of the percentage rise, rounded to the nearest $\frac{1}{10}$ of 1 percent. The first years compared would be 1963 and 1962, and any increase would be effective April 1, 1964. If the difference from 1962 to 1963 was less than 3 percent, no action would be taken. A comparison would continue to be made each year with the consumer price index for 1962 until there was a cumulative increase of at least 3 percent. The year before that in which the retired pay was adjusted would then be used as the starting point for the next comparison. There would be no reduction in retired pay should the consumer price index fall.

On the floor of the House, the bill was amended to permit both recomputation based on the 1958 rates and a 5-percent increase for those currently on the rolls. Members of the Armed Forces who had retired before June 1958 would have their retired pay recomputed; the rates adopted in 1958 would be used (with a savings clause permitting retention of the 6-percent increase granted in 1958 if it resulted in a larger amount). All members retired before 1963 would receive a 5-percent costof-living increase, and members retired in 1963 would have their retired pay based on the increased active-duty pay provided in the bill. The automatic cost-of-living increase feature was retained.

The bill was amended in the Senate to provide that members of the Armed Forces who had retired before June 1958 would either have their retired pay recomputed or receive the 5-percent cost-of-living increase. In other words, they could choose between their pre-1958 rates increased by 6 percent and further increased by 5 percent, or a 1958 recomputation. Members retired after May 1958 would receive a 5-percent increase. The provision that all those retired in 1963 (whether before or after the effective date of the bill) would have their retired pay based on the new rates was eliminated on the grounds that this was an undesirable retention of the recomputation feature, now to be replaced by automatic cost-of-living increases.

In conference, Congress agreed to permit military personnel retired before June 1958 to choose either recomputation or a 5-percent increase—the action recommended by the Senate Committee and passed by the Senate. The 5-percent cost-of-living increase was made applicable for retirements occurring between June 1958 and March 1963; for retirements after March 1963, pay would be based on the active-duty rates in the bill.

In debate on the floor of the Senate, it was made clear that for the future no recomputation of retired pay is contemplated but that instead the cost-of-living adjustment will be used.

The bill was enacted as agreed to in conference and became Public Law 88-132 when it was signed on October 2, 1963. Thus the precedent set by the civil-service retirement system—automatic increases for the future based on increases in the consumer price index—has been adopted for military retired pay.

Benefits for Survivors of Men Lost on the U.S.S. Thresher*

One hundred and twenty-nine men lost their lives when the nuclear-powered submarine on which they served—the U.S.S. Thresher—failed to surface from a deep test dive made about 200 miles off the coast of New England on April 10, 1963. The benefits payable under old-age, survivors, and disability insurance to dependent survivors of the men who died in this disaster demonstrate graphically the extent and importance of the protection provided by the program.

Eighty-six of the men who died on the *Thresher* left survivors who qualified for monthly survivor benefits or lump-sum death payments. The others —most of them young, nonmarried servicemen left no qualified survivors.¹ Only one of the men, a civil-service employee, did not have sufficient work in covered employment to have insured status under old-age, survivors, and disability insurance. His survivors, therefore, did not qualify for old-age, survivors, and disability insurance benefits, but they may be eligible for benefits under the civil-service retirement program.

AGE OF SURVIVORS

Of the 86 men who left qualified survivors, all but two were survived by widows. Sixty-two of

^{*} Prepared by George I. Kowalczyk, Division of the Actuary.

¹ When a deceased insured person is not survived by an eligible spouse, the law provides that the lump-sum death payment shall be available only to the extent that burial expenses are actually paid. There were, of course, no burial expenses in these cases.

the widows had at least one child under age 18 in their care. Six were expecting their first child, and a child was born to three of these widows within 2 months after the disaster. One of the men had as his only survivor a child under age 18, and one man left children under age 18 who were in the care of his former wife, from whom he was divorced. The age distribution of the widows is shown in the following tabulation.

Age of widow	Number of widows ¹	
	Total	With children ²
Total	85	69
Under 30 30-39. 40-49	47 32 5 1	40 26 3 0

Includes one former wife divorced.
Includes 6 widows who were expecting their first child.

As indicated in the tabulation, most of the widows were young; their average age at the time of the disaster was about 29. Those with children in their care will be eligible, if they do not remarry, to receive monthly benefits until their youngest child attains age 18. The widows who do not remarry may, on reaching age 62, be eligible for aged widow's benefits.

There were, in all, 171 children who qualified for immediate monthly benefits as a result of the disaster. In addition, seven children were born posthumously and qualified for benefits. The families with children under age 18 had, on the average, 2.5 child beneficiaries. About half the children awarded benefits were under age 5, and about 80 percent were under age 10, as shown below.

Age of child	Number of children	
Total	178	
0-4 ¹ 5-9 10-14 15-17	53 25	

¹ Includes 7 children born posthumously.

FAMILY BENEFIT AMOUNTS

For most of the beneficiary families, monthly survivor payments under the Social Security Act are an important source of income. The amounts that they were awarded varied with the number of children in the surviving family and the primary insurance amount of the deceased worker.

Seventy-one of the men left qualified survivors immediately eligible for monthly benefits. These survivors consisted of 62 widows with at least one eligible child at the time of the disaster, six widows with an eligible child born posthumously, a "former wife divorced" with eligible children, a surviving child only, and a surviving child whose mother did not qualify for a mother's benefit because she did not have the child in her care. (The mother in the last instance may qualify for an aged widow's benefit on attainment of age 62.)

The average primary insurance amount for the 71 men was \$93. The monthly amount of family benefits awarded for immediate payment varied as follows:

Monthly amount	Number of families	
Total		11
Less than \$100		7
100149.90		16
150–199.90	2	21
200-253.90	1	12
254	1	15

The women who will qualify for widow's benefits at age 62 may expect to receive about \$76, on the average. (Such factors as failure to qualify because of death or remarriage, or failure to qualify for full benefits because of entitlement to an old-age benefit based on her own earnings record, are disregarded in this estimate.)

VALUE OF FUTURE BENEFITS

In the actuarial analysis of the benefits payable as a result of the disaster, two calculations were made. In one, an estimate was made of the aggregate amount of benefits "expected" to be paid in the future under certain assumptions. Here, no account was taken of the fact that funds not required for the payment of benefits until some future date can be invested at interest. In the second calculation, the "present value" of the aggregate amount "expected" to be paid in the future was determined. By "present value" is meant the lump-sum amount that, if invested at an assumed rate of interest—31/4 percent in this instance—would be exactly sufficient to finance all "expected" future payments as they arise. Thus, the present value may be looked upon as the amount of the life insurance in force under oldage, survivors, and disability insurance on the lives of the victims at the time of the disaster.

The contingencies of mortality and remarriage were taken into account for the widows, with the computations based on United States white female mortality for 1949-51 and old-age, survivors, and disability insurance remarriage experience for 1956. Tables combining the 1956 remarriage rates with more recent mortality rates were not readily available. Their use, however, would not substantially affect the results, since benefit termination rates among widows are determined primarily by the remarriage factor. For child beneficiaries the mortality factor was disregarded because death rates for young children are very low. All benefits were considered, including the deferred benefits payable to widows at age 62. No allowance was made, however, for possible withholding of, or reduction in, benefits because of the beneficiary's covered employment or because of the receipt by an aged widow of an oldage benefit in her own right. On this basis, the "expected" benefit payments to the survivors of the disaster total about \$2,261,000 and the present value of these payments is about \$1,672,000. These amounts are distributed by type of benefit in the following tabulation.

[In thousands]
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Type of benefit	"Expected" payments	Present value
Total	\$2,261	\$1,672
Mother's and child's Widow's Lump-sum ¹	1,942 299 20	1,558 94 20

¹Lump-sum death payments were made only to surviving widows. No reimbursement for burial expenses was made on the basis of equitable entitlement.

The present value of "expected" benefit payments to all the survivor families averaged about \$19,450 per family. For families consisting of a surviving widow and one or more children, the average was about \$23,490; for all other family groups the average was \$4,180.

These figures do not allow for the possible withholding of or reduction in benefits, which would particularly affect widow's and mother's benefits. Where the maximum family benefits apply, however, the withholding of mother's benefits because of the widow's employment would be partially or fully offset by an increase in the child's benefits.

The situation of a family consisting of a widow with two children under age 18 in her care illustrates the amount of insurance protection that the program provides in a typical case in the *Thresher* disaster. In this family, the widow was aged 29 and the children were aged 4 and 7. The primary insurance amount for the deceased worker was \$95. Each beneficiary will have a benefit of \$67.50 a month until the older child attains age 18. The widow and the younger child will then each receive a monthly benefit of \$71.30 until the child reaches age 18. These amounts are payable as long as the three beneficiaries do not engage in substantial employment, the widow does not remarry, and the children do not marry. If the widow should remarry during this time, her monthly benefit would be terminated, but the children would continue to be eligible. When the unremarried widow attains age 62, she will receive a benefit of \$78.40 a month if she has not become eligible for an oldage benefit in her own right based on her own employment (when she would receive, in effect, the larger of the two benefits).

The "expected" benefit payments and the present value of these payments may be calculated for this family as they were for the entire group, and the same assumptions used. For this family, the "expected" benefits payable amount to \$29,385 and the present value of these payments is \$22,625. The totals, distributed by type of benefit, are shown below.

Type of benefit	"Expected" payments	Present value
Total	\$29,385	\$22,625
Mother's and child's Widow's Lump-sum	25,785 3,345 255	21,490 880 255

The *Thresher* disaster provides a striking example of the protection afforded by the old-age, survivors, and disability insurance program to the surviving dependents of deceased workers. At the beginning of 1963 about 91 million workers had survivor insurance protection under the program, and almost 3 million families in which the wage earner had died were receiving monthly survivor benefits.