Analyzing a new marine business

Marine business management

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Earning a living from the sea is an irresistible challenge to many people. For some, the result is financial success; for others, frustration and failure.

This bulletin presents ideas and procedures that, if used, will help make your new marine business successful. These ideas and procedures apply equally to commercial fishing, charter fishing, aquaculture, commercial diving, and other marine-oriented businesses.

Although technical considerations are important, this bulletin concentrates on economic and financial matters. Before compiling and analyzing economic information, it is also important to understand your personal and business objectives.

Objectives—and resources to meet those objectives

What are your objectives? Are you primarily interested in a stable income, planned leisure, and regular working hours? You may not be able to realize these objectives through a marine-oriented business. However, if the chance of a large financial gain, occupational challenge, and personal independence are important objectives, a marine-oriented business may be just right for you.

Are your personal and business objectives clearly in mind or on paper? Does your new marine business provide a reasonable opportunity to accomplish these objectives? If not, you had better look at other occupations or review your objectives.

What are your resources? Even though you may have chosen a marine business that makes sense in terms of your objectives, you still must have sufficient economic resources to start and maintain that business. Your skills and the amount of capital available to you are your economic resources.

Technical skills are important in most marine businesses, but management skills make the difference between financial success or failure. Do you have skills in budgeting, recordkeeping, personnel management, financial analysis, tax management, and credit analysis? How effectively can you use these skills?

The successful managers are those who have management skills and know how to use them. Even when a good manager experiences a financial failure, he or she attempts to find the real cause and does not blame it on "low prices," "government regulation," "foreign interference," "inflation," "recession," etc. A good manager analyzes failures as well as successes, and you must be prepared to do the same.

Most management skills are acquired through experience. However, there are valuable management courses offered by Sea Grant, Cooperative Extension Services, community colleges, and professional associations. Self-study is another way to improve management skills.

One of the fringe benefits of improving your management skills is that they are also useful in other types of business and in family financial matters.

Capital available to you includes cash on hand and cash available from these sources:

1. savings accounts;
2. stocks and bonds;
3. the productive value of buildings, improvements, and equipment that can be used in your marine business;
4. the market value of other buildings, improvements, and equipment; and
5. the amount of money you can borrow.

A net-worth statement (or balance sheet) can tell you how much capital you have available. A simplified net-worth statement is illustrated for "A.D. Venture" in Table 1. (Although data in this and the following tables are based on earlier studies, they are not intended to represent any existing or new marine business.)

On the left are assets, things that A.D. Venture owns or what is owed him. On the right are liabilities, what A.D. Venture owes others. Also on the right is an item called "net worth." If A.D. Venture sold out, collected all debts owed him, and paid all debts owed others, he would have left $52,050 before taxes. This is his net worth.

From the net-worth statement we can identify several sources of capital for a new marine business. There are $2,400 in savings, $6,000 in bonds, and $1,800 in stocks, for a total of $10,200 cash readily available (assuming the cash and checking account balance are for current living requirements). Further, A.D. Venture's financial situation—the balance between assets and liabilities—will allow him to refinance his home mortgage and/or his rental property mortgage to raise additional capital for the new business. Other venture capital is available through second mortgages on the home and rental property or a first mortgage on the land. The sale of all or part of the rental property would also generate capital for a new marine business.

Three considerations

The three primary considerations in starting a marine business are:

1. potential monetary rewards,
2. potential risk, and
3. potential nonmonetary rewards.

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It is important to complete an analysis of the first two before you consider number three. Unfortunately, individuals frequently determine first that fishing for a living is just what they want and then are unrealistic in their analysis of potential monetary rewards and risk.

Nonmonetary rewards can still be important. Few would choose a marine business that produced only profit and no personal satisfaction, no flexibility, and no independence. However, the decision is likely to be more rational and accurate if monetary considerations are looked at first.

Financial projections. Before you commit a single dollar to your new marine business, work out on paper the *probable* financial shape of the business for several years, using the best information you have—and the best guesses you can make. This is what economists call a "financial projection." The projection may convince you that you shouldn't even *start* this business. If that happens, it's better to suffer a "paper bankruptcy" than to lose all you have in a real bankruptcy.

Three types of projection have proved valuable in analyzing new marine businesses:

1. *projected profit and loss*, which predicts the future profitability of the business;
2. *projected cash flow*, which measures the ability of this business to meet cash needs and accumulate cash reserves over time; and
3. *projected net worth*, which measures the long-term financial trend.

These projections are illustrated in Tables 2 to 4 for a charter fishing business, in Tables 5 to 7 for a baitfish aquaculture business, and in Tables 8 to 10 for a commercial fishing business.

Table 1.—*Net-worth statement for A.D. Venture, January 1, 1977*

Assets			Liabilities		
Current			Current		
Cash	$ 100		Demand note	$ 2,000	
Checking	850		Credit card account	600	
Savings	2,400		Income taxes	1,200	
Government bonds	6,000				
Common stocks	1,800				
Cash available from insurance	900				
		$12,050			$ 3,800
Other			Other		
Home	$22,000		Home mortgage	$18,000	
Furniture	3,000		Rental property mortgage	21,000	
Clothing	1,000		Truck loan	5,000	
Auto	2,500				
Truck	6,300				
Rental property	38,000				
Land	15,000				
		$87,800			$44,000
			Net worth		52,050
Total		$99,850			$99,850

Profit and loss. In Table 2, gross sales are projected to increase to 1980 as the charter fishing business' reputation and operator skill are established. Operating costs also increase with increased boat use and inflation. Interest costs are those projected for long- and short-term loans (short-term loans must generally be repaid within 12 months); derive them from Table 3, the cash-flow budget. The return to labor, management, and equity is one of several measures of profit. (For a discussion of profit, see Smith, F. J., *How to Calculate Profit in a Fishing Business*, Oregon State University Extension Service, Sea Grant Marine Advisory Program Publication SG 29, reprinted August 1976.)

Projections of sales, costs, and profit may be difficult, but they are important. These projections must take into consideration potential markets, supply of labor, supply of equipment, regulations, state of the economy, etc. The assistance of specialists in making these projections can be very beneficial for the inexperienced person.

The type of information presented in Table 2 should be based on interviews with other charter boat operators, examination of studies (by charter associations, universities, state officials, Federal agencies, and private consultants), interviews with bankers and accountants, discussions with university (marine advisory) and industry experts, review of trade publications, and your own experience. You will want your projections to be accurate, but it would rarely be worth the expense (or even be feasible) to develop *perfectly* accurate projections. Therefore, it is wise to evaluate, at least subjectively, the accuracy of your projections as you proceed.

Charter fishing

Table 2.—*Hypothetical 5-year projected profit-and-loss statement for a charter fishing business*

	1977	1978	1979	1980	1981
Gross sales	$26,250	$33,600	$35,000	$37,500	$37,500
Operating costs					
Labor	2,625	3,360	3,500	3,750	3,750
Charter house	5,250	6,720	7,000	7,500	7,500
Boat	3,000	3,500	4,000	4,200	4,200
Moorage	400	400	450	450	450
Office	500	500	550	550	600
Total	11,775	14,480	15,500	16,450	16,500
Other costs					
Insurance	1,100	1,300	1,300	1,300	1,300
Depreciation	3,300	3,300	3,300	3,700	3,700
Interest[a]	288	3,130	2,450	2,100	1,750
Total	4,688	7,730	7,050	7,100	6,750
Return to labor, management, and equity[b]		11,390	12,450	13,950	14,250
(Return to labor, management, and investment)[c]	9,787				

[a] See Table 3 for interest costs.

[b] One of several measures of profit, this applies to the 1978-1981 period since interest was paid only on borrowed investment and not equity (or net worth).

[c] One of several measures of profit, this applies only to 1977 since no long-term interest was paid—i.e., no charge was made for the 1977 investment.

When you interview others, determine the basis of their knowledge and ask them how confident they are in their own estimates of the future. When you use published data, find out who conducted the study—and when, how, and why.

If the profit-and-loss projection appears accurate enough, proceed with the rest of your projections. If not, study and refine this projection further.

Cash flow. In Table 3 the cash expected to flow in and out of this charter fishing business is projected quarterly for 1977 and 1978 and annually for 1979, 1980, and 1981. This projection indicates a need for short-term loans of $5,300 in the first quarter of 1977 and $5,000 in the first quarter of 1978. These loans will enable the manager to meet cash obligations in these and subsequent quarters without financial embarrassment—or bankruptcy!

Table 3.—*Hypothetical 5-year projected cash-flow statement for a charter fishing business*

	1977				1978				1979	1980	1981
	1st	2nd	3rd	4th	1st	2nd	3rd	4th			
Balance forward	$ 1,000	$ 140	$ 461	$ 832	$ 587	$ 157	$ 337	$3,557	$ 277	$ 3,027	$ 5,177
Cash inflow											
Charter sales	3,940	7,875	11,800	2,635	5,040	10,080	15,120	3,360	35,000	37,500	37,500
Capital sales								2,000			
Long-term borrowing	28,000										
Short-term borrowing	5,300				5,000						
Total cash available	38,240	8,015	12,261	3,467	10,627	10,237	15,457	8,917	35,277	40,527	42,677
Cash outflow											
Operating costs	1,700	3,595	5,300	1,180	2,170	4,350	6,520	1,440	15,500	16,450	16,500
Insurance		1,100				1,300			1,300	1,300	1,300
Income taxes		200	200	200	400	400	400	400	2,100	2,400	2,600
Capital purchases	35,000							5,000		2,000	
Long-term principal payments					3,500				3,500	3,500	3,500
Long-term interest					2,800				2,450	2,100	1,750
Short-term principal payments		1,000	4,300			2,000	3,000				
Short-term interest		159	129			150	180				
Family living withdrawal	1,400	1,500	1,500	1,500	1,600	1,700	1,800	1,800	7,400	7,600	7,900
Total cash outflow	38,100	7,554	11,429	2,880	10,470	9,900	11,900	8,640	32,250	35,350	33,550
Net cash	140	461	832	587	157	337	3,557	277	3,027	5,177	9,127

Cash inflow is derived from sales (see Table 2, the projected profit-and-loss statement), the long-term loan for purchase of boat and equipment, short-term loans as needed, and sales of capital items. Projected operating costs are taken directly from Table 2. Projected capital purchases include the boat and equipment in 1977, a new truck in 1978, and replacement gear in 1980. Most of the data in this cash-flow projection is based on the profit-and-loss statement, on known or easily determined repayment terms, and on personal projections.

Long-term principal and interest payments are those provided for in the loan contract. Short-term principal and interest payments are those you make when cash is available. Family living withdrawals are a projection of shelter, food, clothing, and entertainment needs for the family; the increase in family living requirements reflects inflation and a growing family.

Note that the charter business in this example generates enough cash in the first several years to keep short-term borrowing and interest costs minimal. By comparison, short-term borrowing costs for the aquaculture business illustrated in Tables 5 to 7 are substantial, as little cash is generated in this business for the first 1½ years.

Table 4.—*Hypothetical 5-year projected net-worth statement for a charter fishing business*

	1977	1978	1979	1980	1981
Assets					
Current					
Cash	$ 1,000	$ 587	$ 277	$ 3,027	$ 5,177
Accounts receivable		600	2,200	3,300	5,700
Other					
Boat and equipment		32,700	30,400	29,100	28,400
Truck	4,000	3,000	5,000	4,000	3,000
Building and improvements	21,000	21,000	21,000	21,000	21,000
Total assets	26,000	57,887	58,877	60,427	63,277
Liabilities					
Current					
Accounts payable					
Short-term notes					
Other					
Boat mortage		28,000	24,500	21,000	17,500
Total liabilities		28,000	24,500	21,000	17,500
Net worth	26,000	29,887	34,377	39,427	45,777

Net worth. Table 4 illustrates the projected asset, liability, and net-worth data for the same hypothetical charter fishing business illustrated in Tables 2 and 3. Each column represents the financial situation on January 1 of each year. Current cash assets are the same as the beginning cash balance taken from Table 3, projected cash-flow statement.

Boat and equipment values, as well as the truck value, decrease according to the depreciation shown in Table 2—these are, therefore, "book values." When a new truck replaces the old in 1978 and new gear replaces old in 1980, the book value increases are seen in the net-worth statement for the following January 1. The net worth increases from one year to the next because of that year's profit after deducting nonbusiness expenses (family living). Some of the profit appears as an increase in truck value in 1979 and as increases in accounts receivable in 1978, 1979, 1980, and 1981. Profit is also used to decrease the boat mortgage each year. Net worth is projected to increase from $26,000 in 1977 to $45,777 in 1981.

The accuracy of this projection depends heavily on the accuracy of the projected profit-and-loss and cash-flow statements. For our illustration, this charter fishing business is projected to support a family adequately for five years and to be worth $19,777 more at the end of those five years than at the beginning.

(The market value of buildings and improvements may increase during this period and add to net worth. However, it is not realistic to include it in this projection—it would be the result, not of the management and operation of the charter business, but of real estate market factors.)

Baitfish aquaculture

Making your decision

If your projected profit and loss, cash flow, and net worth meet your objectives, then it is appropriate to weigh the nonmonetary factors and make the "Go/No Go" decision. However, further analysis may be desirable. Will another, similar business yield more favorable projections?

Once you have developed the skill to make the projections described above, it will be less time-consuming and costly to do the same for several potential new marine businesses. You can then make your final decision with more accuracy and confidence by comparing several new marine businesses.

(Tables 5 to 10 illustrate projected profit and loss, projected cash flow, and projected net worth for two other marine businesses, a hypothetical baitfish aquaculture business and a hypothetical commercial fishing business. You can interpret and use this information in a manner similar to the way you handled the information above on the charter fishing business.)

Making the "Go/No Go" decision may be the most difficult part of starting a new marine business. No matter how carefully you develop your projections, there will always be risks in a new business. But the decision must be made . . . you are the decisionmaker . . . and it is you who will suffer the losses or reap the benefits.

Table 5.—*Hypothetical 5-year projected profit-and-loss statement for a baitfish aquaculture business*

	1977	1978	1979	1980	1981
Gross sales	.....	$ 8,000	$91,000	$130,000	$130,000
Operating costs					
Labor	$ 1,000	5,100	9,000	10,000	11,000
Maintenance	50	200	650	900	1,000
Utilities	200	500	600	600	600
Advertising	250	600	800	800	800
Office	100	150	250	250	300
Total	1,600	6,550	11,300	12,550	13,700
Other costs					
Insurance	1,800	2,000	2,000	2,000	2,000
Depreciation	7,000	7,000	8,000	8,000	8,000
Interest[a]	.....	12,000	14,677	10,800	9,600
Total	8,800	21,000	24,677	20,800	19,600
Return to labor, management, and equity[b]	.....	−19,550	55,023	96,850	96,700
(Return to labor, management, and total investment)[c]	−10,400	.....	.....	.....	.....

[a] See Table 6 for interest costs. Interest is charged on short-term loans as they are repaid and on the property mortgage annually.

[b] One of several measures of profit, this applies to the 1978-1981 period since interest was paid only on borrowed investment and not equity (or net worth).

[c] One of several measures of profit, this applies only to 1977 since no interest was paid—i.e., no charge was made for the 1977 investment.

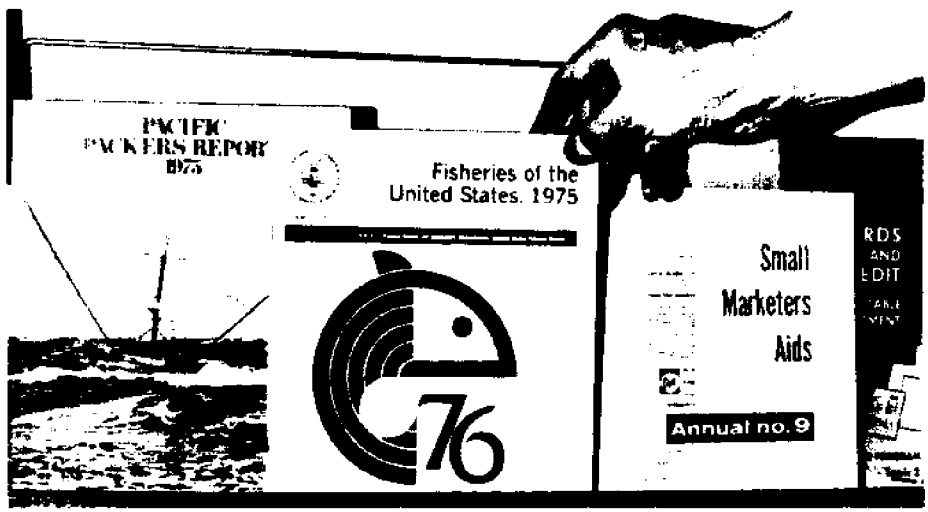

Table 6.—*Hypothetical 5-year projected cash-flow statement for a baitfish aquaculture business*

	1977				1978				1979	1980	1981
	1st	2nd	3rd	4th	1st	2nd	3rd	4th			
Balance forward	$ 5,000	$93,200	$ 700	$ 500	$ 500	$ 500	$ 500	$ 450	$ 500	$11,073	$83,723
Cash inflow											
Baitfish sales					1,000	2,000	2,000	3,000	91,000	130,000	130,000
Capital sales										2,000	
Long-term borrowing	100,000										
Short-term borrowing			1,200	3,100	13,400	800	1,400	6,550			
Total cash available	105,000	93,200	1,900	3,600	14,900	3,300	3,900	10,000	91,500	143,073	213,723
Cash outflow											
Operating costs	700	400	300	200	1,000	1,400	2,050	2,100	11,300	12,550	13,700
Insurance				1,800				2,000	2,000	2,000	2,000
Income taxes									7,000	12,000	12,000
Capital purchases	10,000	91,000						4,000			35,000
Long-term principal payments									10,000	10,000	10,000
Long-term interest					12,000				12,000	10,800	9,600
Short-term principal payments									26,450		
Short-term interest									2,677		
Manager's withdrawal	1,100	1,100	1,100	1,100	1,400	1,400	1,400	1,400	9,000	12,000	18,000
Total cash outflow	11,800	92,500	1,400	3,100	14,400	2,800	3,450	9,500	80,427	59,350	100,300
Net cash	93,200	700	500	500	500	500	450	500	11,073	83,723	113,423

Table 7.—*Hypothetical 5-year projected net-worth statement for a baitfish aquaculture business*

	1977	1978	1979	1980	1981
Assets					
Current	$ 5,000	$ 500	$ 500	$ 11,073	$ 83,723
Other					
Property and improvements	40,000	120,000	116,000	112,000	108,000
Equipment		14,000	15,000	11,000	7,000
Product		1,200	2,000	10,000	21,000
Total assets	45,000	135,700	133,500	144,073	219,723
Liabilities					
Current					
Accounts payable		1,200	2,000	3,000	4,000
Short-term notes		4,300	26,450		
Other					
Property mortgage		100,000	100,000	90,000	80,000
Total liabilities		105,500	128,450	93,000	84,000
Net worth	45,000	30,200	5,050	51,073	135,723

Commercial fishing

Table 8.—*Hypothetical 5-year projected profit-and-loss statement for a commercial fishing business*

	1977	1978	1979	1980	1981
Gross sales	$23,000	$24,000	$25,000	$25,000	$25,000
Operating costs					
Labor	3,450	3,600	3,750	3,750	3,750
Maintenance	1,300	1,300	1,400	1,500	1,600
Fuel	950	1,000	1,100	1,100	1,100
Ice and bait	800	850	900	900	900
Moorage	100	100	100	100	100
Office	480	500	520	540	540
Total	7,080	7,350	7,770	7,890	7,990
Other costs					
Insurance	1,300	1,300	1,300	1,300	1,300
Depreciation	600	600	600	600	600
Interest[a]	1,077	3,033	1,371	1,142	914
Total	2,977	4,933	3,271	3,042	2,814
Return to labor, management, and equity[b]	.....	11,717	13,959	14,068	14,196
(Return to labor, management, and investment)[c]	12,943	.....	.....	.....	.....

[a] See Table 9 for interest costs.

[b] One of several measures of profit, this applies to the 1978-1981 period since interest was paid only on borrowed investment and not equity (or net worth).

[c] One of several measures of profit, this applies only to 1977 since no long-term interest was paid—i.e., no charge was made for the 1977 investment.

Table 9.—*Hypothetical 5-year projected cash-flow statement for a commercial fishing business*

	1977				1978				1979	1980	1981
	1st	2nd	3rd	4th	1st	2nd	3rd	4th			
Balance forward	$ 400	$ 100	$ 450	$ 932	$ 173	$ 113	$ 413	$1,370	$ 530	$ 6,729	$12,637
Cash inflow											
Fish sales	.....	2,000	17,000	4,000	1,000	2,000	17,000	1,000	25,000	25,000	25,000
Capital sales									2,000	1,000	.....
Long-term borrowing	20,000										
Short-term borrowing	16,800				7,400						
Total cash available	37,200	2,100	17,450	4,932	8,573	2,113	17,413	2,370	27,530	32,729	37,637
Cash outflow											
Operating costs	200	1,050	5,100	1,000	600	1,000	5,050	700	7,770	7,890	7,990
Insurance	1,300				1,300				1,300	1,300	1,300
Income taxes					1,400				1,600	1,700	1,700
Capital purchases	35,000								3,000	2,000	.....
Long-term principal payments					2,860				2,860	2,860	2,860
Long-term interest					1,600				1,371	1,142	914
Short-term principal payments			10,000	3,000			9,000	300			
Short-term interest			918	159			1,393	40			
Family living withdrawal	600	600	500	600	700	700	600	800	2,900	3,200	3,800
Total cash outflow	37,100	1,650	16,518	4,759	8,460	1,700	16,043	1,840	20,801	20,092	18,564
Net cash	100	450	932	173	113	413	1,370	530	6,729	12,637	19,073

Table 10.—*Hypothetical 5-year projected net-worth statement for a commercial fishing business*

	1977	1978	1979	1980	1981
Assets					
Current					
Cash	$ 400	$ 173	$ 530	$ 6,729	$12,637
Accounts receivable	.....	6,300	2,870	4,520	6,070
Other					
Boat and gear	.....	34,500	34,000	33,500	34,000
Truck	1,000	900	800	1,700	1,600
Total assets	1,400	41,873	38,200	46,449	54,307
Liabilities					
Current					
Accounts payable		130	100	150	.....
Short-term notes	....	9,700	....	.....	.....
Other					
Boat mortgage	.....	20,000	17,140	14,280	11,420
Total liabilities	...	29,830	17,240	14,430	11,420
Net worth	1,400	12,043	20,960	32,019	42,887

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