Rhode Island Marina Insurance

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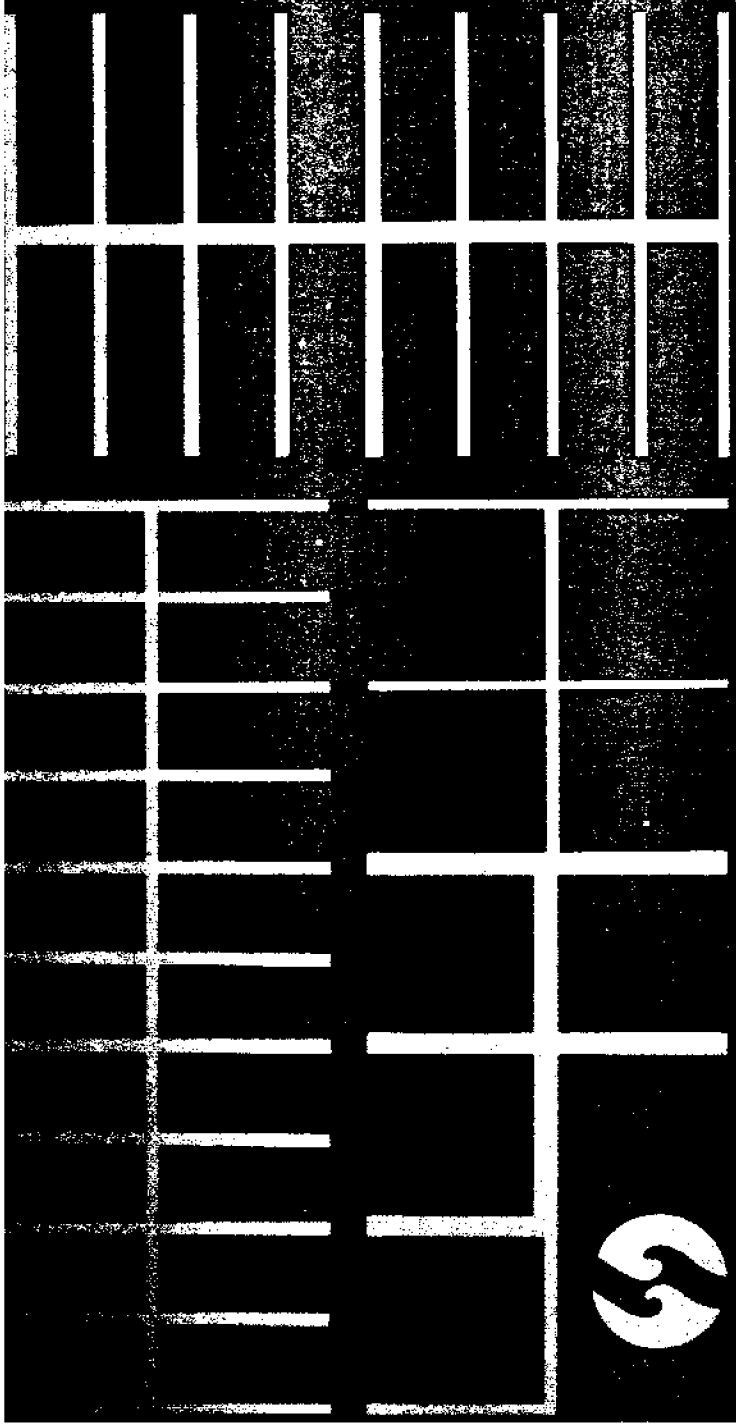

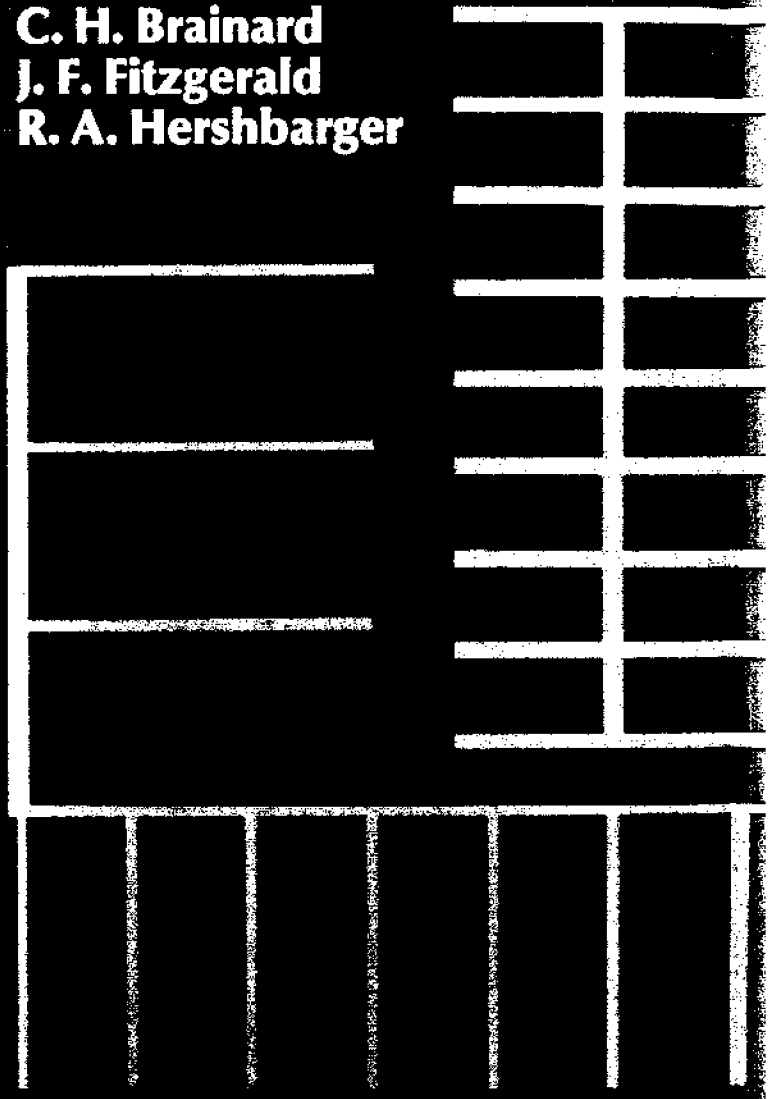

Sea Grant
Finance and Insurance

University of Rhode Island
Marine Technical Report Series Number 22

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Contents

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1. Introduction

Purpose

Approximately 46 million persons participated in recreational boating in the United States in 1972, a year in which $3.9 billion was spent at retail on 9,210,000 pleasure craft.[1] Measured in dollars of retail expenditures, recreational boating has in recent years been expanding at about 5 percent annually.

To service what has been called "America's top family sport," there were nationally in 1972, 4,600 marinas and boat yards and 1,300 yacht clubs with waterfront stations. Even discounting those who rely exclusively on trailering, the continued expansion of recreational boating obviously requires a comparable growth in yachting and boating facilities.

In the Narragansett Bay area of Rhode Island, an exceptionally fine marine resource where boating has a large potential both for recreation and input into the State's economy,[2] it is doubtful that the growth of marinas and boat yards is keeping pace either with the rest of the nation or with the regional demand for facilities. According to the Rhode Island Development Council's publication *Boating in Rhode Island*, yachting and boating facilities in Rhode Island waters declined in 1972-73 to 86 facilities with 5,500 slips from 92 facilities with 5,800 slips in the prior year.

A large majority of the area's marina operators report their inability to meet the demand for slips and moorings due to lack of space, a commodity increasingly difficult to obtain for financial, technical and environmental reasons.[3] Of special and recent significance as an expansion obstacle are the many problems encountered by the Coastal Resources Management Council in formulating decision-making policy toward permit issuance.[4]

However, space limitations are not the only obstacle to expansion. Repeated installation damage from severe storms, uneconomic utilization of existing marina shoreline and land resources, lack of surveys to identify additional sites and harbors of refuge, negative environmental impacts from current marina operations, and business management problems in general also apply a brake on expansion.[5]

Among the diversity of business management problems confronting marina operators lies that of risk management and insurance administration. How well this problem is being solved, the extent to which risk and its insurance may impede rational growth in the provision of boating services, is the principal focus of inquiry for this study.

The methods by which an individual marina operator may determine his risk exposures and identify the forms of insurance needed to cover them have already been discussed in the *Commercial Marine Insurance Guide*.[6] The present study has a different purpose, namely, to determine the actual buying practices of marina operators with respect to insurance coverages and to assess the dollar costs of the resulting programs as a burden on operating revenues. If these costs appear to be excessive, or if the programs provided appear to be markedly inadequate, there would be grounds for the presumption that insurable risk and its management pose a serious problem for the marina industry and constitute an impediment to the normal expansion of facilities.

However, the study is not limited to a description of actual insurance programs and costs. A second purpose is to explain and analyze the relevant market for insurance, the nature of its products, its pricing practices and its different sources of supply, so that marina operators may acquire a better understanding of how existing programs can be improved and present costs contained.

Thus the study's findings divide into two major parts corresponding to its purposes: an analysis of actual insurance programs and costs (chapter 2), and an examination of the characteristics of the market in which the programs are purchased (chapter 3).

Supplementing these two major divisions is a summary statement of the guiding principles underlying the acquisition of insurance coverages by business firms in general (chapter 4). Marina operators should find chapter 4 of utility as an adjunct to the *Commercial Marine Insurance Guide*.

Boundaries of Study

In the fall and winter of 1972-73, an insurance survey was made of marinas in the Narragansett Bay area.[7] Chapter 2 of this study presents an inventory and analysis of the coverages and costs revealed by that survey. Marina operators should

find interest and instruction in comparing their own individual programs and costs with those of other marinas and also with the industry-wide averages.

Before examining the results of the survey, its scope and limitations will be noted.

First, with respect to insurance programs, the survey was confined to non-life insurance—to the property-liability risk exposures. Life and health insurance, including pension and business continuation plans, were not surveyed.

Second, marina insurance costs are measured absolutely in premium dollars expended and relatively against gross revenues and total payrolls. Revenues were taken from a 1970 study by Niels Rorholm entitled *Rhode Island Marinas and Boat Yards*[8] and adjusted upward by a judgment factor of 1.28 to the estimated 1972-73 levels of operations and charges. Payroll data were obtained from the surveyed marinas' workmen's compensation policies. Marina financial statements were not available.

Third, the assessment of an insurance program entails not only a matching of coverage against hazard but also a comparison of the amount of insurance against insurable values. While amounts of coverage were determinable from an examination of marina policies, it was not possible to obtain insurable values, as for example, the actual cash values of buildings and contents for fire insurance purposes.

Fourth, the selection of marinas surveyed was derived from the 1970 study by Rorholm. That study identified "87 clusters of boats around piers" in the Narragansett Bay area. A survey of these clusters produced the following classification:

Full-time marinas and boat yards	45
Part-time marinas and boat yards	7
Primarily boat sales operations	7
Non-profit operations (e.g., yacht clubs)	18
No data obtained	10
Total	87

For several reasons, the 45 full-time marinas and boat yards were selected as the population to be studied. First, primary concern was with the problems of commercial firms of significant size which are fully engaged in supplying recreational boat owners in Rhode Island with summer slips and moorings, winter storage, maintenance and repairs, and miscellaneous services. Second, to give coherence to the study and to develop meaningful statistical analyses, it was important to restrict the population to firms which functionally were substantially homogeneous. Third, Rorholm's study had developed operational and financial data on these same 45 marinas which would be of utility as a supplement to the insurance study.

However, only 28 of these 45 marinas were fully surveyed. In some cases marina operators could not be contacted or were not interested in participating in the survey. In others, mutually convenient appointments could not be made during the survey period. In still others, the marinas had merged, sold out, or were either too small or too highly specialized to qualify any longer as full-time marinas of significant size.

Survey Procedure and Exhibits

Under sponsorship by the University of Rhode Island Marine Advisory Service and the Rhode Island Marine Trade Association, researchers made surveys of marina premises, operations, and risk hazards and conducted personal interviews with owners and operators to determine loss experience and attitudes toward insurance. A special effort was made in all cases to examine and record current insurance contracts, endorsements, rates and premiums. On occasion, interviews were also conducted with the owner's insurance agent.

Upon completion of each survey, the researcher recorded his findings on standardized report forms. These reports together with sample marina storage and repair contracts were placed in individual marina files and constituted the study's primary data collection.

The survey results are presented in a series of exhibits in which, to preserve the anonymity of data sources, cooperating marinas are identified by numbers only.[9] Each of these exhibits will be analyzed in subsequent chapters. They are briefly described here by way of introduction.

Exhibit 1 shows revenues, payrolls, total insurance costs and insurance costs as percentages of revenues and payrolls. The data are for individual marinas and also for the industry as a whole. Marina operators may profit from this exhibit by com-

paring their own costs with those of other marinas and with the industry-wide averages, and by investigating the reasons for substantial disparities if any.

Exhibit 2 analyzes the total insurance costs shown in Exhibit 1 by major exposures and lines of coverage of which there are five: Fire and Extended Coverage, General Liability, Workmen's Compensation, Automobile, and Marina Operators' Legal Liability. This exhibit identifies for marina operators the most productive areas for hazard control and risk management and enables them to assess their area costs against those of other marinas.

Exhibit 3 presents a cost-revenues comparison between two groups of marinas, those with and those without the coverage provided by marina operators' legal liability insurance on boats and equipment in the care, custody or control of the marina. This is usually very costly coverage and the data presented serve as a base for exploring the possibility that it is affordable only by the larger firms.

The results shown in these three exhibits pose the fundamental questions of marina insurance management to be discussed in the accompanying text of chapter 2 and, where market factors are involved, in the further discussion provided by chapter 3.

References and Notes

1. *Boating '72*. 1972. National Association of Engine and Boat Manufacturers, Greenwich, Conn.
2. Rorholm, N. 1971. *Rhode Island Marinas and Boat Yards 1970*. New England Marine Resources Information Program, Narragansett, R. I.
3. Ibid.
4. Ross, N. 1973. Personal communication.
5. URI Sea Grant Advisory Memorandum Series—Nos. 12 (1972) and 19 (1973). URI Marine Advisory Service, Narragansett, R. I.
6. Snow, S. *Commercial Marine Insurance Guide*. 1974. NEMRIP. This was first published in 1971 as *Marine Insurance Guide*.
7. The survey ranged from the Pawcatuck River in the west to Portsmouth, R. I., in the east.
8. Rorholm, N. op. cit.
9. As the survey comprised only 60 percent of the marina population, it should be difficult for anyone but the cooperating owner to identify a specifically numbered marina from the data presented in the exhibits.

2. Analysis of Current Programs and Costs

The Overall Program and Total Insurance Costs

The typical Rhode Island marina buys fire and extended coverage insurance, general liability insurance, workmen's compensation insurance, and automobile insurance. Flood insurance and marina operators' legal liability insurance may or may not be included in the total program. The purpose of this section is to assess the cost of an average marina's total insurance program in relation to the total revenues generated by the operations which give rise to the hazards insured against.

Total Program Costs

Exhibit 1 indicates that for the period 1972-73, 26 surveyed marinas paid an aggregate insurance bill of $113,111 for all forms of property-liability insurance. The average cost per marina was $4,350. However, in view of substantial inter-marina size disparities, a dollar average cost has little significance.

Two approximate indicators of marina size are revenues and payrolls. From the data provided in Exhibit 1, the relationships between these two variables and total insurance costs can be estimated. Costs consume 1.7 percent of gross revenues and are equivalent to 6.2 percent of payrolls. Payrolls are about 30 percent of revenues. That is, per $100 of gross revenues, the average marina spends about $30 for labor and $1.70 for insurance. Excluding Marina No. 13 (M13), which is an atypically large operation, the average expenditure for insurance per $100 of revenues would be $2.40. For simplicity of reference, the average industry cost can be as-

Exhibit 1. Total insurance costs related to gross revenues and payrolls.

Marina	Gross Revenues	Payrolls	Insurance Cost	Cost-to-Revenues	Cost-to-Payroll
1	$ 76,800	$ 12,000	$ 1,014	1.3%	8.5%
2	128,000	12,000	844	.7	7.0
3	n.a.	15,000	2,239	n.a.	14.9
4	64,000	15,000	1,921	3.0	12.8
5	153,600	67,000	5,423	3.5	8.0
6	n.a.	n.a.	471	n.a.	n.a.
7	108,800	33,500	1,602	1.5	4.8
8	128,000	62,000	3,461	2.7	6.0
9	41,600	n.a.	1,209	2.9	n.a.
10	n.a.	31,000	2,951	n.a.	9.5
11	128,000	24,000	2,691	2.1	11.2
12	64,000	8,000	822	1.3	10.3
13	2,224,000	652,000	21,850	1.0	3.4
14	288,000	115,000	7,034	2.4	6.1
15	20,400	n.a.	201	1.0	n.a.
16	n.a.	45,600	5,404	n.a.	11.9
17	256,000	77,300	5,303	2.1	6.9
18	96,000	35,000	1,806	1.9	5.2
19	147,200	22,500	2,198	1.5	9.8
20	640,000	94,000	3,814	.6	4.1
21	185,000	22,000	5,591	3.0	2.5
22	66,560	25,300	2,236	3.4	8.4
23	n.a.	n.a.	898	n.a.	n.a.
24	192,000	44,000	5,175	2.7	11.8
25	576,000	225,000	11,073	1.9	4.9
26	384,000	132,000	15,880	4.1	12.0
Totals and Averages	$5,967,960	$1,769,200	$113,111	1.7%	6.2%

signed a value of approximately 2 percent, the variations as noted above being understood.

Inter-Marina Cost Variations[1]

Relative to revenues earned, the total insurance costs actually paid by individual marinas ranged from a low of 0.6 percent for Marina No. 20 (M20) to a high of 4.1 percent for Marina No. 26 (M26). Only three marinas (M17, M18, and M25) closely approximated the industry average of 2 percent. However, despite a wide dispersion of individual costs, when marinas are grouped by major size classes (small, medium, large), the resulting averages conform to the industry average.

The average cost for marinas with revenues of less than $100,000 a year is 2.1 percent; for those with revenues between $100,000 and $200,000 it is 2.3 percent, and where revenues exceed $200,000 it is 2.0 percent (excluding the atypical M13).

Using revenues as a measure of total marina business, 21 percent of the industry incurred insurance costs-to-revenues of less than 1 percent; 29 percent of the industry had costs of from 1 to 2 percent; 28 percent had costs from 2 to 3 percent; 12 percent had costs from 3 to 4 percent, and 10 percent had costs in excess of 4 percent. Thus nearly 60 percent of the industry incurred costs of from 1 to 3 percent, the remainder being nearly equally divided below 1 percent and above 3 percent.

Exhibit 1 indicates that on average, marinas paid about $6.20 in insurance premiums for every $100 they spent on payroll. Variations among individual marinas were again large, ranging from $2.50 for M21 to $14.90 for M3. But whereas the cost-to-*revenues* average of about 2 percent was relatively constant in all three marina size classes, the cost-to-*payroll* averages varied significantly by size class. For marinas with revenues under $100,000, the average cost-to-payroll ratio was 8.2 percent; for marinas with revenues of $100,000 to $200,000, the average was 9.4 percent, and for those with revenues over $200,000, it was 6.7 percent.[2]

Interpretations and Applications

Insurance Budgets. Whether the marina size is small (less than $100,000 of revenues), medium ($100,000 to $200,000 in revenues), or large (over $200,000 in revenues), total insurance premiums on average cost about 2 percent of gross revenues. That is, in budgeting for insurance, marinas normally should allow for an expenditure equal to about 2 percent of revenues.

It is not known how this compares with the insurance budgets of other industries but probably it is on the high side. For automobile dealers and repair shops, for example, the cost-to-revenues ratio is probably not above 1 percent.

Payrolls are less reliable than revenues as a base for comparing inter-marina insurance costs. On average, the small marinas (revenues less than $100,000) have a lower ratio of payroll to revenues than the large marinas (revenues over $200,000)—respectively the ratios are 26 and 30 percent. Therefore, as the cost-to-revenues ratio is largely invariable with marina class size, small marinas *appear* to have a relatively higher insurance cost than large marinas when payroll is used as a basis for comparison.

For the industry as a whole, the payroll ratio can serve as another way of conceptualizing insurance costs. For every $100 paid in wages, about $7.90 will have to be paid for insurance premiums.[3]

Insurance Adequacy. The 2 percent cost-to-revenues ratio can be used as a point of departure for appraising the adequacy of a marina's insurance program. Assuming that insurance agents assist their clients to purchase a reasonably adequate insurance program, and assuming further that asset values and labor costs vary approximately with revenues—a large marina having more insurable value and liability exposures than a small one—it seems logical to conclude that an insurance budget equal to about 2 percent of revenues provides at least presumptive evidence of reasonably satisfactory risk protection.

According to this reasoning, the insurance programs of marinas with unusually low cost-to-revenues ratios (e.g., M2 and M20) would warrant careful review for adequacy of protection. On the other hand, programs with very high ratios (e.g., M5 and M26) should be reviewed for possible cost savings.

Actually, unusual departures from the norm of 2 percent may be more or less justified by special conditions. For example, a review of the files on the lowest cost-to-revenues marinas in Exhibit 1

discloses a variety of reasons for low cost: labor is performed primarily by the owner and his family; premises are rented from a landlord who buys the insurance; all hauling and launching is done by an independent contractor; buildings are old and have very low insurable values; a repair service is not offered; there are no owned automobiles.

However, these special conditions may conceal rather than reduce real risk costs. For example, family labor may be just as exposed to the real risk costs of occupational injury (disability and medical costs) as hired labor, and the rental paid for the use of hired premises and equipment contains a loading for insurance costs.

It is more difficult to account for the highest cost-to-revenues marinas in terms of special conditions. A restaurant and swimming pool operated by a marina may add to its insurance costs in a way for which allowance cannot readily be made in this study. And a new owner may modernize structures and equipment, with consequent increases in insurance costs, before annual revenues fully reflect the improvements effected. But in most cases, unusually high costs are traceable to unusually broad coverage and/or unusually high premiums for the coverage purchased. For example, a marina operator may purchase a special multiple perils policy instead of the usual fire and extended coverage contract; an umbrella liability policy may be added to the customary general liability protection; a marina operator's legal liability policy may be acquired at an exceptionally high premium.

Different attitudes toward risk and different capacities to bear risk must also be taken into account. Nevertheless, a review of the files supports in general the presumption that unusually low and high ratios of costs to revenues warrant special attention respectively for program adequacy and program economy.

Analysis of Programs and Costs by Major Risk Areas

A Sample Case

Before analyzing the findings shown in Exhibit 2, it may be instructive to review the contracts and annual premium costs found in the insurance file of a fairly typical marina.

The file selected for that purpose shows that marina buildings and contents are insured in the amount of $30,500 for fire and extended coverage at a rate of $1.43 per $100 of insurance for fire and 14¢ per $100 for extended coverage. The total premium is $477. In addition, $7,500 of fire and EC insurance is carried on the contents of an office and supply store at a cost of $99. Both policies are written subject to 80 percent coinsurance.

The marina's general liability exposures are covered by a Manufacturers' and Contractors' Liability Insurance policy in limits of $100,000 each person and $100,000 each occurrence for bodily injury liability and $10,000 each occurrence for property damage liability. As with liability insurance in general, the policy does not cover "property damage to property in the care, custody or control of the insured or as to which the insured is for any purpose exercising physical control." The annual premium of $407 is allocated 21 percent to "Boat Yards—Public," 71 percent to "storage and moorage including slip and dock rentals," and 8 percent to "use of vessels."

The Standard Workmen's Compensation and Employers' Liability policy, as with nearly all marinas, assigns the bulk of the payroll to the "Boat Building or Repairing" classification at a rate of $4.45 per $100 of estimated payroll.[4] This policy carries the customary U. S. Longshoremen's and Harbor Workers' Compensation Act endorsement and a limit of $100,000 on the Employers' Liability exposure. Thanks to favorable loss experience, a 6.1 percent premium discount applies and the annual premium is $2,760.

The marina's pick-up truck and automobile are covered on a standard Automobile Combination policy with the customary coverages for a premium of $260.

Finally, there is a Marina Operators' Legal Liability policy protecting the marina up to $100,000 per "loss, accident or occurrence" for loss of or damage to boats and equipment in the "care, custody or control" of the marina for the operations of mooring, storage, repairs, alterations, maintenance, hauling and launching. With a deductible of $250 per loss, the premium is assessed at a rate of 1.3 percent of the gross charges made for the operations for which the property is in the marina's care.

Thus, this marina's major areas of insurance costs can be summarized as follows:

(1)	Fire & Extended Coverage (F&EC)	$ 576	(9%)
(2)	General Liability (GL)	407	(6%)
(3)	Workmen's Compensation (WC)	2,760	(42%)
(4)	Automobiles (Auto)	260	(4%)
(5)	Marina Operators' Legal Liability (MOLL)	2,600	(39%)
	Total	$6,603	(100%)

Exhibit 2 brings together cost analyses of this kind for all the surveyed marinas.

Fundamental Ratios: an Illustration

Examination of the sample marina's insurance file indicates that insurers need to know gross charges, payrolls, and actual cash values of buildings and contents in order to determine the prices to charge for the coverages sold.[5]

If actual cash values and gross charges were taken as approximate dollar indicators[6] of plant and equipment and revenues respectively, then, in the case of the sample marina, about $20 of property values[7] and $25 of payroll ($45 of both) are needed to produce each $100 of revenues. That is, with respect to revenues, there are two ratios: a *property ratio* of 20 percent and a *payroll ratio* of 25 percent.

However, the insurance charge against payroll of $4.45 per $100 (see workmen's compensation) is nearly three times greater than the charge against property of $1.57 per $100 (see fire and extended coverage). Therefore, any reduction in the payroll ratio which can be gained by an increase in the property ratio is likely to be in the direction of insurance cost savings.

An illustration follows in seven parts.

1. Marina X invests $20 in property values (buildings, equipment, slips, derricks, cradles, etc.) and disburses $25 of annual payroll for every $100 of annual gross revenues it produces.

2. Therefore, Marina X has a *property ratio* of 20 percent and a *payroll ratio* of 25 percent.

3. For every $100 of property value, Marina X pays an annual insurance cost of $1.57. For every $100 of payroll, it pays $4.45 in annual insurance costs.

4. Marina X now invests an additional $12,000 in new property (e.g., labor-saving equipment) which enables it to reduce its payroll by $5,000 a year. That is, it increases its property ratio and decreases its payroll ratio assuming that revenues remain unchanged.

5. The life of the new property is eight years and its average insurable value is about $6,000 over its life span.

6. The additional average annual property insurance cost is $94.20 ($1.57 $\times$ 60) while the savings in annual payroll insurance is $222.50 ($4.45 $\times$ 50). The net savings is $128.30.

7. Over its eight-year life, the new property acquisition produces an aggregate insurance cost savings of $1,026.40. (In addition, savings in Social Security, temporary disability, unemployment, group life and health, and other forms of insurance and benefits should exceed the savings in payroll insurance. And, of course, the annual wage reduction of $5,000 in the given illustration will be much larger than the depreciation expense and cost of capital accruing from the asset acquisition).

This trade off between property and payroll ratios is simply another way of saying that capital budgeting can play an important role in the management of insurance costs. Similarly, the element of insurance cost savings could be a significant input in capital budgeting for marinas. Probably, the costs of an insurance program are minimized where the goals of capital budgeting are best attained.

Findings and Interpretations: Categories of Insurance

Exhibit 2 indicates that the insurance contracts purchased by marinas can be classified under five headings.

First, coverage on buildings, contents and equipment (including occasionally other property like piers and floats), consists primarily of *fire and extended coverage insurance*. In very few instances was coverage broadened to provide additional named perils insurance and only a minority of marinas bought flood insurance. Therefore, the first category of insurance coverages, that on property owned by the marina, can be designated as Fire and Extended Coverage or simply *F&EC*.

Second, the liability to which marina operators

are exposed under the law of negligence for accidental injury to the person or property of customers, guests, and other members of the public—but not including liability for automobile accidents or damage to property in the care, custody or control of the insured—is covered in most instances by a *Comprehensive General Liability* policy. However, other forms known as *Owners,' Landlords,' and Tenants'* and *Manufacturers' and Contractors'* liability contracts are also utilized. Unlike the fire and extended coverage insurance on property values, there is little uniformity or consistency in the writing of the liability contracts purchased by marinas and great diversity of endorsement and coverage exists. General Liability or simply *GL* identifies this category of coverage.

Third, in compliance with Rhode Island's compulsory workmens' compensation law, marinas hiring four or more employees purchased the standard *Workmen's Compensation and Employers' Liability* insurance contract. Some marinas with fewer than four employees voluntarily came under workmen's compensation and purchased the WC&EL policy to provide their workers with statutory disability and medical benefits in the event of occupational injury. Only four marinas—owner operated facilities—did not purchase WC insurance. All WC contracts were endorsed to comply with the U. S. Longshoremen's and Harbor Workers' Compensation Act for occupational injuries covered by that statute.[8] This third category of coverage is identified simply as *WC*.

Fourth, 60 percent of the surveyed marinas used commercial and/or private passenger vehicles in connection with marina business. The commercial vehicles were usually of the ¾-ton pick-up body type. Insurance was provided on the standard *Automobile Combination Policy* for bodily injury and property damage liability. Uninsured motorist, medical payments, and usually some form of physical damage coverage was generally included. Only rarely were policies endorsed to provide additional coverages such as Hired Cars and Employers' Non-Ownership Liability.

The fifth and last category of insurance includes forms and coverages of various kinds which protect the marina operator against liability for loss of or damage to boats and their equipment while in the care, custody or control of the marina for various purposes—hauling, launching, storage, repairs, maintenance, etc. Collectively these forms can be designated as *Marina Operators' Legal Liability* forms or simply *MOLL*. About 60 percent of the surveyed marinas purchased this kind of insurance.

These then are the five major categories of property-liability insurance purchased by marinas. A sixth or miscellaneous category could be added to include isolated instances of special coverage such as yacht, builder's risk, transit and floor plan insurance. However, the risks insured under such contracts do not arise directly from the kind of marina operations surveyed in this study.

Findings and Interpretations:
Cost Categories for All Marinas

Exhibit 2 shows that the $113,111 of total annual insurance premiums incurred in 1972-73 by all 26 marinas were allocated 41 percent to WC, 26 percent to F&EC, 18 percent to MOLL, 11 percent to GL, and 4 percent to Autos.

For all marinas considered as a whole, WC was the most costly insurance area and logically, therefore, the coverage meriting most attention from a risk management and cost control standpoint. A reduction of 11 percent in WC costs would save more insurance expense than the total elimination of all auto insurance costs.

Second in importance from a cost standpoint was the F&EC category. For the third ranking category, MOLL, special comment will be reserved under Exhibit 3.

Findings and Interpretations:
Cost Categories for Individual Marinas

WC Insurance. With respect to WC cost *as a percent of total insurance costs*, marinas varied individually from a low of 14 percent to a high of 74 percent. Marinas 8, 13, 18, and 20 had exceptionally high WC costs—60 percent and over. For these marinas the focus of risk management and cost control is clearly on workmen's compensation.

On the other hand, Marinas 16, 21 and 24 had exceptionally low WC costs—less than 20 percent of total costs. The median average for the remaining marinas was 35 percent.

There are three possible reasons why a marina

might exhibit a very high ratio of WC costs to total costs.

1. It has bought lightly or not at all in one or more other coverage categories. That is, WC costs are not really too high; rather they simply appear high because others costs are very low.

2. It has made average purchases in other categories of coverage but it has an exceptionally high payroll relative to gross revenues—that is, its labor costs are very high.

3. It has average labor costs and an average insurance program but it is paying a very high rate for WC insurance.

The first reason is purely statistical; the second and third are relevant and important: they indicate that either the marina has insufficient or inefficient plant and equipment or else its loss control program is defective. Perhaps both criticisms apply.

Marina operators will be aware of course of any experience debits which apply to their WC rates. However, they may not be aware of the extent to which their payroll/revenues ratio deviates from the industry average.

The data in Exhibits 1 and 2 should assist marina operators to investigate their WC costs. Let us consider Marina 8 as an example.

For this marina, WC costs ($2,113) are shown to be 61 percent of its total insurance costs or well above the industry average of 41 percent. Part of this cost is explained statistically—it does not have any MOLL insurance. However, its payroll-to-revenues ratio of 48 percent is considerably above the

Exhibit 2. Insurance costs by five major risk areas.

Marina	Total Costs	F&EC $	F&EC %	GL $	GL %	WC $	WC %	AUTOS $	AUTOS %	MOLL $	MOLL %
1	$ 1,014	89	9	326	32	367	36	232	23	—	—
2	844	113	13	230	29	236	29	265	31	—	—
3	2,239	459	21	326	15	521	23	283	12	650	29
4	1,921	200	10	—	—	521	27	—	—	1,200	63
5	5,423	971	18	190	3.5	1,573	29	189	3.5	2,500	46
6	471	200	48	271	52	—	—	—	—	—	—
7	1,602	466	29	341	21	795	50	—	—	—	—
8	3,461	860	25	322	9	2,113	61	166	5	—	—
9	1,209	50	4	570	48	—	—	164	13	425	35
10	2,951	577	20	904	30	1,170	40	300	10	0	0
11	2,691	276	10	803	30	864	32	—	—	748	28
12	822	346	42	130	16	346	42	—	—	—	—
13	21,850	3,653	17	714	3	16,203	74	1,280	6	—	—
14	7,034	1,717	24	783	11	2,462	35	572	8	1,500	22
15	201	—	—	201	100	—	—	—	—	—	—
16	5,404	1,830	34	122	2	983	18	375	7	2,094	39
17	5,303	576	11	407	8	2,760	52	260	5	1,300	24
18	1,806	464	26	127	7	1,215	67	—	—	—	—
19	2,198	1,225	56	230	10	743	34	—	—	—	—
20	3,814	314	8	—	—	2,300	60	200	5	1,000	27
21	5,591	851	15	2,149	38	766	14	—	—	1,825	33
22	2,236	540	24	352	14	942	40	402	22	—	—
23	898	100	11	379	44	—	—	119	12	300	33
24	5,175	1,438	28	587	11	898	18	171	3	2,081	40
25	11,073	4,078	36	1,201	11	5,294	48	—	—	500	5
26	15,880	7,652	48	1,065	7	3,506	22	—	—	3,657	23
Totals	$113,111	$29,045		$12,730		$46,578		$4,978		$19,780	
Percent of Total Costs	100%	26%		11%		41%		4%		18%	

industry average of 26 percent. Further, a review of the file indicates that its WC rate is debited by 15 percent. That is, this marina's WC costs are high for all three reasons listed above.

Probably the point of attack on M8's high WC costs lies in the marina's excessive payroll-to-revenues ratio. Asset improvement with more modern handling equipment should reduce the payroll/revenues ratio and also the injury hazards which give rise to WC rate debits. The resulting savings in WC premiums might then be applied to the purchase of MOLL insurance, a risk area which is currently uncovered.

Investigation may furnish economic justification for an insurance cost distribution which is considerably above the industry average in the area of WC (or elsewhere). On the other hand, it may disclose correctible weakness in both financial and risk management.

As already indicated, several marinas have exceptionally low ratios of WC costs to total insurance costs. It is of interest to compare one of these, Marina 24, with Marina 8. Exhibits 1 and 2 furnish the needed data:

Marina	Revenues	Payrolls	Premiums
8	$128,000	$62,000	$3,461
	(100%)	(48%)	(2.7%)
24	$192,000	$44,000	$5,175
	(100%)	(23%)	(2.7%)

Distribution of Premiums over Risk Areas*

F&EC	GL	WC	AUTO	MOLL
$ 860	$322	$2,113	$166	—
(25%)	(9%)	(61%)	(5%)	(0%)
$1,438	$587	$898	$171	$2,081
(28%)	(11%)	(18%)	(3%)	(40%)

* *Risk area percentages refer to premiums (total insurance costs). Other percentages refer to revenues.*

Both marinas are located in the same section of Narragansett Bay; both are engaged in the business of supplying recreational boating with slips, moorings, winter storage, repairs, etc. And both fall in the medium size class of marinas, those with revenues from $100,000 to $200,000. Further, both have the same ratio of total insurance costs to revenues, 2.7 percent, which is close to the industry average for their size class.

However, the payroll/revenues ratio for M8 (48 percent) is more than twice that for M24 (23 percent) and while financial statements are not available we can deduce from the insurable values underlying the F&EC costs, that M24 has a considerably higher property/revenues ratio than M8.[9] That is, M8 and M24, despite similarities in other respects, are opposites as to the *payroll* and *property ratios,* M8 being high-low whereas M24 is low-high. M8 relies heavily on labor to produce revenues whereas M24 relies more on plant and equipment. Consequently, M8 pays $1.65 in WC costs for every $100 of revenues ($2,113/$128,000) whereas *M24 pays only 47¢ per $100.* If like M8, M24 also had to pay $1.65 in WC costs per $100 of revenues, it would be unable to purchase any MOLL insurance without raising its total insurance costs-to-revenues ratio far above the industry average. That is, M24 is able to cover its MOLL exposure whereas M8 is not able to do so because of pronounced differences in their WC costs. That these differences relate to their respective payroll and property ratios seems highly probable.

Absolute or dollar insurance costs have little meaning in themselves. They become significant only when related to the productivity of the function which creates the risk insured against. For example, a comparison of M8's $2,113 of WC costs with M24's $898 of WC costs becomes significant only when their respective gross revenues (productivity) are also known.

Unlike the pricing of F&EC insurance, there is only one manual rate for WC insurance in the marina (Boat Building and Repairs) payroll classification. Therefore, two marinas with the same payroll classification and payroll amounts should have the same WC costs. Consequently, if the marinas offer basically similar services at competitive rates, and produce approximately the same gross revenues, their WC cost-to-revenues ratio should be approximately the same.

Both M8 and M24 are well managed marinas under close owner supervision. Yet, as noted, their WC cost-to-revenues ratios, 1.65 percent and 0.47 percent respectively, are radically different. Tracing the source of this difference, which produces a far better overall insurance program for M24 than for

M8, leads directly to the relationship between revenues and payrolls—the dollars of revenues produced per $100 of payroll—which in turn is very likely a reflection of the property ratio, the extent to which management utilizes property values to reduce labor costs (increase labor productivity).

While limitations on the scope of this study do not permit it, an expansion of the inquiry into the relationships shown in Exhibit 2 would have value in testing the hypothesis that, other things being equal, a low WC component cost ratio, like that of Marina 24 (which is 18 percent of total insurance costs), indicates not only sound risk management but also, and more importantly, sound financial management (capital budgeting).

Fire and Extended Coverage Insurance. As Exhibit 2 indicates, WC is the most important of all marina risk areas from the standpoint of insurance costs. Second in importance is the F&EC area which accounts for 26 percent of total insurance costs.

These two areas are in some respects similar and in others quite dissimilar. The WC risk involves human life values and therefore a form of compulsory social insurance which allows the marina operator very little choice as to risk management options. The F&EC risk involves property values—buildings, contents, equipment, etc.—a risk which in many cases and in different ways the marina operator may either assume or insure in part or in whole with various options as to the extent of perils coverage purchased. The WC rate per $100 of payroll is standardized for all marinas (the Boat Building and Repairing classification) whereas the F&EC rate per $100 of insurance varies considerably from marina to marina depending on location, construction, operations, loss exposure, protection, and other factors. At the time of this survey, the prevailing (1973) WC rate per $100 of payroll ($3.47) was much greater than the average F&EC rate per $100 of insurance ($1.50). As observed earlier, the substitution of $100 of insurable property (e.g., a labor-saving device) for $100 of insurable payroll is in the direction of substantial insurance cost savings.

A marina's F&EC costs will depend on several factors. The premium itself is directly determined by multiplying the amount of insurance by the applicable rate per $100 of insurance. Where an 80 percent coinsurance clause applies, as in most instances it does, the amount of insurance should be approximately equal to 80 percent of the insured property's actual cash value (ACV), that is, 80 percent of its replacement cost less physical depreciation, as both are estimated to be. In general, therefore, the F&EC dollar cost will depend on (1) the replacement cost of the insured property; (2) its depreciation (age, condition, maintenance, etc.); (3) the extent of perils coverage desired, and (4) the applicable rate as determined by the insurance rating authority on the basis of various risk-related factors.

However, what is of moment is not so much the absolute or dollar cost of F&EC as the relationship of that cost to the revenues produced by the marina's property investment. For marinas offering comparable services, we should expect some quantitative correspondence to exist between the size of the marina as to operations (revenues) and its size as to physical plant and equipment (P&E) measured in actual cash values. For example, a marina with $300,000 in gross revenues might need twice the property investment of one with revenues of $150,000. As the survey was not able to obtain insurable values, there is no way to determine the dollar relationship between revenues and P&E. However, the inspection of premises did reveal considerable differences among marinas as to the size, construction, age, condition, maintenance, etc., of P&E and hence as to ACV's. Thus, given marinas approximately equal in revenues and F&EC coverage and rates, the marina with the lowest ACV would have the lowest dollar F&EC cost and the lowest ratio of F&EC cost to revenues. From a risk cost standpoint, therefore, the principle of "good enough is best" would seem to apply, other things being equal. That is, unless "best" increases revenues or decreases labor costs significantly, "good enough" would seem to be the obvious choice.[10]

The data supplied in Exhibits 1 and 2 indicate that the average ratio of F&EC costs to revenues is 0.41 percent for both small and large marina size classes, 0.49 percent for marinas in the medium size class, and 0.43 percent for all marinas as a whole. On average, then, the product of ACV's and rates bears approximately the same relationship to revenues regardless of marina size class. Assuming that insurance is purchased equal to 80 percent of ACV and that the average F&EC rate is $1.50 per

$100 of insurance, this relationship means that on average, approximately $36 of P&E (ACV basis) underlie each $100 of revenues. That is, the marina property ratio (property/revenues) is about 36 percent. This compares with a payroll ratio (payroll/revenues) of about 26 percent.

However, there are extreme inter-marina differences as to coverage and prices in the F&EC risk area. For example:

1. Marina 20, a large operation with revenues of $640,000, spends only $314 a year on F&EC. This is .05 percent of revenues—less than 12 percent of the average industry expenditure. Its buildings are insured for only $7,500 and its contents for $5,000. The perils coverage is for fire, EC and vandalism and malicious mischief (VMM). In addition, the $5,000 of contents is insured against flood loss. The average rate per $100 of insurance is $2.51.

2. In marked contrast with Marina 20 is Marina 24, a medium size operation with $192,000 of revenues. Marina 24 spends $1,438 a year in the F&EC area or 0.75 percent of revenues, considerably above the industry average. Although M24 is less than a third as large as M20 (in revenues), it spends more than four times as much for F&EC. Buildings, contents, and equipment are insured for $168,000 against fire, EC, and broad form perils including glass damage, crime, boiler and machinery loss, etc. Extra expense, valuable papers, personal effects, piers and floats are also covered. In addition, contents are insured up to $5,000 against flood loss. The average rate for this very broad property coverage (known as a Business Owners' Package Policy) is 86¢ per $100 of insurance. Although M24 has much broader protection than M20, it pays only one-third as much per $100 of insurance. On the other hand, even allowing that M20 is grossly underinsured, it would appear that M24 has a much higher property ratio than M20 and has a much lower turnover of operating assets into revenues than has M20.

The survey did not determine either the book or actual cash values of marina property, real and personal, and therefore cannot establish the full significance of inter-marina coverage and cost differences in the F&EC area. However, the survey did determine the kinds of coverage purchased and the unit prices paid. These can be briefly summarized as follows:

1. Major reliance was placed on the standard fire insurance policy endorsed to include extended coverage perils. Where additional perils coverage was purchased, it was usually against vandalism and malicious mischief. Specifically, the primary coverage breakdown by marinas was: (a) F&EC only, 43 percent, (b) F&EC&VMM, 48 percent and (c) multiple peril package policy, 9 percent.

2. For secondary coverage, flood insurance was carried by 30 percent of the marinas (usually small amounts on contents although three marinas did substantially insure their buildings also); sprinkler leakage insurance by 9 percent (presumably by all the marinas with sprinklered properties); mercantile open stock burglary insurance by one marina. Three marinas insured their piers, wharves and slips against F&EC with high rates being charged for EC (about 90¢ per $100). And three marinas owned travel lifts for hauling and launching. Two of these were insured in package policies and the third was insured on an inland marine floater.

3. Fire insurance rates varied from marina to marina, from building to building within a single marina, and from carrier to carrier on the same building. Building rates per $100 of insurance ranged from about $1 to $2 around an average of about $1.35 (with 80 percent coinsurance). EC rates varied from about 10¢ to 20¢ per $100 of insurance, the average rate being 13¢. VMM rates were about 1¢. Therefore, the average rate for the most frequently purchased coverage combination—F&EC&VMM—was $1.49. (Attention is again directed to the 86¢ rate paid by Marina 24 for much more comprehensive marina operators multiple-peril package insurance.) Flood insurance rates did not vary much, the average building rate being 75¢ while the contents rate was $1.[11]

4. Aside from the extra expense coverage contained in the package policies, marinas had no protection against the indirect losses which frequently accompany direct F&EC losses. However, only one operator expressed real concern over his lack of business interruption insurance which he said he wanted but was unable to obtain.

The property insurance program of the typical marina is not elaborate. It consists essentially of

fire and windstorm insurance in limited amounts. Perhaps this is basically adequate. Or possibly it reflects an underwriting opinion that marinas as a whole are not a very desirable class of business and can be considered in some instances at least as "accommodation lines."

As one agent said, "Open exposures, high winds, congested conditions, and other adverse factors make for very serious loss-to-value claims when a fire does occur." Or it may be that marina operators feel that profit margins do not permit a very high priority rating for insurance expenditures in view of pressing needs for breakwaters, dredging, modernization, land acquisition, capital expansion, and so on. In sum, it may be not so much a question of the degree of risk averseness—all operators appearing to be highly averse to risk—as of the ranking of needs under resource rationing.

Property in the Marina's Care, Custody or Control

MOLL: Haves and Have-nots

The fifth risk-cost area is MOLL. It concerns the liability of marinas for loss of or damage to customers' boats and equipment while in the care, custody or control of the marina for moorage, winter storage, repairs, maintenance, hauling, launching, etc. While various forms can be used to protect against this liability, for convenience we shall refer to the coverage as Marina Operators' Legal Liability insurance or simply MOLL.

A fairly typical MOLL policy is that in force for Marina 17. The general liability coverage for that marina reads in part as follows:

> The Company will pay on behalf of the insured all sums which the insured shall become legally obligated to pay as damages because of property damage caused by an occurrence. . . . However, the insurance does not apply to damage to property in the care, custody or control of the insured or as to which the insured is for any purpose exercising physical control.

It is because of the "care, custody or control" exclusion in this GL contract that Marina 17 purchased MOLL insurance.

This particular MOLL policy consists of a yacht policy facing page to which is attached a "Marina Operators' Legal Liability Form." Under this form,

> The Company agrees to pay on behalf of the insured, all sums which the insured shall become obligated to pay by reason of the liability imposed by law for loss of or damage to boats and equipment while in the marina's care, custody or control at the scheduled premises for any of the operations listed below (repair, alteration, maintenance, storage, mooring, hauling or launching).

It can be seen that the wording of both policies is essentially the same except for the exclusion of "care, custody or control" in the GL contract and its inclusion in the MOLL contract.

In this particular MOLL policy, "The Company's maximum liability arising out of any one loss, accident or occurrence shall not exceed $100,000." Further, "the Company shall be liable only for the excess over and above $250 arising out of any one loss, accident or occurrence."

The premium is 1.3 percent of "Gross charges for operations covered by this policy" and the insured agrees "to keep a complete and accurate record" of such charges and to make a monthly report of them to the company.

With one exception, all surveyed marinas provide services (operations) as listed above—mooring, storage, repairs, etc.—and all are equally exposed to the liability covered by MOLL insurance. Further, in the four other risk areas, all marinas purchased substantially the same kinds if not amounts of coverage. It is curious to note, therefore, that in this fifth risk area, the surveyed marinas divide into two large sections, those which have (58 percent) and those which have not (42 percent) purchased MOLL coverage. (See Exhibit 2.)

If this protection is not really essential, then the "haves" are wasting a very substantial part of their insurance budgets. If it is essential, then the "have-nots" are seriously exposed to loss and the possible reasons for their failure to insure must be examined. In the following analysis, we shall adopt the second hypothesis.

Possible Reasons for Not Purchasing MOLL Insurance

The Risk Is Adequately Handled Through Hold Harmless Agreements. Nearly all marinas have formal contracts which customers are requested to

sign. All of these contracts contain clauses purporting to hold the marina harmless for damage to or loss of customers' boats and equipment. For example:

> Marina 1. It is the express intent of licensor and licensee that there is no delivery of licensee's property to the licensor and the latter does not assume any duty or responsibility regarding the care of licensee's property and licensor expressly declares itself not responsible for fire, theft, damage or loss to licensee's property or any part thereof. Only a license is granted and no bailment is created.
>
> Marina 4. The marina management is not responsible for any losses on or damage to boats in the marina, or any injury to patrons or their guests, from whatever cause.
>
> Marina 14. It is mutually agreed that the marina is in no way responsible for injury or damage to yachts, equipment, patrons, or their guests, from any cause whatsoever. . . . The owner agrees to hold the marina harmless from all claims of loss or damage to the vessel and its equipment caused by fire, windstorm, explosion, flood, burglary or theft.
>
> Marina 15. The management is not responsible or liable for damage or loss to the above named boat or its equipment . . . the marina is completely absolved from any and all claims . . . the boat owner does covenant and agree to protect and save harmless the marina from any loss, damage or expense for any reasons whatsoever.
>
> Marina 26. It is the express intent that only a lease is created hereby and no bailment is created. Lessor does not assume any duty regarding care of lessee's property. Lessee agrees that lessor is not responsible for any injury or damage from whatever cause.

A crane drops a $15,000 yacht causing extensive damage. A torch is knocked over inside a $100,000 yacht and appreciable damage is caused before the resulting fire can be extinguished. A workman leaves work at 4:30 p.m. and forgets to turn off a hose. The boat fills with water overnight and sinks.

During the survey, marina operators repeatedly expressed concern over their liability for losses of this kind notwithstanding the saving clauses contained in their contracts with patrons. Further, some pointed out that even if liability were successfully disputed, legal costs would amount to a considerable portion of the claimed loss. Difficulty in raising the cash with which to pay claims and expenses was also mentioned. And it was noted that even though the vessel owner recovered his loss under yacht insurance, the marina would be vulnerable under subrogation proceedings.[12]

That the majority of surveyed marinas (58 percent) paid large premiums for MOLL insurance is evidence of a strong belief that the "care, custody or control" risk cannot be adequately handled through hold harmless agreements.

MOLL Insurance Costs Too Much. Exhibit 3 analyzes the insurance cost-to-revenues ratios of two groups of marinas: those without and those with MOLL coverage. In general, the former are smaller than the latter. On average, those without MOLL have revenues of $102,000 whereas those with MOLL are more than twice as large (2.81 times) with revenues of $287,000. From this an implication might arise that small marinas cannot afford to purchase the protection available to large marinas.

However, when total insurance costs (not including MOLL premiums for Exhibit 3B marinas) are related to revenues, Exhibit 3 indicates that the average cost/revenue ratios for both groups are the same—1.7 percent. That is, aside from MOLL, the purchase of insurance places no greater burden on revenues for the smaller marinas than it does for the larger marinas. Furthermore, the average distribution of total insurance costs among the major risk areas is approximately the same for both groups. For the smaller marinas, the cost of F&EC and WC combined is 1.3 percent of revenues and 78 percent of total insurance costs as compared with 1.4 percent and 82 percent respectively for the larger marinas.

Therefore, if we assumed fairly comparable operating profit margins as between the two groups, there would seem to be little evidence that the smaller-size group is on average less able to finance MOLL coverage than the larger-size group. This is especially so as MOLL coverage is usually billed as a percent of gross charges.

As Exhibit 3 indicates, MOLL coverage adds an average 34 percent to the total insurance costs of the marinas buying it. (They are the Exhibit 3B marinas.) The average additional dollar cost is $1,631.

If the purchase of MOLL coverage costs the 3A marinas, those currently without that coverage, an additional 34 percent also, the average additional dollar cost would be $594. This is 0.6 percent of

the 3A marinas' average revenues. That is, the latter's total insurance costs would rise from 1.7 to 2.3 percent of revenues if MOLL were added to the program.

To accept as a reason that "MOLL costs too much" implies acceptance also of the proposition that on average the larger marinas can, while the smaller marinas cannot, support insurance budgets in excess of two percent of revenues. It suggests that for the smaller operations, two percent of revenues is not so much the measure of an adequate insurance budget as it is the maximum allowable allocation for insurance protection whether adequate or not.

The whole question of risk-cost management in this fifth coverage category (MOLL) invites further study.

References and Notes

1. Throughout, Exhibit 1 is the reference for numbered marinas.
2. The cost-to-payroll ratios for all three marina size classes are larger than the 6.2 percent shown for the industry as a whole. This is because revenues were not available for some of the marinas and therefore, as they could not be sized for classification, they were omitted. Also, to avoid distortion, M13 was not included in the large-size class.
3. Omitting M13. With M13, the average cost would be $6.20 as shown in Exhibit 1.
4. Effective in 1973, the rate for this classification was reduced from $4.45 to $3.47 per $100 of payroll.
5. Many other underwriting factors must also be determined in deriving the rates applicable to these three variables.
6. Gross charges will be less than gross revenues because sales and other sources of revenues are not included.

Exhibit 3. A cost-revenues comparison of marinas with and without MOLL insurance.

A. *8 Marinas Without MOLL Coverage*

		Insurance Costs						
No.	Revenues (R)	Total	(% R)	F&EC	WC	F&EC&WC	(% R)	(% TIC)*
1	$ 76,800	$ 1,014	1.3	$ 89	$ 367	$ 456	0.6	45
2	128,000	844	0.7	113	236	349	0.3	41
7	108,800	1,602	1.5	466	795	1,261	1.2	79
8	128,000	3,461	2.7	860	2,113	2,973	2.3	86
12	64,000	822	1.3	346	346	692	1.1	84
18	96,000	1,806	1.9	464	1,215	1,679	1.7	67
19	147,200	2,198	1.5	1,225	743	1,968	1.3	90
22	66,560	2,236	3.4	540	942	1,482	2.2	66
Totals	$815,360	$13,983	1.7			$10,860	1.3	78
Averages	$101,920	$ 1,748	1.7			$ 1,358	1.3	78

B. *10 Marinas With MOLL Coverage*

		Insurance Costs								
No.	Revenues (R)	Total	(% R)	F&EC	WC	F&EC&WC	(% R)	(% TIC)*	MOLL	(% TIC)*
4	$ 64,000	$ 721	1.1	$ 200	$ 521	$ 721	1.1	100	$ 1,200	166
5	153,600	2,923	1.9	971	1,573	2,544	1.7	87	2,500	86
11	128,000	1,943	1.5	276	864	1,140	0.9	59	748	38
14	288,000	5,534	1.9	1,717	2,462	4,179	1.5	76	1,500	27
17	256,000	4,003	1.6	576	2,760	3,336	1.3	83	1,300	32
20	640,000	2,814	0.4	314	2,300	2,614	0.4	93	1,000	36
21	185,000	3,766	2.0	851	766	1,617	0.9	43	1,825	48
24	192,000	3,094	1.6	1,438	898	2,336	1.2	76	2,081	67
25	576,000	10,573	1.8	4,078	5,294	9,372	1.6	89	500	5
26	384,000	12,223	3.2	7,652	3,506	11,158	2.9	91	3,657	30
Totals	$2,866,600	$47,594	1.7			$39,017	1.4	82	$16,311	34
Averages	$ 286,660	$ 4,759	1.7			$ 3,902	1.4	82	$ 1,631	34

* *TIC means Total Insurance Costs. For 3B marinas it does not include the cost of MOLL coverage.*

And actual cash value (replacement cost less depreciation) will usually differ from both market and original cost bases of asset valuation.

7. This marina leases its land. (The property ratio does not include land values.)
8. Recent changes in this statute will be discussed in chapter 3.
9. As indicated in a prior section, an increase in property values which produces appreciable payroll savings may be in the direction of substantial insurance cost reduction. To increase property values without increasing revenues or decreasing labor and other costs would obviously increase insurable risk and costs and lower marina earning power.
10. M24 has over three times as much property value as M8.
11. These are subsidized rates. The actuarial rates were very much greater. Effective July 10, 1972, the subsidized rates were reduced to 75¢ per $100 of contents insurance and 40¢ per $100 of building insurance where the building's value did not exceed $30,000.
12. Subrogation proceedings are discussed in chapter 3.
13. In the section, Inter-Marina Cost Variations, the cost-to-revenues ratio for "small" marinas, those with revenues of less than $100,000, is given as 2.1 percent. A comparison of Exhibits 1 and 3 will show that the sample composition of the "smaller" marinas in Exhibit 3, the 3A marinas, differs from that of the "small" marinas discussed in that section. The segregation of marinas not buying MOLL insurance reduces the cost-to-revenues ratio considerably.

3. Analysis of the Market for Marine Insurance

Fire and Extended Coverage Insurance

Chapter 2 analyzed the coverages actually carried by marinas and the prices actually paid. The purpose of this chapter is to review the major coverage categories, especially Fire and Extended Coverage, Workmen's Compensation, and Marina Operators' Legal Liability, in the light of the marina insurance market's structure as to products, prices and underwriting practices. The availability of coverage options and the factors underlying rates and premiums will be explored. This section is devoted to fire and extended coverage insurance.

Coverages

As indicated in chapter 2, marinas typically cover their property risk exposures with a simple program of fire and extended coverage insurance to which vandalism and malicious mischief coverage is frequently added.

Fire insurance for marinas is basically written to cover a marina's buildings (work buildings, stores, etc.). To the Rhode Island Standard Fire Policy, which is the same for all marinas, a number of descriptive forms may be attached. These include: (a) Buildings and Contents Form (for owned buildings, machinery, equipment, store supplies, etc.); (b) Builders' Risk Form (for new structures under construction); (c) Extended Coverage Endorsement (extends perils covered, especially to windstorm damage); (d) Vandalism and Malicious Mischief (extends coverage); (e) Flood Insurance (written in areas of Rhode Island declared eligible by the Federal Insurance Administrator in order to protect the owner of buildings and contents from flood losses); (f) Improvements and Betterments (tenant's additions to a building that he does not own); (g) Business Interruption (reimburses the marina operator for loss of income resulting from interruption of marina service work or sales caused by an insured peril), and (h) Other.[1]

There are, however, package policies that provide greater protection on property items and broader perils coverage.[2] Eight insurers write a package policy specifically for marinas: Aetna, Commercial Union, Home, Marine Office-Appleton & Cox Corporation (MOAC-Continental Companies), Safeco, Fireman's Fund American, Insurance Company of North America and Travelers.[3] While each insurer develops its own form of contract, as a general rule the package policy follows either a broad perils or an all risk approach rather than the named perils approach that is taken with straight F&EC insurance. Most package policies offer substantial premium savings over individual policy contracts providing comparable protection. Their procurement should be investigated by the marina owner or his agent.

Examples of perils that are not covered by Fire & EC & VMM policies but that may be covered in a package policy are: glass breakage, falling objects, weight of ice and snow, collapse, cracking, breaking and bulging of pipes, water damage and electrical apparatus breakdown.

Costs

The average rate paid by marinas for F&EC is about $1.50 per $100 of insurance. However, rate variations from marina to marina are considerable (see chapter 2, Analyses of Programs and Costs by Major Risk Areas). Many factors contribute to these rate variations.[4]

For fire insurance, unlike workmen's compensation insurance, there is no standard classification or standard schedule of rates that would apply generally to marinas. The rate for each marina is based on its individual risk characteristics including, for example, the nature of its operations, which might range from operating piers, floats, and wharves to boat storage, repairing, and sales.

Base rates are determined by the Insurance Services Office which uses complex rating formulas for each type of operation. Statewide insurance companies' experience, which is reported every two or three years, is then used to adjust the base rate. If experience is poor for a given class, the base rate is adjusted upward.

Next, the base rate is modified by grade of city or town. Exhibit 4 lists selected municipalities with their respective fire-rating grades. Providence (Grade 1) has the lowest rating, whereas West Greenwich (Grade 10) has the highest. A town grade is determined primarily by the composition and quality of its fire department, which ranges from full-time well-trained firefighters in Providence to part-time volunteer firemen in other municipalities. Other factors influencing the town

grade include fire safety programs, loss investigations, water supply, and speed of answering alarms. Obviously, the location of a marina determines the applicable town grade. Marinas located in Providence have a lower base rate than those in Westerly.

An additional rate-determining factor is the marina's distance from a public fire hydrant (e.g., 500, 1,000 or more than 1,000 feet) and also from a fire station (e.g., within or in excess of 3 miles). If a risk is located within 500 feet of a hydrant and within 3 miles of a recognized fire station, it is classified *protected*. A risk outside these limits is classified *unprotected*.

Once the adjusted base rate is determined, the Analytic (Dean) Schedule is applied. This schedule emphasizes construction, occupancy, protective devices and exposures. After-charges are levied for certain defective conditions. After a final rate is promulgated for each marina, the Insurance Services Office audits the insurers' dailies (copies of issued policies) to confirm that the companies are using the approved rates.

ISO rating inspectors noted that few marinas are low rated and that higher rates are charged primarily because the buildings have poorly constructed wood frames. Some have a marine railway inside the building, and few buildings are fire resistive (all metal). Exhibit 5 shows several examples of different fire rates for particular marinas and yacht clubs.

In summary, each operation (such as piers, wharves, floats) is separately schedule-rated, and rates are based primarily on operations and experience. Special hazards produce after-charges. A building over water is somewhat inaccessible to firefighters and hence has a higher rate than a building near a fire hydrant or fire station. Piers and floats have a 110-1 Fire Code, which happens to be a net rate (there is no experience adjustment). On the other hand, the manufacturing of fiberglass floats, a second class of marine operations, requires a plus 40 percent rate adjustment because of poor experience in this class.

Exhibit 4. List of selected cities and towns in Rhode Island with their grade letters.

	Minimum Rates	
Municipality	Dwelling Grade	Mercantile Manufacturing Grade
Barrington	C	6
Bristol	C	6
Charlestown	E	9
Cranston	B	3 or 4
East Greenwich	C	5 or 6
East Providence	B	3 or 4
Jamestown	C	5 or 6
Narragansett	C	5 or 6
Newport	C	5 or 6
Portsmouth	D	7 or 8
Providence	A	1 or 2
Tiverton	D	7 or 8
Warwick	B	3 or 4
Westerly	C	5 or 6
West Greenwich	F	10

Source: Insurance Services Office

Exhibit 5. Examples of different fire insurance rates.

Marina	Classification	Fire Code	Insurance Rate	Experience Adjustment[a]
A	Lumber, storage (marine supplies)	056-1	1.82	−10%
	Building rate (80% Co-ins.)	165-1	1.16	−25%
	Contents rate (80% Co-ins.)	165-1	1.82	−25%
B	Manufacturing (fiberglass floats)	N.A.[b]	2.55	+40%
	Marine supplies	056-1	2.84	−10%
	Contents rate	N.A.	2.84	+40%
	Sales	056-1	2.84	−10%
	Storage (wooden boat molds)	121	1.23	+40%
	1½-story frame building	P.F.C.[c]	3.04	+40%
	Storage (fiberglass floats)			
	Building (1½ stories)	121	3.45	+40%
	Contents	121	3.65	+40%
C	Hall	075	1.33	−15%
D	Hall	075	.93	−15%
E	Hall	075-1	.76	−15%
F	Building,	084	1.88	Net rate
	Boat storage	121	2.23	+40%

[a] *Based on statewide experience in this particular class of operations, not necessarily restricted to marinas.*

[b] *N.A. means not available.*

[c] *Indicates one or more open walls that produce a severe windstorm exposure.*

An interview with rating analysts from the Rhode Island State Insurance Department indicated that in certain cases ISO publishes rates which insurers consider to be too low for the risks involved. In such cases, a consent-to-rate filing is requested, since under Rhode Island insurance laws, all rates must have the prior approval of the State Insurance Commissioner. To illustrate: assume that ISO sets a rate for boat storage at $1.00 and that an insurer is willing to write this business only at a $1.50 rate. If the assured agrees to pay this rate, he signs a consent-to-rate filing certificate that is subsequently sent to the Insurance Commissioner for final approval. Several insurers use this method on a regular basis. Unfortunately, no records of consent-to-rate filings are kept by ISO. Nor does the State Insurance Department keep a master file, since each filing is kept by company name.

An alternative to consent-to-rate filing is the use of the excess and surplus lines market whereby an insurance broker is allowed to insure a Rhode Island marina with a non-admitted insurer (one not licensed to write insurance in Rhode Island) provided certain regulations are met.

Cost Reduction Recommendations

Results from a questionnaire mailed to insurers indicate that marina base rates are high largely because owners fail to comply with suggested safety standards. Both insurers and rating officials are seeking marinas that they can classify as "good" risks and therefore eligible for low rates, given the constraints previously mentioned. For example, a good risk might be a noncombustible, fire-restrictive building that has adequate fire protection, clear access to separate boat storage areas, and is clean and well kept. One respondent summarized the insurer's view of an ideal risk as follows:

> A good yard should have, within reason, good housekeeping, management, watchmen service, adequate extinguishers and fire fighting protection including water supply (hydrant or pump) and detection capability. It should have sprinklered buildings for storage and repairs and well separated areas of value concentration. Fire lanes should be present in any outdoor storage and any fueling docks should have adequate safety precaution and no-smoking regulations. Docks and piers should have adequate and proper marine lighting and wiring components with enough slack to allow for tidal differences in height of water. Docks must be in sound condition and with substantial pilings to allow for differences in tidal heights and abnormal high waters. It also makes a difference as to how well the area is naturally protected from wind and waves by breakwaters or peninsulas. No major work should be allowed on vessels by owners in repair or storage areas. In many areas, security of some form is necessary to protect against theft or vandalism exposures that may exist. They also may be beneficial for detection in the event of any fire to prevent large scale spread and loss. Condition of marine railways and travel lifts are important for consideration also.

Many of these suggestions also appear in the standards set by the National Fire Protection Association. These should be reviewed by every marina owner as a possible way of reducing fire insurance rates.[5] A summary of several standards appears in Exhibit 6. Compliance with standards such as these followed by a request for rerating of the premises by the Insurance Services Office can result in reduced fire rates.

The marina operator should ask specifically to see any after-charges in his fire rate because these are usually faults that he can easily correct in order to lower his rate.

One rating inspector indicated that minor conditions produce after-charges of 20¢ to 40¢, whereas major conditions produce after-charges of $2.00 in most cases. (He indicated that the charges are scaled from 10¢ to $4.00 per $100 of insurance.) The major causes of substantial after-charges are four.

1. Poor housekeeping: debris, tools and equipment are scattered around the premises.

2. Faulty arrangement of heating systems: many buildings contain little or no heat and many marinas use contractors' portable space heaters which are potential sources of fire. One case cited was a marina operator who enclosed a boat in glass or plastic cloth, left gasoline in the engine, then proceeded to place a *Salamander* space heater under the cloth and near the boat while he was working.

3. Conditions of buildings: many owners are so busy manufacturing boats that they fail to maintain their buildings properly. Also, the usage of the buildings causes rating problems. A building could be empty part of the year, used for repairs in certain months, and used for boat storage in the winter months.

4. For the larger marinas, spray finishing pro-

duces substantial after-charges. The use of fiberglass hardeners and the methods used produce differing rates.

In general, woodworking, paint removing and spraying, welding and cutting, handling gasoline and other highly flammable liquids, are all classified as "extra-hazardous" operations and as such are reflected in the fire rate that the marinas pay.

Some inspected marinas rely upon fire pails (of sand or water) to supplement the portable fire extinguishing equipment. In boat storage sheds these pails should be located on the walls so that they can be easily reached from the decks of the boats. Then a worker on the boat can simply reach over to grab a pail in event of fire. A sounding device when coupled with an automatic fire detection system and/or a regular watch service provides good loss prevention. In addition, the marina could train its own fire brigade to be used before the arrival of the fire department. All of these actions can serve to minimize fire losses when and if they should occur.

Finally, since class experience determines the adjusted base rate, it seems logical that loss prevention recommendations should be directed to all members of a given class of operations. Possibly a marina trade association could perform this educational activity.

Workmen's Compensation Insurance

Coverage and Cost

This form of insurance provides protection to

Exhibit 6. Suggested fire prevention standards.

General

1. Management should establish and enforce fire prevention regulations.
2. Employees should be trained in fire prevention and the proper emergency action in event of fire.
3. An emergency boat evacuation plan should be instituted.
4. There should be an adequate water supply nearby.

Specific

1. Portable fire extinguishers should be located within 50 feet of any point on the marina property.
2. Covered metal cans should be provided for oily and soiled rags and other combustible refuse.
3. Sawdust and wood shavings should be cleared away and disposed of daily.
4. Smoking should be prohibited and "no smoking" signs should be posted and enforced, especially at critical locations such as fueling stations.

Berthing and Repair Facilities

1. No fuel supply boat should be permitted within the berthing area.
2. Congestion should be avoided in the berthing area. Two lines of boats should be able to move rapidly during an emergency.
3. Firefighting apparatus should have access to all parts of the marina's facilities.
4. There should also be access to each boat afloat for emergency removal without having to move any other boat.
5. Mooring piers exceeding 50 feet in length should not be less than 4 feet wide.

Individual Boats

1. Management should inspect each boat received for repair services or shortage and note particularly the presence of any combustible vapors.
2. Unprotected battery terminals should be suitably covered to prevent inadvertent shorting from dropped tools.

Operations

1. Gasoline and other flammable liquids stored in drums or cans should be kept separated from other plant facilities.
2. Gasoline should not be used as a cleaner on the premises or on boats.
3. Removal of paint or other finishes by means of a blowtorch or use of flammable solvents should be restricted to exterior surfaces of boats and should be conducted only out-of-doors and well separated from other craft.
4. Noncombustible or properly flameproofed tarpaulins or metal shields should be set around the work in process to restrict the travel of sparks from welding, brazing, soldering, and cutting operations.
5. The boat repair area should be large enough to permit free access around boats.
6. The machine shop should be housed in a separate fire restrictive building.
7. Boat cradles should be kept free of combustible rubbish.

Electrical

1. Effective grounding facilities are of utmost importance to marinas due to the exposure of electrical systems and equipment to water, damp, or wet earth.
2. A complete inspection of all electrical wiring and ground connections should be made at intervals of not more than 30 days, by an assigned representative of the management. All corroded, worn, broken, or improper materials should be replaced or repaired immediately.

employees of marinas for injuries or death caused by accident and arising out of and in the course of their employment by the marina. Occupational diseases are also covered.

Five types of workmen's compensation benefits are enumerated in the Rhode Island State workmen's compensation law: (1) medical expenses; (2) loss of wages; (3) lump sum payments for stated disabilities; (4) rehabilitation benefits, and (5) death benefits.

Benefit payments must be made regardless of the marina's negligence or freedom from negligence. In exchange for this advantage, workmen's compensation becomes the injured employee's exclusive remedy; he cannot sue the marina owner even if the latter is negligent. However, he can sue third parties whose negligence caused the accident. (Compensation insurers are subrogated to any awards obtained by the injured worker in such third-party actions.)

Providing workmen's compensation insurance coverage for employees can prove a problem for marina owners because the cost of workmen's compensation coverage is relatively high when compared with that for other types of insurance (see chapter 2), and these costs may be greatly increased by a 1972 amendment in the U. S. Longshoremen's and Harbor Workers' Act.

U. S. Longshoremen's and Harbor Workers' Compensation Act

In 1927, the Federal Government passed the U. S. Longshoremen's and Harbor Workers' Compensation Act (LS&HWA) which requires that specified benefits be paid to any employee injured while working on navigable waters of the United States.

Because of the broad scope of the act, marinas whose employees occasionally install equipment on boats or who simply deliver goods on boats might become subject to the act's provisions. Since those provisions are not covered by the marina's Workmen's Compensation policy, it is necessary to request a LS&HWA endorsement in order to provide coverage for this exposure.

Prior to 1972, the act was restricted to maritime employment upon the navigable waters of the United States and territories, including any dry dock. Also, to bring a claim under this act, three conditions were required: (1) the accident must happen on navigable waters; (2) the employment must be maritime; and (3) the injuries must occur under circumstances precluding state workmen's compensation laws from providing a remedy.

On November 27, 1972, President Nixon signed into law an amendment to the LS&HWA that will have a definite impact upon marina owner's workmen's compensation insurance costs.[6] Exhibit 7 compares the original and amended acts against three key points.

Reactions have been generally negative. For example, one responding agent said: "This is a most confusing piece of legislation. I have read the amendment several times and I still don't understand it. Neither do the insurance companies that I represent."

The implications of the 1972 amendment as it affects marinas are as follows:

1. The LS&HWA has been expanded and liberalized; workers previously not covered by the act are now included.

2. An injured worker bringing a third party suit against a vessel owner can no longer base his suit on a breach of warranty of seaworthiness. Instead, he must prove negligence, and the doctrine of comparative negligence can be used.[7]

3. Maximum compensation benefit levels have been increased greatly.

4. Changes have been made in the benefits payable where an injured employee dies from causes *other* than the injury.

To illustrate number 3 above, assume that an injured marina employee earned $225 weekly. Prior to the amendment, he could only recover a maximum of $70 per week despite the fact that 66⅔ percent of his weekly earnings was $150. Now that same worker can collect the full $150, since the maximum has been increased to $167. Hence, in this example, the insurer would have to increase its weekly benefit by $80 (115 percent). Clearly, rates for workmen's compensation must rise to meet this added liability.

The extent of such rate increases will depend in part upon the marina's operations and whether there are any employees with a possible choice between LS&HWA and the Jones Act. This is primarily because of the higher level of benefits pro-

vided under the LS&HWA and the resultant increased claims cost.[8]

Yet, insurers are not in entire agreement about the ultimate impact of the recent amendment. In response to a survey of insurers, mixed reactions were obtained. One insurer even stated that his company was better off with the amendment because the claimant must prove negligence rather than claiming breach of the warranty of seaworthiness. Another observed that as a result of the amendment, his company would underwrite and investigate a marina more thoroughly than in the past. A third indicated that current and future rate levels would be dependent upon court interpretations. A fourth suggested that the average marina in Rhode Island can almost ignore the recent amendment because most of a Rhode Island marina's work is done on shore and is subject to the State's workmen's compensation law. This respondent did concede, however, that while a marina rarely employs longshoremen, its own employees might be deemed "harbor workers" and therefore subject to the act.

Often a fine line separates the Jones Act from LS&HWA cases. As one respondent said: "Generally, an employee other than a crew member would fall in the harbor-worker category." A crew member (one who takes the wheel, handles the

Exhibit 7. U. S. Longshoremen's and Harbor Workers' Act: a comparison of the original and amended acts as to three major definitions.

Original Act

Employee:

"The term 'employee' does not include a master or member of a crew of any vessel, nor any person engaged by the master to load or unload or repair any small vessel under eighteen tons net."

Employer:

"The term 'employer' means an employer any of whose employees are employed in maritime employment in whole or in part, upon the navigable waters of the United States (including any dry dock)."

Compensation Benefits—Maximum and Minimum:

"Compensation for disability shall not exceed $70 per week and compensation for total disability shall not be less than $18 per week: Provided, however, that if the employee's average weekly wages, as computed under section 910 of this title, are less than $18 per week he shall receive as compensation or total disability his average weekly wages."

Amended Act

Employee:

"The term 'employee' means any person engaged in maritime employment, including any longshoreman, or other person engaged in longshoring operations, and any harborworker including a ship repairman, shipbuilder, and shipbuilder, and ship-breaker, but such term does not include a master or member of a crew of any vessel, or any person engaged by the master to load or unload or repair any small vessel under eighteen tons net."

Employer:

"The term 'employer' means an employer any of whose employees are employed in maritime employment, in whole or in part, upon navigable waters of the United States (including any adjoining pier, wharf, dry dock, terminal, building way, marine railway, or other adjoining area customarily used by an employer in loading, unloading, repairing, or building a vessel)."

Compensation Benefits—Maximum and Minimum:

"(1) Except as provided in subsection (c), compensation for disability shall not exceed the following percentages of the applicable national average weekly wage as determined by the Secretary under paragraph (3):

(A) 125 per centum or $167, whichever is greater, during the period ending September 30, 1972.

(B) 150 per centum during the period beginning October 1, 1972, and ending September 30, 1974.

(C) 175 per centum during the period beginning October 1, 1974, and ending September 30, 1975.

(D) 200 per centum beginning October 1, 1975."

"(2) Compensation for total disability shall not be less than 50 per centum of the applicable national average weekly wage determined by the Secretary under paragraph (3), except that if the employee's average weekly wages as computed under section 10 are less than 50 per centum of such national average weekly wage, he shall receive his average weekly wages as compensation for total disability.

Subdivision (19) of the Definitions defines the term "National average weekly wage" as used in the Act as follows:

(19) "The term 'national average weekly wage' means the national average weekly earnings of production or nonsupervisory workers on private non-agricultural payrolls."

lines, a cook or engineer, etc.) falls under the scope of the Jones Act, subject to the exception of an employee assigned to a specific task. Hence, if a marina owner sends one of his employees to "look over" or "test out" a boat owned by a yachtsman, the employee might then be classified as a seaman under the Jones Act.

Perhaps the most controversial aspect of the amendment concerns the dividing line between federal jurisdiction (LS&HWA) and state jurisdiction (state workmen's compensation law). As indicated in Exhibit 7, the amended act extends federal jurisdiction to:

> Any adjoining pier, wharve, dry dock, terminal building, marine railway, or *other adjoining area* customarily used by an employer in loading, unloading, repairing, or building a vessel. (Emphasis added.)

One insurer plans to deny any claims under this amendment in order to force a court opinion on the point. Conceivably, a tackle shop salesman would now come under the jurisdiction of the LS&HWA.

The increased uncertainty as to employment status and applicable law at the time of an occupational injury makes it extremely important that marina operators review their workmen's compensation policies to ensure that the requisite endorsements have been added.

If the injury results from land-based operations not involving a maritime exposure, the standard workmen's compensation policy applies.

If the injury results from a maritime exposure on navigable waters, other than that of master or crew of a vessel, the federal Longshoremen's and Harbor Workers' Endorsement applies. (This is attached or should be attached to the workmen's compensation policy.)

If the injury results from a maritime exposure, involving the master or crew of a vessel, then two other endorsements are needed: (1) The Amendment to Coverage B (Employers' Liability) Endorsement and (2) The Voluntary Compensation Endorsement. The latter voluntarily extends state workmen's compensation benefits to injured marina employees provided they do not bring an action at law against the marina. The former broadens the scope of the marina's workmen's compensation policy to provide liability coverage if the injured marina employee waives the voluntary compensation benefit in favor of an action at law. It should be noted however, that this Amendment to Coverage B Endorsement does not apply to the marina's liability for such "transportation, wages, maintenance and cure" benefits as the injured employee may be entitled to under maritime law.

Marina Operators' Legal Liability Insurance

The marina insurance programs analyzed in chapter 2 are shaped by coverage availability as well as by cost considerations. Insurer surveys indicate that many companies are reluctant to insure marinas for even standard coverages while specialized coverages may be very difficult to obtain. Among the latter is insurance against the legal liability of marinas for loss to boats in their care, custody or control.

Appendix I lists 13 companies from which a marina might obtain a MOLL (marina operators' legal liability) policy. Exhibit 8 analyzes the MOLL coverage provided by six leaders in that group.

A common exclusion in the contracts of all six is liability assumed by the marina under contract. To protect himself against any liability that he may assume under a contract, other than an incidental contract, the marina operator should request to have the contractual liability exclusion eliminated from both the CGL and MOLL policies. Alternatively he may purchase Blanket Contractual Liability coverage. Other noteworthy exclusions are loss caused by the weight of a load exceeding the registered lifting capacity of any lift device and losses caused by freezing during certain time periods. Marinas using bubbler systems should note the latter exclusion carefully.

Ship Repairers' Legal Liability

A restricted form of MOLL is the Ship Repairers' Legal Liability form. This policy covers loss of or damage to vessels, craft and equipment in the care, custody and control of the insured *for alterations or repairs*. Coverage is also provided for loss or damage caused by such vessels under repair and loss or damage caused by employees working on the vessel. Loss must be discovered within 60 days of delivery or completion of work, whichever is earlier, in order to be covered.

Property owned by, leased to, or in the possession of the insured (other than what is covered in the policy) and vessels *stored* by the insured are excluded. If boats are taken in solely to be stored, an extension endorsement should be requested from the insurer. Rates for the SRLL form vary from one to 2½ percent of the ship repairer's total charges for the year.

Protection and Indemnity Endorsement to MOLL Policy

Protection and Indemnity Insurance provides bodily injury and property damage liability protection for accidents arising out of the ownership and operation of a vessel. It includes coverage for loss of life or personal injury to guests, to swimmers and to the public in general. Boat yards and ma-

Exhibit 8. Marina Operators' Legal Liability Insurance: analysis of the insuring clause in six leading policy contracts.

MOAC

This insurance covers except as hereinafter provided, the legal liability of the Insured arising out of the operations covered under this policy for loss or damage to private pleasure vessels or craft including their Hull, Spars, Sails, Materials, Tenders, Boats, Furniture, Machinery and other fittings and other interests on board which are in the Insured's care, custody or control at the locations specified herein.

Home

In consideration of the payment of premium and subject to the limits of liability, exclusions, conditions, and other terms of this policy this Company agrees to pay on behalf of the Insured, all sums which the Insured shall become obligated to pay by reason of the liability imposed upon him (them) by law for loss of or damage to private pleasure watercraft and their motors, the property of others, while in his (their) care, custody, or control at the premises scheduled in Clause 2 for any of the operations listed below.

Aetna

The coverage afforded by this policy is limited to the following described property of others in the care, custody, or control of the insured. As so qualified this insurance covers, except as hereinafter provided, the liability imposed by law upon the Insured arising out of only those operations of paragraph 2, elected by the Insured for loss of or damage to private pleasure vessels or craft, including their Hull, Spars, Sails, Materials, Tenders, Boats, Furniture, Machinery and other fittings and other interests on board, all while at the locations specified in paragraph 3.

Providence Washington

In consideration of premium paid hereunder and subject to the limits of liability, exclusions, conditions and other terms of this policy, this Company agrees to pay on behalf of the Insured, all sums which the Insured shall become obligated to pay by reason of liability imposed upon him (them) by law for:

(a) Loss of or damage to private pleasure type boats and equipment thereon, including outboard motorboats and motors, the property of others, while in his (their) care, custody, or control, at the premises (including adjacent moorings) scheduled in Clause 2 for any of the operations listed on following page, or while being shifted or moved by land or water within twenty-five (25) miles of such premises in connection with covered operations.

(b) Loss or damage to property of others not in the care, custody, or control of the Insured, within twenty-five (25) miles from the premises where the operations listed below are being carried out, and caused by the insured boats which are in their care, custody, or control for any of the operations listed below.

American Universal

In consideration of the payment of premium and subject to the limits of liability, exclusions, conditions, and other terms of this policy this Company agrees to pay on behalf of the insured, all sums which the Insured shall become obligated to pay by reason of the liability imposed upon him (them) by law for loss or damage to private pleasure watercraft and their motors, the property of others, while in his (their) care, custody, or control at the premises scheduled in Clause #2 for any of the operations listed below.

Talbot Bird & Company

This insurance covers the legal liability of the Assured as ship repairer and/or marina operator for loss or damage to vessels or craft including outboard motors and equipment on board:

(a) which are in their care, custody and control for the purpose of alteration or repair in or about the location listed under "Location" in this Policy, including pickup and delivery by water subject to the navigating warranty in this policy.

(b) which are being transported overland, within 50 statute miles of the Assured's location shown in this policy.

(c) which are moored or stored afloat or ashore at the location listed in this policy.

(d) while being serviced and fueled.

rinas need Protection and Indemnity Insurance because the omnibus clause in the Yacht policy carried by a customer excludes coverage for a boat yard, boat dealer and others in the service category. Yacht servicing businesses need Protection and Indemnity Insurance of their own to protect them for their operations of boats owned by customers.

It was obvious from the marinas surveyed that many of them have not purchased P&I insurance, which would provide liability protection for maritime operations, where maritime law applies. This might apply for marinas using large work boats or on delivery trips involving either state-registered or federally-documented vessels, where the courts might rule that such vessels are operated by a seaman (Jones Act) rather than a boat yard employee. Alternatively, boats used for demonstration purposes might also fall into this category. Finally, when a marina removes a wreck by using a barge, it faces a potential P&I exposure, or in cases where a marina employee is testing boats of others in navigable waters, this coverage would apply to an employee who caused bodily injury to other people.

An official of one insurer stated that his company would add the Protection and Indemnity endorsement to a Marina Operators' Legal Liability policy only if requested by the agent. He indicated that less than 50 percent of the agents request this endorsement.

In summary, the MOLL policy protects the marina for property in its care, custody, and control. The Marina Liability P&I endorsement provides property damage coverage for property not in the insured's care, custody, and control as well as coverage for loss of life or personal injury to persons other than marina employees.

Pricing the MOLL Policy

The MOLL policy is relatively high-cost insurance. Exhibit 3 indicates that for the ten marinas which purchased MOLL insurance, costs ranged from $500 (M25) to $3,657 (M26). The average cost was $1,631.

For this reason, several insurers writing MOLL insurance were surveyed in an attempt to discover how this coverage is priced. Their comments, quoted below, shed some light on the question.

1. Fire survey rates are totally inadequate for MOLL coverage, even if our Company did the fire survey. We will call Surveyor's Inc.'s office for a MOLL survey and will follow its recommendations all the way.

After two years, assuming we have a decent reserve, we will negotiate future premiums and we might grant a 10-20 percent experience credit depending upon the underwriter's estimate of the MPL (Maximum Probable Loss).

We do not use reinsurance on MOLL business but retain all coverage. The premium is based upon the size and extent of the operation. The marina form covers the legal liability of the marina resulting from negligent repairs, storage, docking at slips, mooring and anchoring at buoys, fueling, hauling, launching and other operations which can specifically be mentioned in the form. The amount of gross receipts of the marina for repairs, fueling, hauling and lauching is the basis for compiling the premium for the coverage. The premium for storage, docking at slips and mooring and anchoring at buoys is determined by the number of yachts and the values of the yachts.

2. Each risk is individually rated upon the receipt of a fully completed application and in some instances subsequent to inspection. Policies are generally written on an annual basis providing for monthly reports of gross receipts and a payment of a monthly premium.

This is a judgment-rated risk and, for the most part, is based upon past experience for the class, the exposures and size of the operation. Rates vary considerably and could be from $1.00 to $4.00 per $100 of gross receipts based upon the following: fire rate, limit of liability, operations to be covered, deductible, maximum dollar exposure, and gross receipts.

3. Using fire contents and extended coverage rates as bases, we develop rates for the liability exposures which are applied to separate receipts from certain phases of the prospect's operation, i.e., repairs, winter storage, docking, mooring, fueling, hauling, and launching. The receipts are provided to us by way of monthly reports or in certain cases in an annual report. Billing may be either on a monthly basis or through an annual adjustment against a deposit premium.

4. The premium for ship repair, fueling, and hauling and launching is developed by rating against gross receipts, with the rate varying depending on limit and deductible. Storage and mooring coverage is rated via a formula that takes into consideration limit vs. maximum foreseeable loss vs. total exposure. Exposures are rated individually and then transposed into a single rate against receipts. Individual risk characteristics allow adjustments.

5. Basically we use Fire & ECE rates, plus loadings (allowing experience credit) to develop a rate which is applied to the marinas' gross receipts.

6. Each risk is considered separately on its own merits based on a location Inspection Report and a completed application. The premium charge is based on the limits of liability, the gross receipts for each operation covered, the total sum of gross receipts, the deductible

selected, the location fire rate and the loss experience. We use the fire rate plus our judgment. There is no formula. Nor is there a "typical" rate. Each risk is re-rated each year and experience credits (or debits) are applied.

7. The Fire rate plus a judgment rate is applied to the gross receipts. We are not competitive and we know it. We might require a $9,000 premium on a $100,000 MOLL policy, provided the experience was good.

8. Our Storage Risk Rate is 3-4 percent of Gross Receipts. This is judgment-checked against a 50 percent loading of the fire rate for a good risk. We require realistic premium levels which we acknowledge are not generally competitive so we do not participate extensively in this area.

9. We use a survey of premises and the fire rate plus loss experience.

10. Ownership, management, location, physical plant, nature of operation and loss experience are all taken into consideration.

11. On those rare occasions when we write MOLL coverage, the premium is based on the number of units stored (or harbored) and their values.

12. The Premium is determined on the basis of gross receipts for the exposure insured and by Fire and Extended Coverage and Special Perils rating applicable to the premises. After two years, policies are then rated on the basis of loss experience, if the risk has not changed either through expansion, improvement or neglect in the overall premises. Premises are reinspected on the average of every four years to see that housekeeping conditions are maintained on a proper level, and reports are received periodically to reflect the assured's overall business activity.

An agent who specializes in marina insurance noted that the size of a marina's revenues affects the rate charged. He found that smaller marinas pay a higher rate (2 percent of revenues) for MOLL coverage than larger marinas. However, as the marina's experience matures, the insurer might issue experience credits of from 10-15 percent of the last year's premium if conditions are favorable. Exposures can vary within the premises of the marina. Maximum possible loss can be 100 percent inside buildings, while open storage or repair areas can have a maximum possible loss of 25 percent or less.

Implicit in MOLL pricing by all insurers is an evaluation of the marina as to risk quality in both its physical and management aspects. To supply marina operators with underwriting perspective on risk quality, the characteristics of a good risk as seen by a major marina insurer are cited below.

Characteristics of a Good Marina Risk

"We have been successful in writing policies for marinas which we feel, in large measure, is due to the strict underwriting guidelines we have laid down for this class," says a major marine insurer. The salient requirements follow.

For moorings, anchorages, slips and/or spaces: (a.) depth of water sufficient for vessels including allowances for unusually low tides and adverse weather; (b.) minimum exposure to wind, sea and wave wash with reasonable protection afforded by either a breakwater, sea wall or land mass; (c.) adequate spacing and protection for vessels docked side by side; (d.) adequate spacing between vessels docked and repair, storage and fueling facilities, and (e.) adequate fire protection on docks in the form of extinguishers, pumps and watchman services.

Fueling: (a.) fueling station cannot be in close proximity to other vessels, buildings, parking areas and other possible exposure to fire and explosion damage such as public roads; (b.) pumps, piping, tank holes and machines must be in reasonably good condition; (c.) fueling system must be suitably grounded; (d.) night fueling operations are not to be allowed; (e.) pumps must be locked when not in use; (f.) fueling must be done by employees only and never in the absence of the owner of the vessel or paid crew; (g.) No Smoking signs must be posted and enforced in the fueling areas; (h.) fire protection must be sufficient and in accordance with NFPA standards, and (i.) number of vessels at fueling station must be limited either by physical limitations or docking facilities or supervision.

Ship repair, storage and hauling and launching: (a.) all hauling and launching machinery including travel hoists, cranes, or gantries must be in good condition with acceptable and sound braking systems and with rated capacities sufficient for size of vessels handled; (b.) vessels cannot be hoisted over other vessels, buildings, etc., and machinery must always be operated by employees only; (c.) all cradles, tracks, chair wire rope, blocks, etc., particularly where exposed to water, must be maintained in good condition; (d.) construction and size of buildings used for storage and repair must be adequate to afford minimum exposure to fire, theft, windstorm, and flood, and (e.) there must be

adequate spacing between repair and storage facilities, or acceptable safeguards must be used when both operations are performed in close proximity to each other.

"Last, but not least, regardless of the operations performed in any marina, of utmost importance to us is the maintenance and the housekeeping which we feel are indicative of the management and, consequently, are the prime consideration in the underwriting of marinas. Intermittent checks are made on this."

An area of concern to insurers generally was whether a marina owner allowed individual boat owners to do repair work on their boats on the premises or whether the marina employed outside contractors, such as tank welders. Insurers prefer marinas that do not allow boat owners to make repairs on premises; only the marina's employees should do such repairs. They are very conscious of the fire peril. The desirability of fire-resistive construction and fire protection devices is stressed.

Since the MOLL premium is based on the fire & EC rate, one way a marina operator can reduce his MOLL premiums (and also his fire & EC premium) is to take positive action to reduce the threat of fire and to prevent its spread. A few dollars spent on fire protection devices can substantially reduce insurance premiums. Other major areas of concern are location of the marina and management policies.

To summarize, marinas can reduce insurance premiums for MOLL coverage by: (1.) more emphasis on fire prevention; (2.) better training and education of marina employees who have the ability to fight fires until help arrives; (3.) elimination of fire hazards; (4.) better fire protection planning for buildings, storage area, and operations, and (5.) managerial commitment to safety and loss-prevention programs.

Subrogation against Marinas by Yacht and Boat Insurers

Many marina patrons can collect from their own insurers (e.g., under a yacht policy) for loss or damage to boats and equipment in the marina's custody. They are not particularly concerned therefore with proceeding against the marina operator for legal damages even where the marina's liability seems to be clear.

However, their yacht insurers may wish to do so under subrogation proceedings in order to reimburse themselves for payments made to the yacht owners and thereby minimize the cost of yacht insurance.

Thus a definite cost element in the pricing of the MOLL policy purchased by marina operators is the extent of subrogation activity by yacht insurers. An investigation of this question with major yacht insurers elicited the comments which follow:

1. For small losses ($200-300) we will usually write it off. When eight to ten boats are involved in a major loss, we will definitely subrogate. Most cases of this nature are clear cut.

2. The logical answer to this question is "yes," provided the marina owner was legally liable. If in our opinion there was liability on the part of the marina owner or any of his employees for damages sustained by our insured's vessel, we would hope the owner of the marina would feel morally obligated to accept the responsibility for proper repair costs.

3. Whether our company subrogates or not depends upon whether there is a buyer's market (i.e., more slips available than boats).

4. In the event our company is presented with a claim involving a yacht which we insure and the marina appears to be negligent, we will first require the assured to make a claim against the marina. In the event the marina does not reimburse the assured for the repair of the damages, we then will pay our assured and subrogate against the marina. However, we feel it is important that we bring to your attention that we usually do not advise our assured to make claim against the marina unless we are completely satisfied that the marina is at fault. In other words, we feel that we should not waste time and money in attempting to collect from a marina which, in our opinion, cannot be proven negligent. After all, the marina might be a prospective assured or might refer many yacht customers to us for insurance coverage.

Insofar as the number of claims for damages submitted versus the actual number of claims paid, all we can say is that most of the claims submitted are paid by the company. In some instances the marina makes the repairs at their own expense or at the expense of their insurers. Most yacht policies cover damage to the yacht as a result of the negligence of the marina; therefore, in the event the damage resulted from the marina's negligence, the claim would either be paid by us, the marina or the insurer. However, in most instances it is paid by the yacht insurer, the insurer in turn subrogating against the marina.

Up to eight years ago, no insurance company sued a boat yard. The insurer needed the yards to recommend yacht insurance in their particular company. Following the big 1954 hurricane, many companies paid "Total

Losses" rather than go through the subrogation procedure.

5. Recently, changes have been occurring. Several boat yards have adopted the practice used by auto body shops. They have filed exaggerated claims, given "inflated" estimates of costs to repair, and as a result insurers no longer take into consideration the goodwill and loyalty that existed between the boat yards and insurers in the past. Certain companies now have two or three subrogation lawyers who readily press subrogation claims since they are paid 6 percent of the award.

6. As insurers of yachts, we have many times successfully proceeded against marinas for damages for which they were liable. We might also mention that we have been on the receiving end, as insurers of marinas.

7. About five to eight years ago (1965-1968), marina owners cooperated fully with insurers. They spent time and money to repair boats that were damaged by their own negligence. The dollars involved were not that large. Now the cost of labor and materials is much higher and marinas can no longer afford to repair or even salvage sunken boats. Whereas 10 years ago, the marina serviced $2500 boats, he now has $80,000 boats. As a result, cooperation is less and it becomes more costly for insurers in paying claims. Insurers do not try to avoid making payments now; they just investigate more thoroughly. We find more marina owners disclaiming liability than ever before. Even in cases where it is obvious that they were negligent, they will blame the boat owner or third parties.

8. Our company's position is one of compromise. Rather than sue in a subrogation case, and lose the goodwill of the marina owner, we compromise. The marina owner provides the labor and we provide the materials. Thus, the marina can complete the repair work and a lawsuit is avoided.

9. In answer to your question concerning subrogation action against marinas, we confirm that as the underwriter of a yacht which has been damaged by the negligence of a marina, we will subrogate in such instances. While in years past subrogation actions were much less prevalent than they are today, the increase in such actions is probably the direct result of the current realization of underwriters that all steps possible to improve loss experience are warranted in order to keep yacht rates at a minimum level and also because the financial responsibility of marinas has increased by reason of their insuring their liability.

These comments indicate that marina operators cannot rely on their patrons' yacht insurance for protection against loss to property in their custody. The trend seems to be toward increased subrogation activity.

Hold Harmless Agreements

The section on Property in the Marina's Care, Custody or Control in chapter 2 provided discussion of the attitudes of marina operators toward the effectiveness of the hold harmless agreements (escape clauses) contained in their contracts with patrons. To check the conclusions reached in that discussion, major marine insurers were asked for comments with the results cited below.

1. Courts will not find hold harmless agreements to be valid where gross negligence can be proved.

2. Some marinas rely upon hold harmless agreements and feel that liability insurance is not needed. This is a dangerous misconception.

3. We believe that it would be difficult for a marina to contract away its statutory liabilities and, therefore, question the validity of most hold harmless agreements they might devise.

4. We will ask for a copy of the agreement, but the agreement really does not help the marina. Unless the loss is caused by an Act of God, courts have generally held marinas liable for loss, despite the agreement.

5. We generally consider them of little value.

6. Hold harmless agreements are considered to be merely a formality in relation to the insurance afforded by the MOLL policy. The marina operator cannot contract away his negligence. It would seem that the agreement does serve to affirm there will be no liability other than "legal" liability.

7. The hold harmless clauses appearing in the contracts between marina and customer do not relieve the marina of liability in the event of negligence. Many attorneys feel that the courts would take the position that the marina customer signed the agreement under duress and, therefore, the courts would consider the agreement void. However, the signing of such an agreement by the assured does not help the yacht insurance company in its pursuit to recover the amount of the claim paid to their assured by reason of the marina's negligence. It creates one more defense item which the insurance company must overcome.

8. Hold harmless clauses typically violate the subrogation clause. We require copies of these clauses prior to issuance of a policy.

9. A boat owner may sign any form of agreement he wishes; however, he cannot contract away our rights of subrogation nor his obligation to us in the policy to cooperate in a subrogation action.

10. The question of the validity of the various types of hold harmless clauses employed by marinas is one we cannot answer in an authoritative manner. We are not aware that such clauses to date have been tested in the courts but our thinking is that legally they fall far short of a valid release. It would seem that gross negligence, certainly, on the part of the marina would hardly be excused despite the inclusion of a hold harmless clause in the agreement particularly if no option is provided the boat owner to negotiate this point. Obviously, the inclusion of a hold harmless clause in the contract

is desirable from the standpoint of the marina's liability underwriter since it is a "first line of defense" but whether it would stand up under attack is highly questionable.

11. Our regional home office file should include a current, up-to-date "hold harmless agreement," if coverage is to be granted for storage of customers' boats.

These comments indicate that the boat owner is squeezed between the MOLL insurer on the one hand and the Yacht insurer on the other. The former apparently requires that the marina operator obtain a hold harmless agreement from his patron while the latter insists that the boat owner do nothing to impair its right of subrogation against the marina. But in general practice, it would appear that these agreements are largely viewed by both sides as a formality which offers little real protection to the marina operator. This substantially supports the conclusion reached in the last major section in chapter 2, Property in the Marina's Care, Custody or Control.

Minimizing the Cost of MOLL Insurance

When insurers were asked how marina operators might minimize the cost of MOLL insurance, the replies received, however varied in phraseology, conveyed a common answer: compliance with safety engineering recommendations, prevention of the catastrophe loss, and the acceptance of higher deductibles.

1. Simply stated we would point to two areas. One would certainly be the acceptance of higher deductibles. Secondly, and perhaps most importantly, would be a willingness to follow the recommendations of qualified loss control representatives whose primary function is to minimize loss potential via rational loss control approaches. This would certainly include spread of risk, therefore requiring lower limits on a maximum foreseeable loss basis. Our company provides such services.

2. Compliance as promptly and as completely as possible with engineering recommendations and suggestions which are presented marinas in their own interest.

3. Our premium levels run in the area of between one and two percent of the assured's gross receipts. These levels may be reduced depending on a good loss record which could be assisted by a program of preventive maintenance of equipment.

Marina operators are not too realistic in their approach to insurance. In most marinas, the concentration of probable maximum losses generally falls in the area of $1-5 million depending on the number of berths and the class of vessels stored. On the basis of this exposure, the normal premiums usually run between $1,000 for the smallest marina to as much as $10,000 for the largest.

Relating such premiums to catastrophic losses like the fires which burned out the Essex Shipyard twice, and the Fairhaven Shipyard in New Jersey, would seem to make this business most unattractive. In addition to this, the dropping of a vessel while in a lifting device causing the total loss to the vessel ranging from $2,000 to $50,000 also contributes materially to the level of the premium rates.

4. Engineer the risk to hold losses to a minimum through reduction of hazards. Also, consider employing deductibles or self-retention levels.

5. There are insufficient premiums to support the exposure. Boat yards charge so many dollars per *foot*, whereas insurers are concerned with dollars of liability and often ask themselves, "What can this yard afford to pay?"

6. One area of concern is the concentration of boats stored on land (in buildings and in the open). If the marina operator can store the boats so as to minimize the concentration it could bring about a savings in premium cost. An alternative would be sprinklered storage buildings to eliminate the conflagration possibility.

7. Every individual or corporate entity who purchases insurance must come to the realization that insurance companies, like their assureds, are in business to obtain profits. As long as there is profit there will be reasonable cost. When dealing with large loss potential such as in this class of risk, one must realize that money has to be set aside somewhere and obtained somehow in expectation of that large loss. Premium levels have dropped in the past few years in this area of insurance, reflecting the good experience enjoyed by underwriters. In many cases the marina underwriter is obtaining a fraction of the premium that would be developed by a Fire Liability underwriter on the same exposure.

8. A responsible, well-run, financially sound marina can purchase coverage through many sources at an affordable premium. About 90% of the submissions coming to us are acceptable risks or can be made acceptable after slight changes are made in their operations.

Perhaps these comments by leading marina insurers belabor the obvious. If premium costs are to be minimized then loss costs must be minimized by preventive measures and the insured himself must assume a greater part of the risk.

References and Notes

1. See *Commercial Marine Insurance Guide* Publication No. 11, New England Marine Resources Information Program, rev. January, 1974.
2. As indicated in chapter 2, Analysis of Programs and Costs by Major Risk Areas, Marina 24 obtained its F&EC in-

surance, together with other coverages, in a package contract. This was an exceptional case however.

3. See Appendix 1 for an analysis of the marine insurance offerings of these and other insurers.
4. Personal interviews were held in the Spring of 1973 with William J. McCormick, manager of the Insurance Services Office of Rhode Island (the rating agency for the State of Rhode Island), rating inspectors from this agency, and rating analysts from the Insurance Commissioner's Office, Department of Business Regulation, for the State of Rhode Island.
5. See National Fire Protection Association Booklet No. 303, *Marinas and Boatyards, 1969*.
6. The Act is known as Public Law 92-576.
7. The term "vessel" means any vessel upon which or in connection with which any person entitled to benefits under this act suffers injury or death arising out of or in the course of his employment, and said vessel's owner, owner *pro hac vice*, agent, operator, charter, or bare boat charterer, master, officer, or crew member.
8. Prior to passage of the Jones Act, a seaman could not sue a vessel owner for negligence. He was limited to two options—an action in admiralty claiming unseaworthiness of the vessel or an action for wages (paid at the end of the voyage), maintenance (convalescent period), transportation (to the home port when the seaman was put ashore in another port), and cure (medical care).
   In 1920, Congress passed The Merchant Marine Act Section 20, U.S. Code Title 46, Chapter 18, which was popularly referred to as the Jones Act. This act retained the two options but allowed an injured seaman to seek trial by jury on the ground that the vessel owner was negligent. Injuries occurring on shore were covered by state workmen's compensation laws; injuries occurring on navigable waters were subject to federal domain (the Jones Act).
9. For an interesting discussion of this subject see Theodore Goller, "Exculpatory Clauses and Hold Harmless Agreements in the Maritime Industry," *Risk Management*, November 1973.

4. Risk Management Principles for Marinas

Risk management is an integral part of the successful operation of any business just as are financial management, personnel management and other functional areas of the business enterprise. Risk management pertains to the area of *pure* risk, that is, to risk which can only produce a loss and offer no chance of gain. For example, one should not be allowed to make a profit from a fire. A fire at the business premises can produce a loss but cannot produce a profit unless fraud is involved.

Risk management is a relatively new concept and has grown in importance with the recognition by management that a firm's resources could be quickly dissipated by improper handling of the many pure risks it faces. While large businesses developed the risk management function, it applies equally well to small and medium-sized firms, the classifications in which most marinas fall. It is the purpose of this chapter to provide an overview of the risk management function as it applies to marina operations.

Definition

Risk management can be defined as the aggregate effort of the business firm, in this case the marina, to conserve and protect earning power and assets by controlling the risk of accidental loss. The objective of risk management is to make the most efficient "before-the-loss" arrangements for an "after-the-loss" balance between the resources needed and the resources available to preserve the operational efficiency of the marina.

Resources

Implicit in the risk management objective is control over the amount of post-loss resources needed by the marina through prior planning and the operation of systematic programs of loss prevention and loss control. The main sources of post-loss resources available to a marina are: (1) resources from within the business, i.e., retained earnings; (2) credit resources, i.e., credit available to the marina from banks and other institutions; and (3) claims against others after the loss including insurance claims and any legal action that might be successful against a third party. In planning for "after-the-loss" resources, certain criteria must be considered. These are: (1) the adequacy of the resources; (2) the reliability of the resources; and (3) the cost of making these resources available. The adequacy of resources relates to the total amount available to meet losses if any should occur; the reliability relates to the certainty that such resources will be available, and the cost relates to the additional expense involved in securing the necessary resources needed after the loss.

Functions

In order to accomplish the objectives of risk management certain functions must be performed. These functions involve: (1) identification of the risk; (2) measurement of the risk; and (3) selection of the method of treating risk by deciding which method or combination of methods are best for handling the risk.

Risk Identification

Unless the marina manager identifies all the potential losses confronting his operation he will not have the opportunity to determine the best way to handle his risks. He will unconsciously retain certain risks through ignorance and will not be prepared for an unexpected occurrence. To identify all the potential losses, the risk manager needs, first, a check list of all the possible exposures to loss that could occur at or about the marina. Second, he needs a systematic approach to discover which of the potential losses included in the check list are pertinent to his own business. The marina manager may conduct this two-step procedure himself or he may rely upon the services of his insurance agent, a broker or an independent consultant. If the marina operator desires to perform the evaluation himself, sources for a check list of exposures are insurance companies, insurance publishing houses and the Insurance Division of the American Management Association.

Risk Evaluation

After the manager has identified the various types of potential losses faced by his firm, he must measure these losses in order (1) to determine their relative importance and (2) to obtain information that will help him decide which combination of risk management tools is most desirable. The information needed to measure the potential loss in-

cludes two elements: (1) the loss frequency or the probability that the loss will occur; and (2) the severity of the loss, that is, how large the loss may be. The primary concern is loss severity. Here we are concerned with the maximum possible loss which the marina could suffer from one occurrence. In this connection, the "unit concept" is applied. This concept includes not only the direct damage caused by the occurrence, but also its indirect consequences such as the loss of earnings while the marina cannot operate and the cost of putting the marina back in business. The latter includes interest on any money which would have to be borrowed to finance any new construction or replacement of equipment (particularly important if replacement cost insurance is not purchased) and also the time and effort on the part of the marina operator to supervise the rehabilitation of his operation.

Risk Treatment Methods

After the exposure to loss has been identified and the loss has been measured, the marina manager is in a position to determine the best method of handling his loss exposure. There are five recognized methods of handling risk: (1) avoid the risk entirely; (2) assume the risk; (3) transfer or shift the risk to someone financially better able to assume it; (4) pool the risk with other exposures; and (5) initiate activities to reduce or prevent the loss. Avoiding the risk is the most effective means of handling risk. However, in most cases, it is not a practical method since it entails avoiding an activity or activities which may be very profitable to the marina.

Risk may be assumed either knowingly or through ignorance. If knowingly, it may be assumed because there is no other feasible method of handling the risk or because the marina operator may be able to cope with the loss financially. If the risk is assumed in ignorance, then the marina operator is at the mercy of the unknown for his future operation. It is hoped that through the first step of risk management, risk identification, all unknown risks will be eliminated.

Risk may be pooled with other risks in order to reduce the uncertainty of their occurrence. Since most marina operators do not have a large number of any one type of risk exposures, they are not able to pool the risk in order to reduce the uncertainty. Hence, this is an impractical method. If an association of marinas was established, it is conceivable that risk could be handled by pooling all of the exposures of all the marinas in the association.

Loss prevention and loss reduction are practical means of risk treatment by marina operators. These include safety inspections of the premises in order to remove hazards and potential perils and involves capital investment to improve the facilities of the marina in order to either reduce or prevent losses. For example, the installation of sprinkler systems can reduce the loss due to fire and security measures can reduce crime losses. The main problem here is the allocation of available capital to these types of projects at a time when funds may be needed to develop greater returns (short-run profits) in other areas of the operation.

The primary method of treating risk is transferring or shifting it to someone more capable of handling the potential loss. This can be done in one of two ways: (1) risk can be shifted by contract other than insurance; or (2) it can be shifted through an insurance contract. To shift risk by contract other than insurance planning involves the use of hold harmless agreements and legal services to insure that the contracts will be effective if needed. Transfer of risk to another by insurance is the easiest and one of the most economical means to deal with risk. As such, it is the key tool which the marina operator has at his disposal.

If the marina operator decides to use insurance as his prime mechanism for dealing with certain (insurable) risks, he must perform the following three tasks.

1. Develop specifications for the insurance program. This includes determining the type and amount of coverage needed and desired. There are two basic approaches: one method is to formulate the ideal program, and then compare this program with the existing program. The thought behind this approach is that one's thinking is not confined by the existing program and new approaches may be used which will result in a better program than could be achieved by attempting to patch up the existing program. The second method is to begin with the existing program and compare it with the schedule of risks uncovered through the use of the fact-finding and physical survey mentioned earlier.

Unless the intent is to scrap the existing program completely (which may not be possible, even if it is desirable), the logical place to begin in developing insurance specifications and managing risks is with the existing program. Regardless of which system is adopted, the important thing is that a system be developed and that it be followed.

2. Find a market for the coverages desired (this is discussed in chapter 3).

3. Select the best coverages available considering the premiums involved and the financial resources of the marina operator. Normally the financial resources of the marina operator will be limited and all available coverages cannot be purchased. Hence, some system of priorities must be assigned to the various insurance needs. There are many ways to assign priorities. One system divides coverages into four classifications: (1) required, (2) essential, (3) desirable and (4) available.

Required coverages are those coverages which are required by either some specific law or contractual agreement, e.g., workmen's compensation insurances and, where required in mortgages, by fire and EC insurances.

Essential insurance contracts include coverages which protect the firm against losses which would threaten its continued existence if such a loss should occur. Examples of this are fire, extended coverage, flood, business interruption, general liability, automobile liability, and marine operators' legal liability insurance.

Desirable coverages are those designed for losses which would cause the firm serious economic distress but which would probably not force the owners to cease operation due to bankruptcy. Included here are such coverages as vandalism and malicious mischief, automobile comprehensive and collision, crime and transportation insurance.

Available coverages include all those coverages which may be of value to the business, but do not fall in one of the higher priorities. Examples of this type of coverage are plate glass, accounts receivable, rent or rental value, valuable papers and credit insurance.

The assignment of a priority to a particular coverage must be based upon the marina's exposure to losses, its financial resources and the marina operator's aversion to risk. Hence, it can be expected that each marina will develop a different list of priorities. What may be the best for one marina may not be the best for any other marina given the considerations outlined above.

Application of Risk Management Tools

Presented below is a brief outline of an application of the tools of risk management as they are applied to what might be considered a typical marina.

APPLICATION OF RISK MANAGEMENT TOOLS

I. Avoidance (not practical in most cases as the activity is essential to the successful operation or the return is worth the risk involved)
II. Loss prevention and reduction
  A. Installation of automatic sprinklers
  B. Installation of alarm systems, both fire and burglary
  C. Safety inspection of vehicles and equipment
  D. Compliance with Occupational Safety and Health Act standards
  E. Maintenance of good operating standards (see chapter 3 on fire rating for examples)
III. Assumption of Losses
  A. Up to the deductible amount on policies which are written with a deductible provision
  B. In excess of the limit or amount of insurance purchased
  C. Excluded from insurance contracts purchased
  D. To valuable records
  E. From forgery on incoming instruments
  F. Due to war
  G. Of customers following resumption of business after a shutdown
  H. For credit
  I. For flood (can be insured)
  J. For earthquake (can be insured)
IV. Transfer
  A. By non-insurance means
    1. Hold harmless agreement on the hauling and launching of boats
    2. Hold harmless agreement on the storage of boats
    3. Purchase agreements
    4. Sales agreements
  B. By insurance contract
    1. Required
      a. By law
        (1) Workmen's Compensation (4 or more employees in Rhode Island)
          (a) Rhode Island coverage
          (b) Longshoremen's and harbor workers' compensation
          (c) Jones Act endorsement
          (d) Federal Employers' Liability Act endorsement

(2) Automobile liability (to meet state's financial responsibility requirements)

b. By contract
   (1) Fire and extended coverage (on mortgaged property)
   (2) Contractual liability (sale or purchase agreement)
   (3) Contractors' liability (construction alteration and demolition on premises)

2. Essential
   a. Fire and extended coverage
   b. Business interruption or extra expense
   c. Comprehensive general liability
      (1) Premises and operations
      (2) Contractual
      (3) Products
      (4) Completed operations
      (5) Independent contractors
   d. Marine liability
      (1) Marina operators' legal liability
      (2) Protection and indemnity
   e. Excess liability (umbrella liability)
   f. Comprehensive automobile liability (increased limits)
   g. Boiler and machinery insurance
   h. Life insurance on key personnel
   i. Disability income insurance on key personnel
   j. Life insurance on owner when a buy and sell agreement is in force
   k. Workmen's compensation (above that required by law)
      (1) Universal endorsement
      (2) Voluntary compensation endorsement
   l. Flood (if exposure is present)
   m. Earthquake (if exposure is present)
   n. Yacht (if exposure is present)

3. Desirable
   a. Vandalism and malicious mischief insurance
   b. Automobile comprehensive and collision insurance
   c. Comprehensive crime insurance
      (1) Employee dishonesty
      (2) Broad form—inside (destruction, disappearance and wrongful abstraction)
      (3) Broad form—outside (destruction, disappearance and wrongful abstraction)
   d. Fire legal liability
   e. Transportation insurance

4. Available
   a. Accounts receivable insurance
   b. Leasehold insurance
   c. Depreciation insurance
   d. Glass insurance
   e. Depositor forgery
   f. Counterfeit money

V. Pooling (not practical unless trade association can establish the pool)

Summary

Risk management is the aggregate effort of the marina operator to protect and conserve the earning power and assets of the firm by controlling the risk of accidental loss of assets by the most economical means. The concern is with pure risk—that risk which involves only the chance of loss, not gain. The effort to control pure risk involves three primary functions: (1) the identification of exposures to loss; (2) the measurement of the severity and frequency of possible losses, and (3) the selection of the best method to handle the possible losses.

Potential losses must be identified or the marina manager will assume them unknowingly and will be unable to plan for or manage the possible loss. The probable severity and frequency of losses must be determined in order to select the best tools or techniques for handling the loss. Small losses may be assumed but the possibility of large losses must be planned for if the marina is to be operated successfully. The tools or techniques available for risk management are: (1) avoidance, (2) loss prevention and reduction, (3) non-insurance transfers of risk, (4) transfer of risk by insurance contracts and (5) pooling.

Insurance is the primary tool which the marina operators have available for managing risks. Insurance, although an economical technique, requires an expenditure of usually limited funds. Hence, not all available coverages can be purchased by the marina operator. To allocate insurance funds wisely, coverages should be assigned priorities. One system of classifying coverages is: required, essential, desirable and available.

Three practical rules which a marina manager should keep in mind when applying the concepts of risk management outlined above are: (1) don't risk more than you can afford to lose; (2) don't risk a lot for a little, and (3) consider the odds.

5. Conclusions and Recommendations

Continued development of the Narragansett Bay area for recreational boating depends to a large extent on the capability of marina operators to meet the demand for expanded boat servicing facilities. Currently, that capability appears to be confronted by an impressive array of serious problems. Is marina insurance one of them? Specifically, does the cost of an adequate insurance program place an excessive burden on marina finances? Does it lead to inadequate insurance protection? Does it inhibit investment in additional facilities? To examine these questions was a major purpose of this study.

Two Concepts of Marina Insurance Costs

There are two concepts of marina insurance costs. Objectively considered, insurance costs are like any other essential cost of doing business. They are a part of the total operating costs which are deducted from total revenues to determine the marina's before-tax net income.

Subjectively, they may be differentiated from other costs on the grounds that insurance is not immediately or directly necessary for the creation of boating services. Patrons, like operators, can visualize the labor and materials which go into the repair of damaged hulls and assess and accept the charges made for them. Beyond that, patrons are probably aware that utilities, rents, taxes and interest charges are also necessary, if indirect, costs to be shared by marina users. They may be less willing to view the cost of insurance protection for the operator's interests as a cost which they should share.

Operators themselves may look upon insurance as an optional and, with luck, unnecessary purchase for the rendering of marina services. Subjectively, they may rank their operating costs according to some schedule of priorities with a very low priority being assigned to insurance costs. It may even be that some operators relate insurance costs to after-tax profits rather than to gross revenues in determining the affordability of such costs and the burden they place on marina finances.

For several reasons, the subjective view of marina insurance costs is naive and untenable. First, workmen's compensation insurance, the largest element in insurance costs, is for most marinas a compulsory purchase. And other elements such as fire insurance on mortgaged property are at least quasi-compulsory. Second, for business firms generally, non-life insurance premiums are routinely accounted for as tax-deductible costs of doing business. Third, however tempting it may be, it is erroneous for a marina operator to look back in retrospect to a loss-free year and reflect that but for his insurance he would have made (on average) $4,350 more profit (see chapter 2). Risk costs cannot be escaped; either they must be paid in full when loss occurs or else averaged out by risk pooling. If some marinas are loss-free in a given year, others may suffer substantial loss. And when this occurs, it may require the pooling of many premium payments to create the fund from which a particular loss is paid. That insurers generally seem less than anxious to write marina risks suggests that the balancing of premium pools with needed loss-payment funds is not easily achieved in the marina market.

In accordance with social accounting theory, sector activities should bear sector costs; that is, recreational boating should pay its own way. Therefore, if the cost of adequate insurance protection for the marina's risk exposures is a necessary cost of doing business, it is also a legitimate expense to pass along to the boating public in the price charged for marina facilities. The study has determined that a provision of about two percent in the price charged for services will on average cover the insurance costs of a typical marina operation. This would appear to be an affordable increment in the total costs of boat ownership. If so, it should also be affordable to marina operators. Failure to insure is simply failure to price up to full costs with the result that the marina operator subsidizes recreational boating to the extent of his uninsured gap.

Viewed objectively, it is difficult to see how insurance costs can be considered an impediment to general marina expansion and the additional investment that entails.

Some Specific Conclusions

Area trade associations could render a useful educational service by providing marina operators with both model budgeting procedures and sound pricing concepts for the handling of marina insurance costs. As insurance costs ultimately reflect hazards, a model program of loss prevention should

also be included. Failure of individual marinas to exercise reasonable control over hazards affects not only their own costs through merit rating but also, through insured risk pooling, the costs of the entire industry.

Actually, sound risk management is probably to a large extent a natural by-product of sound financial management. To seek out more profitable ways to conduct operations through capital budgeting procedures would seem to lead almost inevitably to lower insurance costs as well as to increased efficiency and earning power. The insuring of human life values is far more costly for marinas than the insuring of property values and within reason the substitution of machine hours for man hours would seem to be always in the direction of reduced insurance costs.

The study developed no evidence of recent marina bankruptcy or serious financial embarrassment as a result of uninsured loss. However, the study was of limited scope and does not furnish a sufficient basis for a firm conclusion that marina insurance programs are currently and fundamentally adequate. Certainly, marinas with uncovered MOLL exposures are not fully protected. And it is obvious that, with few exceptions, marina insurance programs are stripped down to bare essentials. In the future, therefore, insurance costs as a percent of gross revenues should probably trend upward rather than downward. Adequacy of protection would be more certain of achievement at a cost-to-revenues ratio nearer three percent than two percent.

These conclusions can now be arranged in a series of summary statements:

1. All marina operators should protect their financial interests with a full and adequate program of insurance including MOLL coverage.

2. Assuming a reasonable observance of hazard control and loss prevention principles, and the use of capital budgeting procedures to achieve an optimum balance between investments in plant and equipment and expenditures on labor, it should be possible for marinas generally to acquire adequate insurance programs with an insurance budget equal to about two to three percent of gross revenues.

3. The cost of the insurance program should be considered as much a real cost of producing marina services and facilities as that of labor and materials. If the cash flows created by premium payments do not actually return in a given year to indemnify one marina, they are used in that year to indemnify another, or else set aside in a reserve for the payment of a catastrophe loss in some future period.

4. The cost of the insurance program should be a definite input into each marina's pricing formula so that the users of the services supplied pay the full costs of their production.

5. Deductibles can reduce marina insurance costs significantly but in that event, if full risk costs are to be passed along to marina users, an average uninsured loss provision should be estimated and included in the marina's price formula.

6. Finally, when insurers place reliance on judgment factors for the determination of rates (e.g., MOLL insurance), the market may be characterized by appreciable price variability. Marina operators should compare prices at various sources of supply before buying coverage.

Suggestions for Further Research

This study was confined to property-liability exposures and therefore the extent and cost of other marina insurance programs are not known. The cost of Social Security, unemployment and temporary disability insurance can, of course, be estimated approximately from payroll data but a determination of the premiums paid for private life, health and pension programs must await subsequent inquiry. It may be that the overall "life" program purchased by the typical marina costs as much as the property-liability program. In that event, total marina insurance costs on average may be nearer five percent than two percent of gross revenues.

Further, the discussion of marina insurance costs in the property-liability field was centered very largely on industry-wide averages and sub-averages based on marina size classes as measured by reported gross revenues. It would have been more revealing perhaps to have distinguished between marinas run as family businesses by persons embracing a favored way of life (love of boats and water) and those run as large-scale, expansion-minded, profit-seeking investments. Additional study might reveal that the insurance problems of these

two classes of entrepreneurs are quite different and merit separate treatment.

Also, the subject of insurance programming and affordability would seem to relate rather closely to the unit prices charged for facilities and services. In the Narragansett Bay area, these unit charges vary considerably from marina to marina. For example, footage slip charges varied in 1973 from $6.50 to $14 around a medium average of $10. While these differences are partially explainable in terms of marina location and the quantity and quality of services rendered, they may bear no necessary relationship to risk cost differences. It would be interesting to determine the relationship between the adequacy of insurance programming and the rates charged for accommodations.

Finally, much more should be known about the profitability record of the marina industry. According to a 1963 study by the National Association of Engine and Boat Manufacturers (*The Modern Marina*), net profits in private marina operations have run as high as 30 percent and as low as 4 percent. How the adequacy and cost of a marina's insurance program relate to its profitability record, and the reasons for such relationship as may exist between them, would provide valuable insight into the problems of marina insurance management.

Appendix Exhibit. Summary of insurer survey responses.

	Ship Repairers' Legal Liability	*Marina Operators' Legal Liability*	*Protection and Indemnity Endorsement to MOLL Policy*	*Boat Dealers' Liability*	*Boat Surveyors' Legal Liability*	*Excess Liability (Umbrella)*	*Hull Policy*	*Yacht Policy*	*Package Policy*	*Other*
Aetna Insurance Company	Yes	Yes	Yes[1]	Yes	No[2]	Yes	Yes	Yes	Yes[3]	—
Aetna Life Casualty	Yes	Yes	Yes	Yes	No	No	Yes	No[4]	No	—
American Universal	Yes	Yes	Yes	Yes	No	Yes[5]	Yes	Yes	No	[6]
Marine Office—Appleton and Cox Corporation (MOAC)	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	—
Commercial Union	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	[7]
Fireman's Fund	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	—
Great American	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	[8]
Guaranty National	No	Yes	No	Yes	No	No	No	No	No	—
Hartford Insurance	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	[9]
Home Insurance	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	—
INA	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	[10]
Kemper Insurance	Yes	No	No	No	No	No	Yes	Yes	No	—
Nationwide	No	No	No	Yes[11]	No	No	No	No	No	—
Providence Washington	Yes	No[12]	No[13]	Yes	No	No	Yes	Yes	No	—
Royal Globe	No	No[12]	No[13]	No	No	No	No	No	No	—
Talbot, Bird and Company	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	—
Travelers	Yes	Yes[14]	Yes	Yes	No	Yes[14]	Yes	Yes	Yes[15]	—
SAFECO	No	No	No	Yes	No	No	Yes[4]	Yes[4]	Yes	—
Totals—Yes	14	13	12	16	0	5	15	14	8	
No	4	5	6	2	18	13	3	4	10	

[1] *But only if requested by agent.*

[2] *New York only.*

[3] *Especially for Florida marinas.*

[4] *Pleasure craft only.*

[5] *Just began writing.*

[6] *Contractors' Equipment Floaters on Travel Lifts.*

[7] *Comprehensive General Liability, Workmen's Compensation, Contractors' Equipment Floater, Fire EC or All Risk on buildings, office fixtures, piers and wharves, Business Interruption Insurance and Workers' Disability Benefit in states where required.*

[8] *We use a Standard Manufacturers' and Contractors' Liability Policy and Modified Garage Keepers' Legal Liability form modifying only the definition.*

[9] *General liability, Workmen's Compensation, plus other needed property coverage.*

[10] *In reference to your question, INA's Boat Dealers'/Repairers' and Marina Operators' policy covering basic marine exposure is underwritten by the Marine Department. Coverage on buildings, contents (excluding boats owned and offered for sale) as well as shoreside liabilities is underwritten in our Commercial Insurance Department. The reason for this is that certain property and liability coverages are state-regulated with form and rate being filed. INA does provide marine liability coverage (umbrella coverage) and the nature of the risk would determine whether it would be written as a marine or liability department risk.*

[11] *General liability policy.*

[12] *We wrote this business in the past but no longer write it because it became unprofitable. All of our policies are tailor-made.*

[13] *Usually desired in conjunction with SRLL; therefore, we would delete the exclusion H on SP-9B to provide storage cover (wet and dry) and further add by endorsement any cover for fueling, mooring or hauling that may be necessary.*

[14] *We have not been asked; however, we would consider when we felt the primary was acceptable and limits reasonable.*

[15] *We may combine several of the above under one policy jacket when it makes sense to do so.*