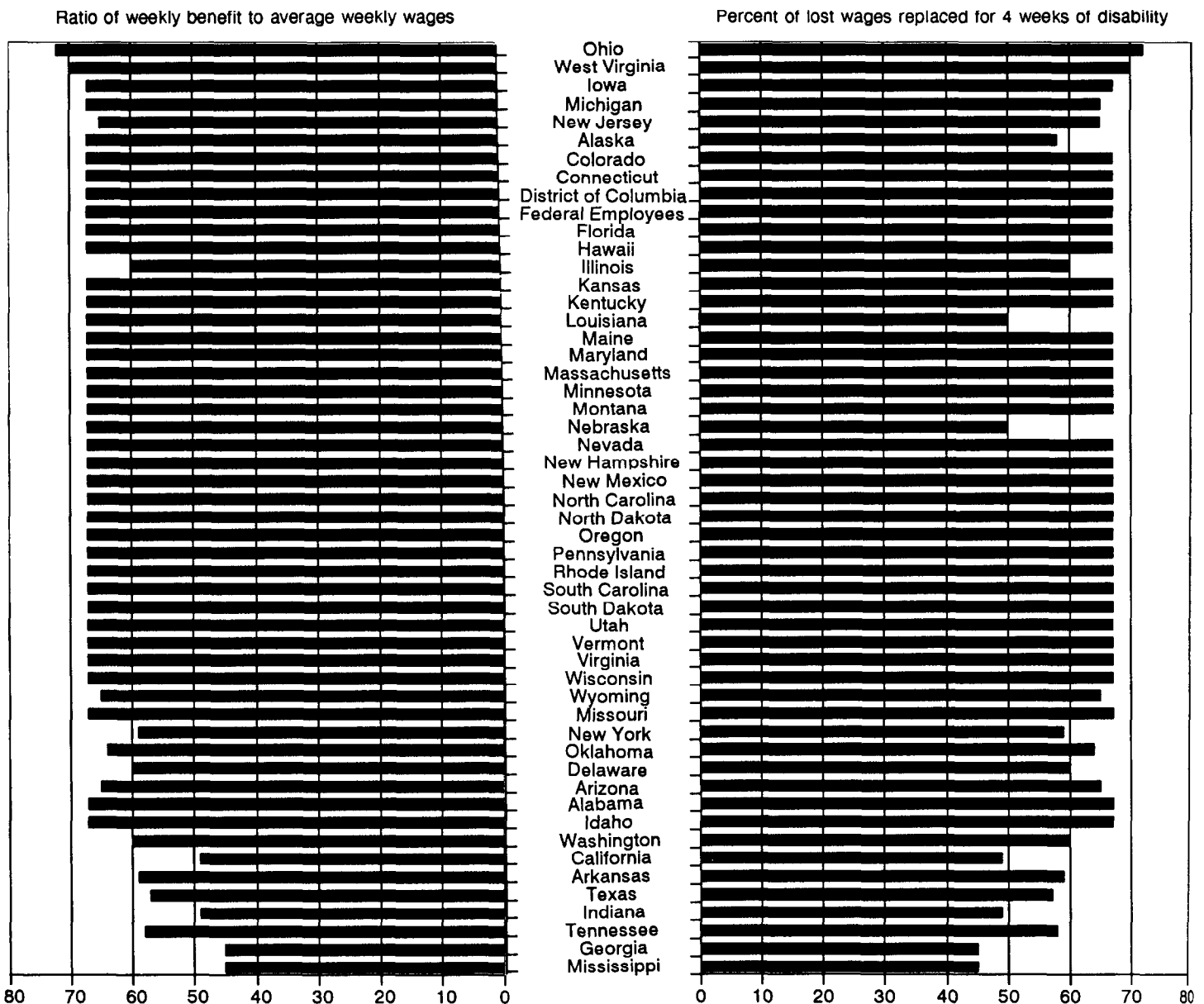
compensation is for the entire period, because the worker is paid retroactively for the 5-day waiting period once the disability last more than 4 days.

However, in Nebraska and Louisiana, each with 7-day waiting periods and 6-week retroactive periods, a worker disabled for 28 days (up to 41 days) would not be compensated for the waiting period; instead, the worker would receive payment for 21 of the 28 days. This formula reduces the

replacement rate from 66½ percent to 50 percent for the worker with wages equal to the State's average weekly wage.

The effect of the waiting period and retroactive pay provisions as of January 1988 is shown in chart 2. A disability period of 4 weeks is selected because workers lost an average of 19 workdays due to disability in 1988, a period roughly equivalent to 25-27 calendar days. For each State, total

Chart 2.— Measures of interstate variation: Weekly benefit payable for temporary total disability as a percent of the average weekly wage, 1988 and percent of lost wages replaced for worker with 1988 average weekly wage for temporary total disability lasting 4 weeks, January 1988



Maximum weekly benefit for workers without eligible dependents: average wage for workers covered by unemployment insurance program.

benefits payable in 1988 for the first 4 weeks of a temporary total disability are related to the wages lost by a worker with no dependents and who is receiving the State's average 1988 wage. As the chart indicates, Federal civilian workers and those in 33 States and the District of Columbia would receive at least 66½ percent of their weekly wages when disabled for a 4-week period; in 4 States, the ratio was below 50 percent.

Employer Costs

The cost of workers' compensation to employers consists of several components. In addition to benefit costs (commonly called "pure premium"), overhead costs are also reflected in the premium rates (or their equivalent) that employers pay to insure or self-insure the risk of work injury. These overhead costs include the expenses of policywriting, ratemaking, payroll auditing, claims investigation and adjustment, safety inspection, legal and medical services, and general administration. The cost of insurance provided by commercial carriers also includes acquisition charges (commissions and brokerage fees), taxes and license fees, and allowances for underwriting profit. These costs vary from one employer to another depending upon industrial classification, industry hazards, and the prevalence of high-risk groups within the workforce. Costs also vary from one State to another, influenced, in part, by State statutory benefit provisions.

Employer costs exceeded \$43 billion in 1988 (table 7). This amount is more than 72 percent higher than in 1984 and is in sharp contrast to the modest increases of the early 1980's when employer costs rose only 13 percent from 1980 to 1984. The earlier period was characterized by aggressive efforts by regulators to contain costs following the decline in benefit growth during the 1977-82 period.

Although premiums are affected by factors relating to the employer's industry and injury experience as well as by State-mandated requirements and benefit escalation, the impact of wage

and medical care increases on premiums can be reduced by examining the relationship of premium costs to employer payrolls. During the 1960's, the costs ratio moved slowly upward from 0.93 to 1.08, accelerating during the 1970's from 1.11 to 1.95. In 1980, costs reached a plateau of 1.96 percent of payroll but subsequently declined to 1.66 percent in 1984 as cost containment efforts became effective. From 1984 to 1988, however, the ratio of costs to payroll has again moved steadily upward, reaching 2.16 percent in 1988.

During the 1990's, cost increases may moderate as the number of lower-risk service jobs grows much more rapidly than those in goods-producing industries. Since the more hazardous employment tends to produce more serious injuries and higher benefit levels, this changing occupation mix should lead to smaller increases in total employer premiums per covered worker.

Loss and Expense Ratios

The effectiveness of workers' compensation programs in providing income-maintenance protection to disabled workers can be measured by relating benefits to employer costs. This "loss" ratio indicates the proportion of each cost dollar that is returned to the employer as benefits. In 1988, about 69 percent of all employer costs were paid as benefits, the lowest ratio since 1982 (table 8).

The loss ratio fluctuated generally between 50 and 60 percent during the 1970's before increasing to 66.6 percent in 1982 and 70.4 percent in 1983. This increase reflects a stabilizing of program costs during the early 1980's, a sharp contrast with the 1970's when insurers increased premiums to compensate for program changes and inflation.

The loss ratio reflects the combined experience of the different types of insurers and it must be used carefully. For example, the overall ratio of 68.8 percent in 1988 conceals wide variations in ratios for different insurers. The ratio for self-insurers and

Table 7.—Estimated costs of workers' compensation to employers as percent of payroll in covered employment, by selected years, 1940-88

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.....	22,256	1.96
1981.....	23,014	1.85
1982.....	22,765	1.75
1983.....	23,048	1.67
1984.....	25,122	1.66
1985.....	29,185	1.82
1986.....	33,964	1.99
1987.....	38,095	2.07
1988.....	43,284	2.16

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 revenue funds, primarily most of the Federal Black Lung benefits program.

the Federal employees' program is 90-95 percent because the computation is based on payments during the year plus an estimate of administrative expenses. Costs may be overstated (and thus the loss ratio understated) for private insurers and some State funds because dividends to employers are not taken into account. These dividends may be considered as part of the premium that is later returned to the employers.

For private insurers and State funds, a loss ratio based on losses (benefits) *paid* during the year is lower than one based on losses *incurred*. Incurred losses reflect large amounts of premium income that must be set aside to pay future benefits at a time when the statutory maximums will be higher. These losses invariably will be greater than current payments for cases from earlier years when wages and compensation were lower. This difference between incurred and paid losses is especially great when insured payrolls are rising rapidly, requiring statutory maximums to be adjusted accordingly.

Private insurers.— In 1988, the loss ratio based on actual losses paid by private insurers was 61.2 percent (table 9). This ratio has increased significantly since 1979 when such losses represented 43.0 percent of premiums written (the lowest point since this series began in 1950), but has remained in the 60-64 percent range since 1983.

The loss ratio based on incurred losses and earned premiums is commonly used by insurance companies when evaluating and adjusting premium rates. As shown in table 9, the loss ratio based on incurred losses exceeded the rate based on actual (direct) losses paid in 1950-70, usually by 5-15 percentage points. This gap increased in the 1970's, exceeding 25 percent, on average, in 1975-79 as uncertainty over benefits and cost levels accelerated estimates of losses to be paid in future years. The spread between the two ratios averaged less than 13 percentage points in the 1981-84 period as the amount of losses paid increased much

more rapidly than the amount of incurred benefits, but widened again in the 1984-88 period.

Most workers' compensation insurance is underwritten by stock and mutual companies. The experience of these companies is shown in table 10, reflecting amounts paid by employers to cover benefits as well as the insurers' operating expenses and their margin of profit. However, comparisons of the ratios of benefits and expenses to premiums for these two types of companies must be made cautiously since their method of operation is different.

For example, nonparticipating stock companies distribute profits to their stockholders while participating stock companies and mutual companies make such distributions to policyholders as dividends. In 1988, these dividends totaled 5.6 percent of premiums for stock companies and 9.7 percent for mutual companies, according to data furnished by the National Council on Compensation Insurance. In computing the 1988 loss ratio, incurred losses would represent 87.6 percent of premiums for stock companies and 92.8 percent for mutual companies when these dividends are subtracted from premiums earned. Without considering the impact of such dividends, the loss ratio was about 83 percent for both types of insurers.

The gap between expense ratios of stock and mutual companies—the ratio of expenses to premiums—has remained steady in recent years. During the 1939-47 period, the expense ratio for stock companies was 15 percentage points higher than for mutual companies but by the 1969-72 period, the difference had narrowed to less than 5 points, where it remained into the early 1980's. During the 1985-88 period, the gap gradually widened to about 8 percentage points in 1988. As with the loss ratio, the consideration of dividends is important when evaluating the expense ratio. For instance, if dividends are subtracted from premiums earned, the expense ratio would be 37.0 percent for stock companies and 25.1 percent for mutual companies. Without consideration of the dividends, incurred expenses were 30.6 percent for stock companies in 1988, compared with 22.7 percent for mutual companies.

The net gain ratio, expressed as the relationship of underwriting gains before payment of dividends to total premiums, is also shown in table 10. The workers' compensation area has generally been less profitable for stock than mutual companies, although 1988 was difficult for both with stock and mutual companies recording underwriting losses of 13.4 percent and 6.5 percent, respectively. For the

Table 8.—Percent and amount of benefit payments and their relationship to employee costs, selected years, 1950-88

Year	Employer costs ¹ (in millions)	Benefit payments	
		Amount ¹ (in millions)	As percent of costs
1950.....	\$1,013	\$615	60.7
1960.....	2,055	1,295	63.0
1970.....	4,894	2,889	59.0
1980.....	22,256	12,107	54.4
1981.....	23,014	13,523	58.8
1982.....	22,765	15,151	66.6
1983.....	23,048	16,231	70.4
1984.....	25,122	18,399	73.2
1985.....	29,185	20,979	71.9
1986.....	33,964	23,585	69.4
1987.....	38,095	26,299	69.0
1988.....	43,284	29,789	68.8

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

1985-88 period, stock companies experienced a loss as measured by a net gain ratio of -13.1 percent, compared with -1.7 percent in the 1981-84 period. Similarly, mutual companies experienced a drop from 4.2 percent (1981-84) to -7.1 percent

(1985-88). These data on underwriting gains and losses do not include investment income, an important source of profit since such investment returns on future benefit reserves can be substantial.

The detailed expenses incurred by

private insurance companies in administering the workers' compensation programs are reflected in table 11. In the past, these expenses have been highest for stock companies whose policies have been sold through independent agents, thus resulting in

Table 9.—Comparative ratios of benefits to premiums, private carriers, 1950-88 ¹

{Amounts in millions}

Year	Losses (benefits) paid in relation to direct premiums written ²			Losses (benefits) incurred in relation to premiums earned ⁴		
	Direct premiums written ³	Direct losses paid	Loss ratio	Premiums earned ³	Losses incurred	Loss ratio
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	7,028.3	44.6	13,608.0	9,173.8	67.4
1981.....	16,163.7	7,876.0	48.7	13,990.7	9,276.1	66.3
1982.....	15,397.9	8,646.7	56.2	13,544.5	8,688.2	64.1
1983.....	15,383.9	9,265.3	60.2	13,669.1	9,535.5	69.8
1984.....	16,632.1	10,609.8	63.8	14,886.8	11,974.4	80.4
1985.....	19,499.8	12,327.0	63.2	16,636.4	13,504.7	81.2
1986.....	22,771.1	13,794.3	60.6	19,194.9	16,297.6	84.9
1987.....	25,447.8	15,427.8	60.6	22,624.9	18,546.4	82.0
1988.....	28,538.4	17,479.6	61.2	25,057.8	20,769.2	82.9

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.

Table 10.—Countrywide workers' compensation experience of stock and mutual companies, 1939-88

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
1981-84	42,753,532	30,186,537	70.6	13,280,221	31.1	-1.7
1985-88	61,369,469	50,726,123	82.7	18,666,443	30.4	-13.1
1981	10,488,700	6,982,458	66.6	3,082,011	29.4	4.0
1982	10,262,628	6,597,691	64.3	3,147,151	30.7	5.1
1983	10,477,917	7,306,542	69.7	3,386,050	32.3	-2.1
1984	11,524,287	9,299,846	80.7	3,554,009	31.8	-12.5
1985	12,471,808	1,009,264	80.9	3,712,100	29.8	-10.7
1986	14,023,434	12,013,590	85.7	4,217,379	30.1	-15.7
1987	16,049,092	13,049,351	81.3	4,968,079	31.0	-12.3
1988	18,825,135	15,572,918	80.5	5,768,885	30.6	-13.4
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
1981-84	12,555,600	8,782,528	70.0	3,244,703	25.8	4.2
1985-88	20,962,398	17,498,738	83.5	4,947,037	23.6	-7.1
1981	3,313,687	2,182,501	65.9	790,322	23.9	10.3
1982	3,083,811	1,984,021	64.3	803,978	26.0	9.6
1983	2,994,469	2,095,166	70.0	790,381	26.4	3.6
1984	3,163,633	2,520,840	79.7	860,022	27.3	-6.9
1985	3,900,482	3,191,684	81.8	944,026	24.2	-6.0
1986	4,912,673	4,095,157	83.4	1,166,215	23.7	-7.1
1987	6,256,489	5,274,827	84.3	1,498,975	24.0	-8.3
1988	5,892,754	4,937,070	83.8	1,337,821	22.7	-6.5

¹ Annual figures for 1939-84 previously published in workers' compensation articles that appeared in the *Social Security Bulletin* in March 1954, August 1958, October 1966, October 1970, October 1974, May 1979, July 1984, and July 1988.

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.

Table 11.—Administrative expenses incurred as percentage of net premiums earned,¹ by category of expense and major type of private carrier, selected years, 1950-88 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
1980.....	28.9	8.8	10.2	3.6	(5)	(5)	6.3
1981.....	30.3	9.6	9.8	3.9	(5)	(5)	7.0
1982.....	31.0	9.3	9.8	4.0	(5)	(5)	7.9
1983.....	32.7	9.6	10.5	4.2	(5)	(5)	8.4
1984.....	32.5	10.2	10.2	4.1	(5)	(5)	7.8
1985.....	30.1	10.6	8.2	4.9	(5)	(5)	6.4
1986.....	30.9	11.4	8.3	5.2	(5)	(5)	6.0
1987.....	32.0	12.0	8.9	5.3	(5)	(5)	5.8
1988.....	31.7	11.5	10.1	4.9	(5)	(5)	5.2
Participating stock companies							
1950.....	28.6	8.2	11.5	2.4	(5)	(5)	4.3
1955.....	28.3	7.9	11.9	2.3	(5)	(5)	4.3
1960.....	26.8	8.3	11.0	2.3	(5)	(5)	3.9
1965.....	25.1	8.1	9.9	2.3	(5)	(5)	3.5
1970.....	25.2	8.7	8.4	2.8	(5)	(5)	4.1
1975.....	24.7	8.1	7.4	4.1	(5)	(5)	5.1
1980.....	25.6	7.9	8.3	3.8	(5)	(5)	5.6
1981.....	28.1	8.5	9.1	4.1	(5)	(5)	6.4
1982.....	30.3	9.0	9.9	4.0	(5)	(5)	7.4
1983.....	31.8	9.0	10.9	4.3	(5)	(5)	7.6
1984.....	31.0	9.4	10.4	4.3	(5)	(5)	6.9
1985.....	29.5	8.7	10.6	4.3	(5)	(5)	5.9
1986.....	29.2	9.8	9.5	4.6	(5)	(5)	6.5
1987.....	29.8	10.8	9.4	4.4	(5)	(5)	5.2
1988.....	29.8	10.8	8.8	4.7	(5)	(5)	5.5
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
1980.....	21.5	8.2	4.5	3.5	(5)	(5)	5.3
1981.....	23.9	8.5	5.4	3.8	(5)	(5)	6.2
1982.....	26.0	8.8	6.5	4.2	(5)	(5)	6.5
1983.....	26.4	8.4	6.9	4.4	(5)	(5)	6.7
1984.....	27.3	9.1	7.2	4.4	(5)	(5)	6.6
1985.....	24.2	8.4	4.9	5.0	(5)	(5)	5.9
1986.....	23.8	8.8	3.7	5.0	(5)	(5)	6.3
1987.....	24.1	9.5	6.0	4.3	(5)	(5)	4.3
1988.....	22.7	9.9	4.0	4.4	(5)	(5)	4.4

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, include's safety inspection and payroll audit costs.

⁵ Included in "other."

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

higher commission costs, while employees of mutual companies sell their own policies. Administrative expenses for nonparticipating stock companies were 31.7 percent in 1988, compared with 29.8 percent for

participating stock companies and 22.7 percent for mutual companies.

State funds.— Eighteen States have established publicly-operated funds to meet the insurance requirements of the State program. In 6 of these States, the

public fund is the exclusive insurance provider, while in the other 12 states, the public fund operates in competition with private insurers.

The ratios of benefits to premiums are noticeably higher than for private carriers. Financial data for these funds, shown in table 12, indicate the loss ratio decreased from a high of more than 90 percent in 1983 to 63 percent in 1988. Among private carriers, the loss ratio was also at a low-point during 1978-79 (43.1 percent), but increased steadily to 63.8 percent in 1984 (table 9) before easing to 61.2 percent in 1988. Although the loss ratio for the State funds generally has been 15-20 percentage points higher than that for private carriers, this differential has shrunk considerably in recent years.

There are several operational factors that have contributed to the historically higher loss ratios among State funds. First, States often incur higher losses (pay more benefits) because they insure a higher-risk segment of the workforce, many of whom cannot obtain insurance with private carriers. Secondly, many State funds have lower costs because they do not include allowances for items such as maintaining reserves, taxes and special assessments, and profit which are included in the costs of private companies.

Additionally, the premium income received by State funds usually reflects changes in dividends and rates. For private carriers, especially mutual companies, the difference between actual and anticipated cost of insurance is usually reflected in dividends that are returned to policyholders—dividends that are not taken into account in table 9.

Administrative expenses of State funds dropped to 10.6 percent in 1988, declining from a high of 16.7 percent in 1983. The expense ratio of stock and mutual companies (table 10) showed similar movement even though such comparisons are not entirely comparable because the latter are based upon earned premiums rather than written premiums.

The primary contributor to the gap in administrative costs between public

Table 12.—Benefit payments and administrative expenses in relation to premiums written, 18 State funds, 1950-88 ¹

[Amounts in millions]

Year	Premiums written ²	Benefits paid ³		Administrative expenses ⁴	
		Amount	Percent of premiums	Amount	Percent of premiums
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	397.8	78.0	38.4	9.7
1963.....	432.8	320.6	74.1	41.4	9.6
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.....	3,008.2	1,824.0	60.6	302.4	10.1
1981.....	2,900.0	2,024.3	69.8	360.4	12.4
1982.....	2,640.3	2,160.7	81.8	497.0	15.4
1983.....	2,694.6	2,435.6	90.4	449.7	16.7
1984.....	3,005.1	2,631.7	87.6	406.9	15.5
1985.....	3,715.1	2,708.3	72.9	505.8	13.6
1986.....	4,873.7	3,117.3	64.0	555.9	11.4
1987.....	5,514.9	3,609.3	65.4	643.1	11.7
1988.....	6,660.0	4,193.0	63.0	708.2	10.6

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-adjusted 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 Fire, Casualty, and Surety Chart* (annual issues); and State reports.

and private carriers relates to their operational differences. For instance, acquisition costs are a major expense item for private carriers that must compete for new business, but are only a small concern for competitive State funds and virtually no concern for exclusive State funds. Other items such as taxes are absorbed by other government departments and thus are of little impact on the administrative expenses of State funds, compared with private insurers.

Notes

¹ William J. Nelson, Jr., "Workers' Compensation: Coverage, Benefits, and Costs, 1989," *Social Security Bulletin*, Spring 1992, Vol. 55, No. 1, pp. 51-56.

² "Social Security Programs in the United States," *Social Security Bulletin*, September 1991, Vol. 54, No. 9, pp. 28-37.

³ George E. Rejda, *Social Insurance and Economic Security*, Prentice-Hall, Inc.: Englewood Cliffs, New Jersey, 1991.

⁴ *Occupational Injuries and Illnesses in the United States by Industry, 1989*, Bureau of Labor Statistics, United States Department of Labor, 1991.

⁵ *Issues Report*, National Council on Compensation Insurance, 1988.

⁶ Laws in Idaho and Washington specify 60 percent; New Jersey and West Virginia, 70 percent; Ohio law established a rate of 72 percent for the first 12 weeks. The replacement rate in Alaska, Iowa, and Michigan is set at 80 percent of spendable (after-tax) earnings.

⁷ *The Report of the National Commission on State Workmen's Compensation Laws*, Washington, DC, 1972.

Appendix

State Data Collection

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 one-third of the States collect any data on the number of covered workers or the amount of covered payrolls under workers' compensation. About one-half the States do not publish basic data on the amount of benefits paid by type of insurance or by type of benefit. Consequently, over a number of years, the Social Security Administration developed procedures to estimate some key indicators that monitor the experience under workers' compensation.

Estimating Procedures

Coverage.— One method for evaluating a national social insurance program like workers' compensation is to examine the number of workers protected. Because coverage data are not available from program operations as they are for Social Security and many other public income-maintenance programs, SSA developed a methodology for estimating the number of covered workers.

Before 1985, policy-year payroll data furnished by insurance companies were used as the basis for these coverage estimates. 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 average wage of workers covered for unemployment insurance. Beginning in 1985, however, payroll data have been incomplete for many States and this requires modification in the estimating procedure. This modification uses State-by-State coverage data for 1984 (the last year that complete information was available). Coverage data is then adjusted based on annual changes in the

number of workers covered for unemployment insurance. Finally, estimates for each State are subject to further refinement based on coverage changes during the year.

The estimating methodology used by SSA 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 are for calendar year 1988 and reflect the usual 4-year update cycle. In this article, the employment trend data, adjusted to reflect estimated effects of legislative changes in coverage, are projected to provide national estimates of coverage for 1984-88, with individual State figures reported for 1988.

This figure is much smaller than the total number of individuals covered at any particular 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 or not State law requires proof of financial security to self-insure). Employees of firms that voluntarily purchase workers' compensation insurance are also included since they cannot be separated from those firms that are required to insure.

This method of estimating coverage has the advantage of being applicable to all States on a uniform basis. Primary data are compiled from national sources such as the National Council on Compensation Insurance and the unemployment insurance program.

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

Table I.—Average monthly number of wage and salary workers covered by workers' compensation in 1984 and coverage projections for 1988

[In thousands]

State	1984	1988
Total	81,945	91,298
Alabama	990	1,120
Alaska	172	162
Arizona	950	1,140
Arkansas	625	695
California	10,000	11,650
Colorado	1,100	1,120
Connecticut	1,310	1,440
Delaware	200	237
District of Columbia	382	444
Florida	3,330	4,020
Georgia	1,900	2,250
Hawaii	365	425
Idaho	270	287
Illinois	3,910	4,260
Indiana	1,660	1,880
Iowa	940	1,010
Kansas	805	865
Kentucky	925	1,060
Louisiana	1,100	1,030
Maine	420	495
Maryland	1,430	1,670
Massachusetts	2,280	2,500
Michigan	2,900	3,270
Minnesota	1,580	1,760
Mississippi	610	667
Missouri	1,700	1,890
Montana	235	235
Nebraska	565	616
Nevada	370	469
New Hampshire	390	467
New Jersey	2,970	3,260
New Mexico	400	432
New York	6,360	6,880
North Carolina	2,230	2,590
North Dakota	212	215
Ohio	3,840	4,240
Oklahoma	865	829
Oregon	890	1,025
Pennsylvania	4,140	4,490
Rhode Island	320	351
South Carolina	990	1,140
South Dakota	184	198
Tennessee	1,260	1,460
Texas	4,160	4,260
Utah	515	570
Vermont	209	247
Virginia	2,050	2,480
Washington	1,470	1,730
West Virginia	510	524
Wisconsin	1,860	2,060
Wyoming	148	133
Federal employees	2,948	3,050

Merchant Marine who are covered by statutory provisions for employer liability rather than by a workers' compensation law.

Benchmark coverage figures for 1984 and for 1988 are shown, by State, in table I. Differences in coverage levels from one period to another and 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.

Benefits.—Benefit estimates in tables 2, 3, and 5 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 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 have been included in this series. These data are from administrative records of the Social Security Administration and the Department of Labor.

The SSA prepares estimates of benefits paid by self-insurers from a variety of sources. When available, current benefit information from State agencies is used. Alternatively, estimates are derived from program statistics other than actual benefit payments such as the number of closed cases or the amount of 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) and to update and improve the available information.

Employer costs.—Like the coverage and benefit measures, calendar year totals for premium costs to employers in table 7 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. For 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 Fire, Casualty, and Surety 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 among 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.