COMMERCIAL ACCIDENT AND HEALTH INSURANCE FROM THE STANDPOINT OF THE REINSURANCE COMPANY

BY

HOWARD G. CRANE

Commercial accident and health premiums written during 1934 by casualty reinsurance companies amounted to approximately $2,100,000. By comparison with the entire volume of commercial accident and health premiums written, reinsurance companies' premiums appear inconsequential. However, since reinsurance facilities are necessary for many companies issuing accident and health policies, some consideration of the position of the reinsurance companies may be of interest.

The need for reinsurance in the accident and health field arises out of the fact that a direct-writing company may be exposed as the result of a single accident or illness for a greater amount of loss than it considers prudent to have at risk contingent upon the happening of a single event. One contingency against which reinsurance protection is desirable is the loss of several insured lives through a single accident, such as the sinking of a steamship. Another contingency is the possibility of an accident or illness involving a single assured upon whom a large line of insurance has been extended.

Reinsurance against the loss of several lives through the occurrence of a catastrophe is provided by treaty on an excess basis. A typical treaty would provide reinsurance up to $250,000 in excess of $20,000 ultimate net loss to the primary insurer, the direct carrier's net loss for the purpose of the reinsurance cover to be considered not more than $5,000 single indemnity, nor $10,000 double indemnity, any one life. With such a cover more than two lives insured by the direct-writing company would have to be lost in a single accident before the reinsurer could be involved. As premium a flat percentage of the direct-writing company's net accident premiums written would be specified in the treaty. Inasmuch as the loss of the lives of more than two assured of a single company in a single accident is a very infrequent happening, the premium charged for a cover of this type is small, and such premiums constitute only a minor portion of reinsurance companies' accident premium volume.

By far the major portion of the reinsurance companies' accident and health premiums represent reinsurance accepted on a share basis for the purpose of relieving direct carriers of large commitments on individual insured lives. When a direct-writing company provides insurance against accidental death to an individual assured in an amount greater than it cares to retain for its own account, reinsurance on an excess basis is not feasible. Inasmuch as the happening of the contingency insured against will require the payment of the entire principal sum, the reinsurer must receive a pro-rata share of the premium in the proportion that the liability it assumes bears to the total amount insured. With respect to the weekly or monthly indemnity for injury or illness, it would be possible in theory to reinsure on an excess basis so that the reinsurer would take up the loss payments after the product of the periodical indemnity and the duration of the disability had resulted in loss payments aggregating some specified sum. However, the loss cost to the reinsurer under an arrangement of this type would be dependent upon such factors as the amounts of indemnity insured on individual lives, and policy provisions respecting the periods of payment for total and partial disability. These are matters concerning which the practice among direct-writing companies varies so greatly that the determination of an equitable reinsurance premium would present an insurmountable obstacle in the way of arranging a disability reinsurance contract upon an excess basis. Hence the only satisfactory arrangement for reinsuring a portion of large lines of accident or health insurance on individual lives is upon a share basis.

The most obvious share basis would be the reinsurance of a fixed, unvarying share of the insurance upon each life insured by the primary carrier. Such a basis would, of course, be objectionable to direct-writing companies, since to afford themselves adequate reinsurance on large policies they would be required to reinsure heavily on small policies which were entirely within their own carrying capacity, and they would thus be giving off as reinsurance an unduly large portion of their premiums. Furthermore, the need for reinsurance exists only as respects the larger sums insured on individual lives. Hence the practice is to reinsure upon what is known as the surplus share basis. The primary carrier retains all policies where the aggregate sum insured per life does not exceed some amount specified in the reinsurance treaty. Where the amount insured exceeds that specified, the surplus is reinsured on a share basis, subject, of course, to some specified maximum amount. For example, a treaty may provide that where the amount insured on any one life exceeds $5,000 principal sum, or $25 weekly indemnity, the surplus over these amounts shall be reinsured on a share basis subject to a maximum amount of reinsurance of $10,000 principal sum and $50 weekly indemnity. With such a treaty, if a direct-writing company wrote a policy, or policies, on an individual aggregating $15,000 principal sum and $75 weekly indemnity, it would reinsure $10,000 principal sum and $50 weekly indemnity, and the reinsurer would receive two-thirds of the premium and would pay two-thirds of all losses, large or small. It is customary for the reinsurer to participate proportionately in all benefits provided by the policies reinsured. Thus, under a treaty such as described in the above example where the maximum amount reinsurable was $10,000, the reinsurer's maximum loss would be $20,000 as respects reinsurance of a policy with double indemnity benefits. It is also customary, in the event that there are several policies on a single assured, that all policies be reinsured proportionately.

To the reinsurance companies commercial accident and health insurance has been a distinctly unprofitable class of business. The four reinsurance companies writing any considerable volume of this business sustained underwriting losses for the years 1927-1934, inclusive, aggregating $3,896,395, this being 17% of their earned premiums of $23,118,444; the ratio of their incurred losses and claim expenses to earned premiums was 75%. The results by year are shown in the following exhibit:

EXHIBIT I

COMMERCIAL ACCIDENT AND HEALTH EXPERIENCE OF FOUR CASUALTY REINSURANCE COMPANIES (a)

Year	Net Premiums Earned	Ratio Losses and Claim Expense Incurred to Premiums Earned	Underwriting Profit or Loss	Ratio Underwriting Profit or Loss to Premiums Earned
1927	$3,163,714	70.4%	− $ 407,898	− 12.9%
1928	3,191,853	67.5	− 432,758	− 13.6
1929	3,208,304	62.5	− 177,812	− 5.5
1930	3,159,481	75.7	− 530,921	− 16.8
1931	3,165,971	96.2	− 1,123,252	− 35.5
1932	2,785,370	83.2	− 609,036	− 21.9
1933	2,305,757	70.1	− 281,163	− 12.2
1934	2,137,994	71.3	− 333,555	− 15.6
Total	$23,118,444	74.8%	− $3,896,395	− 16.9%

(a) Employers Reinsurance Corp., European General Reinsurance Co., Ltd., U. S. Branch, First Reinsurance Co. of Hartford, General Reinsurance Corp.

Although the experience of the direct-writing companies during this same period has also been unsatisfactory, their net underwriting losses have been relatively less severe than those of the reinsurers.

The basic cause for the reinsurance companies' unsatisfactory experience is the greater than average loss frequency with respect to persons insured for large amounts of principal sum and indemnity. In the following exhibit is summarized the experience by size of risk compiled by the Bureau of Personal Accident and Health Underwriters for policy years 1931 and 1932, combined, as respects the cost and frequency of death claims on Class A male risks covered by policy forms providing dismemberment and disability as well as death benefits:

EXHIBIT II

EXPERIENCE BY SIZE OF POLICY — DEATH

Principal Sum Group	Exposure (Term in Years)	No. of Claims	Amount of Incurred Losses (Single Indemnity Only)	Claim Frequency (a)	Loss Cost per $1,000 Principal Sum Exposed (Single Indemnity Only)
0 - $ 4,999	172,947	141	$ 251,388	.82	(b)
5,000	146,612	133	554,704	.91	$0.76
7,500	211,014	187	1,109,915	.89	0.70
10,000	75,536	102	847,798	1.35	1.12
15,000	63,399	95	1,089,047	1.50	1.15
20,000	8,424	19	304,750	2.26	1.81
22,500	2,918	7	134,374	2.40	2.05
30,000	11,779	20	468,675	1.70	1.33
30,001 and over	3,884	12	413,750	3.09	(b)
All Other	23,038	26	279,100	1.13	(b)
Total	719,551	742	$5,453,501	1.03	(b)

(a) Number of claims per 1,000 years' exposure.
(b) Cost per $1,000 exposed cannot be computed from data published by Bureau inasmuch as policies contained in group vary in size.

The reinsurance companies seldom participate in risks covered for amounts of $5,000 or less; in the case of policies issued in units of $1,500 principal sum, the reinsurers do not usually participate in risks covered for $7,500 or less. Hence the reinsurers share to only a slight extent in policies which would fall into the first three groups shown in the Exhibit II; their interest is largely confined to risks covered for amounts of $10,000 or larger—the risks showing a higher than average loss cost per $1,000 exposure. Furthermore, under the surplus share plan of reinsurance the larger the policy, the larger the reinsurer's participation—and there is apparent in Exhibit II a trend toward increasing loss cost with increasing amounts of principal sum. Obviously under these circumstances the reinsurers must expect principal sum loss ratios substantially higher than those experienced by their ceding companies.

The dismemberment and disability experience by size of risk as compiled by the Bureau on the same group of policies is summarized in Exhibits III and IV.

EXHIBIT III

Experience by Size of Policy — Dismemberment

Weekly Indemnity Group	Exposure (Term in Years)	No. of Claims	Amount of Incurred Losses (Single Indemnity Only)	Claim Frequency (a)	Loss Cost per $5.00 Weekly Indemnity Exposed (Single Indemnity Only)
0 - $ 24.99	104,232	8	$ 9,300	.08	(b)
25.00	331,206	57	152,782	.17	$0.092
50.00	178,073	33	167,310	.19	0.094
75.00	13,310	2	9,350	.15	0.047
100.00	33,052	5	64,467	.15	0.098
100.01 and over	8,143	..	..	..	..
All Other	51,535	7	29,045	.14	(b)
Total	719,551	112	$432,254	.16	(b)

(a) Number of claims per 1,000 years' exposure.

(b) Cost per $5.00 exposed cannot be computed from data published by Bureau inasmuch as policies contained in group vary in size.

EXHIBIT IV

EXPERIENCE BY SIZE OF POLICY — DISABILITY

Weekly Indemnity Group	Exposure (Term in Years)	Total Disability (a)		Partial Disability		Average No. Weeks Disability per Year Exposed		Loss Cost per $5.00 Weekly Indemnity Exposed (Single Indemnity Only)
		No. of Days	Incurred Losses (Single Indemnity Only)	No. of Days	Incurred Losses (Single Indemnity Only)	Total Disability	Partial Disability	
0 - $ 24.99	104,232	97,372	$ 192,318	75,190	$ 72,060	.133	.103	(b)
25.00	331,206	391,544	1,407,051	328,125	581,593	.169	.142	$1.201
50.00	178,073	222,997	1,592,906	226,877	782,187	.179	.182	1.334
75.00	13,310	20,998	224,966	17,391	89,959	.225	.187	1.578
100.00	33,052	49,008	699,116	45,786	314,370	.212	.198	1.534
100.01 and over	8,143	10,959	249,304	10,496	115,976	.192	.184	(b)
All Other	51,535	65,689	367,148	51,763	141,105	.182	.143	(b)
Total	719,551	858,567	$4,732,809	755,628	$2,097,250	.170	.150	(b)

(a) Including cost of elective benefits.
(b) Cost per $5.00 exposed cannot be computed from data published by Bureau inasmuch as policies contained in group vary in size.

In the case of dismemberment benefits the trend is rather inconclusive, probably due to the relatively few dismemberment claims included in the experience. As respects disability benefits the cost clearly rises as policy amounts increase, although the rise is not as sharp as in the case of principal sum benefits.

Although health insurance experience by size of risk is not available for a recent period, compilations made some years ago show that for this class, also, the loss ratios are higher on the larger risks.

The policy years included in the Bureau accident experience, viz. 1931 and 1932, probably comprise the period during which the disparity between loss cost on large and small policies was greatest. This was the period of most severe financial stress, and hence the time when the temptation to holders of large accident and health policies to commit suicide or malinger was greatest. Since that time progress has been made in the direction of restricting amounts of principal sum and weekly indemnity to figures more commensurate with assureds' earning power. Nevertheless, there will probably always be a relatively higher loss cost on large policies than on small.

For some time it has been the custom among reinsurance companies to extend accident or health facilities only to direct-writing companies with whom there are in effect reinsurance treaties covering other kinds of insurance. In other words, it has come to be accepted as a matter of course that underwriting losses on accident and health reinsurance are probable, and the reinsurers have sought to counteract this by securing sufficient amounts of profitable business of other classes. This is obviously an unsound arrangement, and it would be beneficial both to the reinsurers and the direct-writing carriers if accident and health reinsurance could be made to stand on its own feet.

The primary requisite for making accident and health insurance profitable to the reinsurers is a sufficient improvement in the experience of the direct-insurers so that in the aggregate, gross as to reinsurance, the accident and health business is on a profitable basis. Much progress toward this end has been made during the past two years. In order that the reinsurers may sustain no underwriting losses, it is necessary that not only the experience as a whole, but particularly the experience on the larger policies be improved. The results on large policies can doubtless be improved somewhat by careful restrictions on the amount of principal sum and indemnity insured in proportion to an assured's earnings. Furthermore, regardless of earnings, it would seem desirable to confine the amounts of principal sum coverage afforded on any one life to lower limits than in the past. In view of the higher loss ratios on the larger risks, this should prove beneficial to the primary carriers as well as to the reinsurers. After all, from a social viewpoint there is little justification in most cases for huge principal sum accident policies. The assured's dependents generally need insurance to an equal extent whether death is from accidental or natural causes, and the purchase of life insurance, even though necessarily in much smaller amounts, would seem a better investment from the assureds' standpoint.

A change in reinsurance practice which should prove mutually beneficial would be the retention by the direct-insurer of a disproportionately larger amount of principal sum than of weekly indemnity. The effect of this would be that a larger proportion of the reinsurers' business would relate to the disability coverage on which there is less disparity between the loss ratios on large and small policies. To the primary carriers this would be a sound and advantageous basis of reinsurance. With accident policies customarily issued in units of $1,000 principal sum and $5 weekly indemnity, a principal sum loss is the equivalent of approximately four years' disability benefits. As long as accident policies are issued providing life indemnity for total disability, the possibility of disability payments extending over a period considerably in excess of four years is by no means remote. Hence the potential shock hazard with respect to persons insured for large amounts is greater on the disability than on the principal sum side, and accordingly there is more need for reinsurance of the disability hazard.

If the foregoing changes were accomplished, a material betterment of the reinsurers' loss ratios should result. The reinsurers would still be confined to a participation in the larger risks, and consequently would still have to expect poorer loss ratios than the primary carriers. However, since the ceding commission allowances and overhead expenses of the reinsurance companies average a little less than do the acquisition and administrative expenses of the direct insurers, an equivalent underwriting result might be accomplished in spite of slightly poorer loss ratios.

Whether such changes as suggested would result in a sufficient improvement so that the reinsurers could at least enjoy an even break on their commercial accident and health business is uncertain. In the interest of the continuance of a reinsurance market for accident and health business, some plan for improving the reinsurance experience is essential. The reinsurance companies cannot afford to subsidize the accident and health business indefinitely from the proceeds of other classes of insurance, since profits from the other lines are by no means certain. From the ceding companies' standpoint, steps which will improve the reinsurers' experience will in most cases benefit their own experience as well. Hence it is in the ceding companies' own interest to so adjust their underwriting policies that their reinsurers will have underwriting profits.