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NATIONAL SERVICE LIFE INSURANCE
ITS ADMINISTRATION AND EXPERIENCE

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BRIEF HISTORY OF GOVERNMENT LIFE INSURANCE PRIOR TO THE ENACTMENT OF THE NATIONAL SERVICE LIFE INSURANCE (NSLI) ACT ON OCTOBER 8, 1940

THE obligation of the Government to provide compensation for those injured or killed in military service has long been recognized and acknowledged through an elaborate system of pension and compensation benefits for members of the armed forces and their dependents. In 1917 the Congress passed the War Risk Insurance Act which included, among other benefits, a contributory program of Government life insurance for service personnel whose main objective was the restoration of insurability lost on entrance into military service during wartime.

Accordingly, during World War I members of the armed forces were offered life insurance under the War Risk Insurance program of the United States Government on the One Year Renewable Term plan. The insurance covered both death and permanent total disability, the latter benefit being an instalment maturity clause covering disability occurring at any age and paying monthly benefits of $5.75 per thousand of insurance for a guaranteed period of 20 years, or until prior recovery, and for as long thereafter as the disability continued. The premium for the combined death and disability benefits was the net rate based on the American Experience Table of Mortality with $3\frac{1}{2}\%$ interest.

The legislation authorizing War Risk Insurance permitted conversion of the Term insurance after the war to a variety of permanent plans at net American Experience $3\frac{1}{2}\%$ rates for the combined death and disability benefits. This converted insurance, first issued in 1919, was then designated, and is now known as, United States Government Life Insurance (USGLI). War Risk Term Insurance could not be renewed after July 1, 1927.

All premiums collected for War Risk Insurance were deposited to a special Treasury account known as the Military and Naval Insurance Appropriation, all benefits were paid out of this same Appropriation, and the deficiency was met by periodic replenishment of the account by Congressional appropriations from general revenues.

Unlike War Risk Insurance, the financial administration of the USGLI program is effected through a specially created trust fund in the U.S. Treasury known as the USGLI Trust Fund. This Fund is administered solely for the benefit of the policyholders and beneficiaries covered under its program. All income is deposited to, and all disbursements are paid out of, this Fund. For dividend determination and for other purposes, the experience is segregated, statements of Income and Disbursements, Assets and Liabilities, are prepared by the Veterans Administration, and in all respects the Fund is operated as if it were an individual insurance company. The law requires that the assets, other than policy loans, be invested in United States securities (or securities guaranteed by the United States) and at the present time all assets, with the exception of policy loans and a small working cash balance, are invested in special Treasury Certificates of Indebtedness bearing interest at the rate stipulated in the law for the premium basis, namely, $3\frac{1}{2}\%$.

It should be noted that under the War Risk Insurance program the requirement that all premiums be deposited to, and all benefits be paid out of, an Appropriation had the effect of limiting the contribution of the Government for excess claim costs to the extent by which total losses, including the war claims, exceeded the premium income. Since the total claims, due chiefly to the war and to the heavy influenza losses, far exceeded the income, no dividends were ever paid on this insurance.

The contributions of the Government toward excess claim costs on the USGLI program are determined on a case-by-case method. The Government reimburses the Trust Fund by a deposit to that account for the value of *each* death or disability claim determined by the Administrator of Veterans Affairs to be due to the extra hazard of military or naval service. Thus, dividends under this program can be paid if the premium, interest, and other income exceeds the *non-extra hazard* losses.

The magnitude of this World War I insurance operation, and the extent to which the insurance was continued after the war, is shown in Table 1.

SUMMARY OF MAIN PROVISIONS OF THE NSLI ACT OF 1940 AND LATER AMENDMENTS

After World War I and until the enactment of the NSLI Act, new entrants in the armed forces could obtain Government insurance under the USGLI program. Up until the late 30's, such new entrants were relatively few, but with the increase in recruiting activities at about this period, and with the Draft Act under consideration, questions arose as to the advisability of continuing to provide insurance for our new service people under the existing USGLI program. The desire to preserve the equities of the USGLI policyholders, which had been built up over the years, was the principal motivating factor which led to the decision to establish a new program and another Trust Fund. Up until the middle 40's, when special Treasury securities were made available to the USGLI Fund, open-market operations in regular U.S. securities had resulted in rather substantial capital gains for the account of the USGLI policyholders, and it was felt that an influx of new and younger entrants might impair these equities. It was not inconceivable, for example, that an epidemic of an unknown nature, but, say, of World War I influenza proportions, might strike heaviest at the younger ages. There were doubts as to how

TABLE 1

WORLD WAR I INSURANCE IN FORCE

End of Cal. Yr.	War Risk		USGLI	
	No. of Pols.	Amt. of Ins.	No. of Pols.	Amt. of Ins.
1918.......	4,529,889	$39,606,743,000	None	None
1921.......	339,167	2,536,482,444	259,730	$ 929,292,694
1930.......	128*	695,824*	646,448	3,031,841,343
1940.......	96*	254,577*	624,542	2,606,057,390
1949.......	None	None	492,598	2,147,632,865

* This is insurance in force principally as a result of recoveries from permanent total disability. Conversion had to be effected within two years after recovery.

far segregation of assets could be carried to maintain equity among the various classes of policyholders.

Accordingly, new legislation was introduced in Congress and on October 8, 1940 the NSLI Act became law. It established an additional system of Government life insurance and closed the USGLI program to new entrants in the armed services, unless such new entrants had served during a specified period in World War I. The interest rate for premiums and reserves in the NSLI Act was reduced to 3% and the permanent total disability feature of USGLI, providing coverage throughout life, was eliminated and a premium waiver benefit substituted.

The main provisions of this Act, its Amendments to date, and Regulations issued pursuant thereto are summarized as follows:

Financial Administration

Special NSLI Trust Fund exists in U.S. Treasury. All NSLI experience segregated and program administered solely for benefit of

NSLI policyholders and beneficiaries. Statements of Income and Disbursements, Assets and Liabilities prepared by Veterans Administration. All assets other than policy loans and small cash balance invested in special 3% Treasury issues.

Eligibility Requirements

Any individual serving in the armed forces after October 8, 1940 (Army, Navy, Marines, Coast Guard, and later their Women's Auxiliaries).

Veterans who served between October 8, 1940 and September 2, 1945 may apply at any time; others must apply while in active service.

Amounts Available

Maximum $10,000, minimum $1,000; in multiples of $500.

Combined total of NSLI and USGLI cannot exceed $10,000.

Disability Provisions

Premium Waiver included in all policies at no specified extra premium.

August 1946 legislation made available monthly income benefit of $5 per M at an extra premium to be determined by the Administrator of Veterans Affairs.

Total disability prior to age 60 with a 6 months' waiting period.

Beneficiary Designations

On claims occurring prior to August 1, 1946, beneficiaries restricted to wife, husband, children, parents, brothers, and sisters.

Restrictions removed in legislation of August 1, 1946.

Settlement Options

On claims occurring prior to August 1, 1946, instalments for 20 years, or refund life income, if beneficiary was under 30 years of age; if 30 or over, life income 10 years certain or refund life income.

On death claims occurring after August 1, 1946, four options available, namely, (1) lump sum, (2) instalments certain, 3–20 years, (3) life income 10 years certain, (4) refund life income.

Option 2 only instalment option available on maturity proceeds of endowments—no instalment options on cash values.

Plans of Insurance

5 Year Term, Ordinary Life, 20 Payment Life, 30 Payment Life, 20 Year Endowment, Endowment at 60, Endowment at 65.

The 5 Year Term issued prior to 1946 was extended to 8 years at the same rate.

One renewal for 5 years has been authorized on all Term issued prior to 1948.

Conversion Privilege

Conversion to any permanent plan may be made as of present, intermediate, or original date by payment of appropriate reserve difference. If disabled, conversion limited to Life plans.

Reinstatement

Term may be reinstated by the payment of two monthly premiums; at the present time within 3 months of lapse with only a comparative health statement; at any time within the Term period with full medical requirements.

On other than Term plans same health requirements but all back premiums and interest required.

Dividends

Insurance is participating.

Regular dividend on Term may be paid in cash only.

Regular dividend on other than Term plans may be paid in cash or left to accumulate at interest.

Mortality and Interest Basis for Premiums, Values, etc.

The premium for the combined death and premium waiver benefit, the nonforfeiture values and the settlement options, are all net on the American Experience Table with 3% interest.

The extra premium for the disability income benefit is based on recent commercial experience.

All premiums are calculated on a true monthly basis.

Expenses of Administration

Borne by the United States Government.

Excess Extra Hazard Claim Costs

The amount at risk on all death claims and the benefits on all disability claims traceable to the extra hazard of military or naval service are paid by the United States Government. On all death claims paid in instalments, where life contingencies are involved, a mortality table reflecting actual up-to-date experience is used to determine the true value of the claim.

On all death claims, the NSLI Fund is reimbursed in a lump sum at the incurrence of the claim and is then liable for all future payments. On disability claims, transfers are made periodically to the Fund as benefits become due.

Gratuitous Insurance

Under certain circumstances, generally on service-incurred deaths occurring around Pearl Harbor time and in early 1942, free insurance was provided by Congress in an amount sufficient to make the total of the gratuitous and whatever was in force at time of death equal to $5,000. The Government reimburses the Fund for the value of these gratuitous benefits.

The development and extent of this NSLI program is indicated in Table 2.

DEFINITION AND DETERMINATIONS OF "EXTRA HAZARD OF MILITARY OR NAVAL SERVICE"

The NSLI Act provides that the United States Government shall reimburse the insurance Trust Fund for the amount at risk on all death and disability claims traceable to the extra hazard of military or naval service, as such hazard may be determined by the Administrator of

TABLE 2

NSLI INSURANCE IN FORCE

End of Cal. Yr.	No. of Policies	Amt. of Insurance
1941..........	709,027	$ 2,500,249,500
1942..........	4,536,361	26,458,994,386
1943..........	13,079,574	95,151,004,181
1944..........	15,899,444	121,274,608,702
1947..........	6,099,000*	36,200,900,000*
1949..........	5,619,162	36,085,785,311

* Estimated.

Veterans Affairs. In peacetime this excess mortality is relatively small, averaging somewhere between 5 and 10% of the total, but in wartime it becomes definitely significant. The assumption of this hazard by the Government can be justified on the grounds that this excess mortality is as much a part of the total financial cost of war as perhaps any other item in the budget, and as such it seems only proper that it should be shared by all taxpayers and not by the insureds only.

In practice, the determinations are made by a special Committee appointed by the Administrator. Each claim is individually reviewed by the Committee and a determination is made based on the facts of each case. It is, of course, impossible to lay down rules and criteria of "extra hazard" that may be applicable in all cases. Generally speaking, an extra hazard of service is defined as a hazard to life or health, not ordinarily arising in civilian life, which is a logical consequence of the military service. Thus, Committee regulations require that the death or disability *result from the performance of duty*, and not be merely "in line of duty" (as militarily interpreted), or service-connected.

The following types of claims are clearly indicated as extra hazard:

(1) Death and disability resulting from enemy action.
(2) Death and disability suffered during the course of military training, such as drowning while engaged in amphibious training.
(3) Death and disability suffered as a result of an airplane crash while performing official duty, not due to negligence or misconduct.
(4) Generally, death or disability resulting from tropical or oriental disease, where it can be definitely established that such disease was contracted in, and is peculiar to, the locale.
(5) Death or disability resulting from confinement as a prisoner of war.

The following types of claims are examples of cases clearly *not* extra hazard:

(1) Death or disability which is a result of the insured's own misconduct.
(2) Death or disability while the insured is on a pass, liberty, or leave, unless, of course, the performance-of-duty-connection is apparent. Death or injury suffered while the insured is away from his station for pleasure or on personal business could not be attributed to the performance of military duty; nor could injury suffered while the insured is absent from his station without leave.
(3) Death or disability resulting from congenital defects or certain organic conditions, unless it can be definitely shown that the condition was aggravated by service.

The determinations in the large majority of claims are clear-cut, and present no particular problems to the Committee; however, there are borderline cases where the Committee has to exercise judgment based upon a consideration of all the facts in the light of the established standards. At the announcement of the first dividend on NSLI, there were implications in the press, and in many articles written on the subject, that the determinations of the Committee during the war had been unduly liberal, and that many claims were improperly saddled on the Government. In the final analysis, the only test of the fairness and reasonableness of the Committee's determinations is in a comparison of the residual non-extra hazard mortality with similar mortality experienced by commercial insurers during the same period. Such a comparison is made in the following pages and the results attest to the sound decisions and good judgment of the Committee.

TABLE 3

National Service Life Insurance
Mortality Experience under Term Insurance
By Amounts—Calendar Year Basis
Unit $1,000 Throughout

Attained Age Group	Exposure	Actual Deaths			Ratio Actual to Expected			
		Total	Not Due to Extra Hazard of Service	Ratio "Not Dues" to Total	American Experience		U.S. Life 1939–41 White Male	
					Total Deaths	"Not Dues" Only	Total Deaths	"Not Dues" Only
	Exposure Years 1941–1944—Issues of 1941–1944							
20 and under	$ 37,475,979	$ 413,104	$ 43,523	10.5%	142.3%	15.0%	567.0%	59.7%
21–25	74,304,082	1,063,320	102,771	9.7	180.5	17.4	616.4	59.6
26–30	41,418,576	515,900	56,139	10.9	151.6	16.5	489.3	53.2
31–35	21,878,980	200,818	33,034	16.4	106.2	17.5	293.7	48.3
36–40	10,660,389	72,044	20,280	28.1	73.1	20.6	162.8	45.8
41–45	3,278,753	16,272	8,921	54.8	48.0	26.3	80.7	44.3
46–50	917,204	6,496	4,346	66.9	59.2	39.6	79.3	53.1
51–55	216,163	2,260	1,758	77.8	67.7	52.7	76.6	59.6
56 and over	63,821	940	791	84.1	64.3	54.1	67.8	57.1
Total	$190,213,947	$2,291,154	$271,563	11.9%	147.1%	17.4%	461.8%	54.7%
	Exposure Year 1941—Issues of 1941							
20 and under	$ 170,067	$ 1,064	$ 279	26.2%	80.9%	21.2%	327.4%	85.8%
21–25	711,075	3,097	1,044	33.7	54.9	18.5	186.9	63.0
26–30	282,631	1,033	417	40.4	44.6	18.0	144.9	58.5
31–35	103,870	513	246	48.0	57.1	27.4	158.3	75.9
36–40	48,703	183	81	44.3	40.5	17.9	89.3	39.5
41–45	19,807	52	39	75.0	25.4	19.0	42.6	32.0
46–50	10,481	110	79	71.8	86.6	62.2	114.6	82.3
51–55	3,483	27	27	100.0	50.0	50.0	56.3	56.2
56 and over	1,144	33	33	100.0	126.9	126.9	132.0	132.0
Total	$ 1,351,261	$ 6,112	$ 2,245	36.7%	55.4%	20.3%	173.9%	63.9%
	Exposure Year 1942—Issues of 1941–42							
20 and under	$ 2,428,124	$ 20,197	$ 2,334	11.6%	107.3%	12.4%	427.4%	49.4%
21–25	8,728,532	69,099	10,631	15.4	100.0	15.4	342.7	52.7
26–30	3,940,458	26,194	5,411	20.7	80.9	16.7	261.4	54.0
31–35	1,960,657	9,451	3,109	32.9	55.7	18.3	154.2	50.7
36–40	1,061,868	4,526	1,830	40.4	45.9	18.5	100.6	40.7
41–45	561,587	2,588	1,257	48.6	44.6	21.6	74.9	36.4
46–50	96,889	915	509	55.6	78.2	43.5	103.6	57.6
51–55	26,833	397	333	83.9	95.4	80.0	107.9	90.5
56 and over	7,584	117	74	63.2	68.0	43.0	71.8	45.4
Total	$ 18,812,532	$ 133,484	$ 25,488	19.1%	86.3%	16.5%	264.8%	50.6%
	Exposure Year 1943—Issues of 1941–43							
20 and under	$ 13,743,754	$ 72,993	$ 14,414	19.7%	68.6%	13.5%	275.1%	54.3%
21–25	25,484,524	243,384	30,138	12.4	120.5	14.9	411.1	50.9
26–30	13,607,620	101,243	16,164	16.0	90.5	14.5	292.2	46.6
31–35	7,268,394	34,410	9,562	39.2	54.8	15.2	151.5	42.1
36–40	3,428,698	14,944	6,656	44.5	47.2	21.0	105.1	46.8
41–45	1,258,295	5,839	3,521	60.3	44.9	27.1	75.4	45.5
46–50	325,656	2,098	1,483	70.7	54.0	38.2	72.5	51.3
51–55	73,337	734	518	70.6	64.8	45.7	73.3	51.7
56 and over	21,298	241	196	81.3	49.7	40.4	52.3	42.5
Total	$ 65,211,576	$ 475,886	$ 82,652	17.4%	89.2%	15.5%	280.9%	48.8%

TABLE 3—*Continued*

Attained Age Group	Exposure	Actual Deaths: Total	Actual Deaths: Not Due to Extra Hazard of Service	Actual Deaths: Ratio "Not Dues" to Total	Ratio Actual to Expected: American Experience: Total Deaths	Ratio Actual to Expected: American Experience: "Not Dues" Only	Ratio Actual to Expected: U.S. Life 1939–41 White Male: Total Deaths	Ratio Actual to Expected: U.S. Life 1939–41 White Male: "Not Dues" Only
	Exposure Year 1944—Issues of 1941–44							
20 and under	$ 21,134,034	$ 318,850	$ 26,496	8.3%	194.7%	16.2%	772.5%	64.2%
21–25	39,379,951	747,740	60,958	8.2	239.5	19.5	817.3	66.6
26–30	23,587,867	387,430	34,147	8.8	199.9	17.6	645.3	56.9
31–35	12,546,059	156,444	20,117	12.9	144.2	18.5	399.0	51.3
36–40	6,121,120	52,391	11,713	22.4	92.7	20.7	206.9	46.2
41–45	1,439,064	7,793	4,104	52.7	52.4	27.6	88.1	46.4
46–50	484,178	3,373	2,275	67.4	58.3	39.3	78.1	52.7
51–55	112,510	1,102	880	79.9	63.5	50.7	71.9	57.4
56 and over	33,795	549	488	88.9	70.7	62.8	74.5	66.2
Total	$104,838,578	$1,675,672	$161,178	9.6%	195.3%	18.8%	614.3%	59.1%

MORTALITY EXPERIENCE DURING THE WAR YEARS

In order to make available for general use the mortality experience of the war years, and to provide a basis for the calculation of dividends, a mortality experience on the Term insurance covering the calendar years 1941–1944 inclusive was extracted from tabulated punch card records. It was not possible to extend this experience beyond 1944 because the rapid demobilization beginning in 1945, resulting in unavoidable delays in the reporting of discharges and terminations by the Service Departments, left no alternative but a resort to estimates in the maintenance of in-force figures on Term from the end of 1944 until 1948. It was not deemed advisable to obtain exposures from an estimated in-force for mortality study purposes.

Table 3 records the results of this study by calendar year of exposure with the total death losses divided between those due to extra hazard of service and those not so due. Ratios of actual to expected are to the American Experience Table and to a population table. In analyzing these ratios it should be remembered that the NSLI data are select to the extent that these insured lives were medically examined upon entrance into service.

The following observations on this study may be of interest in any consideration of the possible effect of war losses on insurance in general.

(1) The *extra-hazard-of-service* death losses in these four years, one of which, 1941, was almost entirely a peacetime year except for Pearl Harbor, averaged for all ages about 130% of the American Experi-

ence mortality. The highest ratio was approximately 164% in the age group 21-25. This maximum ratio translates into about 13 extra deaths per thousand.

(2) In the calendar year 1944 when the European invasion was launched, and when war activities generally reached a maximum, the *extra-hazard-of-service* death losses averaged for all ages about 177% of the American Experience. The highest ratio was 220% in the age group 21-25. This maximum ratio translates into about 18 extra deaths per thousand.

Table 4 is a reshuffling of the data in Table 3 so as to bring out a comparison of the residual non-extra hazard mortality by duration with an intercompany mortality experience of that period. Since the NSLI experience had to be made on a calendar year basis, whereas the intercompany experience was on a policy year basis, resort was had to half durations for comparison purposes. This study shows that at each duration the non-extra hazard Term mortality under NSLI is higher than the intercompany standard used for comparison. This study is offered not for the purpose of comparing as such the mortality of NSLI with the differently selected intercompany business, but simply to provide factual support for the conclusion that the extra hazard determinations were reasonable and fair, and that as many deaths as might be expected in peacetime were paid for out of premiums collected by the fund.

SETTLEMENT OPTION EXPERIENCE

On death claims occurring prior to September 1944, neither the insured nor the beneficiary had any choice in the manner in which proceeds of the policy could be paid. The law stipulated settlement in the form of a life income 10 years certain if the beneficiary was 30 years of age or older at the death of the insured, and in instalments certain for 20 years only, if under 30 years. In September 1944 amendatory legislation added a refund life income option and beneficiaries then receiving instalments under the previous modes of settlement were given a limited period in which to substitute the refund option with an adjustment in income. In the August 1, 1946 legislation, additional options were made available including lump sums.

Since by far the largest liability item in the NSLI Balance Sheet is the reserve for the future unpaid instalments on the death claims arising in the war years, a very large proportion of which involve life contingencies, it was thought necessary to investigate the mortality experience of the Fund's own beneficiaries under settlement options. Accordingly, in 1947

TABLE 4

COMPARISON OF NSLI NON-EXTRA HAZARD TERM MORTALITY WITH INTERCOMPANY MORTALITY EXPERIENCES

	NSLI	INTERCOMPANY*
Exposure Periods:	—Cal. Yrs. 1941–1944 incl.	Pol. Yrs. Current in 1940–1941 and 1946–1947 (*TASA* XLIII, 131; XLIX, 474)
Expected Deaths by:	—Select Basic Table 1925–1939	Select Basic Table 1925–1939

(*TASA* XLII, 182)

All Claims Determined to Be Due to the Extra Hazard of Military or Naval Service Excluded from Actual Deaths

By Amounts Throughout

AGE AT ISSUE	NSLI (UNIT $1,000)				INTERCOMPANY	
	Exposure	Actual Deaths	Expected Deaths	Ratio A/E	Ratios Actual to Expected	
					1940–1941	1946–1947
	Duration 0–½†				Duration 0–1	
15–19........	13,618,622	12,132	18,385	66%	57%	55%
20–24........	23,177,237	26,757	31,058	86	66	57
25–29........	13,350,118	16,505	17,088	97	58	51
30–34........	7,216,953	10,332	10,609	97	59	53
35–39........	3,684,072	6,625	7,662	86	51	47
40–44........	937,883	2,530	2,710	93	48	37
45–49........	256,021	1,171	1,100	106	60	49
50–54........	54,398	398	368	108	56	38
55 and over...	15,658	248	162	153	77	49
Total....	62,310,962	76,698	89,142	86%	59%	47%
	Duration ½–1½‡				Duration 1–2	
15–19........	17,430,384	23,240	26,668	87%	61%	46%
20–24........	38,393,076	53,552	58,741	91	65	32
25–29........	20,196,239	26,873	30,092	89	60	55
30–34........	10,867,133	15,634	19,126	82	56	36
35–39........	5,437,793	10,303	13,758	75	44	56
40–44........	1,507,415	3,905	5,427	72	53	52
45–49........	421,033	1,851	2,231	83	65	43
50–54........	96,943	718	805	89	51	52
55 and over...	28,015	313	353	89	52	40
Total....	94,378,031	136,389	157,201	87%	55%	48%

* Experiences in 1940–1941 and 1946–1947 used so as to minimize the effect of any war deaths.

† Experience in the Calendar Year of Issue—Exposure is ½ In-Force end of Year of Issue plus ½ the deaths.

For Expected Deaths $2 \times {}_{\frac{1}{2}}q_{[x]} = q_{[x]}$

‡ Experience in the Calendar Year following the Year of Issue—Similar pattern for longer durations.

For Expected Deaths $q_{[x]+t+\frac{1}{2}} = \frac{1}{2}[q_{[x]+t} + q_{[x]+t+1}]$

TABLE 4—*Continued*

Age at Issue	NSLI (Unit $1,000) Exposure	Actual Deaths	Expected Deaths	Ratio A/E	Intercompany Ratios Actual to Expected 1940–1941	1946–1947
	Duration 1½–2½				Duration 2–3	
15–19	2,317,642	4,270	4,033	106%	72%	55%
20–24	14,882,355	24,213	26,044	93	78	56
25–29	7,486,002	11,206	13,325	84	60	43
30–34	3,772,492	6,353	8,149	78	50	51
35–39	1,879,743	3,773	5,978	63	72	44
40–44	783,510	2,398	3,667	65	65	60
45–49	214,984	1,163	1,468	79	65	74
50–54	51,903	450	554	81	97	57
55 and over	14,430	208	230	90	56	64
Total	31,403,061	54,034	63,448	85%	68%	58%
	Duration 2½–3½				Duration 3–4	
15–19	184,544	381	332	115%	72%	47%
20–24	1,003,877	1,825	1,817	100	67	54
25–29	581,796	1,109	1,105	100	59	57
30–34	182,392	463	434	107	73	61
35–39	97,361	186	346	54	63	57
40–44	40,793	223	218	102	57	65
45–49	21,101	120	165	73	77	77
50–54	7,507	67	92	73	45	59
55 and over	2,522	68	47	145	71	60
Total	2,121,893	4,442	4,556	97%	64%	63%
	Duration 0–3½				Duration 0–4	
15–19	33,551,192	40,023	49,418	81%	66%	51%
20–24	77,456,545	106,347	117,660	90	69	51
25–29	41,614,155	55,693	61,610	90	59	52
30–34	22,038,970	32,782	38,318	86	60	50
35–39	11,098,969	20,887	27,744	75	59	51
40–44	3,269,601	9,056	12,022	75	57	54
45–49	913,139	4,305	4,964	87	68	61
50–54	210,751	1,633	1,819	90	63	52
55 and over	60,625	837	792	106	64	54
Total	190,213,947	271,563	314,347	86%	62%	54%

an experience was extracted on the claims from 1941–1945 inclusive, exposed to their anniversaries in 1946. The results of this study are shown in Table 5.

The experience below was graduated by a Whittaker-Henderson formula into a male and female mortality table referred to as the 1947 NSLI Beneficiary Mortality Tables, which tables with ages set back two years to

TABLE 5

NATIONAL SERVICE LIFE INSURANCE

MORTALITY EXPERIENCE OF FIRST BENEFICIARIES UNDER THE AUTOMATIC INSURANCE SETTLEMENT PROVIDED PRIOR TO AUGUST 1, 1946

DEATH AWARDS OF 1941–1945 EXPOSED TO THEIR ANNIVERSARIES IN 1946 BY AMOUNTS OF INSURANCE USED TO PROVIDE MONTHLY INCOME

Att. Age Group	Exposure	Expected Deaths		Actual Deaths	Ratios Actual to Expected	
		1937 Std. Ann.	U.S. Life '39–'41 (Whites)		1937 Std. Ann.	U.S. Life '39–'41 (Whites)
	Men					
Below 20.	$ 22,785,655	$ 35,151	$ 37,687	$ 60,334	171.6%*	160.1%*
20–29....	24,706,213	39,667	60,264	148,998	375.6*	247.2*
30–39....	33,326,103	97,818	120,582	120,110	122.8*	99.6*
40–49....	159,450,226	1,112,305	1,353,264	1,045,787	94.0	77.3
50–59....	310,447,085	4,103,120	5,237,420	3,760,288	91.6	71.8
60–69....	161,634,575	4,270,261	5,493,687	3,969,611	93.0	72.3
70 and over...	37,148,083	2,079,607	2,831,351	2,107,593	101.3	74.4
Total..	$749,497,940	$11,737,929	$15,134,255	$11,212,721	95.5%	74.1%
	Women					
Below 20.	$ 89,443,210	$ 117,568	$ 114,353	$ 147,333	125.3%	128.8%
20–29....	791,099,407	1,053,077	1,395,522	951,246	90.3	68.2
30–39....	343,467,328	707,555	943,919	903,834	127.7	95.8
40–49....	908,051,186	4,089,721	4,919,177	4,408,940	107.8	89.6
50–59....	967,792,294	8,549,652	10,407,888	7,778,763	91.0	74.7
60–69....	347,417,311	6,097,514	8,069,473	6,097,500	100.0	75.6
70 and over...	40,935,670	1,513,074	2,416,901	1,798,939	118.9	74.4
Total..	$3,488,206,406	$22,128,161	$28,267,233	$22,086,555	99.8%	78.1%

* Effect of war—not used in graduation.

allow for improvement in mortality are now the basis for valuation, and for determining the true value of an extra hazard claim payable in an income involving life contingencies where the Government reimburses the Fund. The high mortality evident in this study at the young male ages, an effect of the war, was not used in the graduation of the male table for obvious reasons. The graduated q_x's and values of $\ddot{a}_x$ in these tables at true decennial ages are shown in the following tabulation.

True Age	Men		Women	
	q_x	$\ddot{a}_x$ (3%)	q_x	$\ddot{a}_x$ (3%)
20	.00126	26.080	.00107	26.694
30	.00196	23.660	.00169	24.437
40	.00437	20.693	.00391	21.740
50	.00887	17.289	.00599	18.481
60	.01740	13.495	.01239	14.517
70	.04163	9.631	.02934	10.231

DIVIDENDS

The first distribution of surplus in the National Service Life Insurance Fund is being made in early 1950. There were many reasons why it was not administratively feasible to make any surplus distribution until sometime after the end of the war. Lack of personnel, time, and mechanical equipment were factors, but even without these problems it would still have been impossible because the true surplus could not then be determined with any degree of accuracy due to the unavoidable delay in the reporting of claims. For example, by the end of 1944 less than 50% of the claims incurred up to that time had been reported and awarded.

The payment of this first dividend was further delayed after the war pending a U.S. Supreme Court decision on the *Zazove* case (see *TASA* XLIX, 451) which involved a question as to the manner of computing the amount of income under a life income 10 years certain option. The plaintiff's contention was that the amount of life income should have been obtained by dividing the face amount of the policy by $\ddot{a}_{\overline{10}|}$ rather than by $[\ddot{a}_{\overline{10}|} + {}_{10|}\ddot{a}_x]$. Had this decision been adverse, the entire surplus in the Fund would have been wiped out, and other serious complications would have developed.

The initial dividend scale for the Term policies was obtained by the experience premium method. A graduated mortality table was developed from the NSLI non-extra hazard Term experience previously discussed, and the 1947 NSLI Beneficiary Mortality Table served as the basis for determining the average excess amount of insurance required to compensate for the liberal optional settlement basis (American Experience). Table 6 shows how the dividend margins were developed at quinquennial ages of issue.

TABLE 6

DEVELOPMENT OF NSLI DIVIDEND MARGINS ON TERM INSURANCE
All Calculations on a Monthly Basis
3% Interest Throughout

Age at Issue	Net Prem. for \$1,160 of 8 Year Term on NSLI "Non-extra Hazard" Exp. (See Note 1)	Extra for Waiver Benefit (See Note 2)	Total Cost of Benefits	Rate-book Prem. per M	Margin for Dividends	Margins with 13.4% Added for Delay Interest (See Note 3)	Adopted Scale (See Note 4)
15	\$.12	\$.02	\$ .14	\$ .63	\$.49	\$.56	\$.55
20	.13	.02	.15	.65	.50	.57	.55
25	.14	.03	.17	.67	.50	.57	.55
30	.15	.03	.18	.71	.53	.60	.55
35	.20	.04	.24	.76	.52	.59	.55
40	.31	.06	.37	.85	.48	.54	.55
45	.53	.09	.62	.99	.37	.42	.40
50	.85	.15	1.00	1.27	.27	.31	.25

NOTE 1. The \$1,160 is the average amount of insurance which, according to the settlement experience of the period under observation, is required to provide the contract income benefits on the basis of the 1947 NSLI Beneficiary Mortality Table with a two year age setback. All 5 Year Term policies issued prior to 1946 were extended to 8 years at the same rate.

NOTE 2. This extra is based on the 100% Class 3 experience, assuming immediate conversion to 20 Payment Life at disability. The Fund's own experience was not available, and it was felt that the Class 3 basis was sufficiently accurate for determining the cost of this minor benefit.

NOTE 3. This percentage is based on an average dividend due date, assuming that dividends could have been paid when due. It would have been administratively impractical to take actual policy issue dates into account.

NOTE 4. The margins were sufficiently constant at all ages up to 40 to justify the same monthly dividend per thousand through that age. About 98.5% of the total business was issued at age 40 and under. The difference between the margins and the adopted scale was retained for contingency reserve purposes.

The use of the actual (select) mortality in the determination of this dividend was justified on the grounds that this was to be a one-time distribution to approximately 75% of the original issues that lapsed after the end of the war. It was felt, therefore, that this initial scale should equitably be based on the actual experience of the group in the years in which this surplus developed and that no allowance need be made for the heavier expected mortality of the ultimate years.

After studying various possibilities, it was decided for this initial distribution to make the dividends on the permanent plans of insurance the same as on the Term. Studies did not indicate any significant difference in the mortality on these plans as compared with the Term. The short average duration (about $1\frac{1}{2}$ years as of the anniversary in 1948) with consequent small decreases in the amount at risk, coupled with practical considerations of administrative ease of handling a project of this magnitude, led to this decision, particularly since no substantial equity was thereby being sacrificed.

The initial distribution covered the period from issue to the anniversary in 1948, or prior lapse. A dividend was paid for each month the policy was in force with a minimum of three months. This special dividend was payable in cash only, could not be left on deposit, and could not automatically be applied toward the payment of premiums. These restrictions were imposed to facilitate administrative procedure.

A second distribution is planned for 1951 and is to cover the policy years from the anniversary in 1948 to the anniversary in 1951. This second dividend scale is to be based on later postwar mortality studies.

The large contributions by the Government toward the excess mortality of war, plus its assumption of all administrative expenses, have led to the charge from uninformed quarters that the initial dividend on this insurance is not an insurance dividend in the usual understanding of the word, but rather a "bonus" or "handout" to the veteran from the Government. It is quite clear that the Congress in enacting this legislation intended that the cost of this insurance to servicemen be on a net basis at normal peacetime rates, exclusive of the entire cost for the occupational hazard. The fact that the premium scale was set at a level which would have permitted the absorption of the administrative expenses, and a part of this excess mortality, is not now any justification for the assessment of any of these charges against the premiums, in view of the expressed will of the Congress. The cost to the insureds should properly be only for the non-extra hazard mortality and disability. It is common practice for private employers to assume not only the cost of the occupational hazard but in many cases the entire cost of group insurance and other benefits for their employees, as well as the expenses which are incident to the administrative functions performed by them.

STATEMENT OF INCOME AND DISBURSEMENTS

The cumulative totals of all Income and Disbursements in the NSLI Fund from origin to end of calendar year 1949 are shown in Table 7.

TABLE 7

CUMULATIVE TOTALS OF INCOME AND DISBURSEMENTS IN THE NATIONAL SERVICE LIFE INSURANCE FUND

INCOME

	Cumulative Totals from Origin Oct. 1940 to End of December 1949
1. PREMIUMS	
a) Insurance	$4,401,511,821.54
b) Disability Income	1,501,607.98
2. INTEREST	
a) On U.S. Treasury Notes	789,902,316.31
b) On Policy Loans	322,858.42
c) On Premiums in Arrears	177,927.15
3. REIMBURSEMENTS FROM THE U.S. GOVERNMENT	
a) For Death Claims Due to the Extra Hazard of Military Service	
(1) Contract	3,905,211,929.52*
(2) Gratuitous	137,446,846.92*
b) For Disability Claims Due to the Extra Hazard of Military Service	
(1) Premium Waiver	59,654,671.13
(2) Total Disability Income	9,057.10
c) For Waiver of Recovery of Overpayments under Sec. 609	155,280.58
TOTAL INCOME	$9,295,894,316.65

DISBURSEMENTS

4. DEATH BENEFITS	
a) Contract	$1,410,722,799.72†
b) Gratuitous	50,008,432.22†
[Total Face Amount of Death Claims Awarded to End of Year — Contract $3,879,118,365; Gratuitous 102,125,845]	
5. MATURED ENDOWMENTS	4,852.75
[Total Face Amount Matured to End of Year 14,000]	
6. DISABILITY BENEFITS	
a) Premiums Waived	90,930,510.22
b) Total Disability Payments	42,660.00
7. CASH SURRENDER BENEFITS	10,047,553.74
TOTAL DISBURSEMENTS	$1,561,756,808.65

* Of these totals, $3,241,779,280 on contract, and $102,125,845 on gratuitous, represent actual face values of these extra hazard claims. The balance results partly from a valuation of the benefits on the 1947 NSLI Beneficiary Mortality Table, set back two years, and partly from delay interest on transfers of money from the Government to the Fund which in practice cannot be made exactly at the date of death. The ratio of extra hazard contract death claims to the total of all contract death claims to date is 83.6%.

† These are the total actual death benefit payments made to date. The Convention Blank supplementary contract transfer method of accounting is not used in this statement.

COST OF ADMINISTRATION

The NSLI Act provides that the cost of administering the insurance program is to be borne by the U.S. Government. The determination of this cost is not a simple matter, for practically every Government agency —and its subdivisions—has certain of its functions performed by some other Government agency. For example, certain personnel functions of the Office of Insurance in the Veterans Administration are performed by the Civil Service Commission, certain disbursing functions are performed by the Treasury Department, auditing is done by the General Accounting Office, the Department of Justice assists in certain legal activities, and the Department of Defense absorbs certain distribution and premium accounting costs. In addition, within the Veterans Administration itself, with its many veterans' programs, there are many overhead charges that have to be spread among its various activities. Only a very comprehensive study of this whole subject could produce any figures that could be supported, and no such study has recently been undertaken since the results, while they might be interesting, would have little practical or useful value, and would hardly justify the expense of making the study.

There are so many points of dissimilarity between Government and ordinary commercial insurance that a mere comparison of administrative renewal costs per thousand of insurance, or per policy, would be very misleading. NSLI, for example, has a very high percentage of renewable and convertible Term requiring administrative action at each renewal or conversion; it has a high percentage of claims paid in instalments, very few paid-up policies, a high ratio of monthly premium business, while, on the other hand, ordinary commercial insurance has a higher percentage of permanent plans with cash and loan value activities, more paid-up policies, the service rendered by its agency forces is more extensive, etc., to mention but a few of the points of difference. Any comparison that does not take into consideration all of the relevant factors will do injustice to one or the other.

CONCLUSION

However interesting such discussions might be, it does not appear that any useful or practical ends could be served at this time by a discussion of such controversial and provocative questions as, for example, whether the Government should ever have entered the insurance field, whether the job could not have been done more efficiently and less expensively by utilizing the existing facilities of the private insurance industry, or whether the Government itself could not have accomplished its objectives through any one of a number of alternate methods. The possibility of substituting a completely gratuitous insurance plan, or of amending and increasing the existing compensation and pension benefits, was considered in the deliberations preceding enactment, but all these and other proposals were discarded in favor of the present plan which was supported by the administration of that day.

It is generally agreed that the Government insurance program of World War I had a beneficial and salutary effect on life insurance, which reflected itself in increased sales after the war, as the value of life insurance came to be appreciated by many who made their first contact with it during their period of service. The program of World War II no doubt had a comparable effect, yet its magnitude, both during the war and now, is such that its effect on the private insurance market, combined with that of all the other social insurance plans, cannot entirely be ignored, when it is considered that the insurance under these two veterans' programs alone approximates 20% of the commercial insurance in force in the country.

Fully cognizant of the extent of the Governmental contributions to its insurance programs, the Veterans Administration officially opposes and discourages, as much as it is within its power to do so, the making of any comparisons between the cost of Government insurance and the cost of private insurance. Such comparisons, based on cost alone and without a complete analysis of these contributions and of the many points of dissimilarity between the two types of insurance, would be incomplete and misleading and might have undesirable repercussions on the industry as a whole. In so far as it is possible of attainment, the Veterans Administration administers its insurance programs on the premise that its insurance is complementary to commercial insurance, and not in any respect competitive. It values highly the gratuitous service and unselfish assistance which has been rendered by the home offices and field forces of so many commercial companies, and believes that the friendly spirit of cooperation, which has been evident throughout thus far, will continue indefinitely.