

TRANSACTIONS

MARCH, 1953

THE KOREAN WAR HAZARD

JAMES T. PHILLIPS

THE war hazard faced today by the life insurance industry can be broken down into two general types—the potential hazard arising from the ever present possibility of our being involved in an all-out war and the actual hazard arising from the war in which we are already involved, the Korean conflict.

It is beyond the scope of this paper to discuss at length the problems which life insurance companies would have to face should we become involved in an all-out war. In such a conflict, because of the considerable improvement in the tools of war, the loss of lives and property might well be very great and in fact so great that the solvency of insurance companies might even be threatened. Some work has been done on this problem on an industry-wide basis but the difficulties arising because of uncertainty as to the nature of the hazard and variations among companies as to geographical distribution of business have caused this work to be shelved, at least temporarily.

MORTALITY ANALYSIS

The Korean conflict presents an immediate and more tangible hazard. Since the war has been going on for over $2\frac{1}{2}$ years, statistics are available to show the extent of the problem. It is the purpose of this paper to present some of these statistics and to point out variations in the hazard that might be of value in setting up rules for the underwriting of military risks.

Although it is not intended to delve into the political and economic aspects of the Korean conflict, several general characteristics are of considerable importance in underwriting the present war hazard and should be mentioned.

In the first place, war has not been formally declared, which sets a precedent at least in modern times. This precedent would seem to make it somewhat easier for the United States to become involved in other small scale hostilities which would expose military personnel to the risks of combat. Our present position as a leader in world affairs also makes such involvements a distinct possibility. Since the end of World War II there have always been areas of potential conflict. Following the precedent

set by our intervention in Korea, our responsibility as a world leader might require us to step in with troops to quell uprisings in other parts of the world. Thus, from a military underwriting standpoint, a conservative approach to the problem would necessitate considering not only the present conflict but also the possibility of the United States and Canada becoming involved in other similar actions.

The Korean War also differs from previous wars in the extent of the effort made to bring the war to a successful conclusion. While in previous wars an "all out" effort was made to end the war, the present conflict, after the initial phase, has developed so far into a holding action. From an underwriting standpoint this difference has important implications. The "static" nature of the Korean War makes it impossible to estimate when hostilities might terminate or flare up and there is a strong probability that the war may continue for a longer period than past wars. It also enables a "rotation" policy to be adopted with respect to the troops involved so that for any one individual the hazard is likely to be of a temporary nature although one which may recur from time to time.

The fact that the war is being fought on a limited scale in a particular geographical area influences the distribution of the hazard as among age groups, branches of service, and even with respect to duty branches within each branch of service. During a period of maximum effort over a widespread area such as existed during World War II, more older men were drafted and sent to combat areas than in the present conflict; certain branches of service such as the Navy and Coast Guard played a larger part in the war and thus suffered higher casualties; within the Army itself, more use was made of mobile units so that the casualty rates for these units were considerably higher in World War II than in the Korean War. Statistics brought out later in this paper will illustrate some of these points.

The impact of the Korean War on the individual life insurance companies apparently varies widely. Depending on the company's type of business and type of agency force, the problem of dealing with military risks ranges from a minor, insignificant matter that can practically be ignored (judging by the public statements of officials of some companies) to an underwriting problem of considerable importance in other companies.

Even though the Korean War has had little effect on some companies, it would seem that in the interest of consistent underwriting practices the hazards arising from the war should not be ignored. There are many hazardous occupations where claims thereunder would represent only a very small fraction of total claims. Nonetheless, policies would be issued to persons in such occupations only with substantial extra premiums or

the risk might even be declined. If we were to insure all the steeplejacks in the country, it is doubtful if the death claims would be a significant part of our total death claims. But how many companies issue policies to such persons at standard rates? A review of the ratings of twenty of the largest companies indicates that eighteen will not issue insurance to steeplejacks at any rate while the remaining two will consider them with an extra annual premium of \$25 per \$1,000 and limit the amount to \$10,000. Hence, if the extra military combat hazard can be measured, it would seem reasonable to adopt underwriting practices consistent with those used for hazardous occupations. The New York Life has issued a sufficiently large volume of insurance on various types of military risks since June 1950 (about \$170 million up to December 31, 1952) to enable us to develop reliable estimates of mortality rates. We have also been able to develop from published Government statistics fairly reasonable estimates of the combat death rates among the U.S. services during the Korean War. These two sets of data, together with material developed from World War II, give fairly comprehensive bases of comparison. The consistency of the various rates enables us to place considerable reliance on the validity of the figures.

Comparison of Korean War and World War II Statistics

The American Government publishes casualty lists weekly. According to these reports casualties were heaviest in the first year of the Korean War, declining thereafter to a low point at the beginning of 1952. Unfortunately, there has been a definite increase lately from this low point. For example, the battle deaths reported for all services averaged over 1,000 per month for the first and second six-month periods of the war. During the third six-month period they dropped to 800. For the first six months of 1952 the monthly average was 300 but since then the monthly average has increased to 500 for the last six months of 1952. The casualties are of sufficient size to indicate a continuing extra hazard which warrants special treatment at least for persons in certain combat services.

More detailed figures of the battle deaths among the various branches of the United States forces as compiled from published government figures are shown in Table 1.

Combat death rates for all the United States forces have not been published. However, from statements published from time to time regarding our military forces it has been possible to make some estimate of their average strengths and, with these and the published combat deaths, to estimate the combat death rates among the United States forces. Table 2 shows the rates (excluding missing in action) by branch of service and also presents ratios of assumed dead among the missing in action to battle deaths, in order to provide a basis for estimating total combat rates.

THE KOREAN WAR HAZARD

TABLE 1
 U.S. BATTLE DEATHS IN KOREAN WAR
 (Based on Weekly Casualty Lists published by the U.S. Government)

	ARMY		NAVY		MARINES		AIR FORCE		TOTAL	
	Number	Mo. Aver.	Number	Mo. Aver.	Number	Mo. Aver.	Number	Mo. Aver.	Number	Mo. Aver.
1950										
June 25-Dec....	5,429	905	61	10	1,232	205	113	19	6,835	1,139
1951										
Jan.-June.....	5,355	893	95	16	670	112	69	11	6,189	1,032
July-Dec.....	4,158	693	75	12	393	66	138	23	4,764	794
1952										
Jan.-June.....	1,442	240	83	14	200	33	132	22	1,857	309
July-Dec.....	2,202	367	48	8	673	112	38	6	2,961	493
Total.....	18,586	620	362	12	3,168	106	490	16	22,606	754

TABLE 2
 U.S. GOVERNMENT KOREAN WAR STATISTICS
 APPROXIMATE ANNUAL BATTLE DEATH RATES PER 1,000
 (EXCLUDES MISSING IN ACTION)
 (Estimates based on available published U.S. Government statistics)

	Year Ending June 30, '51	Six Months Ending Dec. 31, '51	Six Months Ending June 30, '52	Six Months Ending Dec. 31, '52	2 1/2 Years Ending Dec. 31, '52
Army.....	10	5	2	3	5
Air Force.....	0.3	0.3	0.3	0.1	0.2
Navy.....	0.3	0.2	0.2	0.1	0.2
Marines.....	14	4	2	6	7
All.....	6	3	1	2	3

These figures do not tell the full story, however, as they exclude missing in action. Adjustments for missing were developed as follows:

BREAKDOWN OF TOTAL REPORTED MISSING (TO 1/2/53)

	Number		Percentage Distribution	
Total Reported Missing.....		12,990		100%
Known dead.....	216		2%	
Confirmed to be prisoners.....	2,091		16	
Returned to U.N. lines.....	1,391		10	
Total Accounted for.....		3,698		28
Current Missing.....		9,292		72%
Reported as prisoners by enemy but not confirmed*.....		1,109		9
Assumed Dead.....		8,183		63%

* Reported on Dec. 20, 1951.

The assumed dead of 8,183 were distributed by branch of service in accordance with the distribution of the current missing on January 2, 1953. The following table compares the resulting figures with the reported battle deaths.

ESTIMATED RATIO OF ASSUMED DEAD AMONG MISSING TO TOTAL BATTLE DEATHS (TO 1/2/53)

	Assumed Dead	Battle Deaths	Ratio
Army.....	6,991	18,601	38%
Air Force.....	696	491	142
Navy.....	67	362	19
Marines.....	429	3,173	14
Total.....	8,183	22,627	36%

The battle death rates for the first 2½ years of the Korean War, adjusted for deaths among the missing, are shown in the next table and compared with corresponding figures for World War II.

ANNUAL BATTLE DEATH RATES PER 1,000

	U.S. Forces during First 2½ Years of Korean War to Dec. 31, 1952 In- cluding Assumed Deaths among Missing	U.S. Forces during Four Years of World War II
Army.....	7	}9
Air Force.....	0.6	
Navy.....	0.3	
Marines.....	7	
All.....	4	8

The only information regarding combat death rates among military personnel published by the government which has come to our attention appeared in the *Army, Navy, Air Force Register* dated December 20, 1952. In this article the combat death rates for the combined Navy and Marine Corps during the first two years of the Korean hostilities were given. For the first year (7/1/50—6/30/51) the combat death rate was 3.1 per thousand and for the second year, 0.7 per thousand. It is of interest to note that the corresponding combat death rates which we had developed from published death and armed strength figures were 3.0 and 0.8 per thousand.

Since rates have not been officially developed for the Army and Air Corps, it seems advisable to consider our figures for these branches as rough approximations which may give some indication of the true figures.

The World War II figures were presented by Mr. Lew in his discussion of Mr. Gundy's paper on "War Mortality and Its Effect upon Life Insurance in Canada" (*TASA XLVIII*, 270-77). These figures may not be directly comparable because of differences in the organization of the Air Force and the air arms of other branches of service. It should also be borne in mind again that our figures for the Korean War are only rough approximations. In view of the limited nature of the conflict, the Korean War figures seem rather high but the size of these figures is influenced by the high losses during the initial phase of the war. On the other hand the lower rates in periods subsequent to June 30, 1951, as indicated in Table 2, tend to reduce the over-all rates. The above comparison highlights the differences by branches of service particularly with respect to the Navy, since the combat rates for this branch thus far in the Korean conflict have been less than one-tenth of those sustained during World War II.

The Korean War Experience of the New York Life on Military Risks

Extensive information is available in insurance literature on the amount and distribution of combat death claims of various companies during World War II and considerable information of a similar nature for the Korean War. However, as far as we know, no other company has published any information regarding the combat death rates on policies issued to military risks during either war. For most companies the regular records kept on issued business would probably not contain enough information with respect to the military status of the insured at issue to provide the classifications required for an analysis of the experience. Such was the case in the New York Life at the start of the Korean War. At that time, however, special records were set up so that our mortality experience on

policies issued to military risks could be analyzed in a variety of ways—by branch of service, by rank, and by age.

In April of 1952, preliminary figures on our "other than aviation" combat experience without war clauses were presented informally to the Home Office Life Underwriters' Association. Since that time the experience has been carried forward for another year and adjustments have been made in the previous data in the light of subsequent information. In addition, this study includes the experience on military aviation risks and on policies with war clauses, and other information such as details of our underwriting procedures.

With the advent of the Korean War the New York Life attempted to handle the military underwriting problem by using only plan and amount limitations. It was not until March 12, 1951 that a war and aviation clause was used generally for persons in military service. For all practical purposes, it can be assumed that business issued before the first of April 1951 was issued without a war clause. Although some business processed after that date was issued without a war clause, it was felt that the inclusion of policies without a war clause might make the data less homogeneous; hence only policies with a war clause were included in the part of this study covering business issued after April 1, 1951. The study was limited to risks in the armed forces at time of issue so that a more refined measure of the military hazard could be obtained.

We thus have two blocks of business which have been analyzed: (1) issues during the first nine months of the war (without war clauses), and (2) issues during the second nine months of the war (with war clauses).

These in turn were subdivided into two groups: (a) other than aviation risks and (b) aviation risks. The aviation risks include auxiliary ground aviation personnel as well as flying personnel, *i.e.*, all persons in the U.S. or Canadian Air Forces and those in the air arms of the Army, Navy and Marine Corps. In practically all cases policies on aviation risks contained aviation conditions.

A more conventional analysis would require waiting until a sufficient period of time had elapsed and then analyzing the experiences on a select basis. However, in order to present our experience at this time we have considered each of the two blocks described above as closed groups and have given combat death rates according to the "year" of the war. This method of presenting the data might not give quite as clear a picture of the effects of selection but it has the double advantage of allowing us to make direct comparisons with government statistics and to show the changes in the character of the war over the different periods.

The amounts of paid business covering the period of issue 7/1/50 to 12/31/51 on which the exposures were based for the four categories of risk are shown in the accompanying table.

PAID BUSINESS FROM 7/1/50 TO 12/31/51 ON PERSONS IN MILITARY SERVICE (EXCLUDING RESERVES NOT ON ACTIVE DUTY)

	OTHER THAN AVIATION RISKS		AVIATION RISKS		TOTAL	
	Number	Amount	Number	Amount	Number	Amount
Issued 1st 9 months of War (without War Clauses).....	7,401	\$35,681,000	3,500	\$22,423,000	10,901	\$58,104,000
Issued 2d 9 months of War (with War Clauses).....	2,638	11,668,000	1,916	10,561,000	4,554	22,229,000
Total.....	10,039	\$47,349,000	5,416	\$32,984,000	15,455	\$80,333,000

Combat death rates based on number of policies were computed for various subdivisions of both the other than aviation risks and the aviation risks. For certain subdivisions of the experience where the number of deaths is quite small, too much reliance should not be placed on the exact values of the combat rates since there is a likelihood of statistical fluctuation. However, the consistency of the various rates provides some indication that the rates are generally of the right order of magnitude. In order to give an indication of the extent of the data, total exposures are given for the full period of exposure for each subdivision.

In computing these combat death rates, exposures were adjusted for lapses. Claims reported as missing in action were included with the combat deaths. From prior experience we found this treatment of claims on missing to be satisfactory as such cases were usually not reported until the family had given up hope. They also act as an offset to delayed claims. Since this study was made immediately after the end of the period of exposure, there undoubtedly are some claims which were not included.

The experience by branch of service is shown in Tables 3 and 4.

From an underwriting standpoint, the most important characteristic of the experience is the considerably higher combat mortality on policies issued without war clauses than on those issued with war clauses, which demonstrates the effectiveness of the use of a war clause in eliminating selection against the company.

TABLE 3

NEW YORK LIFE ANNUAL COMBAT DEATH RATES PER 1,000—BY POLICIES

Korean War Experience to December 31, 1952 under Policies Issued

from July 1, 1950 to December 31, 1951 on Lives in

U.S. and Canadian Armed Forces

OTHER THAN AVIATION RISKS

BRANCH OF SERVICE	1ST YEAR OF WAR		2D YEAR OF WAR		1ST HALF OF 3D YEAR OF WAR		1ST 2½ YEARS OF WAR		
	Deaths from 7/1/50 to 6/30/51		Deaths from 7/1/51 to 6/30/52		Deaths from 7/1/52 to 12/31/52		Deaths from 7/1/50 to 12/31/52		
	Ann. Death Rate per M	Num-ber of Combat Deaths	Ann. Death Rate per M	Num-ber of Combat Deaths	Ann. Death Rate per M	Num-ber of Combat Deaths	Ann. Death Rate per M	Num-ber of Combat Deaths	Total Expos-ures
(a) Issued 1st 9 Months of War (without War Clauses)									
U.S. Army	14	28	4	12	1	1	6	41	6,314
U.S. Navy	1	1	1	1	0	0	1	2	3,721
U.S. Marines	17	7	2	1	0	0	6	8	1,284
Canadian Forces	3	3	8	17	1	1	5	21	4,138
All	9	39	4	31	1	2	5	72	15,457
(b) Issued 2d 9 Months of War (with War Clauses)									
U.S. Army	0	0	1	1	0	0	1	1	1,354
U.S. Navy	0	0	0	0	0	0	0	0	1,011
U.S. Marines	0	0	0	0	0	0	0	0	173
Canadian Forces	0	0	2	1	0	0	1	1	1,030
All	0	0	1	2	0	0	1	2	3,568
(c) Issued First 1½ Years of War—(a)+(b)									
U.S. Army	14	28	3	13	1	1	5	42	7,668
U.S. Navy	1	1	0	1	0	0	0	2	4,732
U.S. Marines	17	7	1	1	0	0	5	8	1,457
Canadian Forces	3	3	7	18	1	1	4	22	5,168
All	8	39	3	33	0	2	4	74	19,025

TABLE 4

NEW YORK LIFE ANNUAL COMBAT DEATH RATES PER 1,000—BY POLICIES
 Korean War Experience to December 31, 1952 under Policies Issued from
 July 1, 1950 to December 31, 1951 on Lives in
 U.S. and Canadian Armed Forces
 AVIATION RISKS ONLY*

BRANCH OF SERVICE	1ST YEAR OF WAR		2D YEAR OF WAR		1ST HALF OF 3D YEAR OF WAR		1ST 2½ YEARS OF WAR		
	Deaths from 7/1/50 to 6/30/51		Deaths from 7/1/51 to 6/30/52		Deaths from 7/1/52 to 12/31/52		Deaths from 7/1/50 to 12/31/52		
	Ann. Death Rate per M	Number of Combat Deaths	Ann. Death Rate per M	Number of Combat Deaths	Ann. Death Rate per M	Number of Combat Deaths	Ann. Death Rate per M	Number of Combat Deaths	Total Exposures
	(a) Issued 1st 9 Months of War (without War Clauses)								
U.S. Air Force.....	5	8	4	9	2	2	4	19	4,903
U.S. Army.....	33	2	13	1	0	0	17	3	177
U.S. Navy.....	3	1	4	2	4	1	4	4	1,111
U.S. Marines.....	51	2	0	0	0	0	18	2	111
Canadian Forces...	0	0	0	0	0	0	0	0	367
All.....	6	13	4	12	2	3	4	28	6,669
	(b) Issued 2d 9 Months of War (with War Clauses)								
U.S. Air Force.....	0	0	3	3	2	1	2	4	1,686
U.S. Army.....	0	0	0	0	0	0	0	0	16
U.S. Navy.....	0	0	7	1	0	0	4	1	232
U.S. Marines.....	0	0	0	0	0	0	0	0	124
Canadian Forces...	0	0	0	0	0	0	0	0	121
All.....	0	0	3	4	1	1	2	5	2,179
	(c) Issued First 1½ Years of War—(a)+(b)								
U.S. Air Force.....	5	8	4	12	2	3	3	23	6,589
U.S. Army.....	33	2	11	1	0	0	16	3	193
U.S. Navy.....	3	1	5	3	3	1	4	5	1,343
U.S. Marines.....	51	2	0	0	0	0	9	2	235
Canadian Forces...	0	0	0	0	0	0	0	0	488
All.....	6	13	4	16	2	4	4	33	8,848

* Includes both flying and nonflying aviation personnel.

The influence of the war clause on antiselection may be seen if we compare the combat death rates in Table 3 for the other than aviation risks issued during the first nine months of the war (*i.e.*, without war clauses) with the combat death rates for the policies issued during the second nine months of the war (*i.e.*, with war clauses).

The combat death rate under policies issued without war clauses to non-aviation risks started off immediately with a high rate of 9 per 1,000 in the first year of the war for all services and even higher rates in certain branches. These "immediately high" rates indicate a marked degree of antiselection which is further highlighted by the early occurrence of claims during the first year of the war. The first combat death claim on policies issued after the beginning of the war occurred just 27 days after the policy issue date (a 23-year-old, 2nd lieutenant paratrooper); 12 claims occurred within 3 months of the beginning of the war on policies issued after 7/1/50, which is remarkable in view of the time it must have taken military personnel to get to the combat area. The claim rate dropped off to 4 per 1,000 in the second year, a drop which can be explained by the change in the character of the war over the two periods. The drop to 1 per 1,000 in the first half of the third year undoubtedly reflects the effect of rotation and illustrates the currently temporary nature of the hazard.

On the other hand, policies issued in the second nine months of the war (*i.e.*, with war clauses) show only 2 combat deaths in the second year of the war and none in the next half year. Incidentally, neither of these were "quick" claims. The first claim did not occur until six months after we had commenced using war clauses. Undoubtedly, this was influenced by the fact that some companies continued to issue insurance without war clauses to persons presenting a war hazard.

A comparison of the death rates in Table 3 for other than aviation risks with those in Table 4 for aviation risks provides another illustration of the effect of a war clause on curbing antiselection. Considering only the second year of the war, the combat death rate was 4 per 1,000 on policies issued without war clauses and only 1 per 1,000 on policies issued with war clauses (Table 3). For aviation risks, the corresponding rates showed considerably less variation, being only 4 per 1,000 and 3 per 1,000 (Table 4). Since aviation clauses were generally used throughout the war on the aviation risks, this smaller variation in the experience on aviation risks would lead one to believe that the addition of a war clause was not so important to such risks and therefore had relatively little influence on the combat death rate.

In order to give a complete picture of the war hazard on aviation risks,

some mention should be made of the aviation accident experience. Certainly some of these accidents occurred as a direct result of the intensified training program adopted after the outbreak of the war to prepare flying personnel for combat duty so, in a sense, they are a part of the total war hazard. Since only flying personnel are exposed to the aviation hazard, inclusion of all aviation risks in the exposure would artificially lower the rates. Consequently, a special study was made of the New York Life ex-

TABLE 5
NEW YORK LIFE COMBAT AND AVIATION ACCIDENT
DEATH RATES PER 1,000—BY POLICIES
Experience to December 31, 1952 under Policies Issued with and without
War Clauses from July 1, 1950 to December 31, 1951 on Lives
in U.S. and Canadian Armed Forces
MILITARY PILOTS ONLY

YEAR OF WAR IN WHICH DEATH OCCURRED	COMBAT DEATHS		AVIATION ACCIDENT DEATHS		TOTAL	
	Ann. Death Rate per M	Number of Deaths	Ann. Death Rate per M	Number of Deaths	Ann. Death Rate per M	Number of Deaths
<i>1st Year</i> (7/1/50 to 6/30/51) . . .	5	8	7	11	12	19
<i>2d Year</i>						
1st Half (7/1/51 to 12/31/51)	10	11	12	14	22	25
2d Half (1/1/52 to 6/30/52) . .	2	2	5	6	7	8
Total 2d Year (7/1/51 to 6/30/52)	5	13	8	20	13	33
<i>3d Year</i>						
1st Half (7/1/52 to 12/31/52) .	3	4	6	7	9	11
<i>1st 2½ Years</i> (7/1/50 to 12/31/52)	5	25	7	38	12	63

perience. It was found most convenient to limit the study to military pilots because of the difficulty encountered in separating other flying personnel from nonflying personnel. Both combat rates and aviation accident rates were calculated for military pilots in all branches of service combined. The separation between combat deaths and other aviation accidents was made in accordance with the intercompany practice as specified in Mr. Murphy's letter of October 9, 1950, to companies contributing to intercompany mortality studies. These rates are shown in Table 5.

An indication of the reliability of the figures can be gained from a com-

parison with the Intercompany experience for the first year of the war (TSA 1951 Reports, 120-122). These figures are not strictly comparable because the Intercompany experience is based on issues of 1946-50 while our experience contains only policies issued during the war period. The New York Life rates during the first year of the war for all branches of service combined were 5 per 1,000 and 7 per 1,000 for combat and aviation accidents, respectively. These compare with the Intercompany rates for the Air Force, Navy and Marines of 4 per 1,000 and 6 per 1,000. Since it is likely that somewhat higher mortality would be experienced on policies issued during the war than on those issued prior to the start of the war, the rates appear to be in close agreement.

The New York Life fatality rates emphasize the importance of the accident hazard as compared with the combat hazard. For the 2½ year war period, the accident fatality rate of 7 per 1,000 was almost 50% higher than the combat fatality rate of 5 per 1,000.

An interesting characteristic of the New York Life rates is noted in the direct correlation between aviation accident and aviation combat rates for different periods of the war. For all periods shown in the table a change in the combat rate is accompanied by a corresponding change in the aviation accident rate. Evidently, a step-up in aviation combat activities brings about an increase in the amount and intensity of other military aviation activities.

Comparison of the Korean War Experience on Military Risks of the New York Life with United States Government Figures

The New York Life's combat death rates on other than aviation risks show the same general trend as the experience for the United States when both are adjusted to a reasonably comparable basis, in spite of the relatively small number of deaths in the Company experience. Since the non-aviation data exclude aviation risks, the rates previously shown for the United States services have been modified to exclude the Air Force data. Similarly, the rates previously shown for the New York Life have been modified to exclude missing in action claims and the experience on persons in the Canadian Armed Forces.

It will be seen from Table 6 that the Company's combat death rates are higher than those for the U.S. Armed Forces in the first year and lower in the fourth and fifth half years; in fact we had only one death claim in each of the latter periods. The higher rate in the first year may be due to selection against the Company. The lower rate in the fourth and fifth half years is undoubtedly due to the fact that many of the persons in the closed group had served their time in Korea and have since returned to the U.S.

either by rotation or otherwise, thus illustrating the temporary nature of the extra risk at this time.

A similar comparison was made between combat data for the Air Force and the New York Life on aviation risks. The levels of mortality were considerably different because of the much larger proportion of flying personnel in the New York Life experience than in the Air Force experience. The comparison is therefore not of much significance but is given merely as a matter of interest. The Air Force combat rates were constant for the

TABLE 6
COMPARISON OF THE U.S. GOVERNMENT* AND NEW YORK LIFE
COMBAT DEATH RATES IN KOREAN WAR

	U.S. GOVERNMENT		NEW YORK LIFE	
	Based on All Lives in the U.S. Armed Forces (excluding Air Force)		Policies Issued between 7/1/50 and 12/31/51 to Lives in the U.S. Armed Forces (other than Aviation Risks)	
	Annual Death Rate per M*	Number of Combat Deaths†	Annual Death Rate per M	Number of Combat Deaths†
1st Year of War (7/1/50 to 6/30/51)	7.4	12,814	8.6	30
3d Half Year of War (7/1/51 to 12/31/51)	3.7	4,654	3.4	11
4th Half Year of War (1/1/52 to 6/30/52)	1.3	1,725	0.3	1
5th Half Year of War (7/1/52 to 12/31/52)	2.2	2,923	0.3	1
1st 2½ Years of War (7/1/50 to 12/31/52)	3.9	22,116	3.1	43

* Approximate rates based on estimated exposures developed from various published statements regarding the size of our armed forces.

† Killed in action only.

first two years of the war at 0.3 per 1,000, decreasing to 0.1 per 1,000 for the first half of the third year of the war. The New York Life combat rates, excluding missing in action cases, were highest during the first year of the war, 4 deaths per 1,000, leveling off to about 2 deaths per 1,000 for the subsequent periods.

UNDERWRITING CONSIDERATIONS

Extra Premiums versus Exclusion Clauses

The question has been asked, "Should we exclude the war risk on the grounds that it is not a form of hazard which is insurable?" First of all,

the New York Life's statistics indicate that there is a definite extra hazard—in fact a hazard so great in many instances that it would not be fair to our other policyholders to ignore it. If we should not ignore it, then the question is, "Can it best be handled by the use of extra premiums, by using exclusion clauses or by selective underwriting methods?"

The available experience provides results which are strong arguments against the use of extra premiums for the military hazard. At first glance it would appear from the New York Life experience that such a method might be feasible; the experience by branch of service shows annual rates no higher than 6 per 1,000 for the first two and one-half years of the war on branches of service where the experience is large enough to be reliable. However, a further breakdown of the experience shows a much greater variation in the hazard. For example, for the Army and Marine Corps on policies issued without war clauses to nonaviation risks, the death rate in the officer group, 2nd Lieutenants to Captains, during the first year of the war was 32 per 1,000 for ages 29 and under. For the full two and one-half year war period the rate was 15. It is extremely unlikely that extra premiums of the size needed to cover such risks would be generally acceptable to individuals in those ranks and age groups. Under present conditions, where we are not in an all-out war, it is doubtful if even an extra premium as low as \$5 per thousand would be widely accepted, especially when some companies at the same time are apparently willing to grant modest amounts of full coverage to such risks at standard premium rates.

The most important deterrent to the use of extra premiums lies in the degree of antiselection that can be exercised by a military risk in determining whether to take out additional insurance. Some idea of the theoretical range in degree of hazard can be obtained from World War II figures quoted by Mr. Lew in his previously mentioned discussion. During the four calendar years 1942-1945 the United States Army experienced annual battle death rates (including killed in action, died of wounds, declared dead, and killed while prisoners of war or missing in action) of 9 per 1,000 for the total Army, 22 per 1,000 for the Army overseas, and about 60 per 1,000 for the Army in the European and Mediterranean Theatres from "D Day" to "V-E Day." This wide range in the degree of hazard for particular groups would create insurmountable underwriting problems under the extra premium method of covering the risk. Under such a system only the poorer military risks in a particular group would be willing to pay such premiums, which in turn would result in higher mortality which would necessitate increasing premiums—in effect creating a vicious circle leading to increasingly higher mortality and therefore steadily rising premiums.

We should also be more suspicious of antiselection with respect to those

applying for insurance shortly after entry into service because of the sizable insurance coverage provided by the Government to military personnel. At the present time all servicemen are covered for \$10,000 of Government life insurance with the privilege of continuing this coverage on a term basis at favorable rates after discharge. In addition, a gratuity equal to six months' pay as well as annuity benefits is provided to the survivors of military personnel. The initial insurance value of all such benefits is considerably higher than the average amount of insurance in force per family in the United States. For example, the initial insurance coverage of such benefits to a 1st Lieutenant with a wife and two children would aggregate in the neighborhood of \$30,000. On the other hand, the amount of insurance in force per family in the United States during 1951 averaged only \$5,500. Hence it might be assumed that many servicemen desiring additional insurance over and above that provided by the Government are motivated to a greater extent by the immediate hazard rather than by longer range considerations.

The present war hazard differs from the usual occupational or aviation hazard. In the first place, a much wider range of hazard exists for the war risk, and the extent of this hazard for an individual can be better appraised by that individual than by the insuring company. In the second place, a normal continuing need for coverage generally exists for persons subject to an occupational or aviation hazard, while for the war risk, since a large amount of additional coverage is provided by the Government, the desire for insurance is more closely tied to the immediate hazard. Both of these factors tend to increase the amount of selection against the company. While the use of extra premiums has proven to be very satisfactory for the occupational or aviation hazard, these fundamental differences would appear to be important enough to make the method unsuitable for covering military risks during the periods when the United States is engaged in even a limited war such as the present conflict.

*Variations in the New York Life Experience That Can Be Used
As a Basis for Selective Underwriting*

The only alternative to the use of extra premiums would be the use of exclusion clauses at least as a basic method on which a selective underwriting process could be superimposed. I believe quite firmly that a company should offer full insurance coverage wherever possible rather than issue policies with limited coverage. Hence, in my opinion the most reasonable solution to the current underwriting problem on military risks is to retain the use of war clauses but to issue full coverage within certain amount limits for those groups where the experience shows that the com-

bat hazard is small and where there is little opportunity for selection against the company. The breakdown of the New York Life experience by branch, rank, and age at issue provides some basis for determining those groups where full coverage might be granted with a minimum of risk. Of course, in setting up underwriting rules, account would have to be taken of combinations of these factors. Figures by branch of service for both other than aviation risks and aviation risks have been shown previously in Tables 3 and 4. Tables 7 and 8 show the variations by rank and age at issue, respectively.

TABLE 7

NEW YORK LIFE ANNUAL COMBAT DEATH RATES PER 1,000—BY POLICIES
 Korean War Experience to December 31, 1952 under Policies Issued with
 and without War Clauses from July 1, 1950 to December 31, 1951
 on Lives in U.S. and Canadian Armed Forces
 BY AGE AT ISSUE

AGE AT ISSUE	1ST YEAR OF WAR		2D YEAR OF WAR		1ST HALF OF 3D YEAR OF WAR		1ST 2½ YEARS OF WAR		
	Deaths from 7/1/50 to 6/30/51		Deaths from 7/1/51 to 6/30/52		Deaths from 7/1/52 to 12/31/52		Deaths from 7/1/50 to 12/31/52		
	Ann. Death Rate per M	Number of Combat Deaths	Ann. Death Rate per M	Number of Combat Deaths	Ann. Death Rate per M	Number of Combat Deaths	Ann. Death Rate per M	Number of Combat Deaths	Total Exposures
Other than Aviation Risks									
Under 25.....	8	17	4	23	0	1	4	41	9,765
25-29.....	13	15	5	10	0	0	6	25	4,498
30-34.....	7	6	0	0	1	1	2	7	3,031
35 and over...	2	1	0	0	0	0	1	1	1,731
Total.....	8	39	3	33	0	2	4	74	19,025
Aviation Risks Only*									
Under 25.....	10	7	4	7	3	3	5	17	3,285
25-29.....	7	5	6	7	2	1	5	13	2,487
30-34.....	1	1	2	2	0	0	1	3	2,331
35 and over...	0	0	0	0	0	0	0	0	745
Total.....	6	13	4	16	2	4	4	33	8,848

* Includes both flying and nonflying aviation personnel.

Variation by Branch of Service

The total other-than-aviation experience by branch of service in Table 3 points out the very low combat rates for the Navy as compared with the other branches of service; in fact, for the first 2½ years of the war the combat death rate for other-than-aviation Navy personnel was less than 0.5 per 1,000. In a supporting role such as has been played by the Navy in the first 2½ years of the Korean War the chief sources of hazard, outside those relating to special branches such as medical corpsmen at-

TABLE 8
NEW YORK LIFE ANNUAL COMBAT DEATH RATES PER 1,000—BY POLICIES
Korean War Experience to December 31, 1952 under Policies Issued with and
without War Clauses from July 1, 1950 to December 31, 1951 on
Lives in U.S. and Canadian Armed Forces
BY RANK* AT ISSUE

RANK AT ISSUE	1ST YEAR OF WAR		2D YEAR OF WAR		1ST HALF OF 3D YEAR OF WAR		1ST 2½ YEARS OF WAR		
	Deaths from 7/1/50 to 6/30/51		Deaths from 7/1/51 to 6/30/52		Deaths from 7/1/52 to 12/31/52		Deaths from 7/1/50 to 12/31/52		
	Ann. Death Rate per M	Number of Combat Deaths	Ann. Death Rate per M	Number of Combat Deaths	Ann. Death Rate per M	Number of Combat Deaths	Ann. Death Rate per M	Number of Combat Deaths	Total Exposures
Other than Aviation Risks									
Noncom. or Lower	7	15	5	23	0	1	4	39	9,702
2nd Lt. to Captain	18	23	5	10	1	1	8	34	4,459
Major to General	3	1	0	0	0	0	1	1	1,083
Rank not specified	0	0	0	0	0	0	0	0	3,781
Total	8	39	3	33	0	2	4	74	19,025
Aviation Risks Only†									
Noncom. or Lower	2	1	0	0	0	0	0	1	2,809
2nd Lt. to Captain	10	12	8	14	4	4	7	30	4,053
Major to General	0	0	3	1	0	0	1	1	819
Rank not specified	0	0	2	1	0	0	1	1	1,167
Total	6	13	4	16	2	4	4	33	8,848

* Navy personnel are classified under their equivalent Army rank.

† Includes both flying and nonflying aviation personnel.

tached to the Marine Corps, appear to be operations connected with amphibious landings, shore bombardments or evacuations. The more serious hazards to the Navy, attacks by enemy ships or planes, may not likely be encountered to any great extent short of an all-out war. The experience indicates, therefore, that in underwriting the Korean War hazard a good many other-than-aviation naval risks might be accepted at standard rates without restrictions; however, war clauses might still be used for certain groups connected with amphibious operations and other specialized personnel such as demolition and bomb disposal units, certain medical corpsmen, and the usual special treatment, if any, for those in the submarine service, etc.

Variation by Age at Issue

The combat rates by age at issue (Table 7) indicate that a fairly clear line of demarcation between high and low rates could be made at about age 30 for both other than aviation and aviation risks. This is evident for the total experience and is also quite true for each period of the war with one exception. The rate for the 30-34 age group during the first year of the war is high (7 deaths per 1,000) for other than aviation risks. This, of course, reflects the large scale combat during the initial period of the war when United Nations forces were either on the defensive or conducting an "all out" offensive and when all available personnel were used for combat duty. During such a "fluid" period, older persons in Korea, not necessarily attached to combat units, would be exposed to a sizable war hazard. For periods after the first year the experience shows that the hazard is more concentrated in the age groups below age 30, as might be expected because of the limited scale of combat activity and the larger number of young men available for combat duty.

Thus, in selecting applicants for issue without a war clause, special consideration might be given to those risks over age 30. It should be fully recognized, however, that if hostilities should flare up or if a similar action were started in another area heavy losses might be expected in the higher age at issue groups.

Variation by Rank at Issue

The combat death rates by rank (Table 8) are very high for the 2nd Lieutenant to Captain group and drop off sharply for the ranks of Major and above, for both the other than aviation and aviation risks. The decrease seems reasonable for the other than aviation risks but is rather surprising for the aviation risks since it is understood that a considerable amount of combat flying is done at least by Air Force personnel in the higher ranks. For the Major to General classification there was only one

death in the aviation experience and one death in the other than aviation experience so that the low combat rates for these ranks might be influenced by statistical fluctuation. It should be noted, however, that each of these experiences covered about 1,000 life years of exposure. In any event, the low rates for aviation personnel in the higher ranks should be viewed with caution since they might be due to the fact that our aviation issues are heavily weighted with officers in the higher ranks who have administrative duties and may fly only to maintain their flying status.

The combat rates for noncommissioned officers and enlisted men are appreciably lower for aviation risks than for other than aviation risks—for the total war period, 0 per 1,000 as compared with 4 per 1,000—which brings out the fact that only a small proportion of noncommissioned aviation personnel are exposed to combat.

It would appear that some use could be made of the trend of the experience by rank under a selective underwriting program. Lenient treatment could be afforded officers of the rank of Major or above in any branch of service, with precautions being taken on high ranking flying personnel. It would appear that war restrictions should be included on policies issued to lower ranking officers and noncommissioned personnel unless there was definite evidence that a risk in either of these classes would not likely be exposed to combat.

Variation by Duty Branch at Issue

Although complete figures subdividing the combat experience by duty branch at issue were not available, it was felt that considerable variation existed and that any information on the extent of this variation would be of value in setting up a selective underwriting program. Consequently, a crude study was made of the combat experience for the U.S. Army. Samples of the issues were analyzed to determine the duty branch at issue and separated into two broad classifications—those which we considered to be primarily combat branches and those primarily noncombat branches. The deaths were classified in the same manner as the issues by duty branch at issue. Approximate combat death rates, assuming that the exposures were distributed in the same proportion by duty branch as the issues, were then calculated. These figures are shown in Table 9.

The figures support, very definitely, the generally accepted conclusion that the infantry is bearing the brunt of the ground combat hazard in the present conflict. The rate for the infantry of 26 per 1,000 is over 5 times the rate for the total Army. Other combat duty branches show rates much closer to the total Army rate of 5 per 1,000.

The experience on duty branches classed as noncombat is extremely

favorable. There were only 2 deaths (a doctor and a cook) among these groups even though they constituted about 50% of the total exposures.

Thus it would seem that duty branch at issue should certainly be considered in a program of selective underwriting. Because of the possibility of transfer from a noncombat to a combat duty branch, particularly with respect to recently inducted personnel, it should be established so far as possible that any current noncombat duty assignment will be relatively permanent. Although figures indicating the extent of the hazard for each duty branch are not available, a study of the functions of each duty

TABLE 9

NEW YORK LIFE APPROXIMATE ANNUAL COMBAT DEATH
RATES PER 1,000—BY POLICIES
Korean War Experience to December 31, 1952 under Policies
Issued with and without War Clauses from July 1, 1950
to December 31, 1951
BY DUTY BRANCH AT ISSUE—U.S. ARMY
OTHER THAN AVIATION

Duty Branch at Issue	Approximate Annual Death Rate per 1,000	Number of Deaths
Infantry.....	26	28
Artillery.....	7	3
Armored.....	3	2
Miscellaneous Combat*.....	4	5
Total Combat Duty Branches...	11	38
Noncombat Duty Branches.....	1	2
Duty Branch Not Specified.....	9	2
All.....	5	42

* Includes signal corps, engineers, etc.

branch during the present conflict should provide a fairly reliable basis for separating the risks into two groups—those that can be safely insured without a war clause and those on which a war clause should be used.

New York Life Underwriting Practices

The underwriting problems created by the Korean War have not been static. In fact, they have been quite fluid and for any company with sizable volume of military business the situation has called for changing rules from time to time to meet the changing conditions. In addition to the changing numbers of war casualties other factors have also been changing. For example, in the early months reservists and National Guard

units were relied upon to a great extent to furnish the combat troops. This situation, however, has materially changed, with many reservists and Guard members being released from service. Again, there have been times when certain units have seen prolonged heavy combat, then a period in which they have been withdrawn from combat with relatively few casualties being reported, followed by another period of increased casualties as they return once more to active combat.

It also should be noted that the aviation hazard has played a most important part. Of the Company's war death claims, 42 percent (by amounts) were due to aviation, yet the aviation death claims not due to war were 158 percent of the aviation war deaths. Of all service death claims, 54 percent (by amounts) were due to aviation in one form or another.

Our first attempt to control the volume of military business was by means of plan and amount limitations. Shortly after the war started we had a general limit of \$10,000 and refused to issue Term plans to persons in service or about to go into service. Six months later we reduced the maximum limit to \$5,000. These steps were not sufficient in themselves to control the volume of military business, partly because of the extent of the additional hazard and also because our Company has a number of agents who have specialized in military business.

In the meantime our Company had prepared and had secured approval of a war and aviation clause on a "result" basis instead of on the "status" basis as in the World War II clause. (This change to a "result" basis was characteristic of the trend in the industry.) It also contained a "Home Areas" definition which was considerably more liberal than the World War II form. As stated above, the Company in March 1951 adopted the general use of a war clause in policies issued to persons in military service. (It had been used to a limited extent prior thereto but only for special cases such as for large amounts.)

In view of the serious nature of the military aviation hazard the New York Life early in August 1950 discontinued the issuance of insurance providing full aviation coverage (with aviation extra premiums) and adopted the use of an aviation clause which provided only passenger aviation coverage in governmentally certificated scheduled airlines. Three months later a new military aviation program was introduced under which full aviation coverage for the face amount within the "Home Areas" was made available subject to the payment of aviation extra premiums. The "Home Areas" include the United States, the District of Columbia, Alaska, Hawaii, Panama Canal Zone, Puerto Rico, Virgin Islands and Canada. Provision was made for the pro-rata refund of aviation

extra premiums for time spent outside the "Home Areas." This "Home Areas" program was adopted in order to meet the complaints of military aviation risks that they could not get full coverage even within the "Home Areas."

If a person presenting a military aviation hazard did not choose to pay an aviation extra premium, an aviation clause was used which afforded coverage for the face amount within the "Home Areas" only for certain passenger flying. When the war clause was adopted in March 1951, the essential features of the "Home Areas" aviation program introduced four months earlier were continued, including the aviation extra premiums and the scope of the various aviation coverages available with and without an aviation extra premium.

It should be noted that, where war clauses are used, under this "Home Areas" aviation program, a person presenting a military aviation hazard who is willing to pay an aviation extra premium is provided full coverage within the "Home Areas" for his military specialty just as a person with the ground forces is provided (but without extra premium) full coverage within the "Home Areas" for his military specialty.

Underwriting changes since March 1951 have been in the nature of liberalizations as the military situation appeared to improve. The first major liberalization was in March 1952 when we began again to issue insurance in limited amounts without a war clause to certain persons in service provided they were not in combat units and met certain age and other requirements. This treatment was further expanded in June 1952.

In connection with our June liberalization, the Company seriously considered the use of a quota system such as has been applied by some other companies to prevent a further increase in the relative volume of military business. Our General Counsel was of the opinion that a quota system was not proper as it might lead to discrimination. If a company has accepted its quota of military business from a given office or from an individual agent for a certain month, how can it legally refuse to accept additional military business? This is particularly true of a company receiving a substantial amount of military business from a number of agents who are military specialists. However, while a quota system was deemed impractical for our Company, we have taken certain agency steps in order to prevent any future emphasis on military business. These measures have maintained the volume of our military business on the same level as before June 1952 even though we are now issuing over half of such business without a war clause.

The salient features of our present military underwriting rules are as follows:

Persons in Military Service

In general, where an aviation hazard is not presented, we will grant limited amounts of insurance without war and aviation conditions to females in the armed forces, to most Navy personnel, and to other servicemen age 27 and over who have noncombat administrative duties and assignments which in the underwriters' judgment will not expose them to combat in the future and will likely keep them in the United States or Canada for at least a year. Our liberal treatment of personnel in the Navy, even though a combat organization, reflects our continued light war mortality among persons in that branch of service. If insurance is to be issued without war and aviation conditions (but with an aviation extra premium) on servicemen who present an aviation hazard, we have, besides the foregoing, a requirement as to rank, more stringent age qualifications, and a requirement that they fly only to maintain proficiency. Others in the armed forces will generally be considered only with war and aviation conditions.

Civilians Presenting a Military Hazard

With respect to civilians who present a military hazard because of the draft or their reserve or National Guard connection, we will generally grant limited amounts of insurance without war and aviation conditions provided they have not received notice of induction or been notified to report for active duty. Civilians who have received notice of induction or have been notified to report for active duty are generally considered for insurance only with war and aviation conditions.

Removal of the War Clause from In-force Policies

Because of our underwriting liberalizations adopted since March 1952 and our age, rank and assignment qualifications, we receive a number of requests to remove war and aviation conditions from in-force policies where the insured because of current status would qualify under our present rules for insurance without war and aviation conditions. In such cases, we are willing to remove the restrictions upon receipt of satisfactory evidence that the insured can qualify for such removal in accordance with the rules currently applicable to new issues.

VOLUME OF MILITARY BUSINESS AND CLAIM STATISTICS

Volume of Military Business

From June 25, 1950, the start of the Korean War, up to December 31, 1952, our paid issues were 31,772 policies for \$169,070,000 face amount of insurance on military risks, including reservists, National Guard members, etc. This business represented about 7% of our total paid business.

This ratio was 9% in the early months of the war but is now running about 6%.

The distribution of the paid military business by calendar year and the amounts with and without a war clause are as follows:

TOTAL MILITARY BUSINESS

	Without a War Clause	With a War Clause	Total
1950 (Six months).....	\$ 48,611,000	\$ 348,000	\$ 48,959,000
1951.....	37,251,000	26,551,000	63,802,000
1952.....	29,471,000	26,838,000	56,309,000
Total.....	\$115,333,000	\$53,737,000	\$169,070,000

The foregoing relates to military business, including reservists, etc. Of the insurance issued to persons in military service, only 20% was being issued without war clauses at the beginning of 1952. This ratio jumped to 40% with our March liberalizations and is now about 50% as a result of the June changes.

Claim Statistics

Combat death rates have been presented for New York Life policies issued during the first eighteen months of the Korean War. Similar studies have not yet been completed for subsequent issues. With respect to policies issued prior to June 25, 1950, mortality studies are not possible as exposures are naturally not available. However, it may be of interest to see the distribution by cause of death of the New York Life total service deaths during the Korean War. The figures in Table 10 represent losses reported up to January 2, 1953.

Deaths on policies issued since June 25, 1950 represent 19% of the total cases by number and 24% by face amount. (The difference in these percentages indicates the presence of antiselection.) The extra liability on Family Income policies increased the Company's liability from \$5,827,054 to \$6,089,158 but War and Aviation clauses were effective in 101 cases reducing the Company's liability to \$5,594,583. Claims of \$5,594,583 on deaths from persons in military service may not seem a large amount when measured as a percentage of total claims but it is already equal to one-quarter of the total amount of similar claims paid by the New York Life in World War II.

It might be argued that since only one-quarter of our service deaths are on policies issued subsequent to the start of hostilities, putting a war clause on new issues represents a treatment of but a small part of the

problem. It is hardly necessary to mention that nothing can be done about the earlier issues unless we are willing to use a war clause in peace time. Furthermore, such policies are issued under normal circumstances with no incentive to buy insurance beyond the normal demand. The advent of war changes the antiselection picture completely and, in view of the size of the extra hazard and the opportunities of persons likely to be exposed to it to select against the insurer, it appears that adequate steps should be taken to protect the interests of the Company.

As stated above, it is not possible to develop combat death rates for

TABLE 10
NEW YORK LIFE DEATHS IN SERVICE BY CAUSE OF DEATH
ALL YEARS OF ISSUE—U.S. AND CANADIAN SERVICES—DEATHS
REPORTED TO JANUARY 2, 1953

	Number of Policies	Face Amount
War Deaths		
<i>Killed in Action</i>		
Aviation	122 (16)	\$ 776,600 (\$ 116,500)
Nonaviation	450 (95)	1,486,135 (450,289)
Total	572 (111)	\$2,262,735 (\$ 566,789)
<i>Missing in Action</i>		
Aviation	73 (18)	\$ 443,459 (\$ 106,392)
Nonaviation	78 (15)	228,529 (74,500)
Total	151 (33)	\$ 671,988 (\$ 180,892)
Military Deaths—Not a result of war		
Aviation	348 (58)	\$1,933,216 (\$ 382,513)
Nonaviation	285 (56)	959,115 (245,836)
Total	633 (114)	\$2,892,331 (\$ 628,349)
Total Service Deaths		
Aviation	543 (92)	\$3,153,275 (\$ 605,405)
Nonaviation	813 (166)	2,673,779 (770,625)
Total	1,356 (258)	\$5,827,054 (\$1,376,030)

NOTE: Figures in parentheses are the claims reported under policies issued since June 25, 1950.

policies issued prior to June 25, 1950 as the appropriate exposures cannot be ascertained. However, the Company's war deaths reported up to December 31, 1952 for United States military personnel have been broken down by branch of service, rank and age at time of death. As this analysis may be of some interest it is given in Table 11.

TABLE 11

NEW YORK LIFE WAR DEATHS AMONG PERSONS IN U.S. MILITARY SERVICES
BY BRANCH OF SERVICE, RANK AND AGE AT TIME OF DEATH
BY POLICIES FOR ALL YEARS OF ISSUE—DEATHS
REPORTED TO DECEMBER 31, 1952

RANK AND AGE AT DEATH	U.S. ARMY		U.S. NAVY*	U.S. AIR FORCE	U.S. MARINES	TOTAL
	Infantry	Other				
<i>Below Commissioned Officer</i>						
15-19.....	21	7	0	0	11	39
20-24.....	127	34	1	4	34	200
25-29.....	34	8	2	4	1	49
30-34.....	9	4	0	2	2	17
35 and over.....	6	6	0	0	1	13
Total.....	197	59	3	10	49	318
<i>2nd Lt. to Captain</i>						
15-19.....	0	0	0	0	1	1
20-24.....	22	17	10	21	9	79
25-29.....	35	22	10	61	16	144
30-34.....	17	10	4	36	19	86
35 and over.....	3	1	0	3	0	7
Total.....	77	50	24	121	45	317
<i>Major and Higher</i>						
15-19.....	0	0	0	0	0	0
20-24.....	1	0	0	0	0	1
25-29.....	0	1	0	3	0	4
30-34.....	2	1	5	16	2	26
35 and over.....	4	3	0	8	1	16
Total.....	7	5	5	27	3	47
<i>Not Specified</i>						
All Ages.....	0	5	0	0	0	5
<i>All Ranks</i>						
15-19.....	21	7	0	0	12	40
20-24.....	150	55	11	25	43	284
25-29.....	69	32	12	68	17	198
30-34.....	28	15	9	54	23	129
35 and over.....	13	10	0	11	2	36
Total.....	281	119	32	158	97	687

* Navy personnel are classified under their equivalent Army rank.

CONCLUSION

Our Company has explored many different ways of controlling the war hazard—limiting amounts, plan restrictions, extra premiums, quotas, use of war and aviation clauses, and underwriting by branch of service, current assignment and location. We have come to the conclusion, if military business is to be written in an appreciable volume on a satisfactory basis, that an exclusion clause seems the only practicable treatment where the war hazard is sufficiently great and is relatively imminent. It should be used, not necessarily for all persons in service, but certainly for those in service who are likely to produce a substantial extra mortality.

Our experience shows quite conclusively that a war clause has a marked effect in removing antiselection. We have also found that even with a war clause a substantial amount of military business may be written; in fact, we are currently writing about as much as we think we should in proportion to our other business. However, as noted below, there is little uniformity of practice among the companies and therefore the war clause has to be applied selectively in order to avoid invidious comparisons with companies which apparently do not use war clauses. Based on our analysis of combat and aviation accident death rates under policies issued since the start of Korean hostilities we are now able to so underwrite our military business that more than half of it is issued without a war clause.

One may question the usefulness of war clauses when faced with court decisions holding that the Korean conflict is not a "war." (Supreme Court of Pennsylvania, *Beley vs. Pennsylvania Mutual Life Insurance Company* and *Harding vs. Pennsylvania Mutual Life Insurance Company*, February 1953). A study of the opinions indicates that a different decision might have been reached with respect to current clauses especially those which refer to "war, declared or undeclared." However, whether this interpretation is true or not, so far only a few states have ruled that the Korean conflict is not a war, while other courts, including one Federal court, have held to the contrary. In any event we believe that the use of a war clause will continue to have a salutary effect upon antiselection.

One feature of the current war hazard situation is that there is a considerable lack of uniformity among the companies as to how the hazard should be handled. This is to be expected because, among other reasons, we are not confronted as in World War II with a large scale war calling for general mobilization of our manpower and hence calling for the general use of a war clause by the companies. Superimposed on this we have had the heaviest casualties in the early part of the war, in contrast to the trend in World War II, so that the need for a war clause has perhaps been con-

sidered of decreasing importance. We have also had changing conditions, as previously mentioned, which have required changes in underwriting rules for some companies but have meant little to others. Underwriting the military risk is a problem which is quite different in different companies. Some companies normally receive a substantial volume of military business, in many cases from agents who are military-writing specialists. In other companies the volume of military business is so small that the war hazard problem is insignificant to the point that it is practically ignored.

The New York Life has written for many years a substantial volume of military business. Consequently it has already accumulated a volume of military business issued during the Korean War of sufficient size to produce statistics which give a fairly reliable picture of the war hazard in terms of combat death rates. Although the experience is still in the development stage, it seemed appropriate to present the statistics which are already available with the object of making them known while they may be of some use to others. I hope also that this presentation will result in other companies publishing their experience at this time. It seems preferable to make these data available now rather than to wait until a more complete determination of the experience might be made, as by that time the whole question of a war hazard such as we are faced with in the Korean War may have become of only academic interest.