AN ASSESSMENT OF THE IMPACT OF THE FRESHWATER FISH MARKETING CORPORATION ON THE FRESHWATER FISH INDUSTRY

© By John Snell

A practicum submitted in partial fulfillment
of the requirements for the degree,
Masters of Natural Resources Management.

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ABSTRACT

The creation of the Freshwater Fish Marketing Corporation, in 1969, represents the complete reorganization of the processing and marketing sector of the western freshwater fish industry. As part of the ongoing evaluation of the FFMC, this study seeks to assess the impact of the Corporation on fishermen and the industry in three fundamental ways: through assessing the financial performance of the Corporation; by examining the Corporation's record with respect to the achievement of its mandate objectives and purposes; and, by determining the satisfaction of the Corporation's clients with the overall performance of the Corporation.

Financial evaluation of the Corporation was carried out through the use of financial ratios and a set of comparative fish processing and marketing entities including, National Sea Inc., The Canadian Saltfish Corporation, and The Prince Rupert Fishermen's Cooperative. Mandate objectives and purposes were evaluated through a series of empirical analyses based upon, annual value of sales, final payment trends, price trends, portion of sales paid to fishermen and the trend in market diversification. Client satisfaction was measured through a series of in-person interviews with both fishermen and fisheries management officials.

Comparison of the financial performance of the FFMC to

other firms revealed that in the majority of the measures, primarily those relating to return on assets and profitability, the Corporation was a top performer among the four examined. Examination of the data related to the Corporation's mandate suggest that the Corporation has had some success in the orderly marketing of fish but that serious problems remain on some species. Similarly the Corporation appears to have had some success in increasing returns to fishermen especially in the last six years. Market diversification has been achieved but without a net increase in marketed volume. Domestic markets remain at much the same level as they have since the Corporation's inception. Interviews with both client groups revealed a number of complaints but it was generally accepted that the benefits of the Corporation exceeded these problems.

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Chapter 1

Introduction

1.1 Background

1.1.1 The Western Freshwater Fishery: The Decline of the Fishery in the 1960's and the McIvor Commission

The western freshwater fishery covers an enormous geographical area of some 5.34 million square kilometers and includes lakes in Alberta, Saskatchewan, Manitoba, North Western Ontario and the Northwest Territories (Standing Senate Committee on Fisheries, 1986). Commercial fishing of these lakes has been ongoing, in the case of the four provinces, since the turn of the century and since 1945 in the Northwest Territories (Deloitte, Haskins and Sells, 1988). By the mid 1960's the fishery provided both full and part time employment to about 7000 fishermen (McIvor, 1965). In 1987, however, this number had fallen to 3500 (1987) (Annual Summary of Fish Harvest Activities, 1986-87). Prior to the creation of the Freshwater Fish Marketing Corporation (FFMC) in 1969, fishermen sold their catches to 285 dealers who, inturn, sold to one of 35 exporters operating within the region (McIvor, 1965). It was then the exporters job to sell the fish, primarily to buyers in the United States.

Despite the numbers of dealers and exporters, monopsony and oligopsony in the purchase of fish were said to have been common practices within the western freshwater fishery (Judson, 1961 and COMEF, 1963). Geography, economies of scale in fish buying and a lack of available working capital were argued to have resulted in a situation where fishermen usually had only one dealer/exporter in their area to whom they could sell their catch (Judson, 1961). Where more than one dealer operated on a lake, such as the case of Lake Winnipeg in Manitoba, it was claimed that oligopsony prevailed and price competition was avoided through collusion (Judson, 1961). Competition was generally confined to outfitting policy, that is, the terms upon which fishermen were given working capital loans and equipment rental, in an effort to get enough fishermen to work for a particular company (Judson, 1961).

Two separate evaluations of the fishery concluded that this relationship between fishermen and the dealer/exporter meant that the buyer passed on the related risk of fish marketing to the fishermen (Manitoba Federation of Fishermen, 1965 and Judson, 1961). This was achieved, the evaluations argued, by holding payment for fish received until the fish had been marketed with the purchase price being determined at that time (Manitoba Federation of Fishermen, 1965 and Judson, 1961).

Because so many dealers/exporters worked the fish trade many suffered from a lack of fish volume and operated as marginal producers (Government of Manitoba, 1964). Even those that maintained sufficient volume tended to act as their marginal counterparts, keeping long term investment in the fishery at a minimum, hence discounting the future heavily in attempts to account for the uncertainty faced in both the supply of fish and the sale of the catch (Judson, 1961). As a result technological developments in the fishery were, for the most part, constrained at both the processing and the fishing level although some of the larger companies did begin to invest in filleting plants by the early 1960's (Western Business, 1964).

The dealer/exporter's uncertainty in the marketing of the catch was said to have stemmed from the existence of a highly concentrated U.S. market into which the majority of the freshwater harvest had been traditionally sold. Estimates of the amount of the catch that sold in U.S. markets range from 80% to as high as 90% of the total (Judson, 1961 and McIvor, 1965). The major U.S. destinations were Chicago, Detroit and New York. In Chicago alone, two firms controlled the majority of incoming fish and similar dominance by a few firms was claimed to be the trend in Detroit and New York (McIvor, 1965).

It has been suggested that during this period dominance by a few firms in the US market meant that the Canadian exporters faced a situation similar to that of the fishermen from whom they purchased fish. Importers attempted to keep the terms and conditions of buying open and flexible and were, it has been claimed, able to shift much of the marketing risk onto to the exporter (Judson, 1961 and Government of Manitoba, 1964). This relationship, it was argued, resulted in some portion of the exporters risk being shifted to the fishermen and contributed to reducing their returns as well (Government of Manitoba, 1964).

By all accounts, in the mid 1960's, the western freshwater fishery was in decline. The Committee on Manitoba's Economic Future (1963) found that the Manitoba fishery, the largest in the region, was in serious shape, suffering from over-capitalization, over-participation, lack of investment in long term technological capital and monopsonistic buying which contributed to the reduction of returns to fishermen (COMEF, 1963). The Federal-Provincial Conference on Fisheries Development: Submission by the Province of Manitoba (1964) determined that the current situation was detrimental to the fishery and that a complete reorganization of both regulatory practices and marketing would be necessary if the fishery was to be viable in the future (Government of Manitoba, 1964). With these concerns in mind the McIvor Commission was appointed to provide an in depth investigation of the Canadian freshwater fishery (it concerned itself with the Great Lakes Fishery as well but treated the two fisheries separately) and to report on the reasons for the noted decline.

1.1.1.2 The McIvor Commission

In 1965 a Royal Commission of Inquiry was established under the leadership of G.H. McIvor, to investigate and report upon the, "...marketing problems of the freshwater fish industry in the Provinces of Ontario, Manitoba, Saskatchewan and Alberta and the Northwest Territories..." (McIvor, 1965). The focus of the report fell, naturally, upon the U.S. market as the largest and most significant, importing 98% of its whitefish, 97% of its pickerel and 100% of its pike from Canadian sources totaling approximately 80% of the yearly catch of freshwater fish. The commission was to investigate and report specifically upon: the factors contributing to the weakness in domestic and export prices; the possibility of better tailoring production to coordinate supply with demand; and, the desirability of establishing an export monopoly.

The final report concluded that the weakness in export prices stemmed from the fact that there were too many exporters, some 35 companies, in the industry competing for the business of relatively few, mostly American, importers of freshwater fish. This fact combined with the disproportionate number of dealers between the fishermen and the exporters (one for every seventeen fishermen in Manitoba alone) was claimed to have created inefficiencies and an inability to take advantage of economies of scale which had driven down the price of fish on the export market (McIvor, 1965).

In addition, the Commission found that the bargaining position of the exporter was weakened because the risks inherent in the freshwater fish trade (perishability and quality of the product) were borne by the exporter and aggravated by a lack of consistent quality control. The number of exporters was also claimed to have produced an inability to coordinate the supply of fish with the demand as the exporters "individually and collectively appear(ed) to have little or no dependable knowledge of consumer demand" (McIvor, 1965).

The combined result of these factors was a price paid to the Canadian industry which was half the amount paid by the U.S. consumer (McIvor,1965). The Commission's evaluation of the state of the industry and the market was as follows: "The Canadian industry as sole supplier of these species to the United States market is wasting the marketing strength inherent in such an important supply position by sharing the selling functions among too many individual exporters." (McIvor,1965)

In response to the inequities and inefficiencies which it identified, the Commission recommended that a crown corporation be created under federal legislation to act as a monopsony in the purchase of fish from producers and as the exclusive processor and seller of freshwater fish for producers in Alberta, Saskatchewan, Manitoba, Northwest Territories and Northwestern Ontario (not including the Great Lakes).

1.1.2 FFMC Structure, Purpose and Objectives

The Freshwater Fish Marketing Corporation (FFMC) was created in 1969 by the Fresh Water Fish Marketing Act, 1985 R.S.C. , c.F-13, in response to the conclusions of the McIvor report. The Corporation was charged with the responsibility of acting as the sole purchaser, processor and seller of freshwater fish in both interprovincial and export markets for the area comprised of the Northwest Territories, Alberta, Saskatchewan, Manitoba and Northwestern Ontario (see figure 1, Area Served by the Corporation).

Manitoba is the largest contributor to FFMC production accounting for 66% of the total catch. Saskatchewan is the second largest with 20% of the total supply. The remaining areas, Alberta, Northwestern Ontario and the Northwest Territories contribute, 5%, 7%, and 2% respectively to the total supply of freshwater fish (1976-1977 figures, Gislason, Macmillan, Craven, 1982). Due to its contribution to total supply and its central location, Winnipeg, Manitoba was established as the head office and central processing centre for the entire producing area covered by the FFMC mandate (sec. 13 FFM Act, 1985 R.S.C., c.F-13).

The purpose and powers of the Corporation are defined in

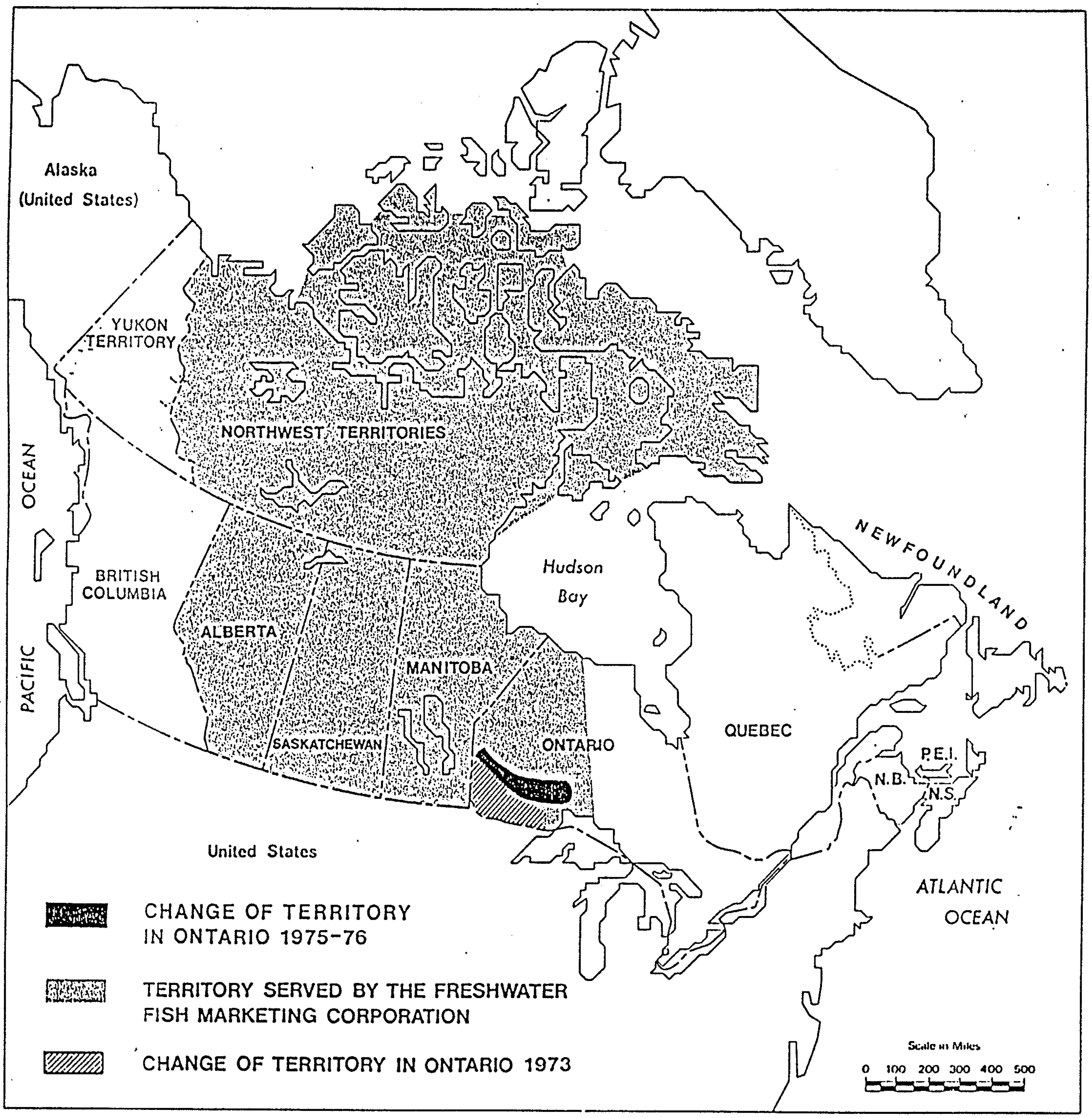


Fig. 1: Area served by the Coporation (FFMC, 1980)

section 7 of the Act, "The Corporation is established for the purpose of marketing and trading in fish, fish products and fish by-products in and out of Canada..."(sec. 7, FFM Act 1985, R.S.C., c.F-13). To accomplish this objective the Corporation was given a capacity which included the powers to: buy fish and prepare them for market; buy, manufacture and process fish products for market; store and ship, import and export and market fish produced by the Corporation; hold property; establish branch offices or employ agents; invest moneys; borrow from banks upon the credit of the Corporation; make loans of working capital to fishermen; and, do all things necessary or incidental to the exercise of its powers and functions. In addition to the powers previously listed, sec. 20 of the Act establishes the Corporation's exclusive right to market and trade in fish on export markets and interprovincially, except where the Corporation issues licenses which specify otherwise.

The Corporation is managed by a Board of Directors comprised of Federal, Provincial and Territorial representatives, producers representatives and the President who acts as the chief executive officer of the Corporation and as its general manager (sec. 5, FFM Act 1985, R.S.C., c.F-13). Input into the direction of the Corporation is provided by an advisory committee composed of representatives of whom at least 1/3 must be freshwater fishermen (sec. 17(1), FFM Act 1985, R.S.C., c. F-13).

The FFMC is authorized to buy all fish offered at prices established by the Corporation and to market those fish and products processed therefrom in order to achieve the objectives of the corporation (sections 22(2),(3),23 FFM Act 1985, R.S.C., c. F-13). The primary objectives of the corporation are threefold:

> ....the Corporation has the exclusive right to market and trade in fish in interprovincial and export trade and shall exercise that right, either by itself or its agents, with the object of
>
> (a) marketing fish in an orderly manner;
> (b) increasing returns to fishermen; and
> (c) promoting international markets for, and increasing interprovincial and export trade in, fish.
> (section 22(1), FFM Act)

The FFMC considers its central objective to be the increasing of returns to fishermen (FFMC Yearly Report, 1986/87) and it is this central objective which guides the development of the remaining Corporation objectives.

1.2 Problem Statement

The formation of the FFMC represents a complete reorganization of the western freshwater fish industry from a market, populated by several participants (dealers and exporters) to one dominated by a single, legislated, purchaser-exporter. Upon its formation the Corporation was given the following mandate: increase returns to fishermen;

market fish in an orderly manner; and, promote international and interprovincial trade in fish. The principal question to which this research is directed is; To what extent, and to what effect, has the FFMC fulfilled its legislated mandate and addressed the marketing, price, cost and supply problems of the freshwater fishery as identified by the McIvor commission?

As a part of the ongoing evaluation of the Corporation, this study will examine impact upon fishermen and the freshwater fish industry, in relation to its mandate, in order to determine the effectiveness, efficiency and equitability of the Corporation's performance.

1.2.1 Problem Components

The problem is composed of two essential components: the impact, of the FFMC, on fishermen; and, the impact on the industry as a whole. These components in turn contain within themselves various sub-problems of importance to the overall goal of assessing impact and ultimately evaluating the performance of the FFMC.

1. What has been the impact of the Corporation on fishermen insofar as its operations have affected?:
   - a) prices available to fishermen;
   - b) the cost of fish processing and marketing;
   - c) availability of credit assistance;
   - d) effect on incomes and impact upon stability of incomes; and
   - e) the general satisfaction of fishermen with the efforts of the Corporation.

2. What has been the impact of the FFMC on the freshwater

fish industry generally insofar as its operations have affected?:

a) sales volume and value;
b) development and strengthening of markets;
c) success at effecting orderly marketing;
d) the effect of reorganization and centralization on processing and marketing costs.
e) financial performance of the FFMC and the impact of this performance on its ability to fulfill its mandate.

From the components of the problem three general research questions can be formulated:

1. Has the FFMC operated efficiently and effectively in terms of financial performance?;
2. Has the Corporation fulfilled the objectives and duties for which it was created?;
3. Have the clients of the FFMC been satisfied with the operation and performance of the Corporation?

1.3 Objectives

The primary objective of this research is to determine the impact of the FFMC on the freshwater fish industry and on freshwater fishermen in order to determine the Corporations effectiveness in meeting its mandate and confronting the problems of the fishery. Each of the three research questions formulated above define the specific objectives.

1.3.1 Specific Objectives

1. To determine the extent to which the Corporation has operated efficiently and effectively in terms of financial management.

2. To evaluate the extent to which the Corporation has

achieved the objectives and duties for which it was created, that is,

a) marketing fish in an orderly manner;
b) increasing returns to fishermen;
c) promoting international markets for and increasing interprovincial and export trade in, fish;
d) providing credit assistance to fishermen; and,

3. To determine the level of satisfaction of among clients with respect to the operation and performance of the Corporation.

The specific objectives will be examined in turn to produce a set of conclusions concerning the overall impact of the Corporation on fishermen and the industry. It is intended that the findings of this evaluation will be of use to Corporation administrators, participants and policy makers in future management and direction of the Corporation's policies and procedures.

1.4 Outline of the Study

This study is presented in five chapters. The First provides background and a statement of the purpose and objectives of the research. The Second is a review of the operation of the FFMC and of past reports concerning the Corporation and the marketing of freshwater fish, in an effort to identify issues and problems of significance to the present evaluation. Chapter three will outline the methods of the study and operationalize the research objectives. Chapter Four will present the results related to each of the objectives of the study and offer interpretation of the evidence. The Fifth and final chapter will serve to present the conclusions of this research and offer recommendations related to the findings and for future research.

Chapter 2

Review of Related Literature

2.1 Introduction

The purpose of this chapter is to identify and examine the major problems and issues related to the function and operation of the Freshwater Fish Marketing Corporation. The review is intended to provide a grounding in the recurring problems and the more recent issues which have significant bearing on the performance, effectiveness and efficiency of the Corporation. Understanding these problems and issues provides important background information for the subsequent analysis of the major problem components to which this research is directed.

Since its creation in 1969 by the agreement of both Federal and Provincial governments, the FFMC has been the subject of numerous, and for the most part government initiated, studies. Consequently, the bulk of the studies and reports discussed in this review are in the form of Senate Committee Reports, Ministerial Task Force Reports, Transcripts of Hearings, Annual Reports, Reports of Participating agencies, and consultant's submissions to participating governments.

The discussion of the relevant literature will follow a three part form. The first part will involve the examination, principally, of financial issues related to the Corporation. The second will review and examine marketing issues and problems. The third, and broadest category of issues, will involve a review of problems related to the operation and infrastructure of the Corporation and its relationship with the various participating governmental agencies. This review will also, in the process of examining issues, discuss the significant operating procedures of the Corporation.

2.2 Financial Issues and Problems

2.2.1 Corporation Financing

The Corporation was established as a Federal Crown corporation intended to manage its affairs on a "self sustaining" financial basis (sec. 15(1) F.M.M. Act, 1985, R.S. c.F-13). Authorization for loans from the Department of Finance is provided for in section 16(1)(b) of the F.F.M. Act; section 16(2) establishes the upper limit on such loans at $30 million. Throughout the history of the Corporation, Department of Finance loans have been the primary source of both working capital and fixed asset funds.

The practice of relying on Department of Finance loans was reviewed in a report issued by the Department of Fisheries and Oceans entitled, Report Respecting the Management, Operations, Financial Structure and Performance of the Freshwater Fish Marketing Corporation 1979 by T. F. Peart (hereafter Peart, 1979). A policy option examined in the report was the desirability of the Corporation seeking funding in private markets. The rationale for this proposal was to, "expose the Crown Corporation's financial management to the discipline of the market place" (Peart, 1979). Peart characterized Department of Finance loans as "concessionary", calculating that re-financing of the entire debt portfolio at private market rates of interest, which at that time differed from Finance Department Rates by 4.675%, could cost the Corporation some $550 thousand dollars annually (Peart, 1979).

The Corporation responded to this criticism by stating that the rate on Finance loans had differed from private markets by an average of 1.375% over a six year period (due to the quarterly adjustment mechanism employed). This differential, argued Corporation officials, did not constitute a significant concession but a requirement of obtaining private market funding would likely have the effect of reducing returns available to fishermen (Peart, 1979 and FFMC, 1979).

Earlier reports on the Corporation's financial management and operation's support Peart's claim that loans from the Department of Finance contained a concessionary element. Both a 1973 Environment Canada report and a 1975 Auditor General's report state that the Corporation's capital asset loans carried the lowest interest rate offered by the Federal Government and that this low rate was effectively s subsidy when compared with corresponding private market rates (Environment Canada, 1973 and Auditor General of Canada, 1975).

In order to establish a favourable debt-equity ratio to enable the Corporation to obtain private market funds, Peart suggested the transformation of fixed asset loans into equity (Peart, 1979). This suggestion highlights an important characteristic of the Corporation: the low level of equity maintained. Because the Corporation sees its primary goal as increasing returns to fishermen only a minimal amount of income is retained, thereby reducing the equity position.

The examination of the private financing option began with the Siddon Report early in 1979 as part of the Federal Conservative governments review of Crown Corporations. With the change of government and the subsequent Report of the Federal/Provincial/Territorial Committee of Officials on the Freshwater Fish Marketing Corporation in 1980, the question of private market financing was down-played as the Federal government expressed a willingness to continue financing as in the past and participating Provincial / Territorial governments made it clear that they would not press the issue.

Despite assurances that financial arrangements would continue as they had in past, the Corporation began, in 1979, to establish a reserve of retained earnings. A plan was developed in conjunction with the Advisory Committee to retain 1% of initial and final payments deducted from final payments in order to build the Corporation's equity (Standing Committee on Fisheries and Forestry, Minutes of Proceedings, witness Mr. Tom Dunn, FFMC President, May 3, 1983). As of April of 1987 the Corporation's retained earnings had reached a total of $2 225 936.00 (Annual Report, 1986-87).

2.2.2 Financial Performance and Efficiency

An important section of the Peart Report deals with the financial structure and performance of the Corporation. In this section Peart carries out a financial ratio analysis. Because the Corporation maintains a policy of retaining only minimal income, Peart states that liquidity and efficiency measures, rather than profitability or leverage indicators, are most relevant. Furthermore, the importance of liquidity is down played because of the existence of "concessionary loan funding" from the Department of Finance (Peart, 1979).

The Corporation countered this claim of "concessionary loan" dependence and low levels of liquidity by claiming that Peart's analysis failed to properly take fixed asset loans into account by rolling them into calculations of current liabilities. The Corporation claimed that fixed asset loans were a form of long-term financing and should not be included in current liabilities (FFMC, 1979). Even if fixed asset loans were reclassified, the liquidity position of the Corporation would remain low, but this the Corporation responds, is the result of efforts to maximize returns to fishermen.

The most contentious portion of the financial analysis lies not in the numbers that are generated or the focus of his analysis but with the industry comparisons employed. In the comparison of efficiency measures, Peart employed industry norms from the meat-packing and poultry products industries. This, according to the Corporation, fails to recognize operational differences between the two types of entities, especially with respect to inventory and supply characteristics (FFMC, 1979). The nature of fish processing is such that harvests are undertaken in short time periods which necessitates greater inventory carrying. The Corporations supply position is further altered by the fact that it must, by legislation, purchase all fish offered (sec., 22(2), FFM Act, R.S.C., 1985, c-F13.)

Efficiency comparisons using meat and poultry industries as the benchmark consistently revealed the Corporation as a less efficient operator (Peart, 1979). However, when compared to other companies in the fish trade the Corporation appeared to be in the upper end of the efficiency scale (FFMC, 1979).

Inventory management has, according to Peart, been a problem for the Corporation, as the cost of carrying inventory and its timely movement impact on the magnitude and speed with which final payments are issued to fishermen (Peart, 1979). The Corporation countered this claim by stating that, despite efforts to distribute the harvest by offering winter premiums, the greater bulk of the harvest (some 50%) was delivered between the months of June and September (FFMC, 1979). In addition, the Corporation responded that inventories might have to be carried for longer periods in an effort to obtain the best possible price by altering supply and improving the sellers bargaining position, as this was the original purpose of single desk selling. The Corporation made its final point by comparing the percentage of current assets in the form of inventories it held in a single year to those held by three other fish processors (Prince Rupert Fishermen's Co-op, National Sea and British Columbia Packers) with the result that the Corporations percentage was consistently lower.

2.3 Marketing Issues and Problems

Although the Corporation has exclusive control over the purchase of fish within its mandated region it must compete against produce from American and Canadian freshwater fish taken from the Great Lakes, and other smaller lakes. The most important market for freshwater fish from the Corporation is, and traditionally has been, the U.S. market. Prior to the existence of the Corporation, U.S. markets received approximately 80% of the yearly harvest (McIvor, 1965). Today that numbered has changed little and is estimated by the Corporation at 70% (Corporate Plan, 1985-86). The remaining 30% is marketed in various countries in Europe, Asia, the Middle East, Scandinavia and throughout Canada.

2.3.1 Development of Local/Domestic Markets

Concentration on lucrative U.S. markets has resulted in the criticism that the Corporation is neglecting the development of domestic markets for freshwater fish. Figures compiled for 1984/85 show that the sale of freshwater fish in Canada amounted to 1766 metric tonnes, or 15% of total sales (Marshall, 1986). A 1983 study commissioned by the Alberta government discovered that retailers in that province suffered from intermittent availability of fish, fluctuations in price for species such as Arctic Char and Pickerel sometimes as high as 100%, a system of distribution which does not include an active sales force and product prices established in U.S. markets (Thorne, Stevenson, Kellogg, 1983).

In response to these claims, the Corporation maintains that it can get better prices in U.S. markets. In an effort to meet its objective of increasing returns to fishermen, the Corporation places less emphasis on the Canadian market (Corporate Plan, 1985-86). In addition, the Corporation maintains that Canadian prices are established "to yield the same return from sales in the U.S." in an effort to prevent wholesalers and retailers from selling into the U.S. market and taking advantage of the foreign exchange differential and any domestic vs. export price differences (Corporate Plan, 1985-86).

The major suggestion for improving the servicing of domestic markets has been the relaxation of intra-provincial sales regulations as they relate to fishermen. The Federal/Provincial/Territorial Committee (1980) examined the impact of allowing fishermen to sell directly to wholesalers, retailers and institutions within their province. The principal benefit of the option would be meeting local demand. However, the Committee notes that the option would also mean reduced processing through-put at the Transcona facility (the Corporations main facility in Winnipeg, Manitoba) and a consequent increase in overhead costs for the remaining processed volume. The result would be lower prices to those fishermen who continued to send their fish to the Corporation (Federal/Provincial/Territorial Committee, 1980). Unauthorized sales of fish into inter-provincial markets and possibly even export markets and a possible reduction in quality of the product on intra-provincial markets were other concerns of the Committee (Federal/Provincial/Territorial Committee, 1980). Its final conclusion on this option was that the expansion of local sales cannot maximize returns to the aggregate of fishermen and the Commission therefore recommended that any attempts to improve local markets should be carried out through the Corporation (Federal/Provincial/Territorial Committee, 1980).

In a 1983 report commissioned by the Alberta government, it was stated that significant local demand existed in the province that was not adequately being served. Specifically, the report stated that "the FFMC is not properly equipped to handle the myriad of small retailers and food service organizations" (Thorne, Stevenson, Kellog, 1983). Consequently it was suggested, as the best option of six examined, that fishermen be allowed greater latitude in the intra-provincial sales of fish similar to the option examined in the 1980 Federal/ Provincial/Territorial Committee. This option was eventually put into practice on an experimental basis in 1984 under agreement with the Corporation that no leakage of fish into other markets would occur and that if volume decreases produced a deleterious financial effect on the Corporation the Alberta government would pay compensation (Corporate Plan, 1985-86).

The Standing Senate Committee on Fisheries (1986), in its review of the marketing of freshwater fish, stated that changes to intra-provincial regulations in Alberta and Saskatchewan (who initiated a similar project) were "unlikely to disrupt the FFMC's current intra-provincial sales" and would produce the benefit of developing local markets, which the Senate Committee suggested could offer lucrative opportunities to fishermen (Marshall, 1986). To date, the intra-provincial sales in both provinces have not caused significant declines in FFMC production or Transcona through-put while the magnitude of gains to fishermen are not known with certainty (Personal Communication - Alex Drobot, Field Operations, FFMC, 1988).

2.3.2 The Problem of Under-utilized Species

Under-utilized species or rough fish, primarily mullet, carp and burbot, have consistently posed a marketing problem for the Corporation. Prices for these species are generally low (usually below .11 cents per kilogram) because the competition from the supply of similar fish in other fisheries. Marketing difficulties are exacerbated by problems such as the number of bones, the colour and texture of the flesh and most importantly the instability of markets for these species (Corporate Plan, 1985-86). Low prices have brought criticism that the Corporation is not doing enough to market these species of fish (Marshall, 1986).

In the past, the Corporation has attempted to develop overseas markets for the sale of rough fish with only limited success (Corporate Plan, 1985-86). The creation and marketing of specialty products has generally been avoided because of the risk and the consequent potential for the reduction in payments to fishermen (Thorne, Riddell and

Associates, 1978, FFMC, 1979, Marshall, 1986). However since the issue was examined by the Federal/Provincial/ Territorial Committee in 1980, and indeed prior to this investigation, the Corporation has expressed its willingness to allow private development in this area (Response to the Peart Report, 1979, Federal/Provincial/Territorial Committee, 1980 and Corporate Plan, 1985-86) through the issuing of "Special Dealers License". These licenses are issued to private dealers on the proviso that the products to be marketed do not directly compete with Corporation products (Advisory Committee Newsletter, January 1989).

2.4 Issues and Problems Related to Operations and Infrastructure

2.4.1 Pricing and the Problem of Cross Subsidization

Prices for the various species handled by the Corporation, which are grouped into species pools, are established on the basis of a sales forecast (for fresh, processed and frozen fish). From this estimate a mean price "free on board" (f.o.b.) Transcona is calculated (Gislason, Macmillan and Craven, 1982). The price actually paid to fishermen lake-side for loose fish (unpacked), is the mean price minus all costs incurred in packing, transport and Transcona costs at between 80% and 50% of the projected total available price depending on the specie (FFMC, 1983). These prices are referred to as initial prices and are set conservatively in an effort not to stimulate supply above forecasted expectations (Corporate Plan, 1985-86). Final payments are made to fishermen when a surplus is realized in a particular species pool.

A major issue of concern in the Corporation's pricing policy relates to the use of the species pool. That is, the revenue from fish of the same species from fisheries with differing cost structures is pooled (Peart, 1979). The charge has been made that significant subsidization of poor performers is incurred by better performers under this arrangement and that cross subsidization occurs between pools when "the surplus value of one pool is used to support the price of other pools" (Peart, 1979). It has also been suggested that regional cross-subsidization has occurred with respect to transportation and plant costs (Peart, 1979).

The Corporation's response to these charges has been that it is inevitable that some subsidization will occur simply because of the mix of cost structures in the species pools. However, the extent of this subsidization, the Corporation claims, has been minimal (FFMC, 1979). With respect to the issue of cross-subsidization the Corporation has a policy of distributing the overhead costs of pools which show negative returns up to a limit of $150 000 (FFMC, 1983). If the pool is still negative the deficiency is borrowed from other pools on the condition that the borrowed funds (taken from final payments) are to be repaid with interest before any final payments are made on the negative pool (FFMC, 1983). The Corporation defends its species pooling by stating that initial payments are made in relation to grade and that final payments are paid equally because all fishermen should benefit from the marketing efforts of the Corporation (FFMC, 1980)

2.4.2 The Northwest Territories

The problem of subsidization is perhaps most contentious in the Northwest Territories. During the recent hearings of the Standing Senate Committee on Fisheries, fishermen from the Hay River area claimed that high quality whitefish from the Territories were subsidizing the returns to fishermen in other provinces where the grade of whitefish is lower (Marshall, 1986). While initial payments are made with respect to grade, final payments make no differentiation. The reason for this is that the end use of the fish may not necessarily be related to the grading (FFMC, 1980). Consequently, the practice is followed to account for a form of "reverse subsidization" whereby higher grade fish is sold with lower grade fish and lower grade returns have in fact subsidized the return on higher grade fish (Marshall, 1986).

However, the argument from many of the respondents to the Senate enquiry seemed to indicate that they believed that their product, high grade whitefish and Arctic Char, could command a better price if sold outside the Corporation. This sentiment is apparently not new, as the parliamentary representative from this area, David Nickerson (PC - Western Arctic), has on at least two occasions introduced a private member's bill into the House of Commons calling for the repeal of the Corporation's monopsony position with respect to the purchase of freshwater fish (Bill C-235, June 1985 and Bill C-211, October 1986, Index to Current Bills, 1987-88), both of which where unsuccessful. The principle argument put forward by Mr. Nickerson is that the Corporation has not adequately been serving the fishermen in his area because of its failure to promote the unique characteristics of the fish of this region and to market the fish accordingly (Hansard, October 8, 1986 - February 2, 1988).

This opinion of the future of the Corporation and its relationship with the Northwest Territories was not shared in two separate studies which examined the region's marketing options. The Department of Economic Development and Tourism, NWT, noted that opting out of the Corporation would entail a "substantial cost element" to the Territorial government and that the aggregate of the fishery would not benefit significantly (NWT, Department of Economic Development and Tourism, 1982). However, the report did stress that specific fisheries may benefit from new marketing arrangements and that further study should be undertaken to discover these potential arrangements.

In response to the conclusions of the Department of

Economic Development and Tourism report, and due to the continued decline of the fishery, a specific study was undertaken in 1985 with respect to the Territories Arctic Char fishery. The report discovered that while the Corporation had done a good job of promoting the product and creating a market niche, price had been set too high ($5.00/lb., 1985 ($11.02/kg) - well above the highest priced salmon) and there was a danger of damaging the market by encouraging substitution (Thorne, Stevenson and Kellog, 1985). The conclusion of the report was that the price must be reduced and new domestic markets established in cooperation with the FFMC.

The reason given for continuing participation with the FFMC as the principal marketing agent was that the Corporation could handle the product most efficiently due to economies of scale and that having the product go through the FFMC for processing added little to the cost. Consequently, to remove the product from the Corporation's control would cost Char producers time and money in establishing markets, marketing channels and a processing infrastructure (Thorne, Stevenson and Kellogg, 1985)

2.4.3 Agency Cooperation and the Coordination of Supply

One of the original purposes of the Corporation was to attempt to better coordinate the supply of fish from the various regions to ensure deliveries at times most profitable to fishermen. To achieve this goal it was originally suggested that the Corporation work with the participating provinces, in an advisory capacity, with respect to the setting of seasons and quotas for the various producing lakes.

It was recognized by the Federal/Provincial Task Force in 1975 that the multiplicity of agencies involved in the management of the fishery presented a problem of management communication. The major suggestions of the report were that the FFMC become the coordinating body for each provincial/territorial government and the federal government. It also affirmed the original relationship, suggesting that the Corporation function as advisor on regulatory practice to each of the provinces and the Northwest Territories (Federal/Provincial Task Force Report, 1975). The need to formalize this relationship was reiterated in the Report of the Federal/Provincial/ Territorial Committee in 1980.

In the Corporate Plan for 1985-86 (FFMC) it was stated that while consultation between the Corporation and the provincial/territorial agencies had taken place, the results were disappointing. For instance, a 1983 Alberta Government Task Force reported that the entire harvest of a single lake (Utikima), up to 500 000 lbs, was being taken in under two weeks; the resulting necessity to freeze much of the produce meant lower prices to fishermen. The failure to rationalize regulations to enhance the coordination of supply with market demand, the Corporation claims, has lead to increased carrying costs (with respect to inventories) and missed marketing opportunities (FFMC, 1985-86). The Standing Senate Committee on Fisheries suggested in their 1986 report that the very existence of, "a large organization that can either find markets for a product or store it" reduces the incentive for provincial/territorial regulators to rationalize regulatory schemes.

While the problems continue, especially in Alberta and to a lesser extent in Manitoba, the Corporate Plan 1988-89 states that the channels of communication are open between the Corporation and provincial agencies and suggestions for managing and regulating production are being discussed (FFMC, 1989). In Manitoba the Corporation has been working in consultation with the Fisheries Department in an effort to reduce the numbers of producers and to rationalize the system of quotas and licenses in the fisheries on lakes Manitoba and Winnipegosis (FFMC, 1989). The Corporate Plan reiterates, however, that the Corporation has not been as successful as it should have been in this area and that "too many marketing opportunities have been missed by not having fish available at the right time and excessive inventories have been carried during parts of the year."(FFMC, 1989)

2.4.4 Centralization of Processing

The Corporation's processing infrastructure includes two plants (this does not include the 90 packing stations presently in operation). The main plant is located in Transcona (Winnipeg, MB.) and there is one seasonally operated satellite plant located at La Ronge in northern Saskatchewan. Claims have been made that the effort to centralize processing primarily at Transcona and to a lesser degree in the satellite plant has been undertaken at great cost to fishermen and fishermen's agents (Peart, 1979). Most significantly, the centralization resulted in the reduction of jobs in some northern communities and has resulted in increased transportation costs to remote fisheries that must ship to Transcona (Corporate Plan 1985-86 and Marshall, 1986).

Consequently, pressure has been placed on the Corporation from some fishermen and their representatives for the decentralization of processing. The argument given in support of decentralization is that it can add significantly to employment opportunities in remote regions and that moving processed product to market is cheaper than sending raw material to Transcona for processing (Federal/Provincial/Territorial Committee Report, 1980).

However the Federal/Provincial/Territorial Committee's conclusion on this issue was that decentralization of processing would lead to a transferring of employment to other regions but not an overall gain to the aggregate of fishermen. With respect to the transportation issue the Committee found that the average per pound cost of transportation from delivery points to Transcona was only about \$.03 cents (\$.07/kg.). The major delivery cost is incurred in transporting the raw product to delivery points (Federal/Provincial/Territorial Committee, 1980).

The Corporation has consistently argued against decentralization because the original intention of centralization was to capture significant economies of scale in fish processing and to streamline existing facilities in an effort to reduce the cost of processing. If more satellite processing were to be initiated, the Corporation claims that fishermen would suffer increased overhead costs and reduced returns due to the addition of the plants and the reduction of through-put at the Transcona facility (Response to the Peart Report, 1979, Corporate Plan 1985-86 and Marshall, 1986). This argument is supported by a study undertaken at the Freshwater Institute which examined the removal of Saskatchewan volumes from Transcona aggregate processing. A global benefit cost analysis undertaken as part of the study examined the impact of seven Saskatchewan processing options. The results indicated that in every case the benefits which Saskatchewan fishermen might receive from either of the options were offset by increases in the Transcona plant overhead: "benefits are not sufficiently large to offset the incremental capital costs...and compensate for the disbenefit which results from the reallocation of Transcona overhead costs over reduced total volumes" (Topolniski, 1979).

It is important to note that the Saskatchewan benefit cost analysis, which takes into account only the impact of increasing Transcona overheads on the remaining Saskatchewan volume processed there, showed positive net present values on two of the seven models examined (Topolniski, 1979). The results suggest that positive improvements can be gained by decentralization of processing for the region considering the option but there would be a corresponding increase in cost for those regions who continue to deliver to the Transcona facility.

The Corporation has repeatedly stated that it would undertake decentralization of processing only if it could "yield additional benefits to fishermen" or if the agencies desiring the increased regional processing were willing to cover the additional costs or operating losses incurred due to the function of such a facility should they occur (Response to the Peart Report, 1979 and Corporate Plan, 1985-86). What the Corporation seeks to avoid are costs related to the carrying out of "social" directives and goals which may be in the interest of some participating agencies but could potentially have a negative impact on the fishery as a whole (FFMC Annual Report, 1986-87).

2.5 The Application of the Literature to the Study

The review of the existing literature in the three categories presented was intended as a discussion of major issues which have faced and continue to face the Corporation and the freshwater fishery in general. The three areas presented are directly related to the major research questions of the study:

1. Has the FFMC operated efficiently and effectively in terms of financial performance?;
2. Has the FFMC fulfilled the objectives and duties for which it was created?;
3. Have the clients of the FFMC been satisfied with the operation and performance of the Corporation?

The three areas also provide an examination of the various positions taken by the proponents in each of the issues discussed. As such, the review provides a base of information upon which the analysis in succeeding chapters may proceed, cognizant of the complexity of the issues at hand. The review also provides important information as to the function and operation of the Corporation which is germane to an understanding and analysis of the FFMC's impact on the fishery as a whole.

Chapter 3

Methods

3.1 Introduction

This chapter describes the methods employed in this study for achieving each of the three specific objectives outlined in chapter 1 and for addressing the question of the impact associated with the centralization of processing.

3.2 Financial Performance

This portion of the evaluation involved the examination of financial statistics and ratios related to the performance of the Corporation. The data have been used to carry out an analysis of Corporation trends over time (trend analysis) and a comparison to the trends of comparable fisheries operations, to determine the impact of Corporation operations on the fishermen in terms of the efficiency with which capital is employed, inventory turnover, liquidity measures, leverage measures, and profitability. Comparative data were obtained from Ontario freshwater fishery operations, The Prince Rupert Fishermen's Cooperative, National Sea Products Ltd. and The Canadian Saltfish Corporation.

Due to the specific nature of the Corporation, many of the typical financial ratios have been modified to reflect the Corporation's mandate. Similarly, comparison of financial performance has been cognizant of the unique operating characteristics of the Corporation as compared to those of the private and public firms to which the comparisons have been made.

3.3 Fulfillment of Objectives and Purposes

The purpose of this section is to evaluate the level of achievement and impact of each of the objectives and purposes specified in the mandate of the Corporation. The Corporation's objectives and purposes have been operationalized for the purpose of evaluation, using the following measures:

1. Marketing fish in an orderly manner:

   a. trend analysis of the rate of inventory turnover as compared to that experienced in other fisheries;

      Comparative data were obtained from the Great lakes freshwater fishery, The Prince Rupert Fishermen's Cooperative, The Canadian Saltfish Corporation and National Sea.

   b. trend analysis of sales volume and value over time; (value represented in real dollars, that is, adjusted for inflation through the use of the Industrial Price Index for Fish Products, Statistics Canada, 1975-1987).

   c. trend analysis of the real value of final payments to fishermen for the fishery as a whole and by specie (value represented in real dollars adjusted using the Industrial Price Index for Fish Products, Statistics Canada, 1975-1987).

      As final payments represent a profit on a species pool, they indicate the degree of success to which the Corporation has matched the supply of fish with the prevailing market demand.

2. Increasing returns to fishermen:

   a. trend analysis of prices paid to fishermen by species, in real dollars;

      Comparison of prices available to fishermen in the Ontario freshwater fishery and those of the saltwater fishery, in real dollar terms (adjusted using the Industrial Price Index for Fish Products, Statistics Canada, 1975-1987).

   b. trend analysis of the total portion of sales paid to fishermen;

      This measure seeks to determine the portion of the returns from fish sales that fishermen have received over the life of the Corporation.

   c. trend analysis of the real dollar weighted average returns from fishing, of fishermen for the fishery as a whole and by region, in order to determine if returns have improved (adjusted to real dollars using the Industrial Price Index for Fish Products, Statistics Canada, 1975-1987).

      Returns have been weighted according to the number of fishermen in each group, which range from $1000 to $50000 by $2000 increments. Wide ranging amounts of fishing effort between fishermen necessitate the use of a weighted average in order to determine overall changes in returns.

3. Promoting international markets for and increasing international trade in, fish:

   a. trend analysis of total fish harvests over the life of the Corporation;

   b. trend analysis of changes in domestic market over the life of the corporation;

   c. trend analysis of the diversification of the marketing efforts of the Corporation. Examination of the change in the destination of exports over the life of the Corporation.

4. Provision of Credit Assistance to Fishermen

a. assessment of the terms of credit extensions, collateral requirements, terms of repayment and interest rates, and limits on credit offered by the Corporation;

b. evaluation of the credit policy on the basis of personal interviews carried out under section 3.4 Client Satisfaction.

3.4 Client Satisfaction

The clients of the Corporation include:

1. The Fishermen;
2. The Provinces and NorthWest Territories.

As participants in the agreement that created the FFMC and as the authority which decides upon continued participation, Provincial/Territorial governments can be considered clients of the Corporation's operations in the broad sense whereas direct benefits go to the fishermen in each region.

Client satisfaction has been determined through the use of three separate interview schedules (see Appendix B). One schedule was tailored to determining the views of each of the government officials in charge in the five regions (Ontario, Manitoba, Saskatchewan, Alberta, Northwest Territories). The remaining two were designed to determine the satisfaction of fishermen. Topics covered in the interview process include: marketing strategy; pricing policy; centralization of processing; fishermen's representation; profitability; credit policy; and, the future of the Corporation.

The interview process was carried out by selecting advisory committee members, both past and present, (who are fishermen) and representatives of principal fishermen's organizations in each of the Corporation's operating regions. Advisory Committee and fishermen's organization officials were chosen because of their high levels of involvement in the Corporation's business, their high levels of knowledge of operations and their positions as representatives of the fishermen at large.

A total of fifteen personal interviews have been undertaken with representatives who are themselves fishermen and five with the various government officials in charge of commercial fishing in the Provinces and Territory.

3.5 The Impacts of Centralization of Processing

This research provides a general assessment of impact of centralization. This has be achieved by examining financial data related to profitability, the portion of sales paid to fishermen and the trend in weighted average income in order to determine the financial impact on fishermen over the Corporation's lifetime. This data have been contrasted with the opinions of fishermen concerning the impact of centralization on their operations, collected in the Client Satisfaction component of this research (see Appendix B: Interview Schedules).

3.6 Summary

Each of the methods described above is designed to address a single aspect of the overall research problem. The analysis proceeds from the narrow perspective of a financial analysis into the broader topics relating to the Corporation's mandate and finally to the perceptions of the client group. This progression was chosen so that all aspects of the Corporation's performance could be evaluated to provide an overall assessment of the efficiency, effectiveness and equitability of the Corporation's operations and performance.

Chapter 4

Analysis and Findings

4.1 Introduction

The purpose of this chapter is to present and discuss the findings relevant to each of the objectives identified in chapter 1. It is organized in three main sections covering the three principle objectives: Financial Performance; Fulfillment of Objectives and Purposes; Client Satisfaction.

4.2 Financial Performance

A standard means through which the financial performance of a firm may be gauged is the use of financial ratios. These ratios are derived from balance sheet information and cover the primary areas of the financial health and performance of the firm: liquidity; leverage; activity; and profitability, the last being the ultimate measure of management's ability to invest and direct its resources properly.

The financial performance of the FFMC will be measured using ratios in each of the four general categories. To present a fair assessment of performance and to identify trends in the measures, the ratios will be presented over a ten year period from 1978 to 1987. In addition, comparisons with similar trends for three other firms in the fishing industry will be presented. Comparison to other firms is a necessary component of the evaluation because it reveals the performance of the Corporation in relation to others in the industry and thereby provides a benchmark from which to make judgments about the firm's performance.

The firms represented for comparison include, The Canadian Saltfish Corporation, National Sea Incorporated, and the Prince Rupert Fishermen's Cooperative. While it is true that there are disparities between these firms and the FFMC with respect to the type of markets, size and the structure of each firm, this approach provides a better comparison than would result from a comparison to published industry norms for a related industry or by the use of analysts "rules of thumb" as reference points.

The most important differences between the FFMC and the comparative firms has to do with the degree and the types of financial risk each faces. As a private firm National Sea must maintaining a certain level of liquidity in order to ensure the continued support of its creditors. The FFMC, on the other hand, obtains nearly all of its working capital and fixed asset funds from the Department of Finance. Consequently, measures of liquidity and leverage are not as important to the Corporation or its creditor, the Finance Department, so long as other performance measures are maintained. Essentially, were private firms face financial risks dealing in private financial markets the

Corporation faces risk of a political nature. That is, their continued access to finance is determined by bureaucratic evaluation influenced by the prevailing political climate. For this reason the Corporation's management will place greater emphasis on achievement of certain mandate goals at the expense of key financial figures, such as liquidity (this will be examined in greater detail below) because they are evaluated on the basis of mandate success rather than strict conformity to established norms for financial analysis.

The validity of the comparison is strengthened by the fact that the firms have many of the same operating characteristics and corporate goals. Because it is a cooperative, the Prince Rupert firm follows a policy similar to the FFMC with respect to returning the majority of profit to the fishermen as a final settlement. The Canadian Saltfish Corporation, like the FFMC, is a crown corporation and consequently operates under some of the same conditions with respect to financing and goals even though their mandates are not exactly alike. Comparisons to National Sea are important because it is one of the largest and most well established fish processing firms in Canada (1987 financial data for National Sea was unavailable and is therefore omitted on a all tables and figures). Consequently, while there are differences between the firms there are important qualities inherent to each firm that can provide insight into the performance of the FFMC.

4.2.1 Liquidity Ratios

The ratios presented in this section measure the Corporation's ability to meet its short term obligations to creditors. The significance of these measures is assessed through a trend analysis of the Corporation's liquidity over the past ten years (1978-1987) and by comparison to other firms in the fishing industry.

Measures of liquidity reveal to the creditors, or investors in a firm, the extent to which their investment is protected by the firm's total assets. Low levels of liquidity may have serious consequences with respect to a firm's ability to obtain future financing and suggests that the firm is unable to take advantage of profitable business opportunities as they arise (Bernstein, 1984). Extremely low levels of liquidity may result in the forced sale of assets to cover maturing obligations or to insolvency and bankruptcy of the firm.

4.2.1.1. Current Ratio

The current ratio is calculated by dividing current assets by current liabilities from the firms balance sheet. The ratio measures the coverage afforded to creditors by the firm's assets. The ratio is expressed as the number of times the firm's assets cover liabilities. This provides the basis from which the minimum proportion of book value of the assets at which liquidation can occur and still cover all obligations. For example, a ratio of 2:1 or 2.00 means that assets could be sold off at 50% of their quoted (book value) value and liabilities would still be met.

Table 1 provides a summary of the current ratio of the Corporation over the past ten years and a comparison to three firms in the fishing industry. (note: prior to 1980 calculation of FFMC current ratios requires the removal of long term debt from the liabilities total by examining the breakdown of the lump sum, "loans from Canada" - the practice of separating these items on the balance sheet did not begin until 1980).

Table 1
Current Ratio Comparisons
(times coverage, assets to liabilities)

YEAR	FFMC	SALTFISH	NAT. SEA	PRINCE RUPERT
1978	0.88	1.30	1.29	1.04
1979	0.89	1.20	1.26	0.97
1980	0.94	1.23	1.14	1.05
1981	0.98	1.67	1.01	1.06
1982	0.99	1.97	1.16	0.97
1983	0.93	1.44	1.10	1.01
1984	0.90	1.02	2.06	1.06
1985	0.88	0.79	3.13	1.05
1986	0.80	0.73	2.66	1.10
1987	0.74	0.79		1.09
AVERAGE	**0.89**	**1.21**	**1.65**	**1.04**

During this period the FFMC has maintained a very low level of liquidity. The level is so low that in the event of liquidation the Corporation would have to sell off its assets at over 100% of book value to meet current liabilities. In comparison to the three other firms included in table 1 the FFMC's ratio is clearly the most consistently low over the ten year trend. The table also reveals that liquidity is generally low for all of the representative firms, remaining near 1.00 for the ten year period.

The reason for the low level of liquidity on the part of the FFMC, over the period and relative to comparative firms, is due to the policy of returning virtually all profits to fishermen as final payments. In each of the ten years, 1978-87, final payments to fishermen represent a significant portion of current liabilities. The low level of liquidity is therefore a management decision, much as the low level displayed by the Prince Rupert Cooperative which returns profits to members, and is in keeping with the goals for which the Corporation was established.

However, the practice of returning all but a small amount of earnings to fishermen results in a yearly deficit in working capital (current assets - current liabilities) which must be made up through debt financing. The result is that the FFMC is dependent in each year on ready accessibility to working capital loans to cover a portion of their current liabilities. While such a situation may generate a considerable degree of financial risk for a private firm, risk to the Corporation is minimal as the Department of Finance has consistently provided the necessary financing.

A significant problem with the current ratio is that it is a static measurement which assumes that the firm under analysis is about to be liquidated and says nothing about the debt-worthiness of the business (Helfert, 1982). The significance of this ratio should, therefore, be tempered with the Corporation's history of repaying both principal and interest to its creditors. Over the ten year period analyzed, the Corporation has demonstrated a consistent ability to repay its working capital loans and by 1987 (April 30) had reduced its long term capital loans to nil. This suggests that as the firm's level of sales has slowly grown over the ten year period (with some setbacks) the payment of current liabilities has been a refunding operation (Bernstein, 1984). Liquidity has remained low but the yearly operation of the firm demonstrates solid debt worthiness. From the creditors' perspective, debt worthiness over a significant period such as the one presented tends to diminish the importance of the liquidity measure. Consequently, any risk of evaluation and alteration of credit terms by the Finance Department is reduced by the demonstrated debt worthiness which indicates adequate performance despite low liquidity.

4.2.1.2. Quick Ratio

The quick ratio is calculated by dividing current assets minus inventories by current liabilities. The purpose of this ratio is to assess the liquidity of the firm without relying on the sale of inventories which, are generally considered to be the least liquid of the current assets.

In Table 2 the FFMC and the comparative firms display quick ratios over the period which reveal, when compared to figures in Table 1, that inventories make up about half or more of current assets. The results are extremely low measures of liquidity with the FFMC lower than all but the Prince Rupert Cooperative. The significance of this measure is tempered in the same way as the current ratio by the Corporation's debt worthiness.

However, this showing by the group of firms suggests that the risk associated with holding large inventories, the cost and reduction in saleable value, and the impact upon liquidity, are characteristics of the fish processing and marketing business. The FFMC's performance with respect to the proportion of current assets as inventories and short term liquidity is not unusual. The fact remains, however, that large inventories significantly reduce liquidity resulting in a greater risk for creditors and the Corporation. In addition product value is reduced and costs increase with the amount and length of time goods must be held in inventory. (The impact and significance of holding large inventories is discussed in greater detail below in section 4.2.3 Activity Ratios).

Table 2
Quick Ratio Comparison
(times coverage, current assets less inventories to current liabilities)

YEAR	FFMC	SALTFISH	NAT. SEA	PRINCE RUPERT
1978	0.40	0.67	0.45	0.25
1979	0.63	0.49	0.44	0.19
1980	0.45	0.69	0.43	0.15
1981	0.42	0.93	0.38	0.20
1982	0.36	1.35	0.34	-0.42
1983	0.32	0.76	0.34	0.21
1984	0.44	0.50	0.59	0.22
1985	0.27	0.59	1.20	0.31
1986	0.34	0.46	1.03	0.38
1987	0.35	0.33		0.31
AVERAGE	**0.40**	**0.68**	**0.58**	**0.18**

4.2.2 Leverage Ratios

Leverage ratios measure the proportion of funds supplied by the firm as against the amount supplied by creditors. These ratios express the risk to which the firm is exposed with respect to claims against its assets (Helfert, 1982). If the greater proportion of the firm's total funds are provided by creditors, the risk inherent in the operation of the business is shifted to the creditor in proportion to the funds they supply. The firm is also placed at an increased risk because, unlike owner capital which is paid a dividend if profits are realized, interest on borrowed funds must be paid whether profits have been realized or not (Tamari, 1978). In a highly leveraged firm, that is with a high proportion of debt capital, there is a greater risk of the firm being unable to meet its maturing obligations.

4.2.2.1. Debt to Total Assets

This ratio measures the total debt, both short and long term, against the firm's total assets. It measures the proportion of funds provided by creditors as against those provided by the firm.

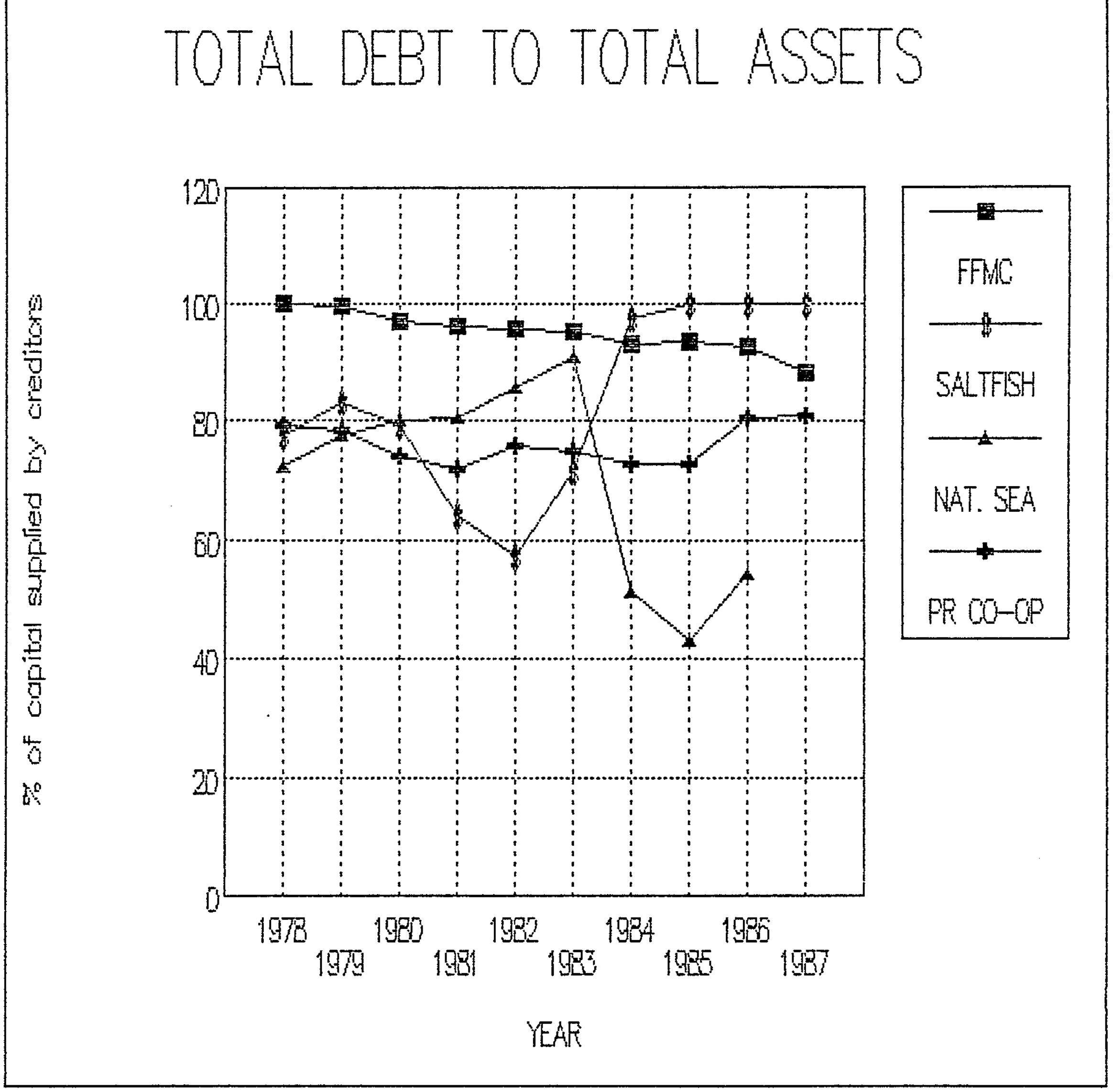
The comparison of firms in table 3, below, reveals a generally high proportion of debt financing for all firms. However, the FFMC is the most highly leveraged of the four firms, relying on debt financing to an average of 95.23% over the last ten years.

Table 3
Debt to Total Assets
(% capital supplied by creditors)

YEAR	FFMC	SALTFISH	NAT. SEA	PRINCE RUPERT
1978	100.00	77.51	72.26	79.28
1979	99.71	83.41	77.38	78.48
1980	97.10	79.17	80.13	74.27
1981	96.39	64.04	80.79	72.14
1982	95.78	57.06	85.75	75.69
1983	95.44	71.34	91.12	75.15
1984	93.34	97.59	51.20	72.71
1985	93.65	100.00	42.94	72.68
1986	92.69	100.00	54.01	80.68
1987	88.25	100.00		81.27
AVERAGE	**95.23%**	**83.01%**	**70.62%**	**76.24%**

Figure 2 plots the ten year trend of total debt to total assets (as a % of capital supplied by creditors) for the four firms. It reveals that the FFMC has been steadily improving its leverage position since 1979. The reason for this improvement is the implementation of a policy in 1979 of maintaining a reserve of retained earnings instead of returning all profits to fishermen as final payments (for a

figure 2



TOTAL DEBT TO TOTAL ASSETS
% of capital supplied by creditors
120
100
80
60
40
20
0
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
YEAR
FFMC
SALTFISH
NAT. SEA
PR CO-OP

discussion of this policy see Chapter 2, p.19).

The high measure of leverage indicates that the Corporation relies almost entirely on the Department of Finance, its principal creditor, for its financing. This arrangement has the effect of placing much of the risk of financial failure on the Finance Department and increases the cost to the Corporation with respect to meeting interest charges. However, given the Corporation's mandate, which expressly assigns the Corporation the duty of increasing returns to fishermen, the relatively high dependance on debt financing appears to be a management decision. Rather than retain a greater portion of earnings, the Corporation has, in each of the years examined, distributed the bulk of earnings as final payment and has had to depend on debt financing to cover its working capital deficit. It would not be difficult for the Corporation to reduce the level of debt financing, simply by retaining a larger portion of earnings, but this would have the effect of contradicting its mandate. As the success of the Corporation is generally evaluated with respect to mandate delivery, it is not difficult to understand why favourable measures of leverage (and liquidity) are not as important to Corporation managers.

4.2.2.2. Times Interest Earned

The times interest earned ratio is calculated by dividing earnings before interest payments, taxes and final payments (in the case of both the FFMC and the Prince Rupert

Cooperative) by interest charges. It is designed to measure the firm's ability to cover finance charges associated with its use of leverage (Bowlin, Martin and Scott, 1980). The resultant ratio is expressed as the amount by which earnings could decline before the firm would experience difficulty in meeting the cost of its debt. This measure is an important companion to the total debt to total assets measure discussed above, just as debt-worthiness tempered the significance of the current ratio, because it reveals the Corporation's ability to meet the payments on its debt as a going concern.

Table 4 reveals that the FFMC is second only to the Prince Rupert Cooperative in its earnings coverage of interest charges over the ten year period. This indicates that while the Corporation is highly leveraged it has performed better than both the Canadian Saltfish Corporation and National Sea Inc. in providing a margin of security to its creditors. The significance of this comparison is heightened when it is considered that the FFMC relies more heavily on debt financing than either of these two firms (see table 3), therefore incurring a greater proportionate amount of interest charges, and yet maintains a higher earnings coverage.

However, Corporation's heavy reliance on debt financing continues to place the firm at some risk regardless of their ability to handle payments in any one year. If earnings fall during one year the Corporation could easily run into a situation in which they would be unable to meet the cost of their debt. The fluctuation in the times interest earned ratio (see Table 4 and Figure 3) reveals the highly variable nature of fish processing and marketing and the potential for just such an occurrence. The growing reserve of retained earnings will offset this danger as the net worth of the Corporation grows.

A drawback of the times interest earned ratio is that it neglects the payment of the principal on loans. However, it was noted above that the Corporation has displayed an adequate ability to repay principal on both working capital loans and fixed asset loans.

Table 4
Times Interest Earned Comparisons
(times coverage of gross earnings to interest payments)

YEAR	FFMC	SALTFISH	NAT. SEA	PRINCE RUPERT CO-OP
1978	3.28	3.63	6.01	32.07
1979	7.07	3.37	3.14	46.35
1980	11.87	2.10	0.63	20.30
1981	11.71	11.86	0.61	8.98
1982	2.35	6.29	0.96	6.40
1983	1.02	6.16	0.07	13.78
1984	5.95	-4.67	0.39	16.74
1985	7.67	-1.54	-0.68	17.17
1986	5.56	-0.49	8.11	17.25
1987	17.98	2.60		15.56
AVERAGE	**7.48**	**4.27**	**2.14**	**19.48**

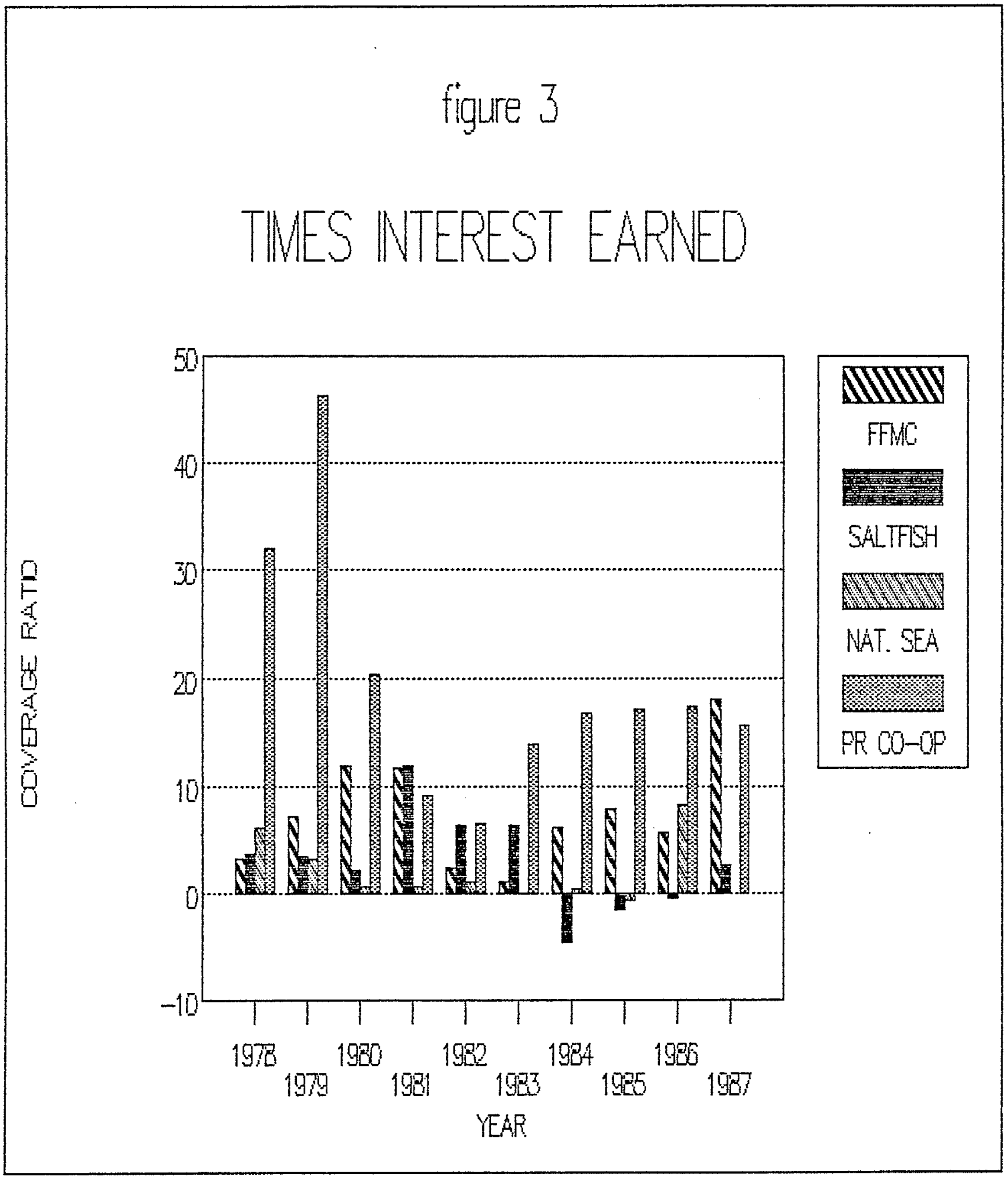


figure 3
TIMES INTEREST EARNED
COVERAGE RATIO
50
40
30
20
10
0
-10
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
YEAR
FFMC
SALTFISH
NAT. SEA
PR CO-OP

4.2.3 Activity Ratios

The purpose of this set of ratios is to gauge the effectiveness to which the firm employs the resources at its command (Weston and Brigham, 1981). In this respect these ratios indicate the performance of the firm and the effectiveness of its management in applying capital to the business of fish processing and marketing.

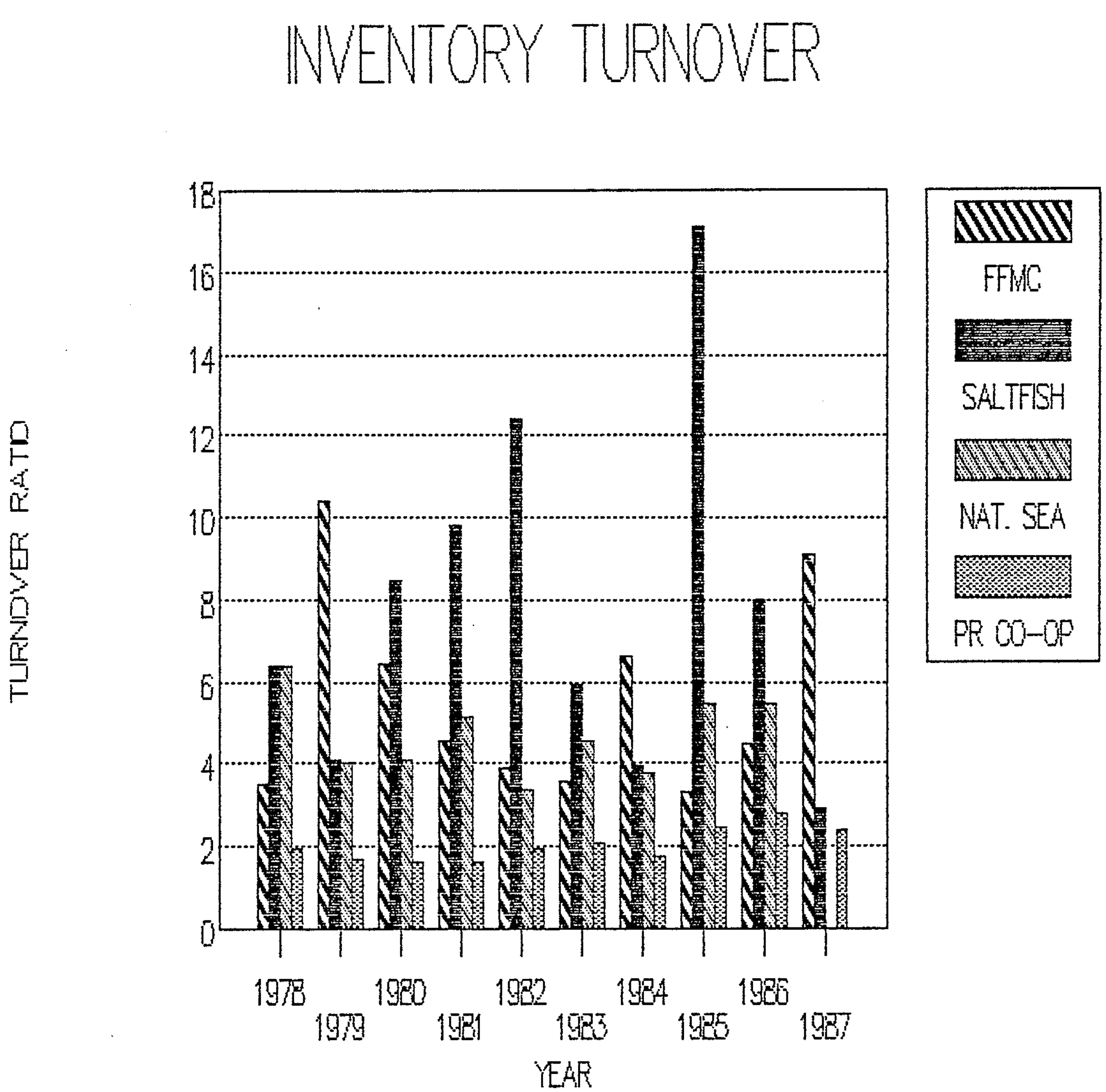
4.2.3.1. Inventory Turnover

This ratio is calculated by dividing sales by the value of inventory as it is entered in the balance sheet of the firm. The ratio produces a turnover figure which indicates the number of times sales will clear the inventory figure.

Table 5 and figure 4 plot the ten year trend of inventory turnover for the four firms. In comparison the FFMC is one of the top performers of the four firms in terms of inventory turnover; second only to the Canadian Saltfish Corporation with respect to the ten year average. The importance of this average is, however, minimal as figure 4 reveals that the year to year fluctuation in turnover has been wide.

A turnover ratio of 3 to 4 times is generally considered to be quite low, especially in the case of a product which loses value in proportion to the time it sits in inventory (Helfert, 1982). Low levels of inventory

figure 4



INVENTORY TURNOVER
TURNOVER RATIO
0
2
4
6
8
10
12
14
16
18
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
YEAR
FFMC
SALTFISH
NAT. SEA
PR CO-OP

turnover during the ten year period indicate that the Corporation has had trouble finding markets for fish at certain periods of the year. Part of the reason for the low inventory turnover, may be related to the Corporation's minimal control over the supply of fish.

Table 5
Inventory Turnover

YEAR	**FFMC**	**SALTFISH**	**NAT. SEA**	**PRINCE RUPERT**
1978	3.54	6.34	6.34	1.97
1979	10.40	4.08	4.06	1.67
1980	6.46	8.43	4.12	1.63
1981	4.54	9.82	5.15	1.62
1982	3.93	12.40	3.37	1.95
1983	3.57	5.93	4.52	2.06
1984	6.64	3.95	3.79	1.77
1985	3.32	17.13	5.47	2.46
1986	4.48	8.01	5.45	2.80
1987	9.11	2.90		2.41
AVERAGE	**5.60**	**7.60**	**4.70**	**2.03**

Lack of coordination between the Corporation and provincial agencies (as was discussed in Chapter 2, p.33-35) may have resulted in a failure to coordinate supply with periods of market demand. The result for the Corporation is that they must place the fish in inventory until a market can be found. The result to fishermen is a loss due to the cost of carrying inventories and the decline in value in proportion to the time the product is carried in inventory.

4.2.3.2. Fixed Asset Turnover

The fixed asset turnover ratio is calculated by dividing the value of sales by the value of total fixed assets of the firm. The ratio is intended to measure the efficiency to which capital equipment is employed in generating returns and to detect idle capacity or over-investment in fixed assets.

Table 6 reveals that of the representative firms the FFMC averaged over the period a return of nearly seven sales dollars on every dollar of fixed assets employed.

Table 6
Fixed Asset Turnover

YEAR	FFMC	SALTFISH	NAT. SEA	PRINCE RUPERT
1978	4.52	17.20	6.83	3.77
1979	6.46	20.83	3.91	4.05
1980	6.87	13.26	3.09	4.81
1981	7.73	22.20	3.20	4.30
1982	7.10	28.69	3.47	4.25
1983	6.09	36.88	4.02	4.93
1984	7.08	29.17	3.42	4.31
1985	6.17	52.58	4.15	5.79
1986	7.34	43.93	4.40	6.47
1987	8.82	28.85		7.33
AVERAGE	**6.82**	**29.34**	**4.05**	**5.00**

Compared to the other three firms this ratio places the Corporation's performance second only to the Canadian Saltfish Corporation. The unusually high ratio displayed by the C.S.C. may be due to over trading on fixed assets and may indicate a lack of fixed asset investment. The Corporation's performance for the ten year period reveals that it is using its fixed assets adequately with neither idle capacity or over trading due to a lack of available fixed asset investment.

4.2.3.3. <u>Total Asset Turnover</u>

This ratio is calculated by dividing sales by the total assets employed by the firm. Its purpose is to assess the performance of the firm based on the level of efficiency with which total assets are employed. The ratio generated indicates the return, in terms of sales activity, each dollar of assets provides for the firm.

As with fixed assets turnover the FFMC is performing better than both the Prince Rupert Cooperative and National Sea Inc.. The ten year average listed in table 7 below, indicates that the Corporation is gaining a return of 2 sales dollars to every asset dollar employed. This average turnover figure is based upon relatively constant numbers over the whole period (see figure 5) and indicates that management has been employing assets effectively and efficiently.

Favourable findings with respect to both the fixed asset turnover and total asset turnover lend support to the conclusion made above with respect to inventory turnover. Because the Corporation's management is effectively employing its assets and generating an adequate sales level, the low inventory turnover is more likely the result of factors outside management's immediate control i.e. those related to the seasonality of the industry and the lack of coordination with regulatory agencies.

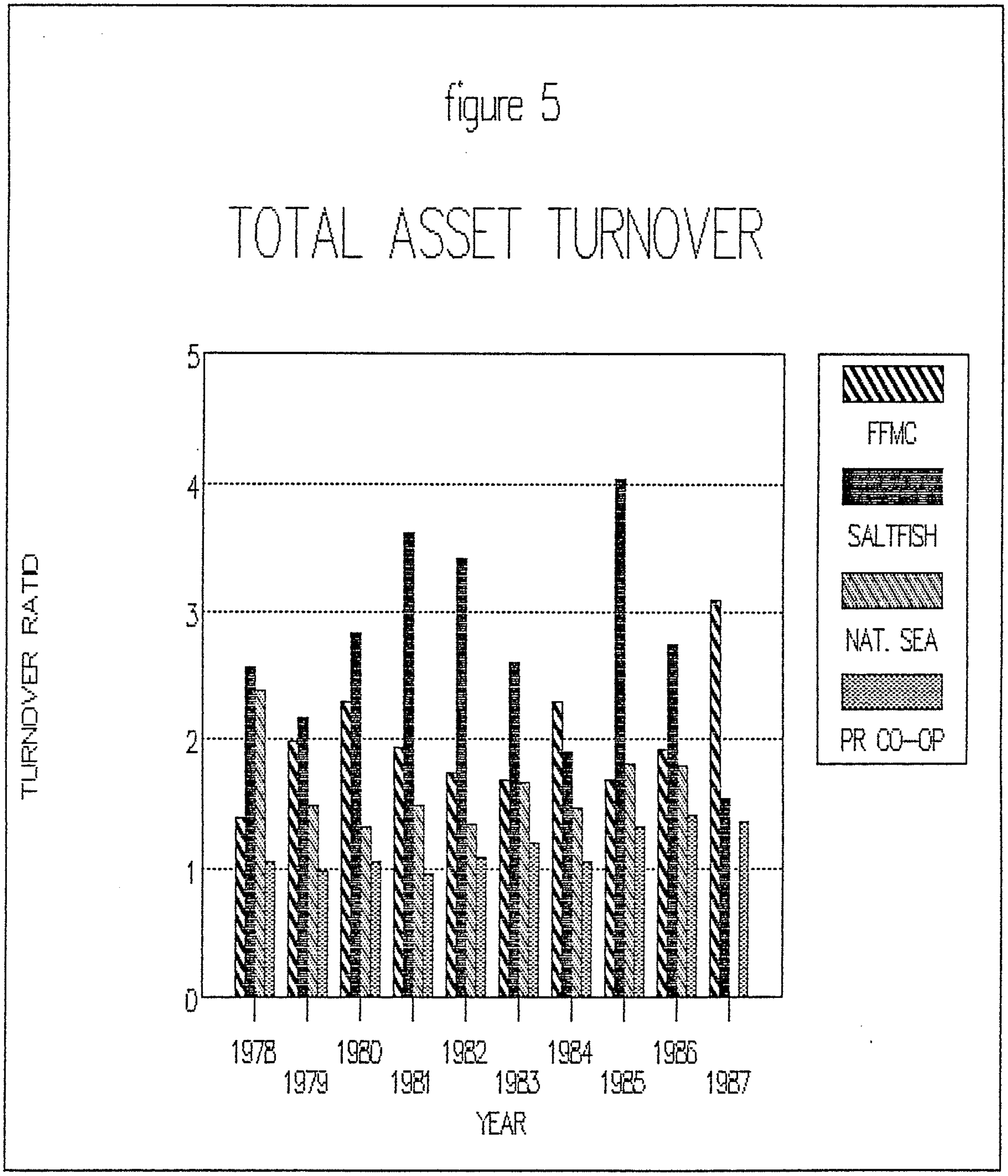


figure 5
TOTAL ASSET TURNOVER
TURNOVER RATIO
0
1
2
3
4
5
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
YEAR
FFMC
SALTFISH
NAT. SEA
PR CO-OP

Table 7
Total Asset Turnover

YEAR	FFMC	SALTFISH	NAT. SEA	PRINCE RUPERT CO-OP
1978	1.39	2.57	2.39	1.05
1979	1.99	2.16	1.48	0.98
1980	2.30	2.84	1.31	1.04
1981	1.94	3.61	1.48	0.96
1982	1.74	3.42	1.33	1.09
1983	1.68	2.60	1.67	1.19
1984	2.30	1.89	1.46	1.04
1985	1.68	4.02	1.80	1.31
1986	1.91	2.74	1.79	1.41
1987	3.09	1.54		1.36
AVERAGE	**2.00**	**2.74**	1.63	**1.14**

4.2.4 Profitability Ratios

The primary importance of profitability ratios is that they reveal the overall effectiveness of the firm's management (Bowlin, Martin and Scott, 1980). Profitability is generally measured in two dimensions: profitability in relation to sales and; profitability in relation to the firm's investment. Consequently, this set of ratios measures management's ability to direct the firm's resources and sell the firm's product at the lowest cost for the highest price.

In the case of the FFMC's profitability all the ratios are calculated before the disbursement of final payments to fishermen. It is true that profit figures calculated in this fashion say nothing about the net worth of the Corporation and the impact of profitability on the liquidity of the firm. However, to calculate profit figures after final payments would be to understate the return on the firm's investment and the effectiveness of management. Calculation before final payment provides a fair analysis of the effectiveness of management with respect to sales and return on assets because the sum of final payments represents revenue above cost and therefore a net return. Measuring profitability in this way suggests that it is the policy of returning the majority of profits to fishermen which has an impact on the net worth of the FFMC and not necessarily the overall profitability in relation to sales and investment.

4.3.4.1. Net Operating Margin

The net operating margin is a measure of the firm's profitability in relation to sales. It measures management's ability to control the costs of sales and turn a profit on each sales dollar. The ratio is calculated by dividing income before interest charges, taxation and final payments, in the case of both the FFMC and the Prince Rupert Cooperative, by the firms sales figure.

Table 8 plots the ten year trend for the four firms and reveals that the FFMC has been second in performance to the Prince Rupert Cooperative. It is apparent from the comparison of the firms that not only has the Corporation been an adequate performer in the group, it has demonstrated greater consistency in the level of profit earned annually.

Table 8
Net Operating Margin
(% return on sales dollar before interest and taxes)

YEAR	FFMC	SALTFISH	NAT. SEA	PRINCE RUPERT CO-OP
1978	10.79	8.33	8.28	68.58
1979	17.46	6.01	8.09	74.15
1980	17.63	5.18	2.80	65.72
1981	19.14	14.21	3.96	58.69
1982	8.45	3.76	5.37	55.38
1983	5.43	2.24	0.36	63.52
1984	16.53	-11.37	1.28	53.97
1985	20.12	-3.55	-1.25	53.08
1986	16.56	-0.65	11.94	47.33
1987	25.32	7.95		46.41
AVERAGE	15.74	3.21	4.54	58.68

4.2.4.2. Net Profit Margin

This ratio, unlike the net operating margin, measures profitability after the deduction for interest charges and taxes. It is calculated in much the same way except that the income figure is net income minus interest and taxes (still before final payments for both the FFMC and the Prince Rupert Cooperative) divided by the sales figure.

Table 9 plots the ten year trend for the four firms and, as with the Net Operating Margin, reveals that the FFMC is performing adequately yet behind the phenomenal performance of the Prince Rupert Cooperative. It is also apparent from this table that, even after the payment of interest on its heavy debt load, the FFMC has been able to produce a net profit margin that exceeds both the Canadian Saltfish Corporation and National Sea. This performance, revealed in Figure 6 - Net Profit Margin, is especially pronounced after the market downturn of 1982-83 in which the

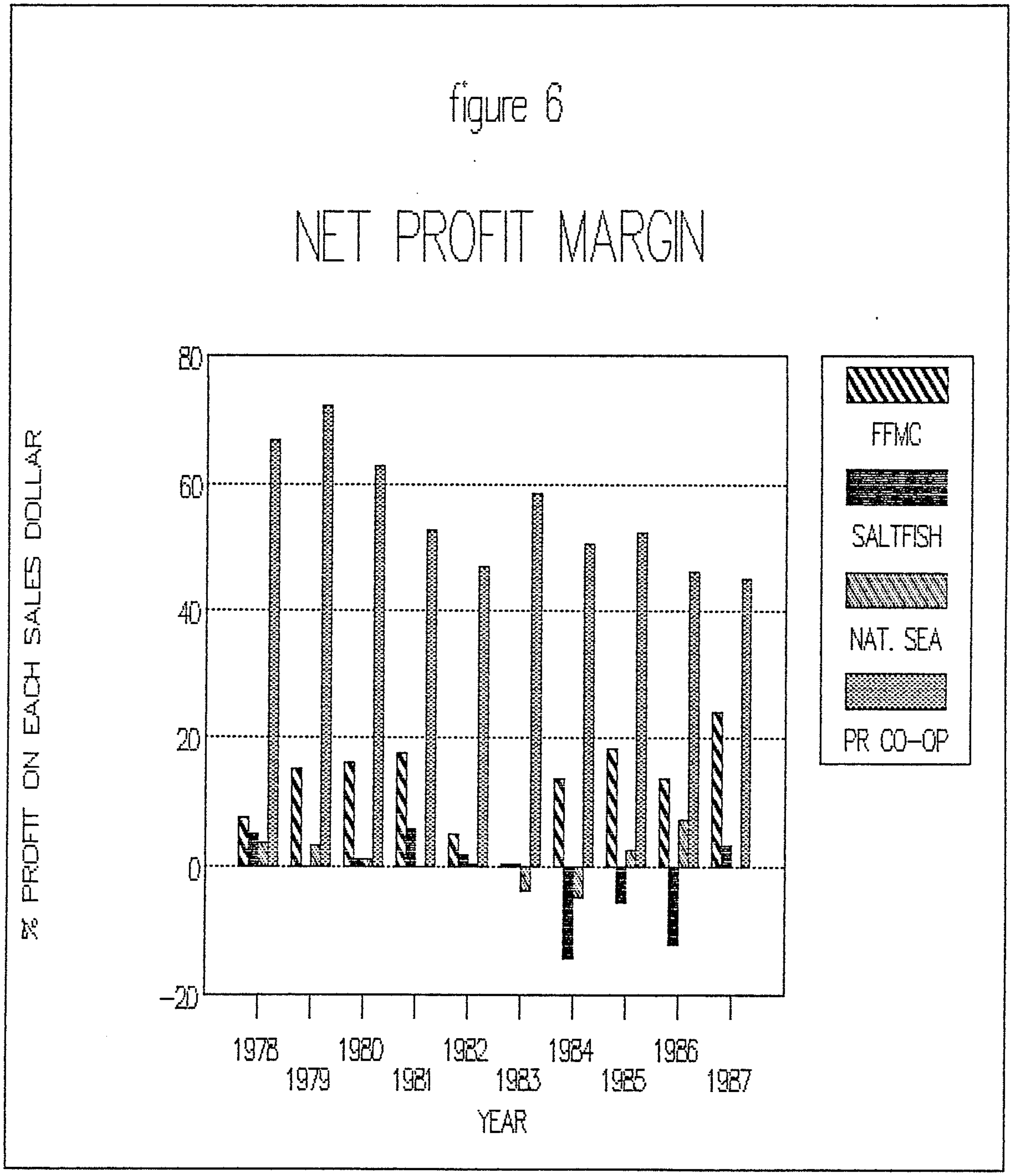


figure 6
NET PROFIT MARGIN
% PROFIT ON EACH SALES DOLLAR
80
60
40
20
0
-20
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
YEAR
FFMC
SALTFISH
NAT. SEA
PR CO-OP

Corporation has steadily improved net profit while the other two firms have not.

Table 9

Net Profit Margin
(% return on sales dollar)

YEAR	FFMC	SALTFISH	NAT. SEA	PRINCE RUPERT
1978	7.50	5.09	3.48	66.64
1979	14.99	-0.15	3.17	72.84
1980	16.14	1.12	0.91	62.57
1981	17.51	5.751	-0.26	52.57
1982	4.86	1.81	0.27	47.00
1983	0.11	0.07	-3.84	58.47
1984	13.75	-14.37	-4.69	50.40
1985	18.13	-5.68	2.23	52.18
1986	13.58	-11.92	7.00	46.16
1987	23.91	3.23		45.08
AVERAGE	**13.05**	**-1.50**	**0.92**	**55.41**

4.2.4.3. Productivity of Assets

Unlike the above ratios the productivity of assets measures the profitability in relation to the investment of the firm. It is calculated by dividing the firm's income before interest charges, taxes and final payments by the total assets invested by the firm. The resultant ratio is expressed as a percentage return on invested capital.
It measures the ability of the firms management to invest and manage assets in order to gain the highest possible return for the firm.

Table 10 plots the ten year trend of return on total assets and reveals once again that the FFMC is one of the top performers among the four firms analyzed.

Table 10
Productivity of Assets
(% return on invested capital)

YEAR	FFMC	SALTFISH	NAT. SEA	PRINCE RUPERT
1978	14.90	21.37	19.79	72.08
1979	34.96	12.95	11.96	72.69
1980	40.56	14.69	3.68	68.23
1981	37.19	51.29	5.87	56.61
1982	14.70	12.83	7.12	60.60
1983	9.13	5.81	0.61	75.41
1984	37.95	-21.49	1.88	56.16
1985	33.87	-14.30	-2.26	72.53
1986	31.65	-1.79	21.38	68.88
1987	78.37	12.21		65.31
AVERAGE	**33.30%**	**9.36%**	**7.78%**	**66.85%**

Because the productivity of assets measure reveals the Corporation's return on its operation, it is a more reliable measure of the long term financial health of the Corporation. The FFMC's demonstrated ability to derive a satisfactory return on invested capital, therefore, tends to diminish the importance of earlier liquidity and leverage measurements by indicating that the Corporation is producing an adequate level of returns with which to meet its mandate goals.

4.2.5 Summary and Conclusions

It is apparent that the Corporation's liquidity is very low, so low that the firm could technically be considered insolvent, as it regularly suffers a deficiency in working capital to cover a portion of its current liabilities. The significance and impact of this position is diminished when the profitability and debt worthiness of the Corporation are considered. Because the FFMC has been performing adequately with respect to the repayment of interest and principal on loans, which is the result of generating adequate returns on invested capital, access to debt financing through the Department of Finance has been maintained.

Essentially, low liquidity and high leverage are the result of management decisions with respect to mandate delivery. The nature of the Corporation's mandate and its borrowing arrangement have meant that liquidity and leverage are not as important as they are for a private firm. Because the Corporation is required, by mandate, to increase returns to fishermen, this goal takes precedence over liquidity and leverage measures which can only be altered by retaining greater earnings. The analysis has indicated that there may be efficiency benefits associated with the reduction of the Corporation's dependance on debt financing by reducing costs. However, the precise impact of such a policy on the financial performance and mandate delivery of the Corporation has not been assessed in detail.

Activity measures indicate that the Corporation is performing adequately with respect to both fixed and total asset turnover, generating a level of sales which makes efficient use of the Corporation's assets. Inventory turnover appears to be low for the group of firms. A possible cause of large inventories and low turnovers may be the result of a lack of coordination between the

Corporation's management and the Fisheries management officials in the provinces and territory that supply the Corporation with fish. (The dimensions of this problem are examined further in section 4.3 Client Satisfaction). However, because the firms as a group revealed fairly low inventory turnover figures, this suggests that these results may also be the product of seasonality or some other factor which is specific to the fish processing industry.

Profitability measures reveal that the Corporation has generated a satisfactory return on both its sales effort and in relation to its invested capital. Measures reveal that the Corporation is second only to the Prince Rupert Fishermen's Cooperative in terms of profitability and in comparison to National Sea and the Canadian Saltfish Corporation has generated a more consistent annual return on sales and its invested capital.

In comparison to the representative firms used in the analysis the FFMC is, with respect to profitability and the efficiency with which it manages and invests its resources, an adequate and often top performer. For fishermen this has meant, a generally rising level of final payments since 1983 and a record $13.7 million in 1987.

4.2 FULFILLMENT OF OBJECTIVES AND PURPOSES

When the FFMC was created in 1969 by the passing of the Freshwater Fish Marketing Act. 1985 R.S.C., c.F-13, the Act explicitly stated the fundamental objectives and purposes to which the newly formed Corporation was to apply itself. The core of these objectives are included in section 22(1) of the Act and are as follows:

(a) marketing fish in an orderly manner;
(b) increasing returns to fishermen;
(c) promoting international markets for, and increasing interprovincial and export trade in, fish.

In addition to these primary objectives, the Act grants the Corporation the power to issue working capital loans to fishermen on a seasonal basis (section 7(h)). Prior to the existence of the Corporation much of the working capital credit available to fishermen was extended through the fish companies. Consequently, as the replacement for these companies, the Corporation has been given the power to grant credit in order to fill (as regards short term working capital) the financing gap left by the removal of the private fish companies.

The perspective from which this portion of the analysis proceeds is that of assessing, through the use of various empirical data, the performance of the Corporation with respect to its various purposes and objectives. Subsumed within this approach and the various tests employed, is the question: having determined what the Corporation has achieved (from the data analyzed), what might the case be without the Corporation? Because the existence of the FFMC necessarily rules out an alternate marketing arrangement to which it may be compared, assessment of the absolute magnitude of the Corporation's achievement becomes difficult. This difficulty is exacerbated at times by the problem of separating genuine effects of the Corporation from general market trends. Many of the tests use data from other fisheries as a comparative base or are simply formulated to assess the Corporation's achievement over time. As a consequence, conclusions about the absolute impact of the Corporation's efforts relative to an alternative arrangement and market effects must, with respect to tests involving final payments and landed price trends, be made on the basis of informed opinion rather than scientific fact.

Throughout the assessment of objectives and purposes, regression analysis has been used to determine the strength and validity of trends over time. The r-squared value which is reported with each finding indicates the strength of the linear relationship between the variables being measured. Conclusions as to the level of acceptable r-squared values have been based on the conventions noted in Davis, 1971, listed in table 11 below. Conclusions in this study are based upon r-squared findings of .3, a moderate association, and higher. Lower scores than this simply describe trends with to wide a scatter in the data to determine any definite trend.

Table 11

Conventions for Describing Measures of Association

Association	r-squared
Very Strong	.7 or higher
Substantial	.5 to .69
Moderate	.3 to .49
Low	.10 to .29
Negligible	.01 to .09

(Davis, 1971)

In order to correct for the general effect of inflation and facilitate comparison, prices and values throughout the analysis have been converted to real dollar equivalents using the Industrial Products Price Index for Fish Products (Statistics Canada, 1975-1987). This index was chosen, rather than the Consumer Price Index (C.P.I.), because it directly measures changes in the value of fish products rather than a more diverse collection of goods as is the case with the C.P.I..

4.3.1 Marketing Fish in an Orderly manner

The FFMC can sell fish, either round, whole dressed, headless dressed, filleted, fresh or frozen. Because consumers have "a taste preference for fresh fish" (Gislason, Macmillan and Craven, 1982), the fresh market commands a higher price than do frozen fish markets. With this fact in mind, the Corporation attempts to sell as much fish as it can into the fresh market; the remainder is "frozen and inventoried and ultimately sold at lower prices" (Corporate Plan, 1986).

"Marketing fish in an orderly manner", refers to coordination of supply with fluctuating market demand. This definition implicitly includes the Corporation's ability to both find and maintain markets and gain a premium price for its product. Premium prices suggest selling a maximum amount of fish in the fresh form and minimizing inventory of frozen product. In the inescapable event of holding inventories, inventory turnover becomes a key statistic in judging the ability of the Corporation to minimize price and quality reductions and the carrying cost of inventories which increase with the time produce is held.

For the purpose of the analysis, "marketing fish in an orderly manner" will be measured using three sets of data: trend analysis of the real dollar value of gross sales over time as an indicator of the Corporation's ability to gain premium prices; trend analysis of the rate of inventory turnover compared over time to similar firms (from section 4.2.3); and, the real dollar trend of final payments, by species, paid to fishermen. As a payment made when a profit is realized on a species pool, final payments can indicate the extent to which the Corporation has been successful in matching supply with market demand and in obtaining the highest possible price for each species of fish.

4.3.1.1 Net Sales over Time

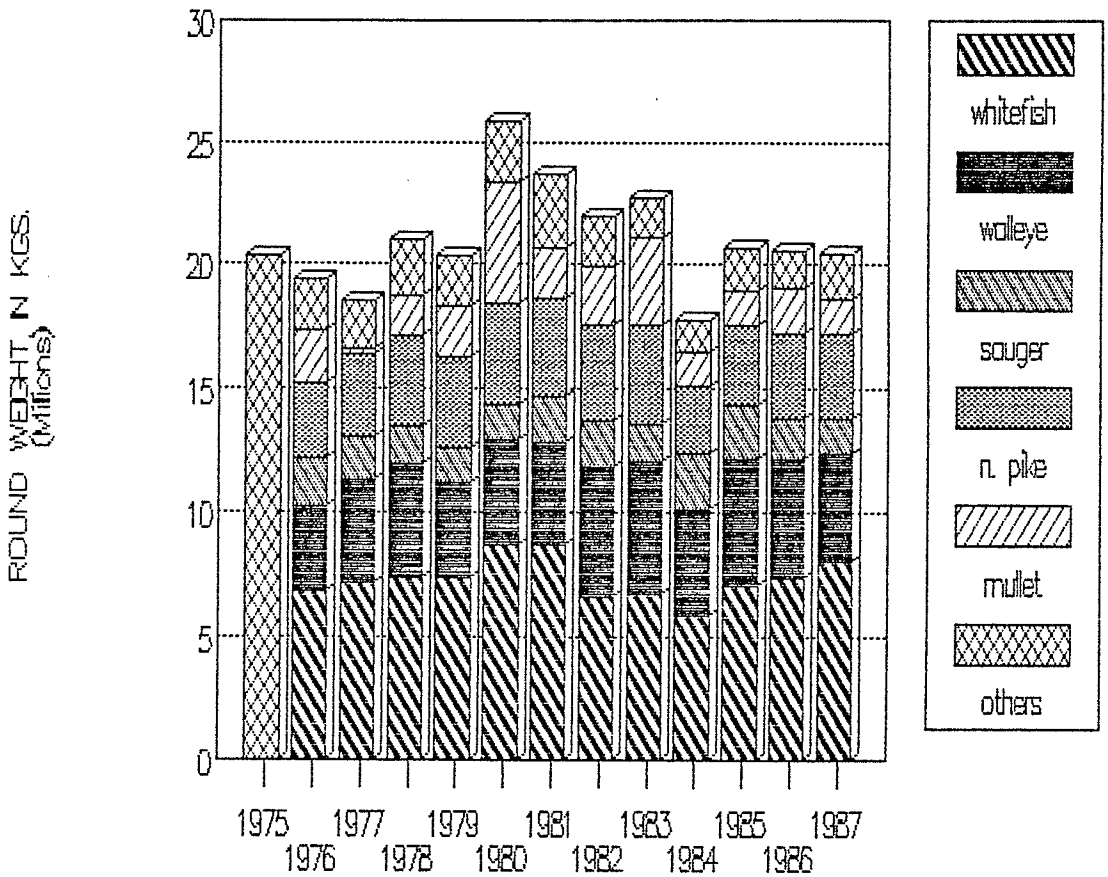
Figure 7 plots the annual purchased volume handled by the Corporation, by major species, for the period 1975-1987. It is apparent from this graph that the volume handled by the Corporation has remained relatively static over the period, and among the species represented, with minor fluctuations. Despite the static volume regression analysis of annual net sales, figure 8, suggests that real value has risen over the trend (1975 data in figure seven are listed as other because a breakdown by species was unavailable). The r-squared value of .38 indicates a moderate association (Davis, 1971) between real yearly values. Although there is scatter in the values a positive yet erratic improvement has resulted.

While it is true that this trend in value may be due to increasing real prices, as the result of increasing demand for fish, it also suggested an ability on the part of the Corporation to make timely and valuable deliveries to its markets. Put more simply the rising real value of sales reveals that the Corporation has been able to take advantage of prevailing market conditions at the very least. This suggests orderly marketing; the delivery of the various species at times and in quantities and forms which will command high prices.

However, this measure says nothing about the levels of inventory needed to take advantage of market conditions or

FIGURE 7

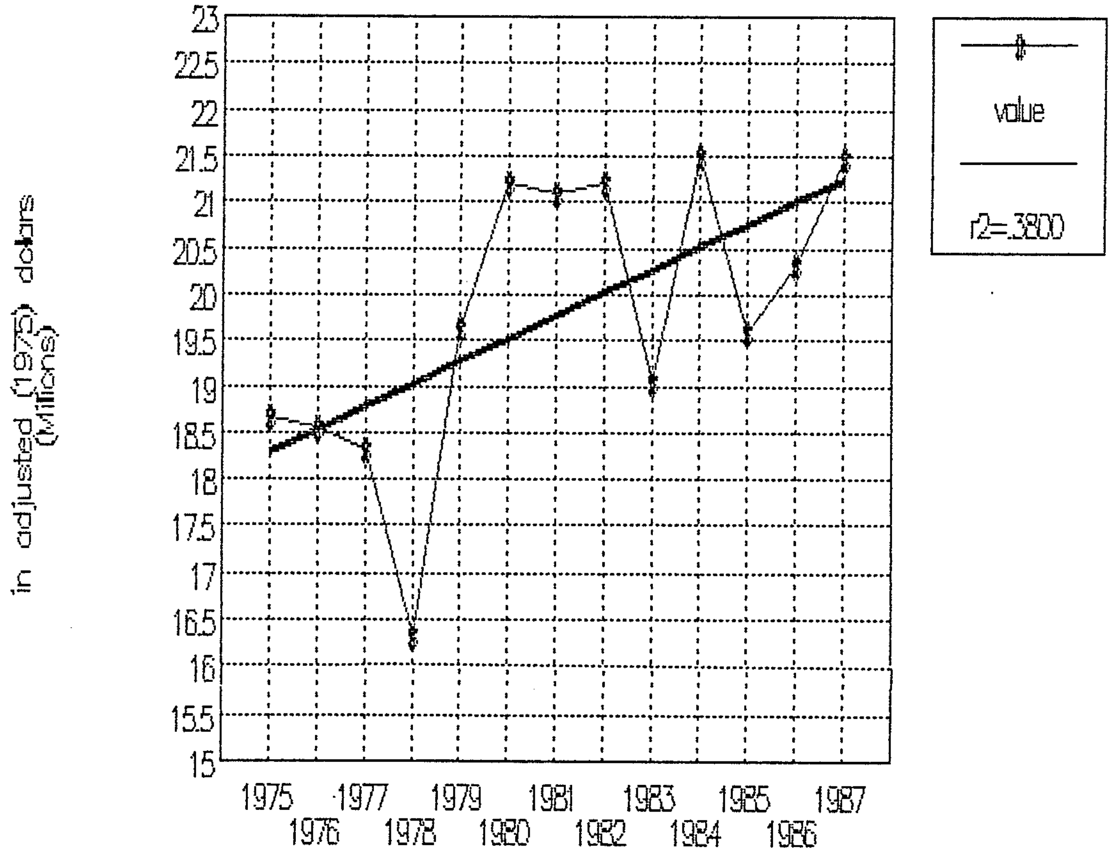
FFMC ANNUAL FISH PURCHASES



source:FFMC Annual Reports, 1975–87

FIGURE 8

FFMC NET ANNUAL SALES



source: FFMC Annual Reports, 1975–87.

the cost associated with holding inventories. The magnitude and impact of carrying inventories is the subject of the following section.

4.3.1.2. Inventory Turnover and Final Payments

Section 4.2.3 (figure 3) of the financial analysis revealed that the inventory turnover generated by the Corporation was, on average, second only to the Canadian Saltfish Corporation but as a trend over time was consistently lower than accepted norms. This finding may suggest one of two things. A slow inventory turnover may suggest that the Corporation has failed to generate an adequate level of sales in relation to the supply of fish. Inadequate turnover may have the result of reducing the payments available to fishermen. Conversely, the lower inventory turnover may suggest a marketing strategy which seeks to balance the cost impact of increased inventory carrying with the timing of sales in order to generate top returns on all sales. The impact of the slow inventory turnover on final payments to fishermen can suggest which of the above explanations is the more plausible.

At the end of each year, profits realized on each species pool are distributed to contributing fishermen as final payments. If no profits are realized on a particular pool, that pool does not generate a final payment. Profits are realized when the carrying costs of the pool are minimized and the Corporation is able to sell all fish at prices in excess of these costs.

Figure 9 plots the final payments, in real dollar terms (deflated to 1975 dollars using the Industrial Price Index - see Appendix A), for all species pools combined. With the exception of poor returns in 1982 and 1983, when all fisheries experienced a market downturn, regression analysis performed on the data suggests that final payments have been growing. The calculated r-squared value (.3709) suggests a moderate association between the values and while it is weak due to the scatter in the data it is strong enough to conclude that total final payments have grown, with some setbacks, since 1975 in real dollar terms.

A closer examination of final payments for individual species, figures 10 - 14, reveals that while final payments have been increasing on the whole, increases have not been realized for all species. Those species which have experienced positive increases include, cutter grade whitefish (r-squared=.3531) (which is likely the result of the pooling of the final payment of the whitefish pool since 1983), walleye (r-squared=.3372), northern pike (r-squared=.6207) and sturgeon (r-squared=.6372). The remainder of the species presented, continental and export whitefish, sauger, lake trout, arctic char, mullet and carp, produced wide fluctuations in the level of final payment making determination of a positive or negative trend over time impossible. That only four species experienced

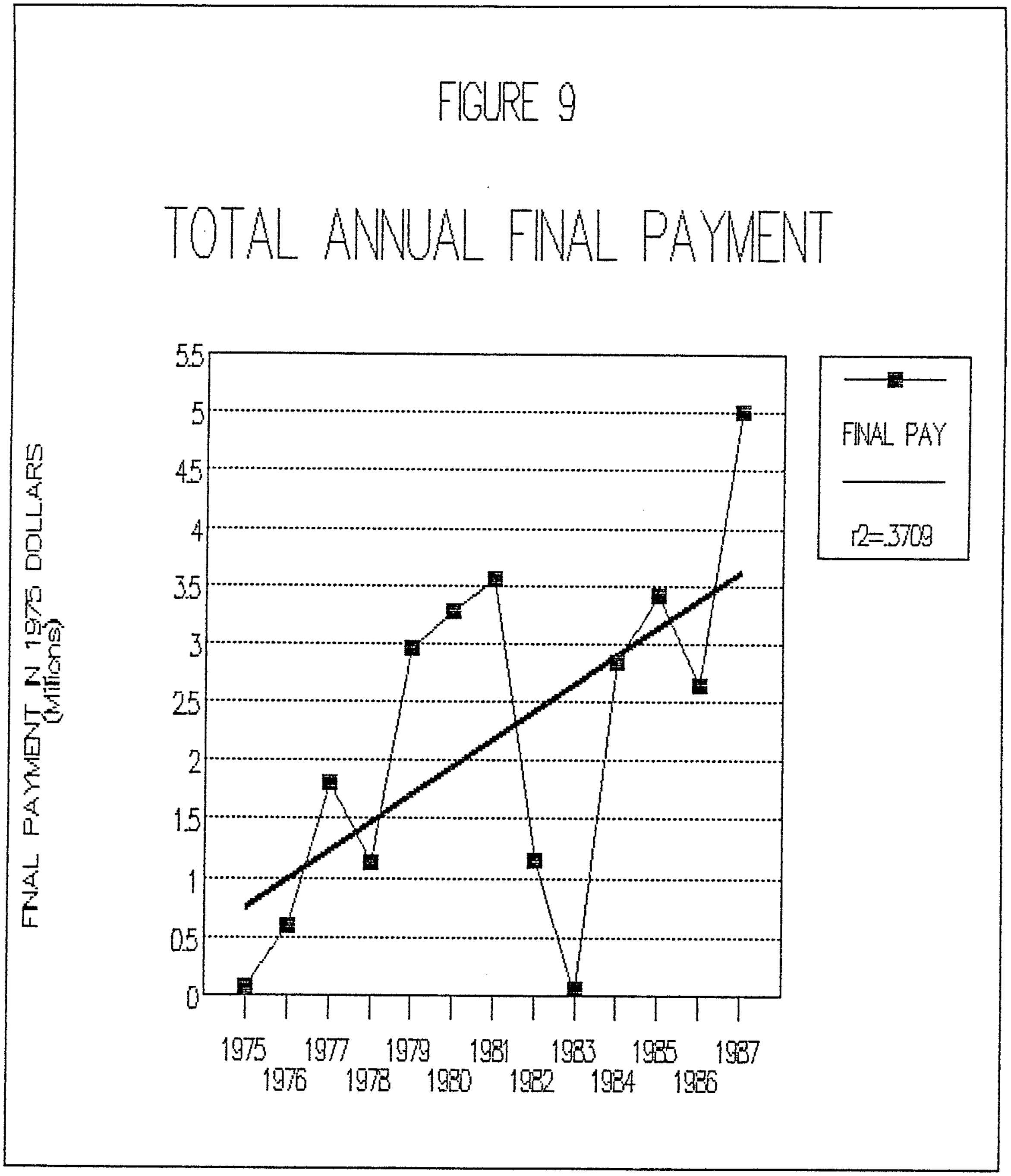
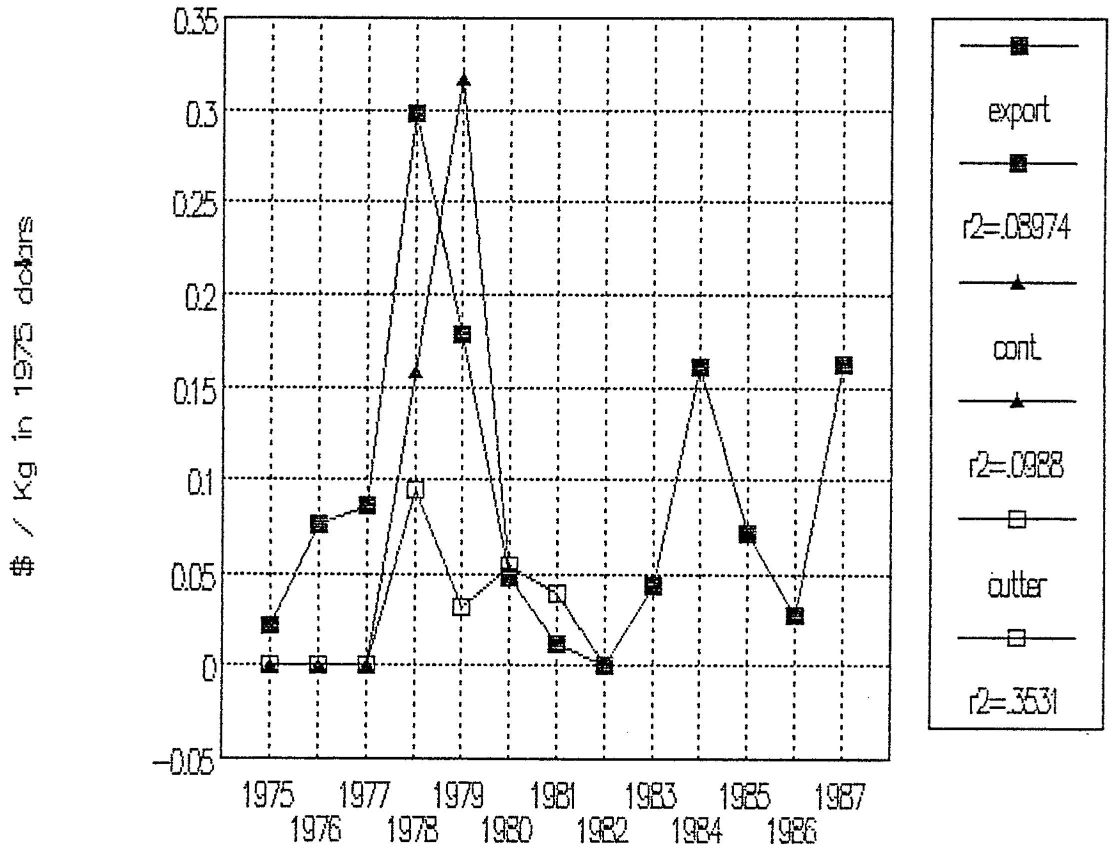


FIGURE 9
TOTAL ANNUAL FINAL PAYMENT
FINAL PAYMENT IN 1975 DOLLARS
(Millions)
5.5
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
FINAL PAY
r2=.3709

FIGURE 10

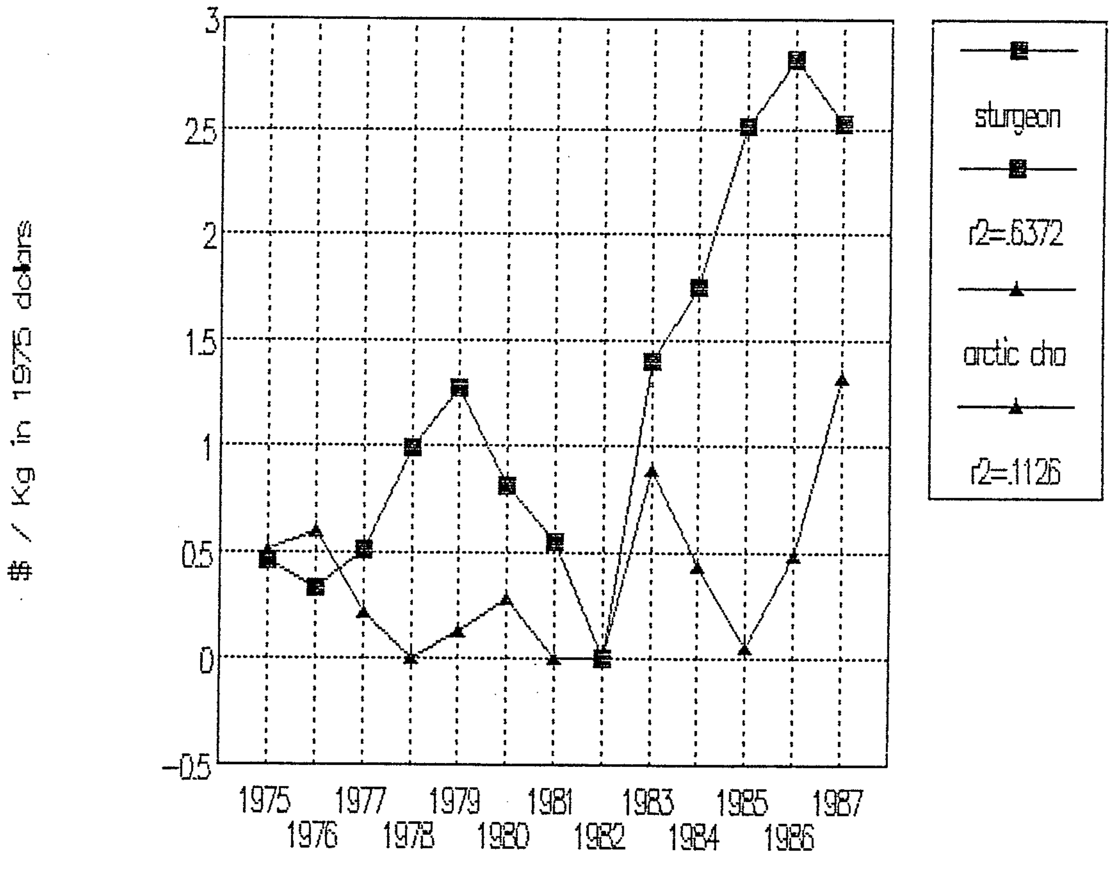
FINAL PAYMENT: WHITEFISH



Source: FFMC reports

FIGURE 11

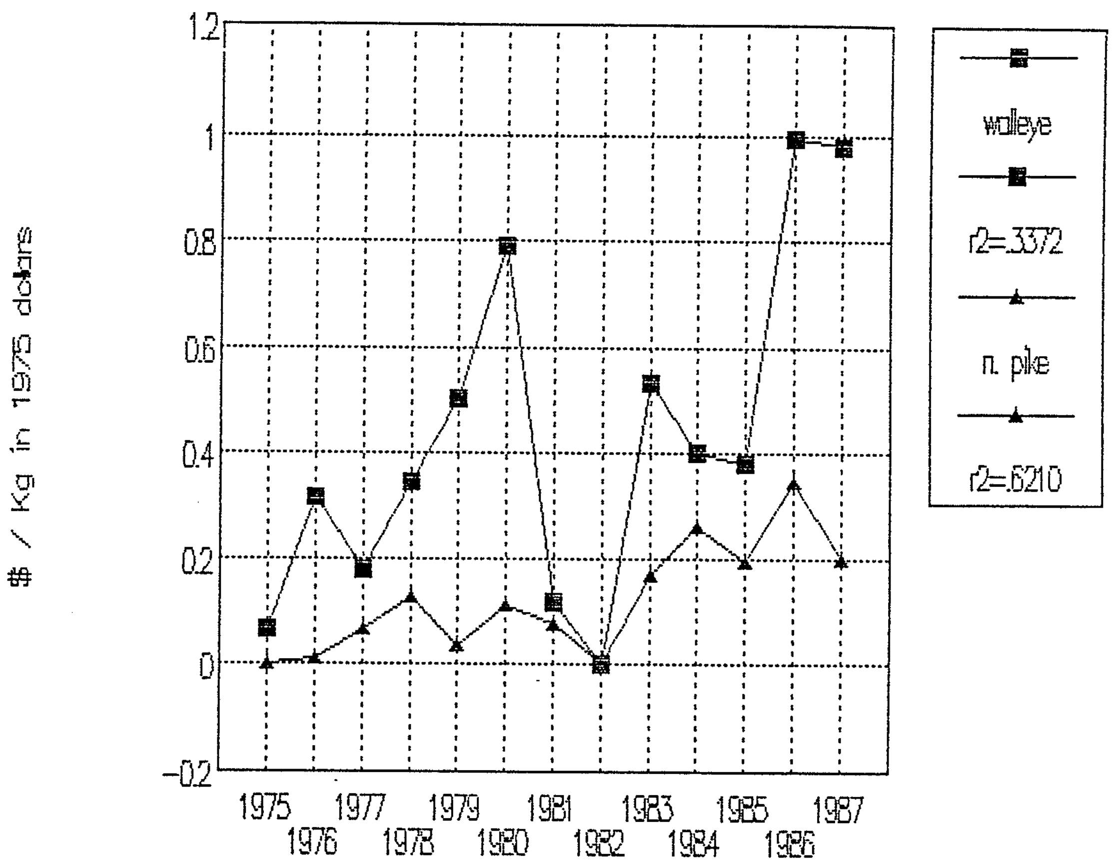
FINAL PAYMENT: STURGEON / ARCTIC CHAR



Source: FFMC reports

FIGURE 12

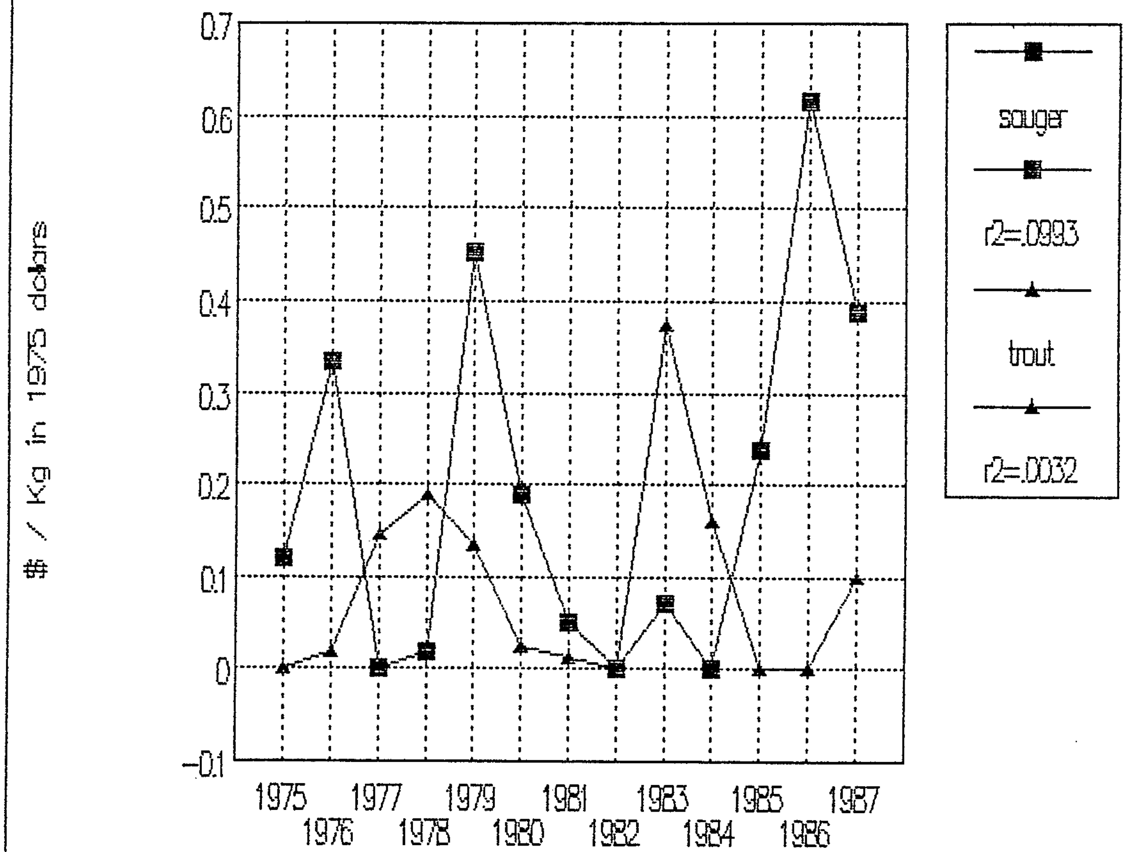
FINAL PAYMENT: WALLEYE / NORTHERN PIKE



Source: FFMC reports

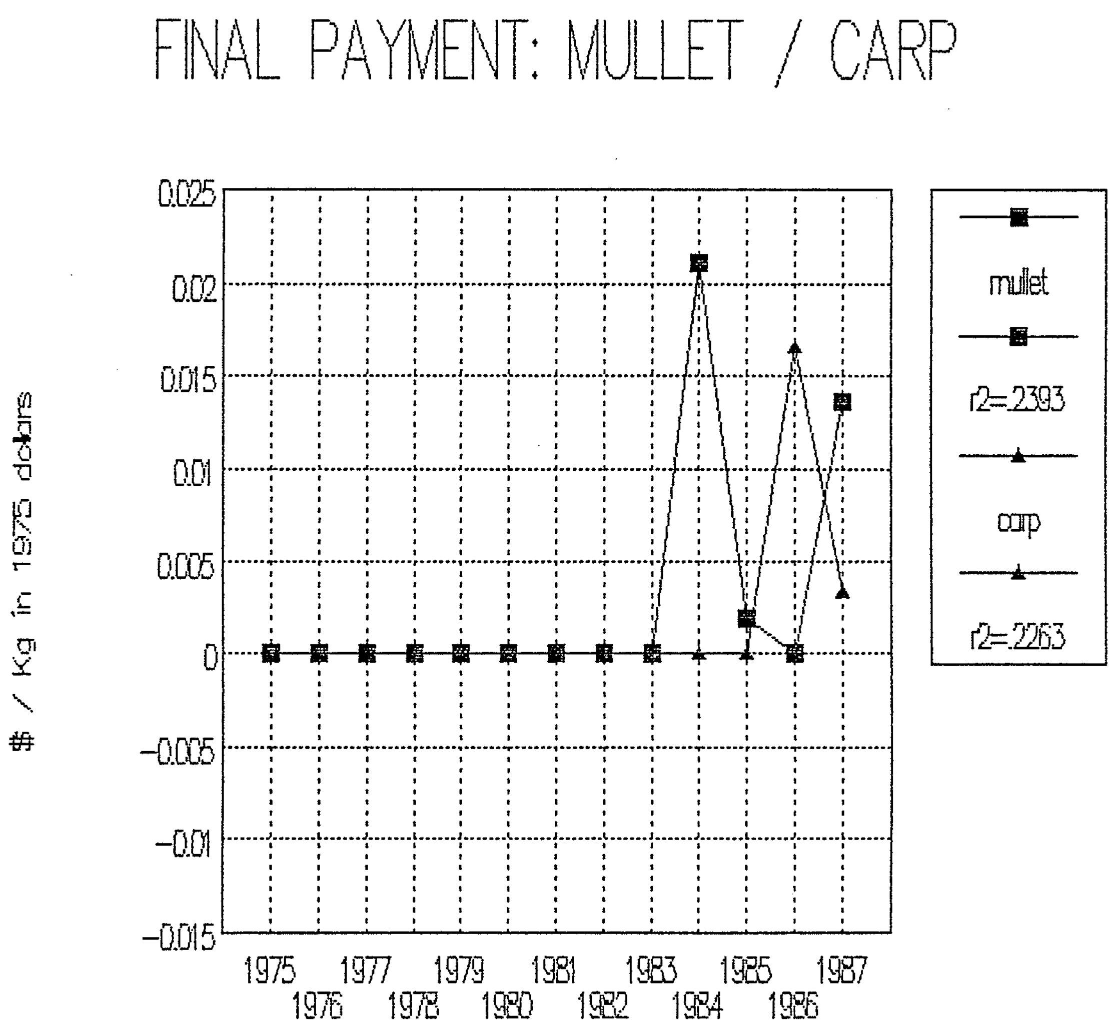
FIGURE 13

FINAL PAYMENT: SAUGER / LAKE TROUT



Source: FFMC reports

FIGURE 14



Source: FFMC reports

positive increases in final payments while overall final payments increased can be explained by the fact that these four make up 40% or greater of the Corporation's yearly purchase volume (FFMC Fish Purchases Summary, 1976-88).

The individual species breakdown of the final payment trend indicates that the rival explanations for the higher than average inventory levels, suggested above, may both be correct. Highly variable final payments on species such as whitefish (continental and export), lake trout, sauger, carp and mullet suggest an inability to generate a consistently adequate level of sales in relation to production and/or an inability to control the timing and level of production to meet market requirements. Real dollar improvements in the case of walleye, northern pike and sturgeon, on the other hand suggests consistent marketing improvement despite the higher than average inventory figure. An important caveat on these conclusions is that in each case general market trends, such as rising or falling demand and/or price for a particular species, are also affecting the Corporation's returns regardless of their efforts.

The measures presented suggest that the Corporation has succeeded in improving the real value of net sales by taking advantage of prevailing market conditions over the thirteen years presented. However, marketing improvements are not even across all species as the trend of final payments by species indicates. The data presented suggest that the marketing of certain species, such as whitefish, lake trout, sauger and the rough fish species, continue to generate carrying costs which result in a wide variety of final payments from year to year. It should be stressed that the fluctuating final payments on the noted species may be the result of an inability on the part of the Corporation to find ready markets or due to production surges in these species which are to a large extent out of the Corporation's control (see Chapter 2, sec. 2.4.3 Agency Cooperation and the Coordination of Supply).

4.3.2 Increasing Returns to Fishermen

In the McIvor Commission report it was suggested that the fisheries in the western provinces and the Northwest Territories were wasting a unique marketing advantage, with the effect of reducing available returns to fishermen, by sharing the job of marketing between many sellers (McIvor, 1966). Consequently, the FFMC was assigned the task of increasing returns to fishermen through the concentration of the marketing effort within its mandate and sole control.

Three measures describe the trend of payments to fishermen over the life of the Corporation: landed prices, which includes initial and final payment; the portion of gross sales actually paid to fishermen; and, the weighted average returns from fishing for the whole fishery and its constituent regions. Data for each of these measures are presented from 1975 and subsequent years are deflated to real 1975 dollars (see Appendix A). Deflation in this manner presents the data on equal terms and facilitates the identification of real dollar trends.

4.3.2.1 Landed Prices

The analysis of price trends for various species of fish, in relation to competing products and potential substitutes, can reveal the ability of the Corporation to gain improved prices with respect to prevailing market conditions. For example, if prices are rising for whitefish and other products which may be substitutes, while the Corporation's landed price is continually falling, it may be suggested that the Corporation is failing to take advantage of the prevailing market environment. Conversely an increasing landed value in relation to decreasing comparative prices may suggest a superior ability on the part of management to find and maintain markets and increase fishermen's returns. Also, because the Corporation can act as stabilizing force in the marketplace due to its volume and ability to inventory production (Corporate Plan, 1988-89) price trends can reveal how well this ability has been employed in order to secure an improved price for fishermen in the Freshwater region.

It should be noted that the conclusions of this test are limited by the influence of market effects for which it does not control. While improved or reduced prices to fishermen (landed price) may in part be due to the

Corporation's efforts, market effects such as increasing or decreasing demand will play a fundamental role in determining landed prices.

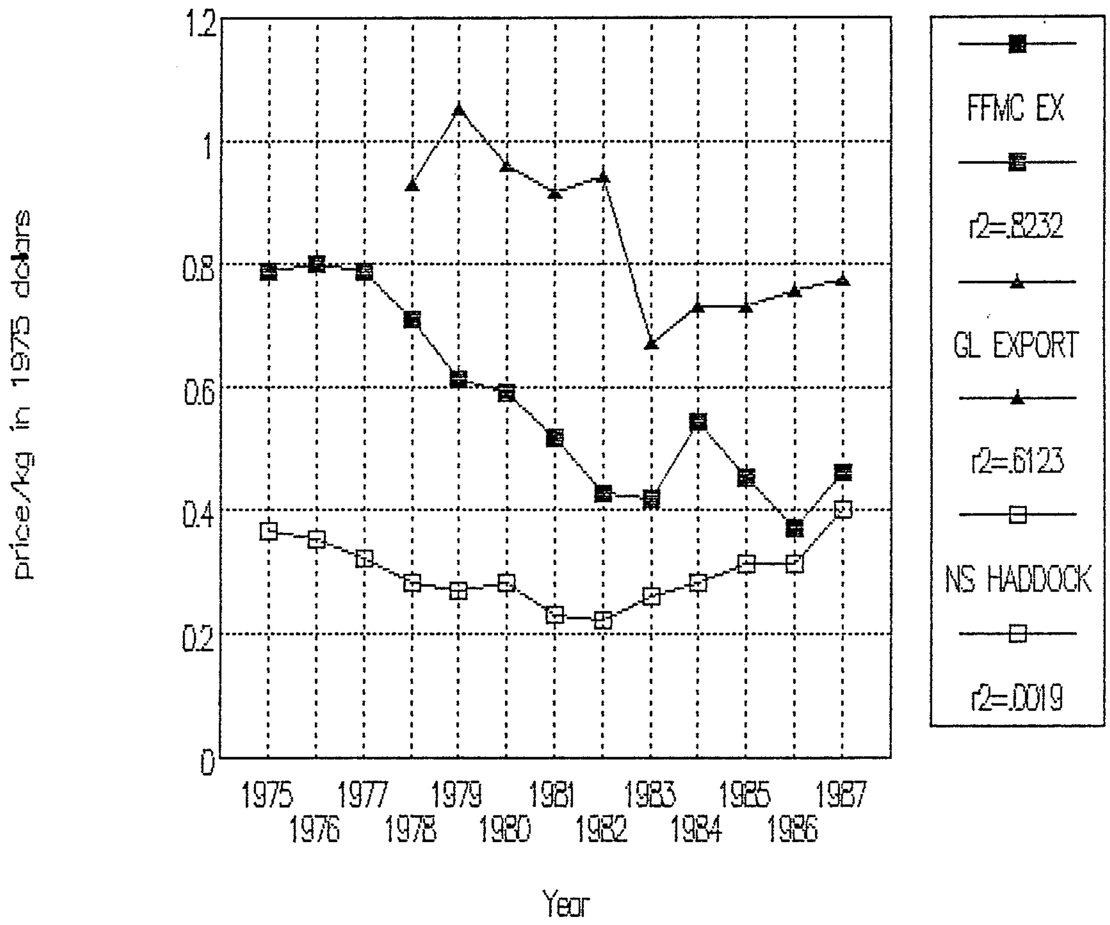
Comparative data for this purpose have been drawn from the Great Lakes freshwater fishery as well as select portions of the Atlantic saltwater fishery and the Pacific saltwater fishery. The comparisons presented are either direct species comparisons, such as FFMC walleye versus Great Lakes walleye, or are based on similarly priced products which may compete in similar markets or share a particular type of consumptive use.

Comparison will, for the most part, be between relative prices rather than the absolute magnitude of price between fisheries. Difficulties arise in the comparison of price magnitudes because of different market characteristics between fisheries, such as proximity to markets. Relative changes, increases and decreases in price trends over time compared across fisheries, may be more indicative of the Corporation's ability to improve returns to fishermen.

Figures 15 and 16 compare the real price trend of FFMC export whitefish in relation to both Great Lakes export whitefish, Atlantic haddock (landed in Nova Scotia) and a range of Atlantic cod prices. Regression analysis on this data demonstrates decreasing real prices for FFMC export whitefish (r-squared=.8232), Great Lakes whitefish (r-

figure 15

WHITEFISH vs ATLANTIC HADDOCK



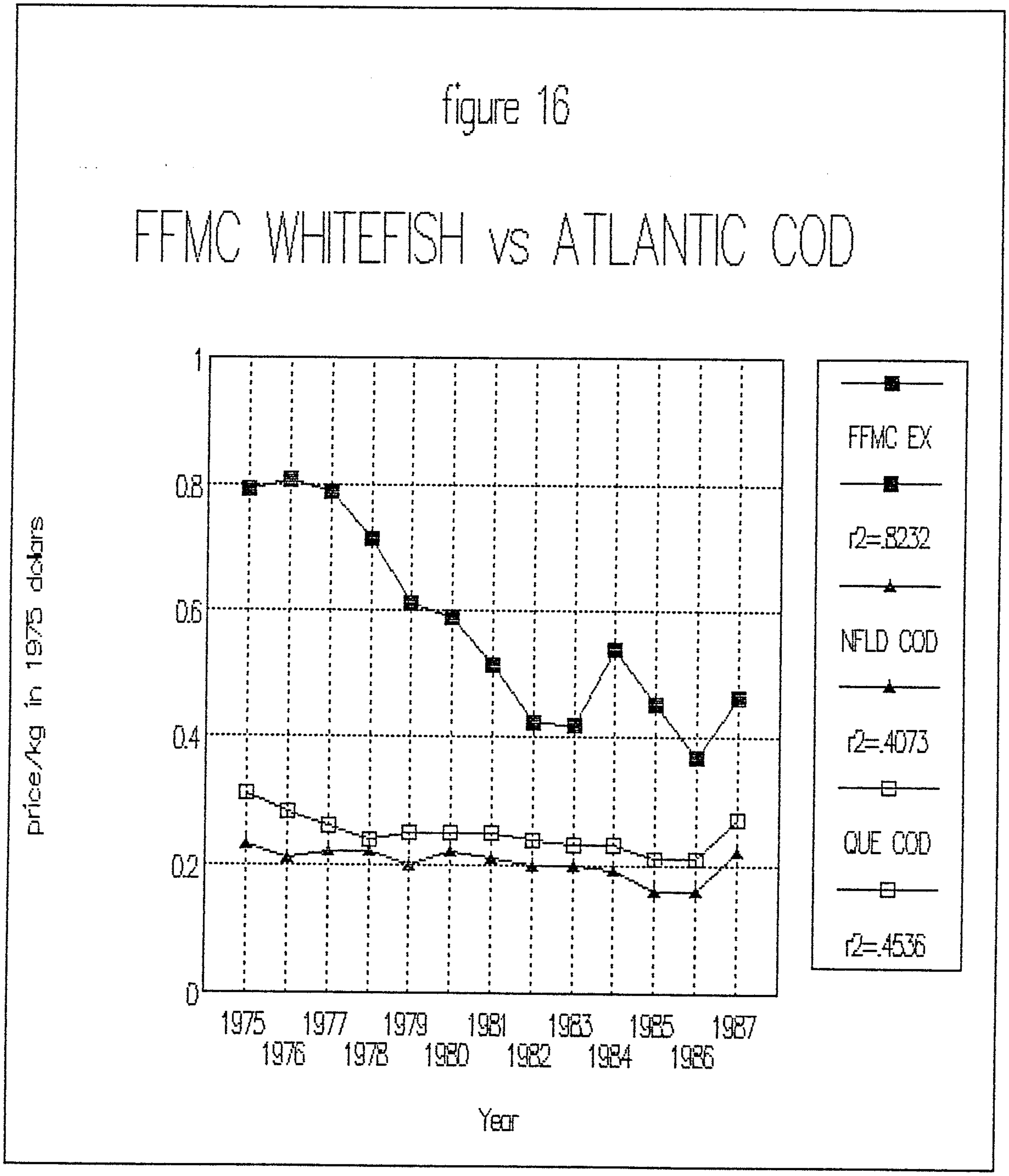


figure 16
FFMC WHITEFISH vs ATLANTIC COD
price/kg in 1975 dollars
1
0.8
0.6
0.4
0.2
0
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
Year
FFMC EX
r2=.8232
NFLD COD
r2=.4073
QUE COD
r2=.4536

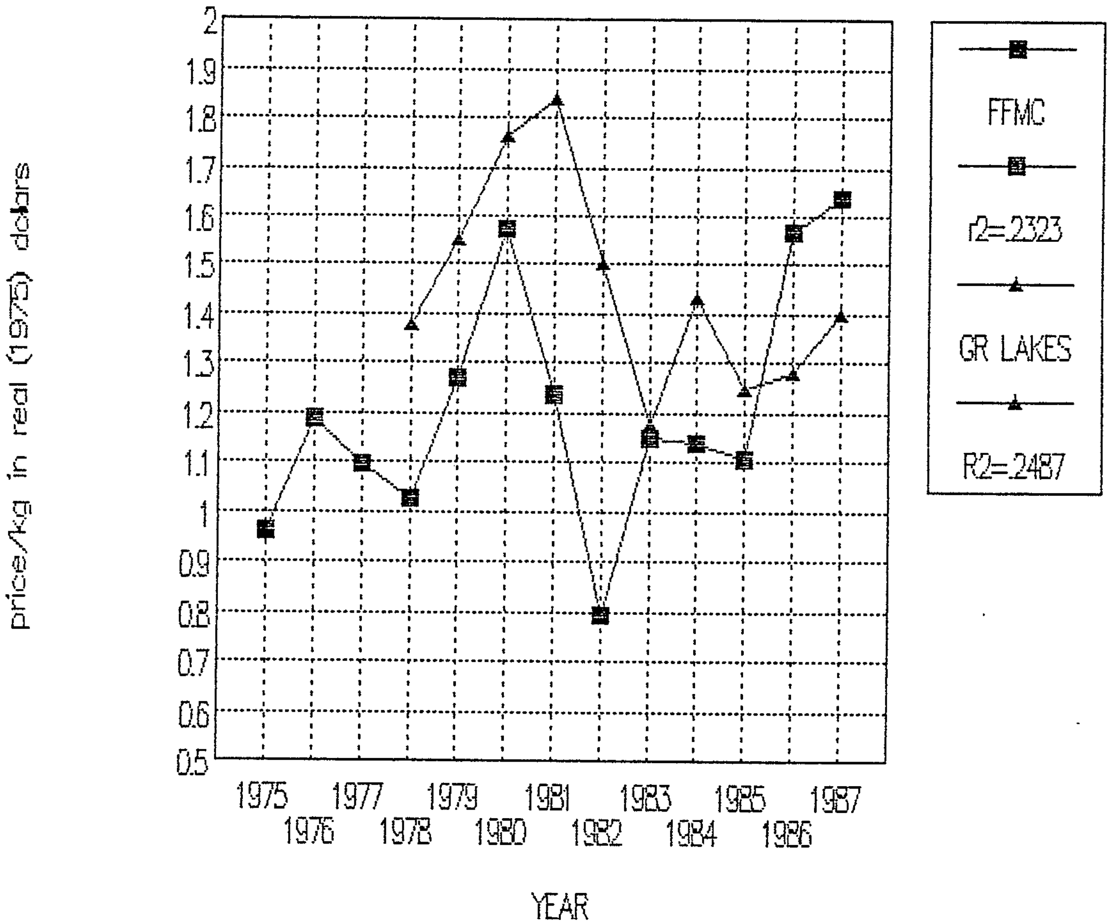
squared=.6123), Newfoundland Cod (r-squared=.4073), and Quebec Cod (r-squared=.4536) with an indeterminate trend on the Atlantic Haddock, suggesting that the falling price trend is an overall market phenomenon. However, the rapid decline in the real value of FFMC export whitefish may be partly due to problems of the timing and the amount of supply mentioned in section 2.4.3.

Annual species reports and Corporate Plans issued by the Corporation have indicated that whitefish supply has been a major problem over the years. In each year the Corporation has been forced to carry large inventories with the ultimate result of reducing the price available to fishermen both through reducing the projected initial price because of supply and final payment because of the cost of carrying inventoried product. Improvements in the 1987/88 price, while they are mirrored by each of the comparative species, suggesting a market upswing, may be indicative of success with the whitefish supply control program initiated for the 1987 season.

Prices for FFMC walleye have experienced an erratic trend since 1975 (figure 17). Regression analysis produced a low association between the plotted values (r-squared=.2323) but the data suggest that before and after the lean market year of 1982/83 prices have followed a real dollar upward trend. It is significant to note that prices for this species have mirrored prices in the Great Lakes fishery and

figure 17

FFMC WALLEYE vs GREAT LAKES WALLEYE



since 1986 have been higher. The latter is a significant development considering the proximity of Great Lakes producers to the major eastern markets in Detroit and New York.

Figure 18 reveals that lake trout has experienced no discernable trend in price improvement (r-squared=.0565). Prices for comparative species and Great lakes trout show a rough mirror effect and a narrowing of the absolute magnitude of price as prices for these species fall relative to FFMC trout.

Northern pike has shown a marked improvement against all comparative species including Great lakes pike (figure 19). While the price of Great lakes pike has fallen (r-squared=.3241) and Atlantic mackerel has remained relatively stable, FFMC pike has improved, in real dollar terms, by over $.20 per kg for the 13 year period (r-squared=.7514).

Figures 20 and 21 exhibit prices for FFMC rough fish species, carp and mullet, which have slowly improved over the thirteen year trend in real dollar terms (r-squared=.3490 and r-squared=.3316 respectively). However, the steady, but slow, rise in real price has been exceeded, since 1984, by increases for both Atlantic pollock and Great Lakes carp and mullet.

Figure 22 compares FFMC arctic char to Atlantic ocean salmon. Wide fluctuations in the price for each of these species from year to year has failed to produce any

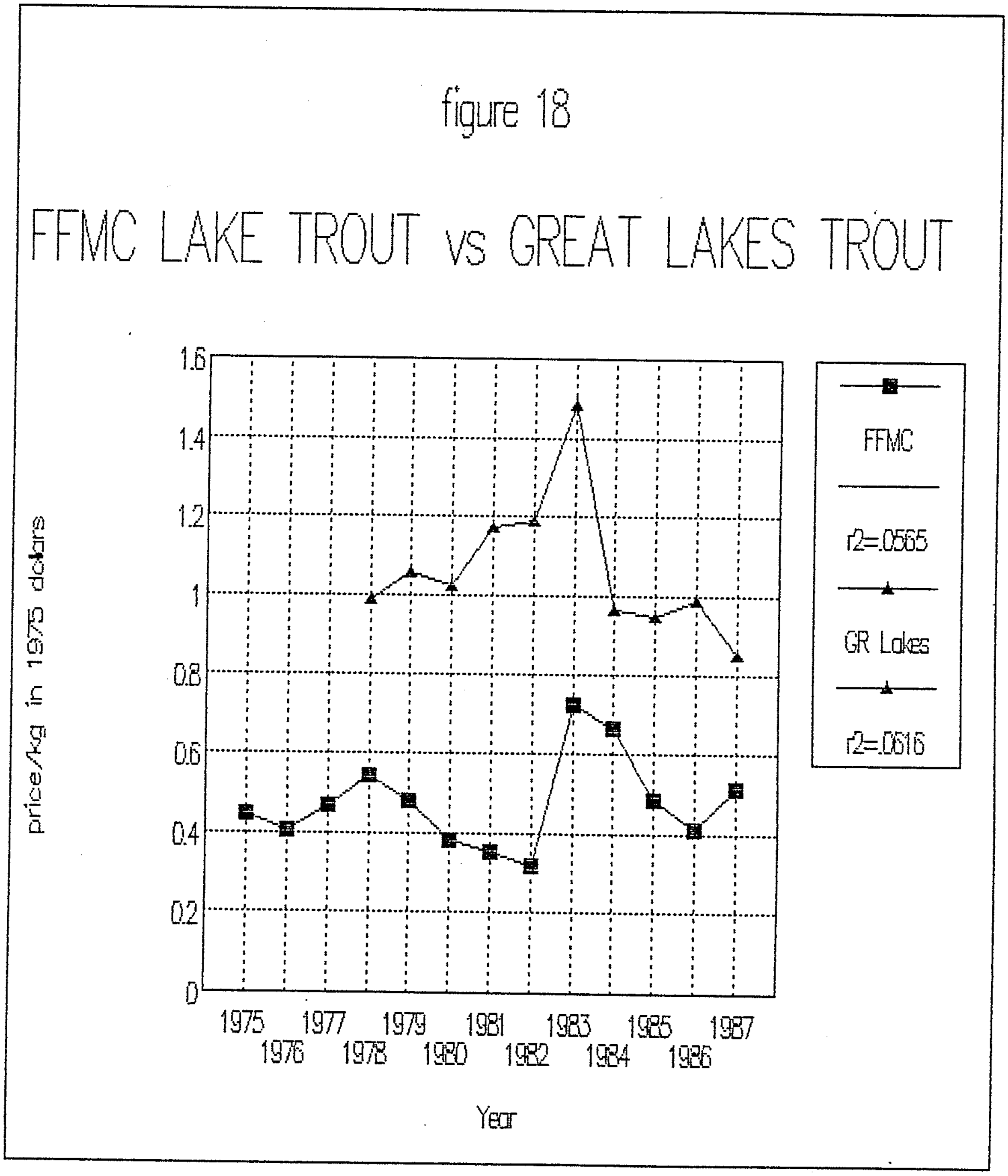


figure 18
FFMC LAKE TROUT vs GREAT LAKES TROUT
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
price/kg in 1975 dollars
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
Year
FFMC
r2=.0565
GR Lakes
r2=.0616

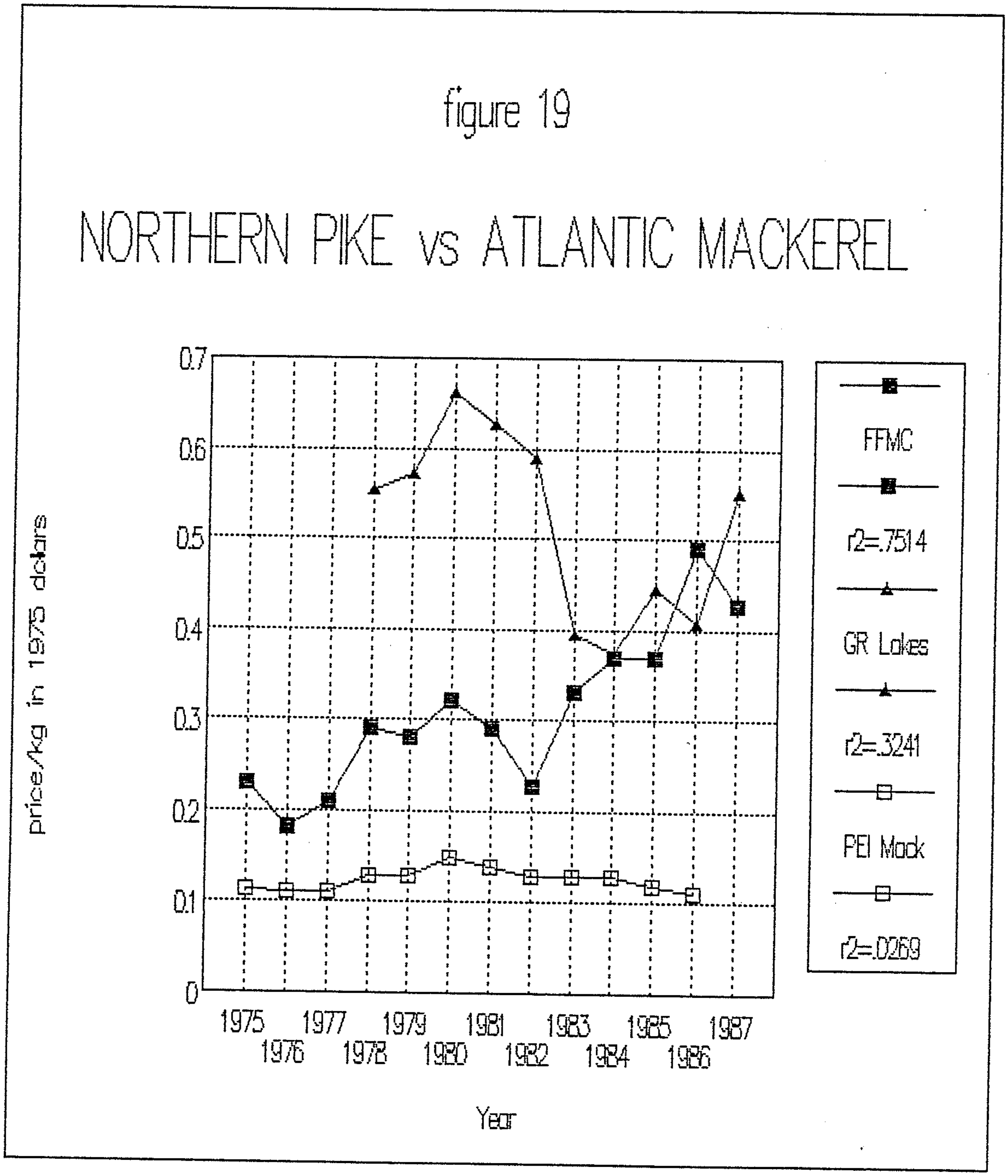
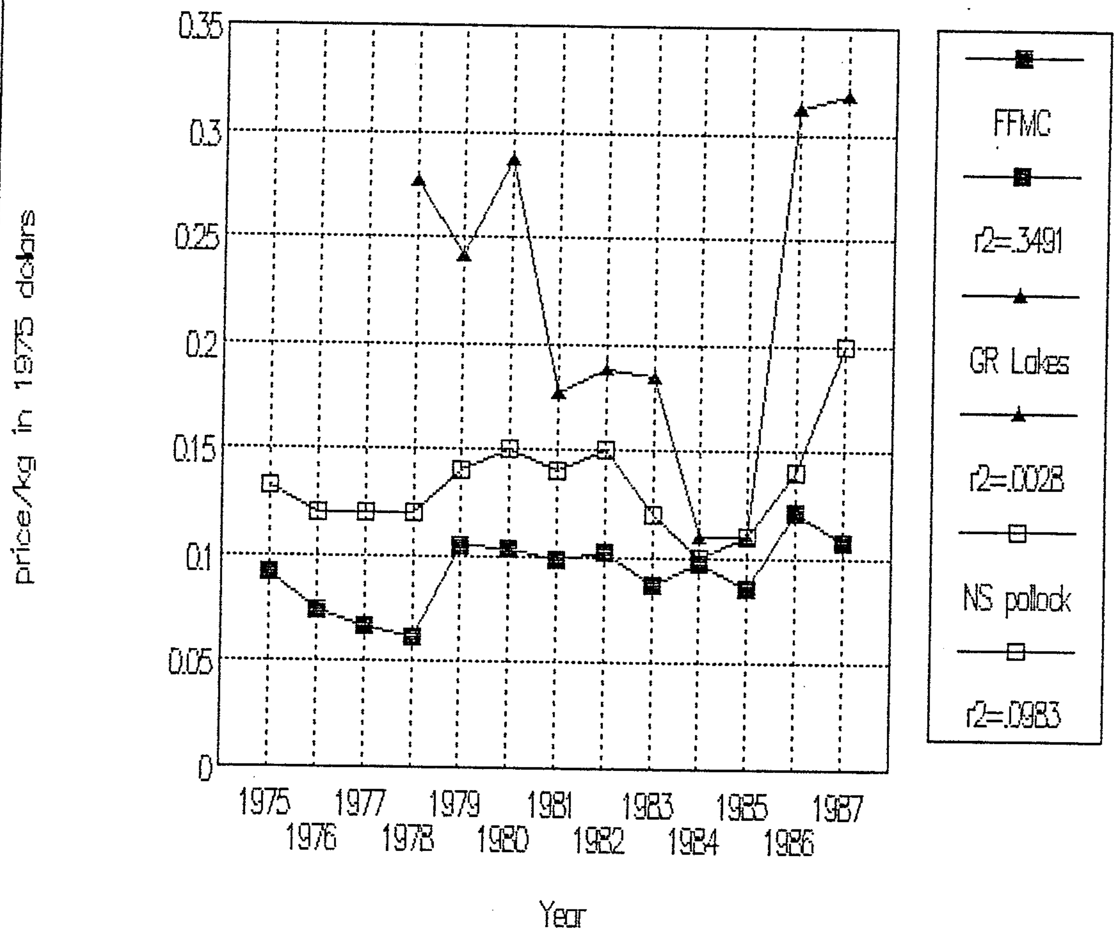


figure 19
NORTHERN PIKE vs ATLANTIC MACKEREL
price/kg in 1975 dollars
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
Year
FFMC
r2=.7514
GR Lakes
r2=.3241
PEI Mack
r2=.0269

figure 20

CARP vs ATLANTIC POLLOCK



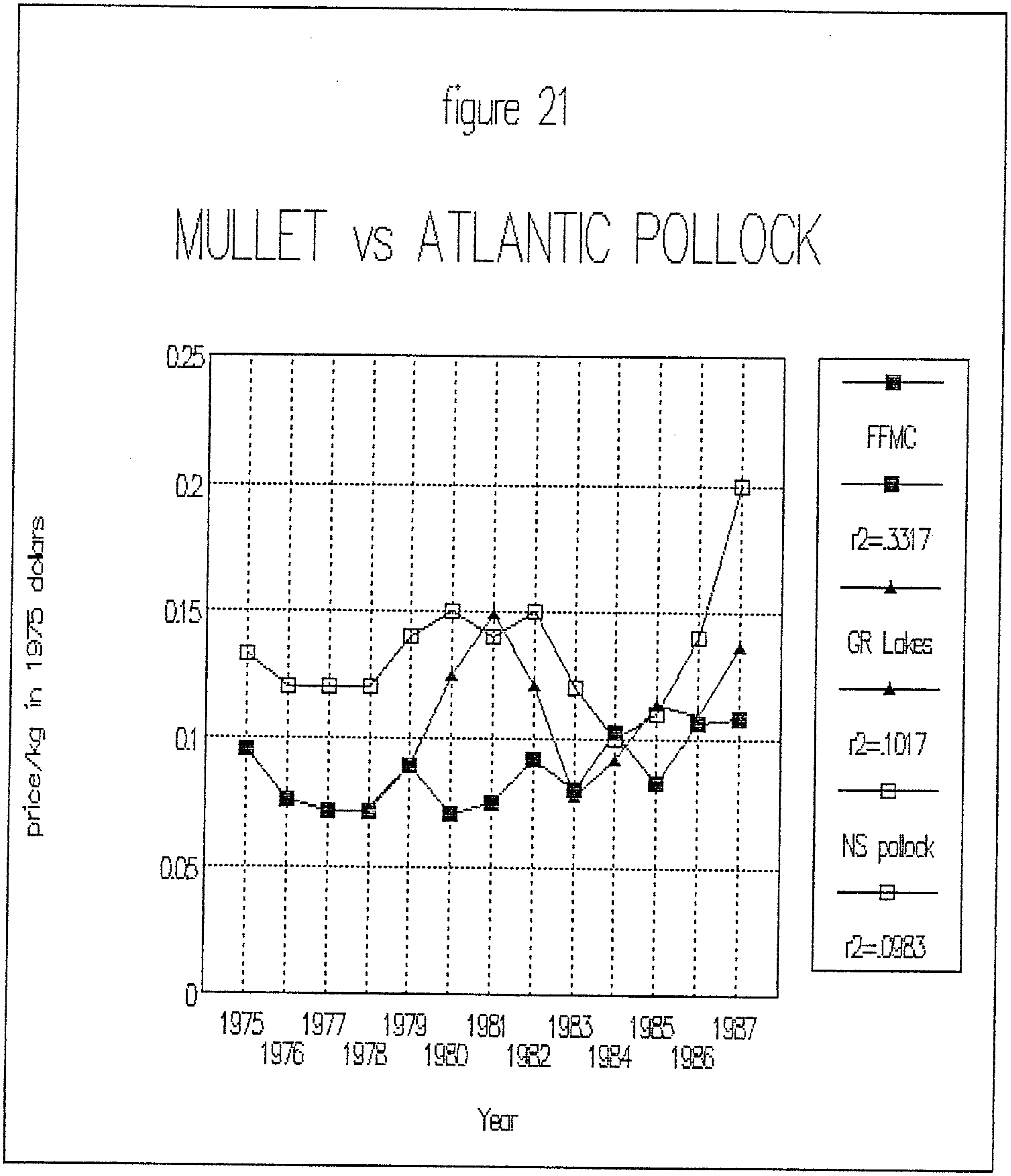


figure 21
MULLET vs ATLANTIC POLLOCK
0.25
0.2
0.15
0.1
0.05
0
price/kg in 1975 dollars
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
Year
FFMC
r2=.3317
GR Lakes
r2=.1017
NS pollock
r2=.0983

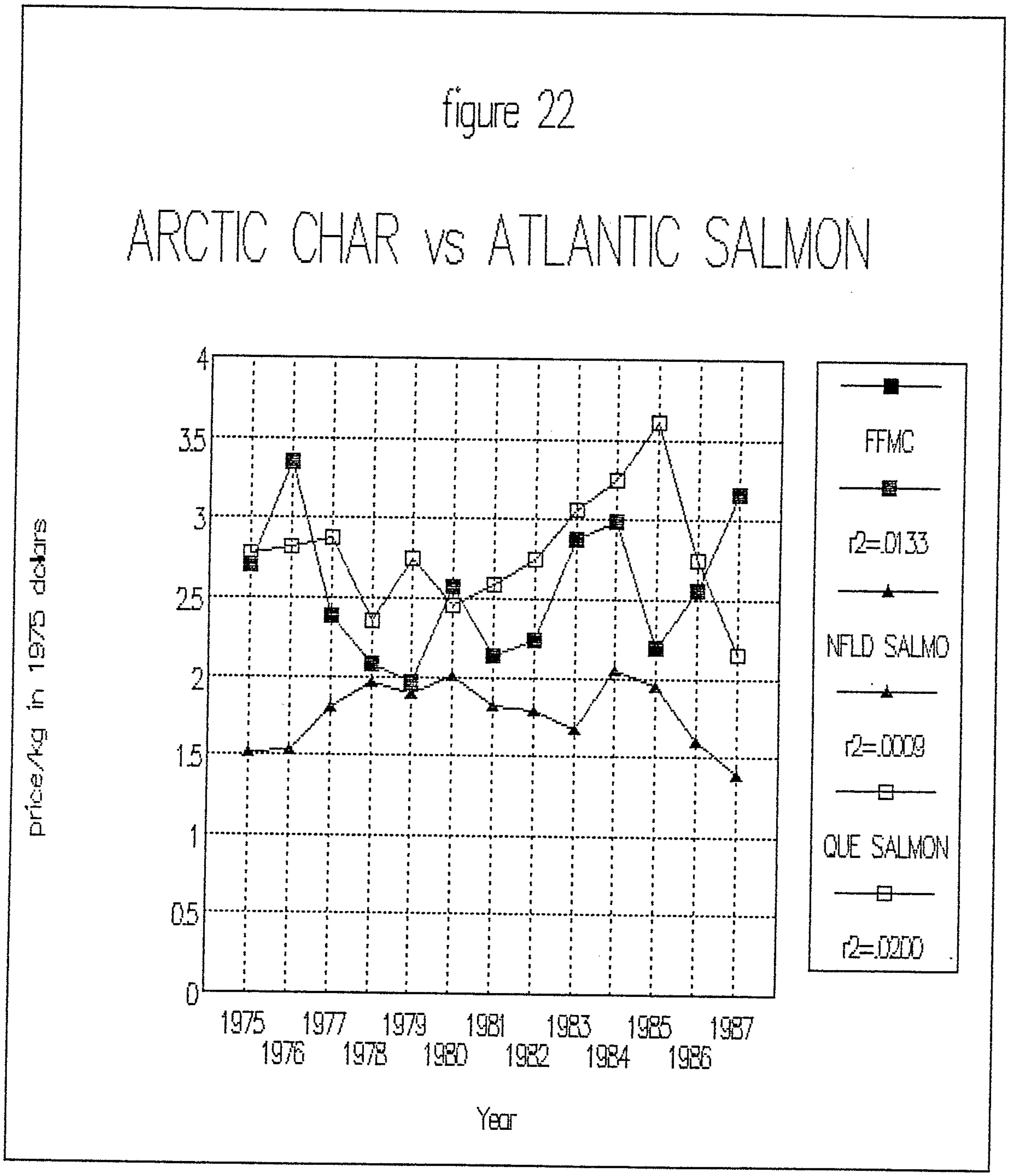


figure 22
ARCTIC CHAR vs ATLANTIC SALMON
price/kg in 1975 dollars
4
3.5
3
2.5
2
1.5
1
0.5
0
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
Year
FFMC
r2=.0133
NFLD SALMO
r2=.0009
QUE SALMON
r2=.0200

identifiable trend in real price (r-squared=.0133, .0009, .0200).

Figure 23 plots the trend of real prices for FFMC and Great Lakes sauger. Much as in the case of arctic char wide annual fluctuations in the price of this species, from both producing areas, make the identification of a trend impossible.

FFMC sturgeon, figure 24, has shown real price improvement (r-squared=.4800) over the trend which has been in excess of prices received in the Great Lakes fishery since 1983.

Improvements in the real price of some species while not in others suggests that returns to some fishermen have been improving while those to others have not. As whitefish is a large portion of the FFMC purchase volume, approximately 35% annually, decreasing real prices over the trend is likely to have had the effect of reducing returns to those who fish primarily whitefish. For species such as lake trout, arctic char and sauger, the wide fluctuation in real prices has likely had the effect of producing no improvement in the level of returns to fishermen of these species. Together these species indicate that a significant group of fishermen have not experienced real dollar landed price improvements.

Those species experiencing real increases in price over the trend, northern pike, sturgeon, carp, mullet and to a

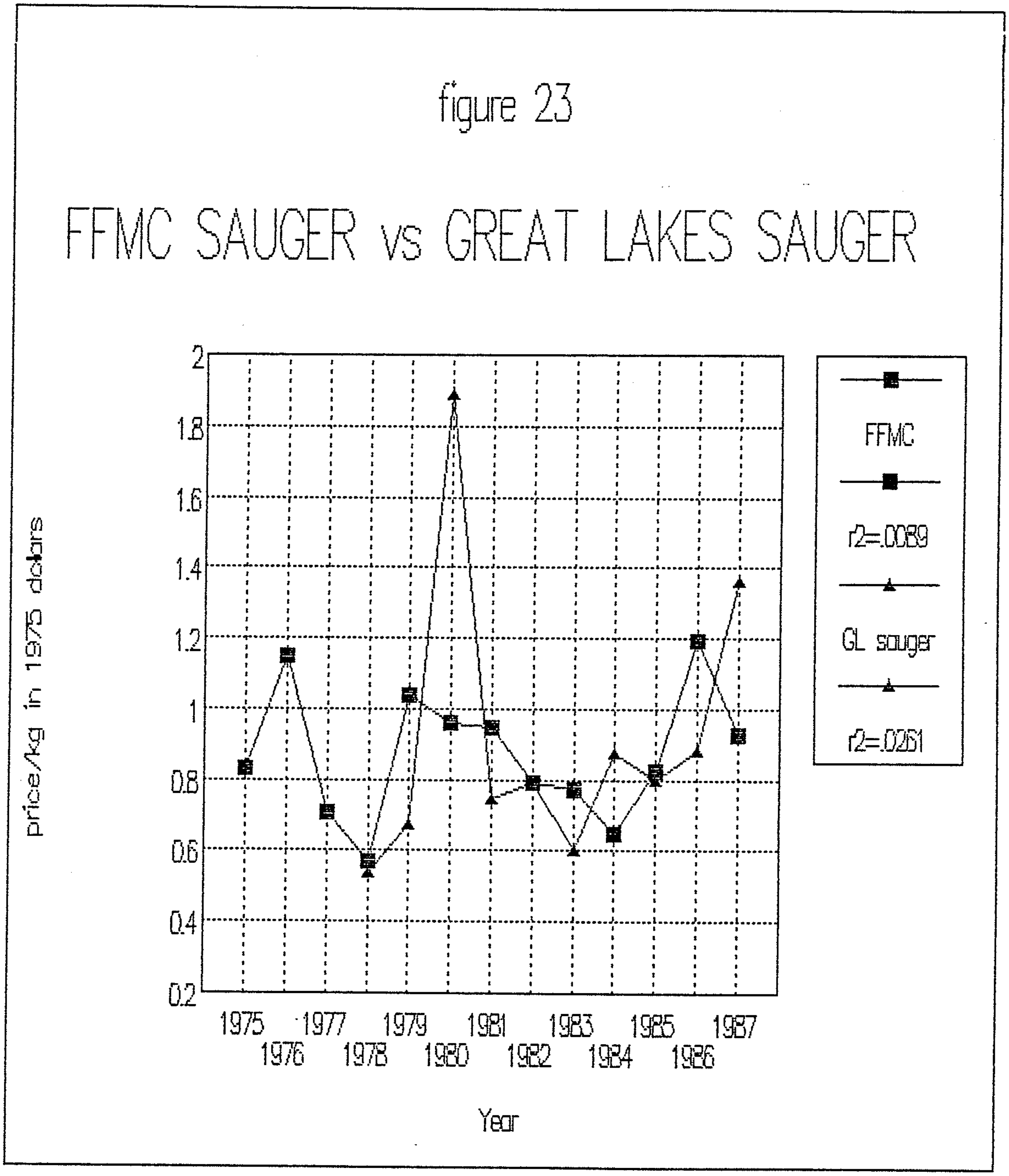
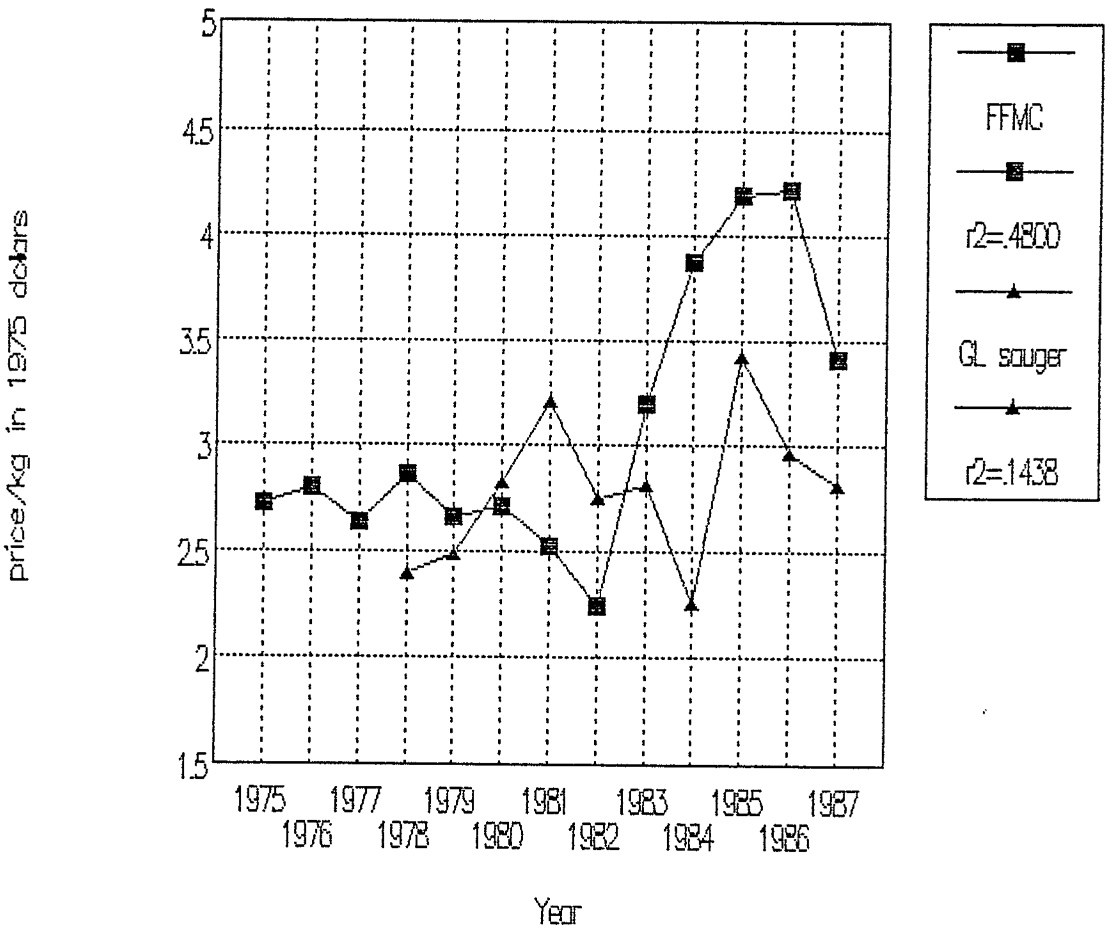


figure 23
FFMC SAUGER vs GREAT LAKES SAUGER
price/kg in 1975 dollars
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
Year
FFMC
r2=.0039
GL sauger
r2=.0261

figure 24

FFMC STURGEON vs GREAT LAKE STURGEON



lesser extent walleye, together make up between 45% and 50% of the annual purchase volume over the thirteen years examined. While it is difficult to determine how much of the price improvement is due to the Corporation's efforts, increasing prices for a greater than 50% volume suggest that a majority of fishermen are likely to have experienced some increase in overall returns. The fact remains, and the Corporation appears cognizant of it, that a number of fishermen who are primarily whitefish producers have suffered declining prices. Early results of the whitefish control program, which seeks to control the timing and supply of this specie, are encouraging and clearly indicate that the Corporation is attempting a strategy to improve the price of whitefish. Between 1986 and 1987, the first year of the program, the final payment on the whitefish pool jumped from 7 cents/kg to 44 cents/kg (FFMC,1988).

4.3.2.2. Total portion of sales paid to fishermen

The Corporation's impact on increasing landed prices to fishermen, relative to market effects, is revealed by the real dollar increase in the total portion of sales dollar paid to fishermen. Figure 25 plots the real value (deflated to 1975 dollars, Industrial Price Index, see Appendix A) of net sales over the period 1975-1987 split into its cost and payment component. This is carried out by adding initial and final payments made to fishermen. This figure is then divided by gross sales plus year end inventory minus

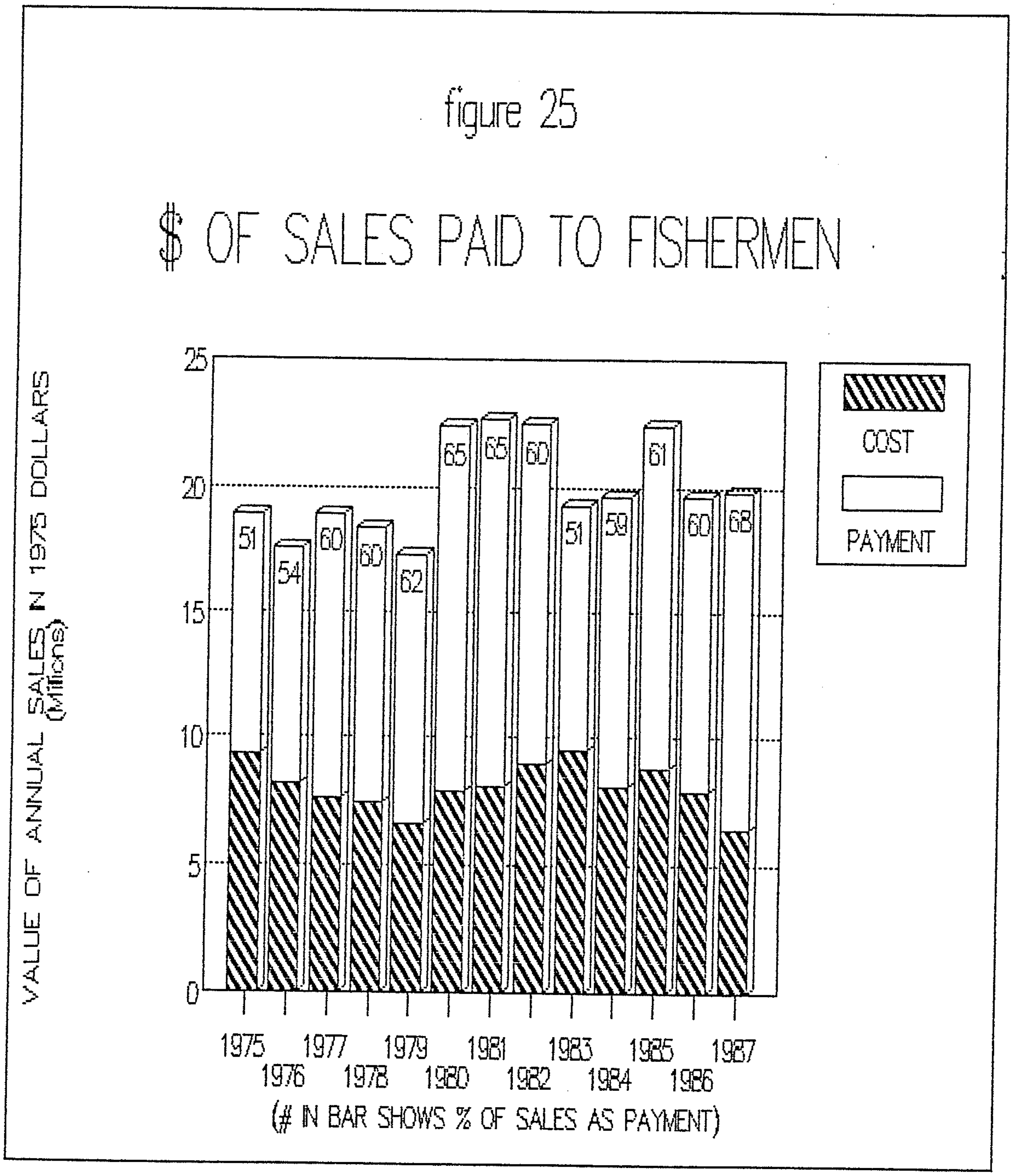


figure 25
$ OF SALES PAID TO FISHERMEN
VALUE OF ANNUAL SALES IN 1975 DOLLARS (Millions)
0
5
10
15
20
25
COST
PAYMENT
51
54
60
60
62
65
65
60
51
59
61
60
68
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
(# IN BAR SHOWS % OF SALES AS PAYMENT)

inventory at the start of the year. The result is the percentage available to fishermen as opposed to that absorbed as cost.

Comparison of the average percentage of the sales dollar available to fishermen annually, in figure twenty 25, for the years 1975-80 to 1981-87 exhibits a 3.40%, or just over a three cent per sales dollar, increase between these periods. Regression analysis of the level of payment made to fishermen, figure 26, supports this conclusion indicating that the real value of payments to fishermen, except in the case of the lean market year of 1983, has been increasing (r-squared=.3373).

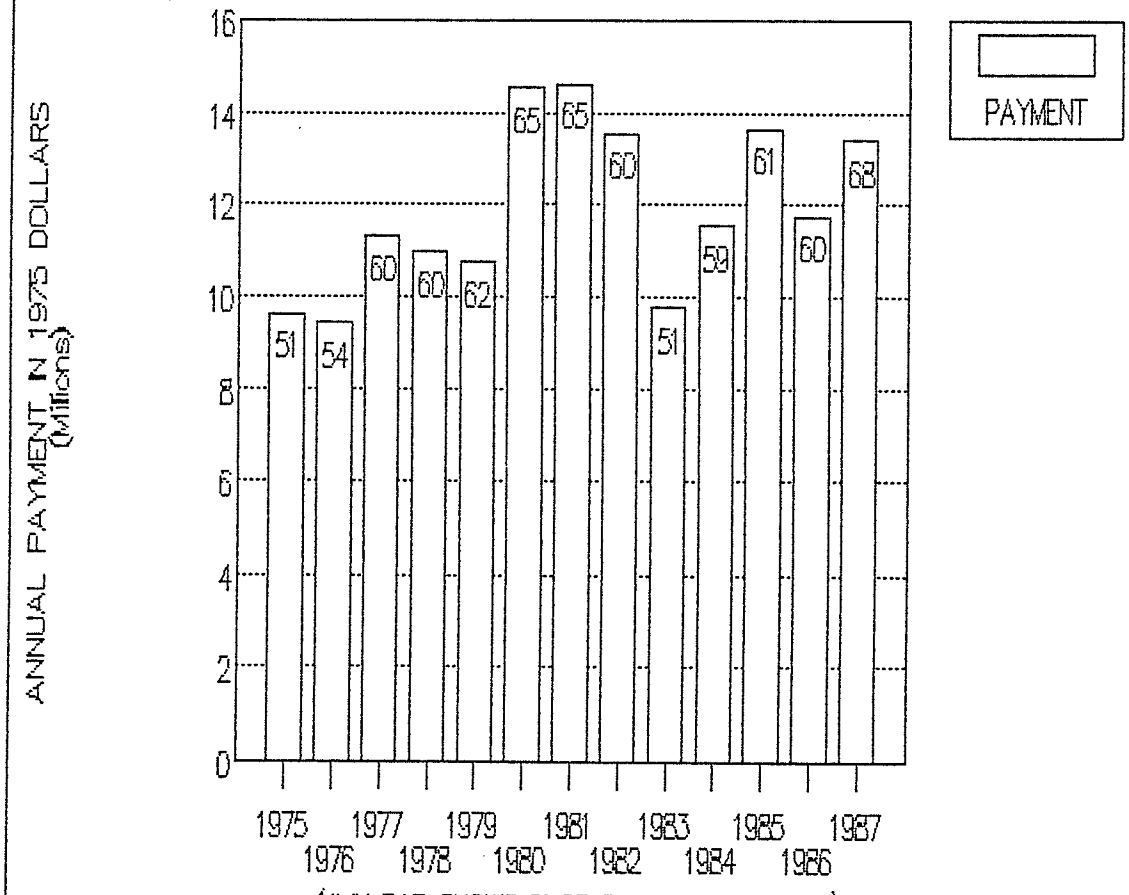
Figure 27 plots the trend for the cost of sales over the period. This figure indicates that the Corporation has proven able to maintain and, in select years reduce, the cost of sales. As the overall value of sales has risen over the period the Corporation has kept costs down to minimum average of about forty cents of every sales dollar.

4.3.2.3. Weighted average returns from fishing

Disparities in the amount of effort and the resultant range in returns from fishing makes the absolute magnitude of average returns for the fishery an inconclusive statistic. It is a characteristic of the fishery that the majority of fishermen work less than 10 weeks and earn $1000 to $8000 dollars per season yet there are those who consistently derive returns in excess of $50000 dollars each

figure 26

PAYMENT TO FISHERMEN



(# IN BAR SHOWS % OF SALES AS PAYMENT)

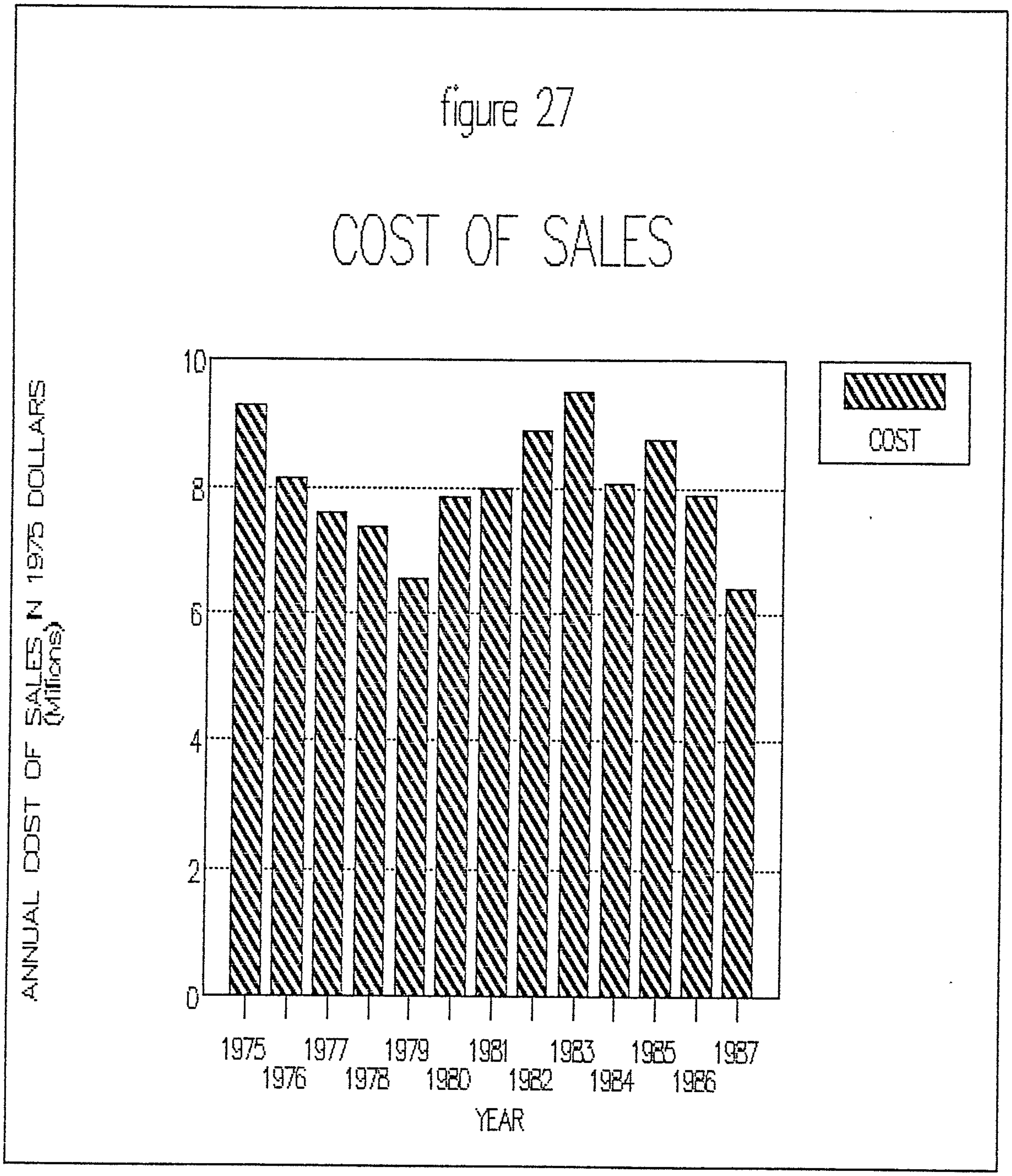


figure 27
COST OF SALES
ANNUAL COST OF SALES IN 1975 DOLLARS (Millions)
10
8
6
4
2
0
COST
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
YEAR

season. In order to be able to use this set of data as an indicator of the trend in returns to fishermen the weighted average return from fishing has been used.

Statistics on returns to fishermen are organized into categories by $1000 dollar increments. The first group is, therefore, the $0-1000 group and the next is 1001-2000 and so on. Returns from each group are weighted by the number of fishermen who belong in that particular group. The results are then deflated using the industrial price index (see Appendix A) so that real dollar trends may be identified. In using these data to determine the direction of returns to fishermen it is not the magnitude of the figure which is important but the trend in that figure over time.

Figure 28 plots the weighted average returns of fishermen for the entire FFMC region for the years 1975-87. Regression analysis on this data reveals that, in real dollars, no definite trend can be identified over the thirteen year period (r-squared=.0683). Figures 29 and 30 represent weighted average returns for the five regions under the FFMC's mandate (Alberta, Manitoba, Saskatchewan, Northwest Territories and Northwestern Ontario). Regression analysis of the real dollar trend over time reveals that in each case, except the Northwest Territories (figure 30), no definite trend in the data can be determined. In the case of the Northwest Territories regression analysis produced a

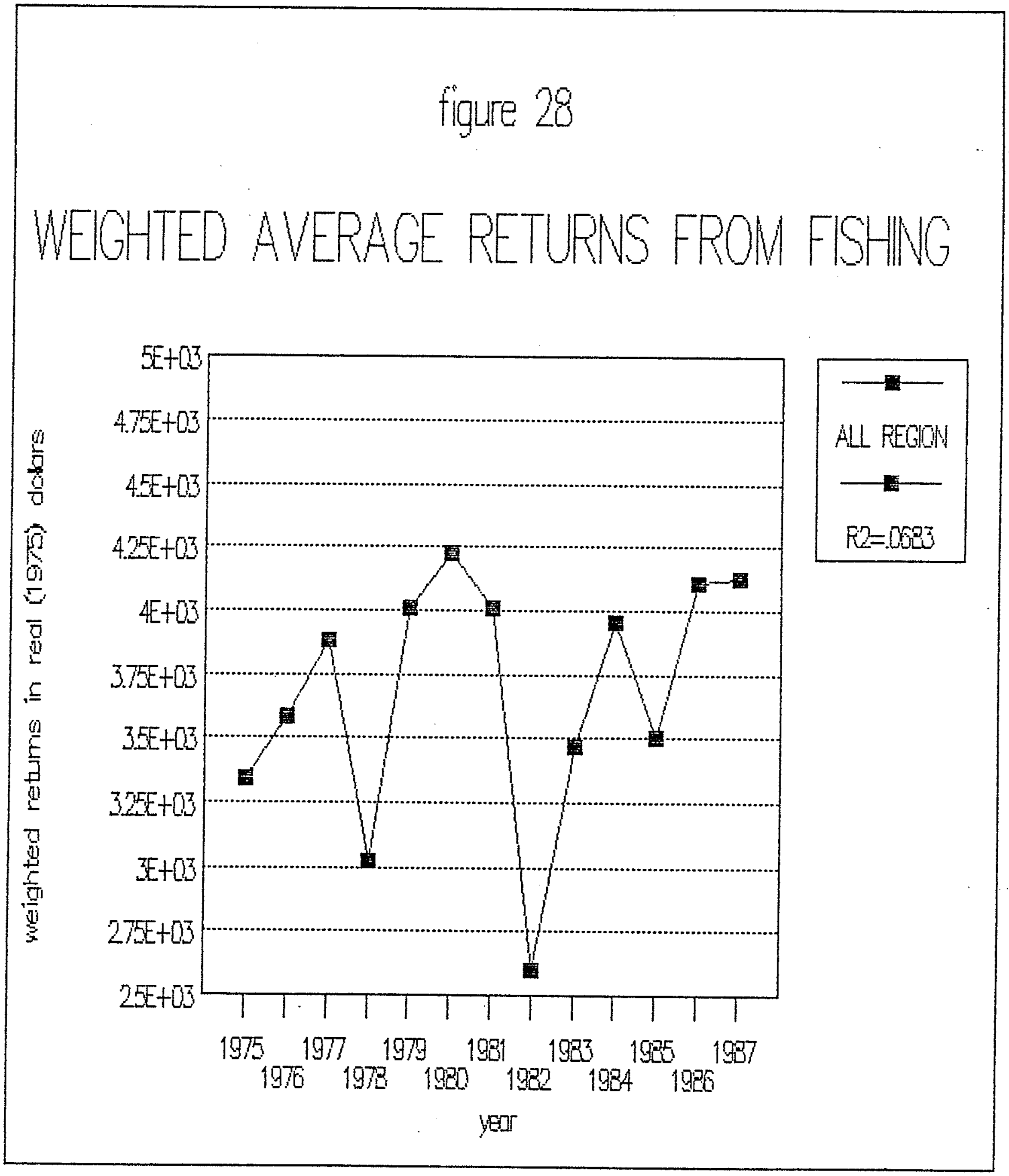


figure 28
WEIGHTED AVERAGE RETURNS FROM FISHING
5E+03
4.75E+03
4.5E+03
4.25E+03
4E+03
3.75E+03
3.5E+03
3.25E+03
3E+03
2.75E+03
2.5E+03
weighted returns in real (1975) dollars
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
year
ALL REGION
R2=.0683

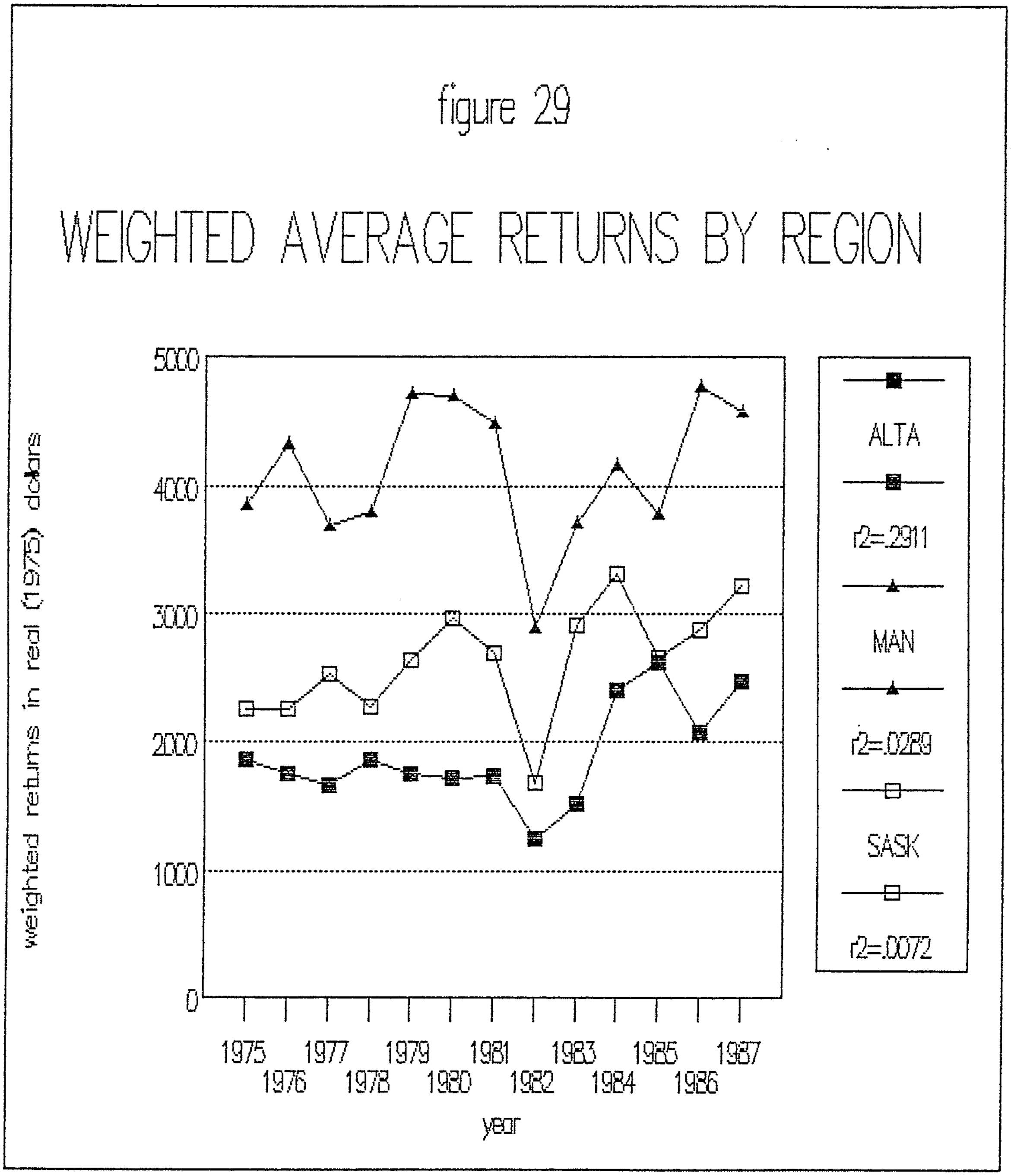


figure 29
WEIGHTED AVERAGE RETURNS BY REGION
weighted returns in real (1975) dollars
5000
4000
3000
2000
1000
0
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
year
ALTA
r2=.2911
MAN
r2=.0289
SASK
r2=.0072

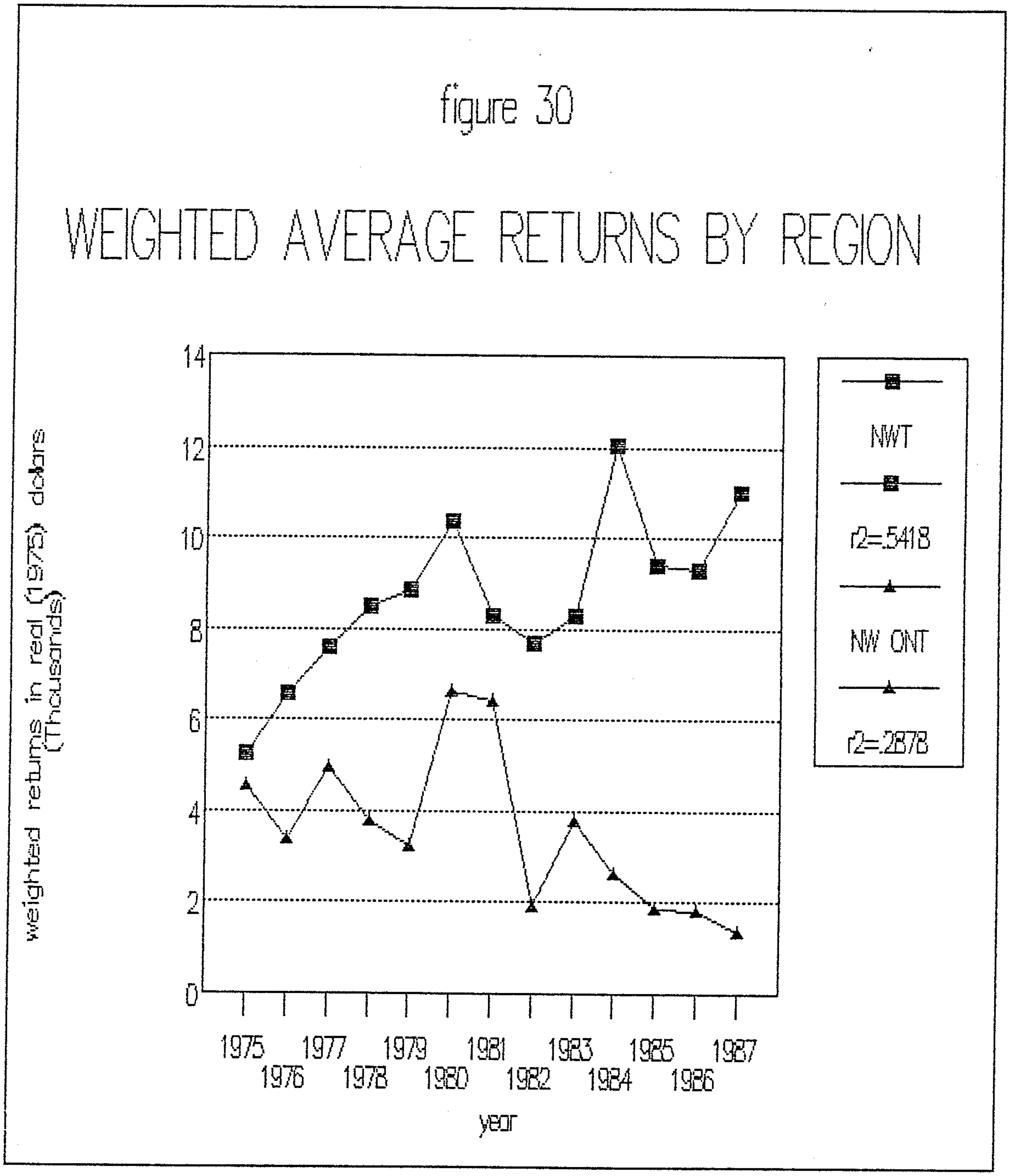


figure 30
WEIGHTED AVERAGE RETURNS BY REGION
weighted returns in real (1975) dollars
(Thousands)
14
12
10
8
6
4
2
0
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
year
NWT
r2=.5418
NW ONT
r2=.2878

substantial positive association between annual values (r-squared=.5418) indicating a real dollar improvement in returns for the aggregate of the region's fishery.

A similar examination of the last six years, 1982-1987, reveals that while weighted average returns may not have been improving over the thirteen year period they have, in almost every case, improved in this times span. Regression analysis carried out on the data for the regions as a whole shows a very strong relationship between annual values (r-squared=.7047) supporting the conclusion that positive returns have occurred over this time period (Table twelve).

Table 12

Weighted average returns from fishing 1982-1987
(in real 1975 dollars)

	Region					
	All	Alta.	Sask.	Man.	NWT	NW Ont.
1982	$2600.72	1254.68	1680.15	2898.49	7670.94	1897.17
1983	$3464.17	1513.05	2905.53	3698.04	8273.18	3744.86
1984	$3953.68	2404.06	3304.68	4153.82	12056.37	2635.47
1985	$3500.67	2622.82	2655.47	3779.60	9407.73	1846.66
1986	$4111.24	2081.29	2872.99	4774.82	9326.36	1795.83
1987	$4128.26	2470.15	3218.18	4574.18	11009.30	1357.54
r2	.7047	.5894	.4011	.7825	.3106	(.3377)

By region Table twelve reveals that each province and the Northwest Territories showed a substantial or moderate association between annual values, again, suggesting that the last six years have witnessed improvement in weighted average returns. The loan exception is Northwestern Ontario which has shown a moderate association between annual values for the period in the opposite direction, indicating a decrease in the weighted average returns (see section 4.4.4 for a discussion of this finding).

It is important to stress that the real fishing return figures in table twelve represent a weighted real average for a fishery which is widely disparate in terms of the amount of fishing each fisherman undertakes in any year. The important figure in the analysis is, therefore, the direction and magnitude of the trend in this data over time. Table twelve indicates that the last six years have produced improvements in the weighted average returns for the greater majority of the fishery. Except in the case of Northwestern Ontario all the regions have experienced an improvement which averages $1400 real dollars over the six years represented. Considering that this is an average figure it is to be expected that fishermen who expended greater than the average amount of fishing effort experienced proportionate increases in their returns.

Taken together each of the measures presented in this section indicate that there has been an improvement in the returns to the majority of fishermen within the Corporation's mandated region. The comparison of landed prices suggested that species which comprise the majority of the purchase volume experienced real dollar increases in the price paid to fishermen over the thirteen year trend examined. However, the data also suggest that a significant portion of the Corporation's purchased volume, including whitefish, trout, sauger and arctic char, experienced declining or static price trends. It is likely that the results of these species have had the effect of either not improving or decreasing the returns of a significant portion of fishermen.

The extent to which the Corporation is responsible for the improvements in landed prices or the lack thereof, is not specifically determined by the landed prices test. However, to the Corporation's credit, it can be said that few products market themselves and, considering positive market trends for species such as northern pike, sturgeon and to a lesser extent walleye and the rough fish species, the Corporation has at least proven able to take advantage of the situation and profit by it. With respect to declining returns on whitefish, comparative declining trends in the Great Lakes suggest that falling prices are a market trend possibly due to declining demand for this species. Support for this suggestion comes from the existence of the whitefish control program which seeks to reduce the supply of whitefish, apparently because demand has fallen, in an effort to improve price. Static or indeterminate results on the remaining species examined, char, sauger and trout, were similar to those experienced in the comparative fisheries. These results suggest that fluctuating or constant demand for these species may be a significant contributor in static and fluctuating real prices.

The real value of the portion of each sales dollar paid to fishermen has increased over the period and has averaged nearly $.60 cents of every sales dollar. This has been achieved, at least in part, by maintaining the level of cost required to process and market annual fish volumes. Finally, while the thirteen year trend revealed no definite trend in weighted average returns from fishing, the last six years, 1982-87, have produced significant real dollar improvements in weighted average returns from fishing for all regions but Northwestern Ontario.

4.3.3 Promoting International Markets for and increasing interprovincial and export trade in fish.

This objective contains two separate components. The first pertains to the development and increase in trade volume of international markets for fish and refers specifically to the development of markets other than the traditional United States market. McIvor (1966) noted in his analysis of the fishery that 80% of fishermen's produce ended up in US markets, indicating that this market was already well developed. The second component recognizes that little development of domestic markets for freshwater fish had taken place prior to the formation of the

Corporation. This objective therefore assigns the Corporation the duty of developing and increasing interprovincial trade in an effort to improve and expand domestic markets.

4.3.3.1. Promoting international markets

Since it began processing and selling fish the FFMC has been keeping sales records of the market destination of all sales broken down into three major areas: Canada; Europe/Asia and, the USA. Figure 31 plots these data as a trend for the years 1975 - 1987. It is apparent from this figure that deliveries to US markets have been reduced by 19% from 79% of the total to 60% over the period while European/Asian markets have been increased by 14% from 9% to about 23% of the total marketed volume (FFMC Sales Analysis, 1975-87).

Relatively static annual purchased volumes over the period, averaging at about 21 million kilograms (see figure 7 section 4.3.2.1), indicate that alterations in market destination have been achieved by shifting product from one market to another rather than net additions to volumes sold. Figure 31 suggests that improvements in European/Asian markets have been managed by reducing volume to US markets. Part of the reduction in product weight to the US markets over the trend is due to greater emphasis being placed on processed fish products rather than fish in round or headless forms. However this change, which amounts to a

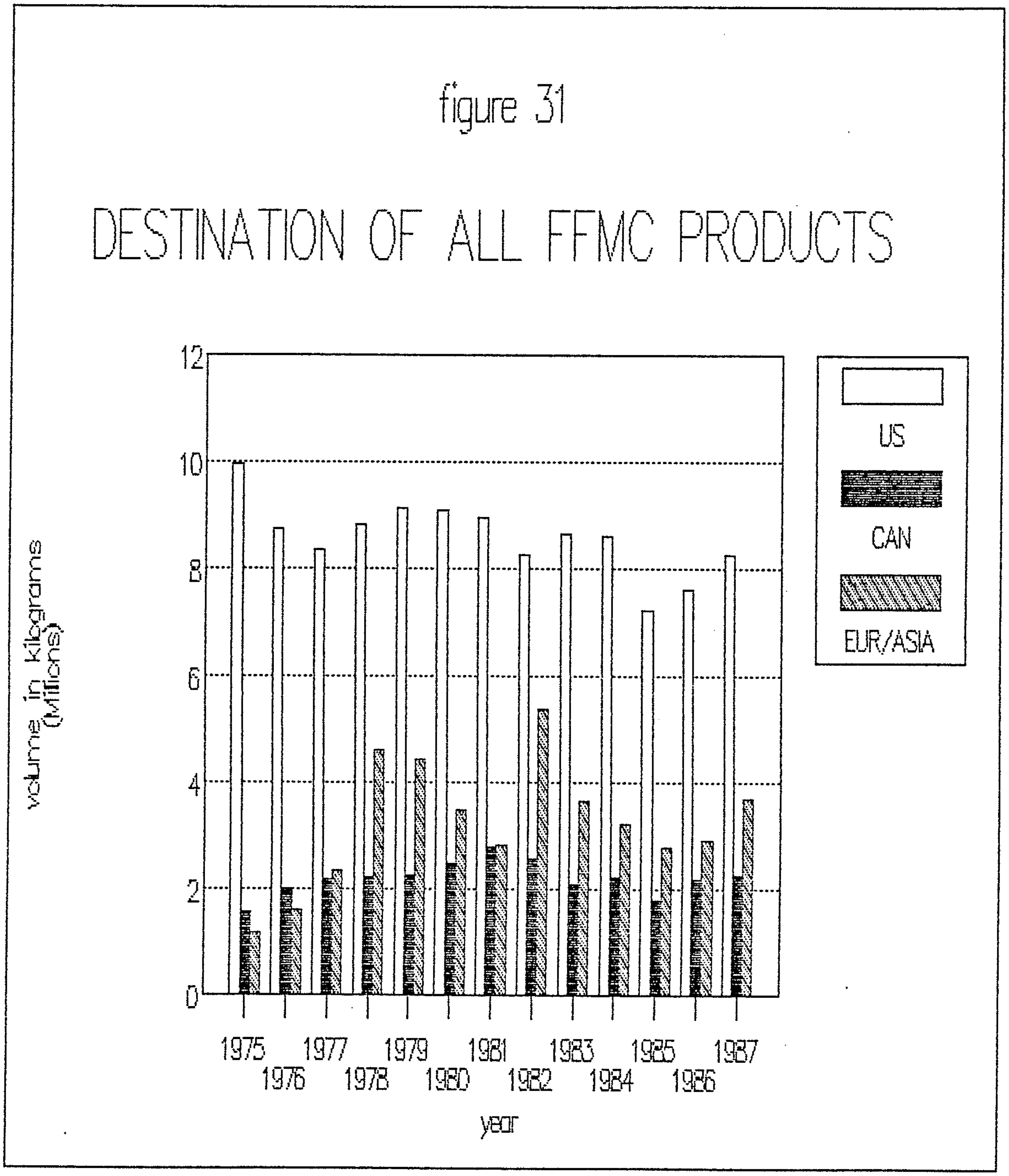


figure 31
DESTINATION OF ALL FFMC PRODUCTS
volume in kilograms (Millions)
0
2
4
6
8
10
12
US
CAN
EUR/ASIA
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
year

maximum growth of about 4% of the total fish bound for US markets between 1975 and 1985, is not significant enough to account for the overall reduction in US product weight (19% over the thirteen year trend, FFMC Sales Analysis, 1975-87). Consequently the Corporation has not increased international trade in fish but has succeeded in diversifying international markets.

Considering that quotas for the entire fishery annually total between 21 and 25 million kilograms, (personal communication, Alex Drobot, Field Operations, FFMC, 1989), which equals the amount the Corporation has consistently purchased (see figure 7), increasing trade may be out of the hands of the FFMC. Increases in the volume of fish would appear to be a matter for increased quotas but as quotas are generally established upon biological data to produce sustainable yield, such increases are unlikely.

4.3.3.2. Domestic Markets

Figure 31 shows that domestic markets have remained relatively undeveloped. Over the trend, with minor fluctuations, this market has rarely surpassed a 16% proportion of the Corporation's total market. In addition, as volumes handled by the Corporation have not expanded over the period, domestic sales have not experienced a net increase in marketed volume.

The data presented suggest that the FFMC has succeeded in promoting new international markets. However, this promotion has been undertaken not by increasing the total volume of sales but through the spreading of a static volume over more numerous destinations. Consequently development of international markets has not meant an increase in international trade. Proportionately and in terms of net volume domestic markets have also remained static. As was mentioned above this may be due, in large part, to existing quotas and not necessarily to any failure on the part of the FFMC to increase its marketed volume.

The importance of the findings with respect to domestic markets are reduced further when it is considered that complete success in all aspects of this third objective have the potential to contradict the objective of increasing returns to fishermen. Essentially, the market breakdown displayed in figure 31 is the product of the Corporation's effort to obtain the best price it can for freshwater fish regardless of destination. Better returns have traditionally been available in US and European markets (FFMC, 1989) and the Corporation has pursued these markets in deference to the goal of increasing returns to fishermen rather than develop domestic markets.

4.3.4 Provision of Credit Assistance to Fishermen

In keeping with the duties prescribed in the Corporation's empowering legislation, a credit policy exists which provides for short term working capital loans to fishermen. The present policy, approved by the Board of

Directors in 1977, is an eight item document which defines the application, limitations, rates and periods over which credit will be issued to fishermen. The Corporation was unable to provide data on the volume or the numbers of fishermen who applied for credit assistance. As a result, data for this section comes from personal interviews with fishermen's representatives based on a series of questions about the present credit policy.

Maximum credit allowable to fishermen under the Corporation's credit policy is not to exceed 20% of the average value of the applicant's production in the last three years for the same season (open water and winter are considered two separate seasons). Approval is subject to a review of the fishermen's entire debt load from all sources. FFMC area managers are responsible for approving and collecting on all loans and must seek approval from the Field Operations Manager if a loan is to exceed $5000. Approval from the Field Operations Manager is also required in order to issue advances on final payments. Major financing for equipment is handled either through private institutions or Provincial/Federal credit schemes such as the Manitoba Agricultural Credit Corporation.

Accounts must be repaid within the issuing season at a minimum of 30% of the fishermen's weekly gross fish receipts. Interest is charged on the account from the date of issuing credit at the Corporation's cost of working capital plus 2%. Credit is generally not extended unless there is assurance that it will be repaid within the season.

Interviews were carried out with the representatives of the major fishing associations and the FFMC's Advisory Committee in which participants were asked a series of questions about the credit policy (complete text of the questions may be found in Appendix B: Interview Schedules). The major question asked of interviewees was, "What are the opinions of fishermen in your region/association of the FFMC's policy on operating credit?"

Of the fifteen representatives interviewed nine commented on the policy and stated that it was a good credit policy. They noted that it offered important start up credit which may not otherwise be available in more remote regions and that it was convenient to work through the FFMC. Several of the representatives added that credit was not difficult to obtain so long as a fishermen had a good history of repaying and was a reasonably good fishermen. According to their representatives, fishermen on the whole accept the restrictions on credit, and the charges, understanding that carrying greater credit loads and high risk borrowers could have an impact on their final payment.

Each representative noted that fishermen in their area were satisfied with the Corporation's credit policy. Charges on credit, the level and the terms of repayment appeared to have caused no concern to fishermen. In fact, many representatives urged tighter restrictions and continued vigilance on the part of the Corporation to ensure that credit levels do not become a burden to fishermen as a whole.

4.3.5 Summary and Conclusions

Real dollar increases in the value of annual sales over the trend examined suggest an ability on the part of the Corporation to make valuable and timely deliveries to its markets. Increases to the final payment on some species but not all suggests that this improvement, while it may impact on the majority of fishermen, has not been consistent. Taken together these two measures suggest success in orderly marketing for some species, enough to raise the annual value of sales, while significant problems remain with respect to others, especially whitefish and to a lesser extent lake trout, arctic char and sauger.

The trend of landed prices revealed increases on those species which make up between 45% and 50% of the landed volume handled by the Corporation. As with the trend in final payments however, improvement has not been consistent. Whitefish has experienced a downward price trend while lake trout, sauger and arctic char have experienced no discernable real dollar increase.

Because the greater portion of the landed volume has experienced real dollar increases the Corporation has been able to improve the portion of sales paid to fishermen. The real value of payments, as opposed to cost of sales, has grown by 3.4% as the value of sales has increased for the period 1975-87. This has been achieved through the maintenance, and reduction in select years, of the cost of sales.

Improvements in the portion of sales paid to fishermen were not discernable in the weighted average returns from fishing over the period 1975-1987. However, an analysis of the last six years shows improvements in each of the provinces and the Territory with the exception of NW Ontario. For the majority of fishermen these results suggest an improvement in annual returns but it should be noted that declining or erratic returns on whitefish, char, sauger and trout may have had the result of reducing or producing no gain to a significant minority of fishermen.

Results suggest that the Corporation has not been successful in significantly increasing the volume of export trade in fish and fish products. They have succeeded in diversifying export markets by shifting marketed volume to European and Asian markets, away from U.S.A markets. That no overall additions to export volume have resulted may be due to annual quotas for the fishery as a whole, rather than an inability on the part of the Corporation to market fish. Annual quotas, which total between 21 and 25 million kilograms of fish, closely match the Corporation's purchased volume indicating that they are handling as much fish as is being offered.

Domestic markets, which have traditionally brought lower prices and continue to do so, have remained static at about 16% of the Corporation's marketed volume. In order to achieve the goals of orderly marketing and increasing returns to fishermen the Corporation has pursued those markets which are most likely to generate top returns to fishermen. As a result, emphasis has been placed upon international markets at the expense of interprovincial trade which continues to generate prices lower than those available in export markets.

In terms of credit assistance available to fishermen the Corporation has provided a set policy and has the mechanism is place to carry out the task of issuing working capital loans. It is apparent from the interviews conducted that the policy is satisfactory and meets the needs of the fishermen who use it.

4.4 Client Satisfaction

The purpose of this section is to provide a sense of the opinions and evaluations of the Corporation's clients as to the delivery of the mandate and a number of specific issues discussed in Chapter 2, Review of Related Literature. As such, this section provides an important complement to the data already examined, presenting an independent set of evaluations of the Corporation's overall impact on the Freshwater fishery.

Primary clients of the Corporation include two distinct groups: the fishermen; and, the Provincial officials in charge of commercial fishing in each of the provinces and the Northwest Territories. The interview process was carried out by selecting the major fishermen's representatives, officials of fishermen's associations, FFMC Advisory Committee members, and each of the commercial fisheries officials. Each was interviewed in person when possible (three interviews were carried out by telephone) and asked the same set of open ended questions from a prepared interview schedule. Three schedules were created for the two client groups because of slight differences in the topics discussed: one was created for Government officials; one for Advisory Committee members; and, one for the representatives of fishermen's associations (see Appendix B: Interview Schedules). A total of twenty interviews were completed, fifteen with fishermen's representatives (Seven in Manitoba, three in

Saskatchewan, three in Alberta, and one each in NW Ontario and the Northwest Territories) and five with fisheries officials.

In the case of the fishermen client group, representatives were chosen because it was felt that they could provide the greatest detail about Corporation impacts and that they could answer for their particular group or constituency. During the interviews they were asked to respond with reference to the general opinion of the fishermen they represented. In order to ensure that each participant could adequately reflect the majority opinion on the various issues, a series of questions were included in the interview to act as a testing device. The questions appear in the schedules under the heading "Group data and Representative Characteristics" (Appendix B: Interview Schedules).

The representatives of fishermen's associations were asked whether they were elected by their members and how their organizations provided for the expression of opinions, complaints and the desires of fishermen. In each case representatives responded that they had been elected by their members and that a system of bi-annual (or at times a greater number) meetings with provisions for emergency meetings existed in which fishermen expressed their concerns to their elected representatives. Informal contacts with fishermen, by telephone or in-person, were common and many issues were discussed in this fashion. These results support the ability of representatives to respond to the questions with the opinions and evaluations of the fishermen they represent indicating that representatives in general are in close communication with fishermen at large.

Advisory committee members were asked by what means they collected input on issues relating to the Corporation from the fishermen in their region. In all but two of the cases, each held or attended area fishermen's meetings in order to gather information to take to the meetings of the FFMC Advisory Committee. The two exceptions relied on informal contact, in person or by telephone and noted that contact was high because they fished together or an effort was made to get out to speak to fishermen. As with association representatives, the results on this set of questions indicate that Advisory Committee members were able to respond to questions with a knowledge of the majority opinion of the fishermen in their constituency.

The form which the interview schedules follow will define the format of the discussion of the results except that "provisions for working capital" has been discussed in the previous section. The discussion will begin with the Provincial Fisheries Department/FFMC relationship and proceed from there through the remaining questions, which are common to the three schedules, finishing with the question of the future operation and structure of the

Corporation.

4.4.1 FFMC - Provincial/Territorial Fisheries Department Relationship

Three major questions were asked under this heading in an effort to determine the nature, character and some of the problems that exist between the FFMC and the provincial/ territorial fisheries departments. The first question of the three was, "Identify and describe the elements of the relationship between your department and the FFMC?" The purpose of this question was to get the interview participant thinking about the relationship and to explain both the formal and the informal channels of communication that exist between the two entities.

Each of the five participants, Manitoba, Saskatchewan, Alberta, Northwestern Ontario and the Northwest Territories, indicated that, along with the formal channels of communication, significant informal channels existed between themselves and the FFMC in order to deal with the day to day issues that arise involving the Corporation. In each case the quality of the communication was described as: "sufficient...there has never been anything we haven't been able to resolve to our mutual satisfaction"(Tom Mill, Alberta); "...(the) channels of communication are pretty good from the Yellowknife end" (Richard Zieba, NWT); "I think the channels of communication have been functioning fairly well...but there is always room for improvement." (Lorimer Thompson, Manitoba); "...they (FFMC) have done a good job of looking after us (the fishery in general), whenever they are around here they certainly drop in to see us and so I think it's (communication) pretty good." (John MacDonald, NW Ontario); "I certainly think that our concerns are very well addressed by the FFMC because of the fact that that mechanism (informal channels of communication) is in place."(Bruce Smith, Saskatchewan).

The second question addressed the contentious issue of cooperation between the FFMC and the various departments over the coordination of supply (background on this question see section 2.4.3 of Chapter 2). The question was as follows, "Does the FFMC consult with your department in an effort to coordinate the timing of fish harvests with market demand?"

In each case the participants noted that there was active consultation on this issue. The FFMC's role was identified as operating on two levels, consultative and through the setting of prices. Except in the case of NW Ontario direct contact has been maintained concerning the timing of fish harvests through pre-season meetings to discuss the markets for the upcoming season. In both Manitoba and Alberta, which were noted as having had problems in this area (Chapter 2, section 2.4.3), officials indicated that they had made an effort to accommodate market demand through the provision of, "...mechanisms and the regulatory framework to allow fishermen to move production."

(Lorimer Thompson, Manitoba) in response to FFMC prices. Tom Mill of Alberta noted that, "we have reduced gear, we have reduced the length of the fishery and created special fisheries in which fishermen have to go in at eight in the morning and be out by 4 in the afternoon...in an effort to reduce production gluts." In addition officials from these two provinces noted that the controversy has been lessened over the years by effective consultation. Although the problems are not entirely solved, especially in the case of Alberta, rationalization programs are under development to reduce the number fishermen and the rapid bursts of production (Tom Mill, Alberta).

The third and final question of this section was, "Identify the problems that exist between your department and the FFMC?" This question produced a variety of responses from officials in each of the regions. In Manitoba, Lorimer Thompson noted that occasionally policies that benefit the freshwater fishery as a whole, such as the whitefish control program, may be detrimental to whitefish fishermen in that province. In Saskatchewan Bruce Smith stated that he felt the Corporation was "running lean in terms of staff" and that this was having an impact on his department's ability to obtain needed information in writing. Tom Mill of Alberta said that the problem of the timing of supply and the fact that portions of the Alberta fishery produce "gluts" of fish has caused and continues to cause some tension. In Northwestern Ontario, John MacDonald said that the only problem he has encountered was with the issuing of final payments. Now that final payments are issued earlier, he feels the problem is solved. In the Northwest Territories, distance from the Corporation's head office and a lack of communication concerning the details of fish marketing were major problems for officials (Richard Zieba, NWT).

In general, the relationship between the Corporation and the fisheries departments in each of the provinces was said to be satisfactory. Where problems do exist it was generally noted that consultation has been ongoing and that these problems are not insurmountable.

4.4.2 Marketing

Three major questions were put to the interview participants covering the principal issues related to marketing which were identified in Chapter 2 of this study: marketing in general; the development of domestic markets; and, the problem of underutilized species (for the full text of questions and the wording in each of the three separate schedules see Appendix B: Interview Schedules).

The first question of this section sought a general response to the marketing efforts of the Corporation; "What are the opinions of fishermen in your association/ region of the FFMC's ability to market fish?"

In each case except those interviewed in Alberta fishermen thought that generally the Corporation was doing a good job of marketing their particular fish. Just under half of the fishermen who responded in this fashion (five) noted that significant improvements have taken place over the last five or six years in the way the Corporation markets fish. Recurring comments among interview participants included the Corporation's stabilization of prices, that the Corporation represents a valuable sales outlet which, more often than not, can take the fish offered and that the Corporation represents a rationalization of the fishing industry, in terms of technological investment, (plant machinery) which has benefited fishermen.

In Alberta, the fishermen interviewed indicated that the Corporation was not doing enough to create new markets and expand sales. The feeling that emerged from each of the three interviews undertaken in the province was that the FFMC has been complacent with respect to markets, relying on traditional channels rather than creating new ones and expanding the volume of sales. Fishermen based this evaluation on production cutbacks received in this season and in the summer season of 1988. This opinion was shared, to a lesser extent, by one participant from Manitoba. He noted that there was room for improvement in the development and expansion of markets. While it would seem that these evaluations of the Corporation's market development are supported by the findings of the previous section of this study it should also be noted that annual quotas for the fishery as a whole are limiting factors on fish volume which are out of the hands of the Corporation.

Other general comments included: a belief that the Corporation is operating at maximum capacity and is unable to respond effectively to even the slightest increase in processed volume; that in the case of the Northwest Territories, Great Slave Lake whitefish are subsidizing the whitefish pool; and, that fish moves too slowly through the delivery mechanism (it was claimed that from some parts of Alberta it may take a week to get to market) to command a premium price.

Government officials noted that it was difficult for them to evaluate the marketing effort of the FFMC. However, each noted that they believed the Corporation was doing a satisfactory job judging by their estimate that the majority of fishermen seemed to be making a profit on their fishing operations. One problem noted by Lorimer Thompson of Manitoba was that the marketing strategy is not readily available to officials and that at times this causes problems because management regimes can not be made as flexible as a marketing strategy. He noted that greater discussion of marketing strategy might mitigate conflicts and allow for better management design. Bruce Smith of Saskatchewan expressed concern over the lack of new product development. As a caveat to that comment, he noted that there is a significant risk in the development of such products and given the constraints placed on the FFMC, realized why they might avoid such investment.

Question 2 asked participants, "What are the opinions of fishermen in your association / region with respect to the FFMC's marketing of rough fish such as carp and mullet?

Without exception fishermen felt the FFMC had difficulty in the marketing of these species. They differed, however, on the reason for the noted difficulty. The majority (ten of fifteen) stated that where markets existed, prices were too low to produce efficiently and that competition from ocean fisheries was too great. The majority also noted that they thought the FFMC had done a fairly good job attempting to sell this type of fish but that markets, willing to pay a price that would return adequate profit, were few and far between. The minority (four of fifteen) on the other hand felt that the FFMC simply neglected this type of fish because it required development of new markets which the Corporation was not prepared to undertake. This position, fishermen suggested, existed either because the Corporation could not handle the volume or simply because concentration on the premium species (walleye, northern pike and whitefish) was an overriding priority.

The records for annual fish purchases do not support the claim that the FFMC has neglected the marketing of rough fish. Annually mullet and carp make up, on average, 12.5% or about 2.5 million kgs. of the total purchased by the Corporation. The primary problems with these species, which have been noted in this study and in several separate studies (Report of the Federal/Provincial/Territorial Committee of Officials, 1980, Marshal, 1986 and the Advisory Committee's sub-committee report on the sales of under-utilized species - Advisory Committee Newsletter, 1989) are that they command a very low price and possess characteristics with respect to bones and flesh which make them very difficult to market. The difficulty is exacerbated by competition from ocean fisheries, in which species such as pollock are harvested in large volume and sell for as little as $.06/kg., well below the $.11/kg. price for mullet and carp.

Each of the fisheries department officials interviewed indicated that they thought the Corporation had approached the problem of rough fish in a rational manner. Each noted that to place a great amount of money and time on a low value product made little economic sense and could be detrimental to the fishery as a whole. Lorimer Thompson, of Manitoba added that while the Corporation's approach was rational, given the constraints they face (maximizing returns to the majority of fishermen), potential exists for the development of greater sales of these species outside the Corporation. Thompson noted that the Corporation has become more free with the special dealers license and encouraged greater use of this mechanism (which allows private dealers to buy and sell a particular specie given certain restrictions see section 2.3.2 p.30) to allow the development of what he termed smaller volume markets neglected by the Corporation.

The third and final question on marketing addressed the issue of the development of domestic markets: "What are the opinions of fishermen in your association/region concerning the FFMC's development of local (Canadian) markets?

The majority (twelve of fifteen) response from fishermen on this issue was that the FFMC does little or nothing to develop domestic markets beyond servicing the network of brokers already in existence. In Manitoba and NW Ontario fishermen added that this benefits fishermen because greater prices are available in export markets. In Saskatchewan, Alberta and NWT fishermen stated that the further development of these markets should be left for those fishermen who wish to sell their fish locally.

Response from government officials on this question mirrored that of the fishermen. They fully understood the FFMC focus on the more lucrative export market in an effort to gain the greatest return for fishermen and accepted the pricing of locally marketed fish on par with export prices to avoid resale into export markets. Saskatchewan and Alberta officials noted that they addressed fishermen's concerns in this area by pressing for changes to the rules governing producers sale of fish on the intra-provincial market. In 1984 each of these provinces instituted an experimental project which allowed a wider latitude over the sale of fish within their province (expansion from final consumer sale to include sales to restaurants, chain stores and food service organizations: see section 2.3.1 p.28).

4.4.3 Pricing

One principle question was asked of interview participants concerning the FFMC's pricing mechanism. This question was followed, where necessary to focus the response, by two questions which broke the initial, more general question into issues concerning the initial price mechanism and the final payment mechanism. The major question asked was, "What are fishermen's opinions concerning the FFMC's price system, which includes a guaranteed initial price and a surplus or final payment paid on species pools?" The sub-questions used to focus the discussion included, a. what are fishermen's opinions of the way the FFMC sets initial prices for the various fish species?, and b. what are fishermen's opinions of the way in which final payments are determined?

A recurring theme which arose out of the discussions on the FFMC's pricing system was that it is far superior to anything that fishermen had prior to the Corporation. Without exception, fishermen stated that the initial price provides a benchmark from which to plan production and new investment for the year. However, Alberta fishermen complained that at times the benefit of posting an initial price is destroyed when the Corporation alters prices in an effort to reduce production levels in the middle of a season. Another complaint about the system is that the original concept of setting initial price at 80% has not held true for all species. It was noted by three of the fishermen interviewed, that initial price on some species are set at 50% of the forecasted market price and that this low initial price has the effect holding back a significant portion of producer's earnings until the final payment is issued. This they state has the effect of reducing benefits to fishermen by keeping them from investing the money in fishing or other financial ventures. An additional four of the Manitoba representatives interviewed appeared to concur with this assessment suggesting that initial payments should be higher at least to the 80% level.

With respect to final payments, fishermen expressed satisfaction with the mechanism but four significant issues arose from discussions. To begin with, six of the representatives interviewed felt that fishermen did not know how final payments were determined at all. Ten of the fifteen representatives interviewed noted that final payments were being issued very late in the year, in December, and that this was having an adverse impact on fishermen. Recent changes to the timing of final payments, which are now issued in November, has significantly improved this situation. Seven of the fifteen representatives noted that the size of the final payment was too large in relation to the initial payment. They believed that the FFMC is not setting initial prices high enough and, with the time lag in the issue of the final payment, are losing money by not getting the payment up front. Finally, complaints were voiced from representatives in Manitoba, NWT and Saskatchewan (three of the fifteen representatives) that the pooling of the final payment for whitefish (all grades are paid the same final payment, see section 2.4.2) created a situation in which high quality export fish from these areas was subsidizing lower quality, cutter and continental grade whitefish.

The fisheries officials interviewed, like fishermen, stated that the pricing system was good but that it had developed a few problems. Lorimer Thompson (Manitoba) and John MacDonald (NW Ontario) both said that the level of the final payment has been very high in the last year and that this has the effect of withholding a large portion of fishermen's income. They thought that the FFMC should be able to better estimate market trends and set the initial price to reflect the originally suggested 80% (initial price) and 20% final payment. Richard Zieba (NWT) noted that a better pooling arrangement on final payment was necessary to reflect the price received on NWT fish. It was noted however, by officials from Manitoba, Saskatchewan and NW Ontario that such a scheme would likely be too difficult to administer and that "...the cost of administering such a plan would be significant and greater than the benefit they might realize." (Lorimer Thompson, Manitoba)

4.4.4 Centralization of Processing

The purpose of this section, as was outlined in Chapter 3, section 3.5, is to present not only the data from the interviews conducted but also to examine data relevant to the question of the impacts of the centralization of processing. This section will, therefore, draw on the data and analyses of preceding sections.

The most important set of measures relative to the question of the impacts of the centralization of processing are: the Corporation's performance with respect to productivity of assets; the portion of the sales value paid to fishermen; and, the trend in weighted average income over the Corporation's life. Table 10 of the financial analysis (p.82) revealed that the Corporation has the second best percentage return on assets employed of the four companies examined. The Corporation has averaged as 33.3% return on assets over the ten year period analyzed. This suggests that the Corporation is using its assets, which includes the central plant at Transcona, to their capacity and that the investments have generated an satisfactory return.

The total portion of sales paid to fishermen is revealed in Figure 25 (p.120). This analysis shows that the Corporation has proven able to increase the value of sales paid to fishermen as the total value of sales has risen over the trend. This has been done, it is apparent from figure 27 (p.123), by maintaining, and in select years reducing, the cost of sales. Rolled into the cost of sales figure is the operation of the Transcona facility. Therefore, the operation of the facility appears to have been maintained at a fixed level of cost (in real dollar terms) and this has meant a greater portion of the increasing sales value can be paid out to fishermen.

Improvements in weighted average income were not found over the thirteen year trend analyzed. However, the last six years, from 1982-87 have witnessed significant improvement in income in all regions but NW Ontario (Table 11, p.128). These findings indicate that, at the very least, the centralization of processing has not had a negative impact on incomes (the special case of NW Ontario will be discussed below in section 4.4.5) and may be partly responsible, in light of the above measures, for increasing incomes.

Each of the measures presented from the financial analysis and the analysis of objectives and purposes suggest that the centralization of processing has had a beneficial impact on the fishery and fishermen as a whole. The measures suggest that the Corporation is taking advantage of significant economies of scale and is therefore able to pass on increases in the value of sales directly to fishermen.

In order to test these findings, both fishermen's representatives and fisheries officials were interviewed on this issue and asked, "What have the financial impacts been on fishermen in association due to the centralization of processing in Winnipeg (Transcona)?"

Only six of the fifteen fishermen's representatives interviewed thought that centralization of processing had benefited fishermen financially. The remainder (nine) thought that it had negative financial impacts for a variety of reasons. Alberta representatives noted that they were stuck with freight costs which reduced the price for their fish. Four of the nine interviewed stated that the centralization has meant the removal of important local benefits in terms of employment from their area. Three of the nine who felt centralization has been detrimental cited the time it takes to get fish to market with the present system as having reduced the potential value of their produce. Alberta representatives and one from Manitoba felt that the Corporation's processing structure was unable to handle volumes at certain times of the year, necessitating production cutbacks. Each of those representatives who felt that centralization had been detrimental (nine of fifteen interviewed) thought that some form of processing in their region would benefit fishermen and the local economy.

Without exception, fisheries officials felt that centralization had provided financial benefits to fishermen, noting that "...I don't see how you could do any better than a corporation which returns 55 or 70 percent of its sales dollar to fishermen." (Bruce Smith, Saskatchewan) "...any company that is returning 60% of what it takes in to fishermen, or even higher, indicates a pretty efficient operation."(Lorimer Thompson, Manitoba). It was noted by four of the five interviewed that centralization may have reduced benefits to regional economies but that gains to fishermen probably exceed the regional employment foregone. With respect to freight and freight subsidies Tom Mill of Alberta noted that their program sought to equalize prices to Transcona, although these prices had not been recalibrated in some while (clearly from the above, Alberta fishermen feel these subsidies do not cover present costs; see above paragraph).

None of the officials interviewed explicitly called for greater processing by the FFMC in their regions. However, Tom Mill of Alberta expressed the opinion that markets in Alberta and Alberta fishermen may benefit if the Corporation were to work more closely with the processing infrastructure that already exists in that province.

The interview process suggested that even though there may have been net gains to fishermen over the period, as evidenced by the measures presented and the opinions of fisheries officials, a majority of fishermen's representatives expressed the opinion that gains may have been greater if processing had been undertaken in their region. The validity of this claim can only be estimated through studies such as that discussed in Chapter 2, section 2.4.4. The results of the present study indicate a real dollar improvement in the value of sales available to fishermen. This suggests that the centralization of processing has had a positive impact on the majority of fishermen's incomes.

4.4.5 Impact of the Corporation on Profitability

When asked, "Has the FFMC improved or reduced the profitability of the majority of fishermen in your association/region?" seven of the representatives said that they thought the Corporation had improved profitability, four thought that profitability had been reduced through the Corporation's efforts and the remainder (four) said that they could not tell if an improvement or reduction in profitability had taken place.

Those that noted an improvement in profitability stated that the principal reason was the Corporation's ability to take advantage of economies of scale and invest in efficient processing technology. Other explanations for the increase in profitability include: an improvement in, and development of, markets in general; management's responsiveness to the particular issues and demands of specific regions; and, the Corporation's success at stabilizing the business of fish marketing in terms of prices and consistent markets.

Those who thought that the Corporation had reduced profitability (four of fifteen) stated as their main concern the freight costs involved with shipping their product to Winnipeg (these representatives were from Alberta and Saskatchewan). When asked about provincial freight subsidy programs, representatives claimed that they failed to cover the cost of transporting their product and that they were paying from $.07 to $.08 cents per pound ($.15 to $.17 cents/kg.) freight.

Fisheries department officials in each of the provinces each agreed that the FFMC has had a positive impact on fishermen's profitability. Richard Zieba, (NWT) noted that improvements are the result of stability offered by the Corporation: "...price fluctuations have levelled off so that fishermen can gear up knowing the (initial) price." Bruce Smith of Saskatchewan believes that the FFMC's ability to operate as a price leader in the market and the employment of labour saving equipment in the Winnipeg plant have been the principal reasons for improvements in profitability. Similar reasons for the improvements were given by officials in both Manitoba and Alberta. In Northwestern Ontario, John MacDonald felt that the Corporation's efforts had been positive for fishermen but that it was difficult to be sure as he felt that the commercial fishing industry was a declining industry in his area. While profitability had improved for some in NW Ontario, changes in the industry, he suggested, explained the falling weighted average income figure noted in section 4.3.2.3 (p.121) of this study.

4.4.6 Representation

The purpose of this section was to determine fishermen's opinions concerning the representation they receive on issues directly related to the operation of the Corporation. The discussion was, as a result, focused on the Corporation's Advisory committee. The first question put to participants on this issue, asked in the opening section of the interview schedule (Group data and Representative Characteristics), was, "Can you explain the process through which an Advisory committee member is appointed" and "Do fishermen have any input in the process?" Advisory Committee members to whom this question was put invariably stated that the process was confusing and most were unsure how they were appointed to the committee except that it was a "political" appointment. It was also noted that in most instances fishermen have little or no direct say in the appointments.

The principal question of this section, asked of all representatives was, "What are fishermen's opinions of the representation they receive with respect to decisions on the operation and management of the FFMC?" Only two of the fifteen representatives interviewed thought the Advisory committee was effective in representing fishermen to the FFMC. Thirteen of the interviewees expressed the opinion that as it is now empowered and appointed the Advisory Committee was unable to adequately represent fishermen. The major complaint made by the representatives concerned appointments to the committee. They noted that appointments were for the most part out of their hands and made by some vague political process. The result of this process, fishermen claim, has been the appointment of representatives who are not fishermen and who are, as a result, unable to adequately represent fishermen and their concerns. As a remedy to this, representatives suggested that the Committee be appointed either through a process of election or on the advice of fishermen's associations in the various regions under the Corporation's control.

Other problems with the Committee that were mentioned by representatives included the view that it was simply a waste of fishermen's money because it had no real leverage with respect to decisions on the operation of the Corporation. Overwhelmingly, however, representatives felt that any drawbacks the Advisory Committee may suffer from could be solved through changes to the appointment process, giving fishermen a greater say in who represents them.

4.4.7 <u>The Future of the FFMC</u>

The final question put to interview participants asked "Should the FFMC be retained in its present form? Why or Why not?"

Of the fifteen fishermen's representatives interviewed fourteen said that the FFMC should be retained with changes. At the top of the list of changes were alterations to the appointment procedure to the Advisory committee. Representatives made it clear that fishermen wanted a larger role in this process. Fishermen expressed the opinion that the FFMC was not doing enough to market as great a volume of fish as was possible. Representatives stated that they would like to see the FFMC sell more of their fish by developing and discovering new markets. Closely related to this point were complaints about the marketing of rough fish species. Again, representatives wanted to see some innovative approaches to the marketing of what they view as a vastly underutilized resource. A final point made by representatives was that the FFMC should attempt to improve the channels of communication between itself and the fishermen at large. It was recognized that the FFMC has done a fairly good job in this area but that it must continue to improve and keep fishermen aware of new developments in the industry.

Fisheries department officials in each of the provinces and the Northwest Territories concurred with fishermen's representatives, stating that the Corporation should be retained again with some changes. Lorimer Thompson (Manitoba) suggested that the species list over which the Corporation has control should be reviewed. Of specific concern is the marketing of rough fish: "twenty years is a long time (without alteration to the species list) and in if in that 20 years they haven't come to grips with the rough fish marketing situation, perhaps it time to look at a different kind of regime to handle these species" (Lorimer Thompson, Manitoba). In Saskatchewan, Bruce Smith thought that the only significant change fishermen might press for would be regional processing, but he stressed that there may be tradeoffs required between regional economies and the profit of fishermen as a whole. In Alberta, Tom Mill stressed that he would like to see the Corporation work with the existing processing/marketing structure in that province to improve intra-provincial sales. John MacDonald, felt that the only means for fishermen in Northwestern Ontario to market their fish was through the Corporation. He stressed that no other channels existed for fishermen and that, therefore, the Corporation must remain intact. Finally, Richard Zieba noted that NWT fishermen would like to see a better whitefish pooling mechanism and alterations to the method of issuing final payments which better recognizes the quality of fish delivered.

4.4.8 Summary and Conclusions

Interviews with fisheries department officials in each of the participating provinces and the Northwest Territories indicated that the relationship between their departments and the FFMC is both constructive and satisfactory. Formal and important informal channels of communication appear to exist, facilitating the discussion of major policy issues as well as day to day operations as the need arises. On the recurring issue of the timing of supply with periods of peak market demand, officials noted that consultation has been ongoing and, while the problems are not entirely solved, some success has been achieved.

In the general sense, a majority of fishermen's representatives thought that the marketing efforts of the Corporation had been satisfactory. The concern was expressed, however, that the fishery resource remains underutilized due to complacency on the part of the Corporation with respect to the development of new and larger markets. With the Corporation annually marketing an average volume very close to the quotas for the fishery (see section 4.3.3.1) as a whole, it seems likely that the resource that is available is being marketed. Government officials also thought that the FFMC had generally done a good job of marketing, noting that fishermen appeared to be profiting from the results.

Rough fish marketing was viewed by the majority of representatives as problem that defied rational solution. Low prices and competition from ocean fisheries have created great difficulties in developing these markets to a satisfactory level. Contrary to this assessment, a minority (four of the fifteen) fishermen's representatives expressed the belief that, for whatever reasons, the FFMC was simply unwilling to put the effort into developing rough fish markets. All of the representatives interviewed expressed the desire to see improvements on these species but were generally at a loss as to how this might be carried out.

Fisheries department officials believed that the FFMC approach to rough fish marketing was rational. They cited low returns on these species as reasonable justification for avoiding costly development efforts. It was noted that improvements may be possible outside the Corporation serving smaller markets which may have been neglected due to low volumes. However, given the facts of competition from plentiful and relatively cheap species from ocean fisheries, it seems unlikely that any significant increase in production and sale of rough species is possible at current prices.

Fishermen's representatives believed that the FFMC had done very little in the development of domestic markets. Most noted that this had had a positive impact on fishermen as the prices of fish are higher on export markets. The opinion was also expressed, especially by those representatives in Alberta and Saskatchewan, that the development and servicing of this market was the job of local fishermen.

Government officials concurred with fishermen's assessment of the domestic markets issue, adding that, in the case of Alberta and Saskatchewan, regulations concerning intra-provincial trade had been altered to give fishermen greater access to this market.

The Corporation's pricing system generally received a satisfactory assessment from fishermen's representatives. They noted that it far exceeded systems prior to the Corporation and that the posting of the initial price provided an important benchmark for the gearing up process.

Complaints about the price system focused on its implementation. Representatives felt that the benefit of posting the initial price had been undercut by price reductions during seasons in an effort to control production. Representatives also felt that on some species, such as walleye, the initial final price split should be closer to the originally suggested 80% - 20% split (rather than the present 50% - 50% split). Lower initial prices, they claim, have the effect of withholding a portion of fishermen's income unnecessarily. The method of final payments received only one criticism; NWT representatives called for a new whitefish pooling mechanism to better reflect the quality of their fish.

With respect to the calculation of the initial and final price on species, it should be noted that the Corporation must estimate, based on a market forecast, what price will be available for certain species. With the noted variability in markets (see trend of landed prices, sec. 4.3.2.1) for some species, estimation may only provide the Corporation with information whose certainty is such that they are only able to set initial prices at half what they are expecting. In addition, the initial price is the only major tool at the Corporation's disposal for controlling production levels. Therefore, adherence to the 80%-20% rule of thumb, for some species may not be possible.

Government officials thought the Corporation's price system provided an efficient system for fishermen although they also wanted to see greater adherence to the 80% - 20% initial price/final payment split. While some of the officials thought that alterations to the pooling of the final payment for whitefish may produce a more equitable system it was noted that the cost of carrying out adequate changes may prove greater than the benefits.

Measures such as the productivity of assets, portion of sales paid to fishermen and weighted average income over the last six years indicate that centralization of processing has played a role in improving returns available to the majority fishermen. Despite these figures, most fishermen's representatives believed that the centralization of processing had resulted in less for fishermen by reducing local employment and by increasing freight costs.

A minority (six) of the fishermen's representatives and all of the government officials interviewed thought that the centralization of processing had a positive impact on fishermen. Major reasons given for this belief were the Corporation's ability to take advantage of economies of scale, its ability to invest in highly efficient processing technology, and overall greater efficiency in the processing and marketing of fish.

Representatives were divided over the issue of the Corporation's impact on fishermen's profitability. The largest group (seven of fifteen) felt the Corporation had improved profitability through the development of stable markets, investment in efficient processing technology and through generally stabilizing prices. The remainder were either unsure of the Corporation's impact (four of fifteen) or felt it had failed to improve profitability (four of fifteen) due to a lack of the development of markets and the burden placed on fishermen, due mainly to freight costs, of the centralization of processing in Winnipeg.

Officials of the various fisheries departments were unanimous in their belief that the Corporation had been able to improve profitability over its lifetime. They cited the advantage of economies of scale, ability to act as a price leader and processing efficiency as reasons for the improvement.

A majority of fishermen's representatives (thirteen of fifteen) expressed the belief that as it is now structured, the Advisory Committee of the FFMC has failed to adequately represent fishermen. The primary reason for this failure was said to have been the appointment system which allows little or no input by fishermen. The opinion was expressed that alterations to the appointment system could drastically improve the Committee's ability to adequately represent fishermen.

Despite various complaints about specific aspects of marketing, representation and the centralization of processing, fishermen's representatives felt that fishermen would like to see the FFMC maintained. They did note that the Corporation should be maintained with changes or attention to the issues such as regional processing of fish, development of markets in general and markets for rough fish, adherence to the 80% - 20% split in the pricing system, and a better system of appointments to make the Advisory Committee an effective body.

Government officials were of the same mind as fishermen's representatives, noting that the benefits the Corporation provided outweighed any negative impacts it may have generated. Again, they wanted to see specific changes such as alterations to the whitefish pool, adherence to the 80% - 20% for initial price and final payment, and perhaps new arrangements for species the Corporation had been unable to market.

Chapter 5

Conclusions and Recommendations

5.1 Conclusions and Recommendations

The purpose of this investigation was to assess the impact of the Freshwater Fish Marketing Corporation on the freshwater fish industry. The study focused on the three principle objectives identified in the opening chapter (1.3.1 Specific objectives):

1. to determine the extent to which the Corporation has operated efficiently and effectively in terms of financial management;

2. to evaluate the extent to which the Corporation has achieved the objectives and purposes for which it was created; and,

3. to determine the level of satisfaction among clients with respect to the operation and performance of the Corporation.

The conclusions and recommendations related to each of these primary objectives are as follows.

5.1.1 Financial Performance

The results of section 4.2 Financial Performance indicate that since the FFMC returns the majority of its earnings to fishermen as final payment the Corporation's liquidity is low and it suffers an annual working capital deficit. This situation has lead to heavy reliance on debt financing to an average of 95% of the Corporation's fixed and working capital funds over the last ten years.

It is apparent, when the Corporation's record of debt repayment and earnings coverage are considered, that low liquidity and high leverage are the result of a management decision rather than indicators of poor financial performance. In fact, if the Corporation wished it could improve these measures simply by retaining a greater share of earnings in any one year. However, because the Corporation has been given the duty to increase the returns available to fishermen, they have maintained a policy of minimal retained earnings.

Performance with respect to activity and profitability measures confirm the conclusion that low liquidity and high leverage are a management decision. Results of the analysis indicate that the Corporation generates satisfactory fixed and total asset turnover figures, suggesting that it employs its assets efficiently. Efficiency with respect to assets has generated a level of profit performance that has been a consistent second to the Prince Rupert Fishermen's Co-operative. In addition the data reveal that the Corporation has proven able to produce fairly consistent returns from year to year unlike the sporadic returns of the Canadian Saltfish Corporation or National Sea Inc.

When viewed as a whole, the financial analysis indicates that the Corporation is deriving an adequate return on its sales and marketing efforts. The fact of low liquidity and high dependance on debt financing indicate that earnings are being distributed to fishermen in an effort to meet mandate objectives. Consequently, the Corporation is managing its financial affairs efficiently, as it derives satisfactory returns, and effectively as those returns are being directed towards fulfillment of the mandate.

Whether improvements in liquidity and a reduction in the Corporation's dependance on debt financing could improve financial efficiency was not specifically examined in this study. However, it has been suggested within the financial analysis that a reduction in the dependance of the Corporation on debt financing has the potential to increase the efficiency of its operation by reducing costs.
The downside of this perspective is that the only way to reduce the amount of debt, is to retain a larger share of earnings. Retention of a larger share of earnings would seem to suggest a practice contradictory to the Corporation's mandate goal of increasing returns to fishermen. Therefore, while it appears, upon cursory evaluation, that there are efficiency benefits to be gained through greater retention of earnings, precise determination of the effect such a policy might have on overall mandate delivery would require a separate study.

Recommendation 5.1.1a.

The Department of Fisheries and Oceans should undertake a study of the potential benefits and impact of the retention of a larger share of earnings by the FFMC. This study would involve an examination of the effect of reducing the Corporation's dependance on debt financing and the impact of such a policy on financial management and mandate delivery.

5.1.2 Fulfillment of Objectives and Purposes

Four primary objectives and purposes of the Corporation were examined in this study. The results of section 4.3.1 Marketing Fish in an Orderly Manner, suggests that the Corporation has achieved some success in this area as noted by the real dollar increase in the value of final payments on species which make up nearly 50% of the annual marketed volume. While general market trends are a fundamental influence in the success of species marketing, positive final payments do reveal the Corporation's ability to keep the cost of inventory and marketing down in order to take advantage of the prevailing market climate. However, success has not been even over all marketed species. Export whitefish, lake trout, arctic char and sauger have experienced no improvement or decreases in the final payment which suggest difficulties on the part of the Corporation in the marketing of these species.

At least part of the marketing difficulty has been a lack of coordination of the timing of the harvest of these species with periods of peak market demand. Consultation with provincial and territorial officials and the implementation of programs such as the whitefish reduction program have been undertaken to address these marketing problems.

Recommendation 5.1.2a.

The Corporation should review the supply characteristics and the marketing strategy for, whitefish, arctic char, trout and sauger, in order to determine strategies to stabilize and improve the returns on these species.

Section 4.3.2 Increasing returns to fishermen, reveals that the Corporation has been able to obtain increasing prices for a majority of the delivered weight of fish it purchases annually. Consequently the total value of annual sales has risen over the 1975-87 trend. While it is difficult to determine to what degree the Corporation is responsible for the increase in species value and the total value of sales, the data suggest that the Corporation has proven able to maintain, and in select years, reduce the cost of sales. In a climate of increasing value of sales this has meant that the portion of sales paid to fishermen has grown, with minor setbacks, in both a proportional and absolute sense over the thirteen year period.

Weighted average returns from fishing for the period 1975-87 fails to show the noted increase in the portion of sales paid to fishermen except in the Northwest Territories. A similar analysis of the last six years, 1982-87, however, suggests that returns from fishing have been increasing in all regions except NW Ontario. It has been suggested that the decline in NW Ontario has been due to an overall decline in the fishing industry in the region as participants leave the industry in search of more lucrative and stable employment opportunities.

Recommendation 5.1.2b.

The falling weighted average returns from fishing noted for Northwestern Ontario should be investigated to determine the precise reasons for the noted decline.

For the majority of fishermen the results of the trend in landed prices, portion of sales paid to fishermen and the improvements in weighted returns over the last six years indicate an improvement in their returns. However, declining or static returns on export whitefish, arctic char, trout and sauger, which make up between 35% and 38% of annual fish purchases by the Corporation, may have produced declining or static returns for a significant portion of the fisheries participants.

International trade in fish has not been increased by the Corporation. Section 4.3.3 Promoting International Markets for and Increasing Interprovincial trade in fish, showed that the Corporation has succeeded in diversifying international markets but that this has been achieved by shifting volumes away from the U.S. market. Domestic markets also remained stable with respect to volumes. Changes in the regulations concerning local marketing by producers have likely improved domestic markets but the Corporation's level of effort has remained static.

The degree to which the Corporation is able to create an overall increase in the trade in fish has been called into question. With yearly marketed volume very close to annual quotas for the fishery as a whole increases in trade, of a significant volume, would require increased quotas. Whether increased quotas are appropriate or possible is a question not for the Corporation but for fisheries managers in each of the Provinces and the Territory.

It is clear that the Corporation's lack of development of domestic markets has been a rational approach given the goal of increasing returns to fishermen. Greater prices are available in export markets for producers' fish. Therefore, in deference to increasing returns, the Corporation has logically focused its efforts on export markets.

Interviews with fishermen's representatives and Fisheries department officials suggested that the Corporation has provided an adequate working capital policy. It was noted that the policy serves the needs of fishermen who have reduced access to start up capital and has been managed so that the cost of carrying credit appears, in the opinion of those interviewed, not to have become a burden on fishermen as a whole.

5.1.3 Client Satisfaction

The Client Satisfaction objective of this study was measured with respect to a number of issues concerning the Corporation's management and operations. Two client groups were identified, fishermen and the Fisheries departments in the provinces and the Northwest Territories. The results of interviews with the client groups indicate that overall both groups are pleased with the efforts of the FFMC and would like it to remain intact with specific changes and emphasis on certain issues.

Fisheries department officials expressed the opinion that communication and cooperation between the Corporation and their departments has been satisfactory and constructive. However, while the relationship was deemed to be satisfactory, significant problems remained with respect to timing of supply which has caused the Corporation problems in finding ready markets and handling production surges.

<u>Recommendation 5.1.3a</u>.

The Corporation and Fisheries departments must continue their joint efforts to coordinate the supply of fish with demand and to reduce the impact of production surges in order to produce maximum returns to fishermen.

Both client groups felt that marketing in general had been successful but stressed that they would like to see the Corporation improve returns on some species such as whitefish.

The problem of rough fish marketing was seen, by the majority of fishermen's representatives (11 of 15), as a case in which the Corporation was unable to improve the marketing of these species because of competition from other fisheries and the generally low prices these species command. The facts of rough fish marketing bear out the majority assessment. Low prices and competition from even lower priced fish in the ocean fisheries have made increased investment in rough fish marketing an uneconomic prospect.

A minority of representatives (4 of 15) felt that the Corporation had neglected the marketing of rough fish. However, production figures for these species of fish do not support this assessment. Annually, the Corporation purchases 2.5 million kilograms of both carp and mullet (12.5 % of the total annual purchases) and it is apparent that landed prices for these species have been increasing, albeit very slowly, in real dollar terms.

Lack of development of domestic markets was not of concern to either group as it was realized that greater prices were available in export markets and that development of domestic markets represents opportunities for fishermen.

The price system employed by the Corporation received a positive assessment by both client groups. Many noted that the posting of an initial price is a helpful planning tool for fishermen. However price cutting in mid-season reduced the value of the initial price and, according to fishermen, had no real effect on their production decisions as they had already geared up for the season. The opinion was also expressed that initial payments should be higher in order to reflect the originally suggested 80% initial price, 20% final payment concept. While such an alteration to the way initial prices are set may benefit fishermen by providing a greater portion of the value up front, it must be understood that the Corporation must set initial prices conservatively as they are based on speculation about what the market will yield. Judging by the wide fluctuations in yearly price for some species, noted in section 4.3.2, it may be impossible for the Corporation to produce a forecast with certainty greater than 50% of the expected price.

Recommendation 5.1.3b.

The Corporation should undertake a review of its initial pricing mechanism in order to determine whether initial prices for those species which do not conform to the 80%-20% initial price to final payment split could be raised without placing the Corporation and the returns to fishermen at risk.

A final criticism of the price system concerns the determination of final payment for whitefish. Those who fished high quality export whitefish lakes, in the Northwest Territories especially, wanted to see a more equitable system of final payment pooling which adequately reflected that value of their fish.

Recommendation 5.1.3c.

The Corporation should review its whitefish pooling mechanism to determine if significant subsidization has taken place by those who deliver export grade as opposed to those who deliver lower grade continental and cutter whitefish and if so, to repair the mechanism in order to promote fair determination of the final payment.

The impact of the Centralization of processing is an issue which has continually been discussed between the Corporation and both client groups. Financial and mandate results (examination of objectives and purposes) reveal that the centralization of processing has had a role in improving the returns available to fishermen. Despite these findings fishermen's representatives thought that increases in returns did not offset increased freight rates and the local employment foregone due to centralization. Fisheries department officials did not agree with this assessment stating that centralization had probably improved fishermen's returns on the whole. It is the conclusion of this study that centralization of processing has had a positive impact on returns to the majority of fishermen. However, determining whether greater gains may be possible in a given region by providing provincial or territorially sponsored processing would require a separate study.

No clear consensus resulted from fishermen's representatives over the issue of the Corporation's impact on profitability. Half (8 of 15) thought that the Corporation's investment in efficient processing technology and generally good command of markets had improved fishermen's profitability. The remaining interviewees either did not know or thought that the FFMC had not developed markets well enough and represented an organization which was to far from them (and hence costly in terms of freight costs) and was unable to properly service existing markets.

Fishermen's representatives expressed the belief that the Advisory Committee did not adequately represent fishermen on issues concerning the management and operations of the FFMC. The chief reason given for this problem was that the system of appointment is highly politicized and out of the hands of fishermen. They stressed that the body could be more representative and, therefore, more effective if fishermen were given a greater say in who is appointed to the committee.

Recommendation 5.1.3d.

The system of appointment to the Advisory Committee of the FFMC should be changed to allow greater input by fishermen. This could be carried out through the establishment of a formal system of advise and consent from the major fishermen's associations in the various regions. As an alternative, and more direct plan, the election of Committee members could be carried out using the existing fisheries department districts and devising a representation scheme compatible with those divisions.

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APPENDIX A:

USE OF THE INDUSTRIAL PRODUCT PRICE INDEX

All of the real dollar conversions carried out in this study used the Industrial Product Price Index: Fish Products (Canadian Statistical Review, Statistics Canada, 1975-87, Section 5, Prices, Supply and Services, Ottawa).

year	index #	
1987	141.92	
1986	124.50	base year 1980 = 100
1985	111.40	
1984	352.40	
1983	348.70	
1982	335.90	
1981	326.30	
1980	299.30	
1979	294.20	base year 1971 = 100
1978	256.70	
1977	226.50	
1976	200.3	
1975	169.54	

Conversion to 1975 equivalent values was carried out by determining the percentage difference of all succeeding years from the year 1975 and then deflating to 1975 equivalent values. Percentage difference is calculated in the following fashion (Finding and Using Statistics: A basic guide from Statistics Canada, 1981, Statistics Canada, Ottawa).

$$\frac{(1975)\ 169.54 - 200.3\ (1976)}{200.3} = -.1536 \quad (\text{or } -15.36\%)$$

As an illustration, say the price of walleye/kg was $1.00 in 1975 and in 1976 it was $1.50. To derive the 1975 dollar equivalent of that 1976 price the percentage increase between the two years, as indicated by the above index calculation, is multiplied by the 1976 price and added to the 1976 price,

$$-.1536 * 1.50 + 1.50 = \$1.27/\text{kg}$$

$1.27/kg is, therefore, the 1975 equivalent of the 1976 price of $1.50/kg.

Because the base year for the index changed in 1985 to 1981, calculation of 1985-87 prices in 1975 dollars required a two step conversion (see break in the index, above). Step one follows the process illustrated above and converts each of the years (1987-85) prices into 1980 equivalents. From here the same process is repeated, further converting the 1980 equivalents into 1975 dollar values.

$$(1980)\ \frac{100 - 111.4}{111.4}\ (1985) = -.1023 \text{ (or } -10.23\%)$$

$$(1975)\ \frac{169.54 - 299.3}{299.3}\ (1980) = -.4335 \text{ (or } -43.35\%)$$

Say the price of walleye in 1985 is 2.10/kg. Converting this to a 1975 equivalent is a two step process using the conversions derived above,

$$-.1023 * 2.10 + 2.10 = \$1.89$$

$1.89/kg is the 1980 equivalent of the 1985 price. Step two derives the 1975 equivalent,

$$-.4335 * 1.89 + 1.89 = \$1.07$$

$1.07/kg is, therefore the 1975 equivalent of the 1985 price of $2.10/kg.

APPENDIX B:

INTERVIEW SCHEDULES AND LETTERS TO PARTICIPANTS

Interview Schedule #1 - Fishermen's Representatives

Purpose: (see section three of Chapter 1) To determine fishermen's attitudes and opinions concerning the operation and management of the FFMC in order to discover their level of satisfaction with the Corporation.

(Responses need not be restricted to opinions and evaluations of the Corporation expressed in this year. Please attempt to answer the questions with reference to the past history of the Corporation as well. In addition, where applicable, please discuss with reference to resolutions passed by your association).

GROUP DATA AND REPRESENTATIVE CHARACTERISTICS

Province or Territory.........

Organization ....

Were you elected by the members of your association? (for association heads only)

What mechanism exist within your organization for fishermen to express their opinions, complaints and desires?

ex. annual meetings
open discussion and resolution

election of officials

do constituents regularly contact you with their concerns?

other informal means, please explain.

SECTION I - MARKETING

1. What are the opinions of fishermen in your association of the FFMC's ability to market fish?

1a. has the FFMC proven able to get the best price possible for your fish?

if no, why not?

1b. has the FFMC marketed fish at a level cost which benefits fishermen?

if no, what makes fishermen think this?

1c. Do fishermen believe changes are necessary to the present marketing policy?

What changes need to be made to the FFMC's marketing approach?

2. What are the opinions of fishermen in your association with respect to the FFMC's marketing of rough fish such as carp and mullet (sucker)?

key issues

2a. Do fishermen think the FFMC has placed enough effort and emphasis on marketing this type of fish?

yes - Why?

No - Why?

2b. Do fishermen think changes need to be made to the rough fish marketing strategy? Why? What kinds of changes?

3. What are the opinions of fishermen in your association concerning the FFMC's development of local (Canadian)

markets?

3a. Has the FFMC placed enough effort on the development of these markets?

Yes - Why do you think so?

No - Why?

3b. Does the current domestic market strategy require changes? What types of changes?

SECTION II - PRICING

4. What are fishermen's opinions concerning the FFMC's price system, which includes a guaranteed initial price and a surplus or final payment paid on species pools.

4a. What are fishermen's opinions of the way the FFMC sets initial prices for the various fish species?

Does the system of initial payments require changes?

In what ways should the initial price mechanism be changed?

4b. What are fishermen's opinions of the way in which final payments are determined?

do fishermen think the payment of final payment on a species pool based on volume delivered but not grade is fair? Why or why not?

Do differences in initial prices based on grade make up for the pooling of final payments? Why or why not?

Does the method of determining final payments need changing?

What changes should be made to the final payments mechanism?

SECTION III - CENTRALIZATION OF PROCESSING AND INFRASTRUCTURE

5. What have the financial impacts been on fishermen in association due to the centralization of processing in Winnipeg (Transcona)?

5a. In what specific ways has this affected fishermen's operations?

5b. Do fishermen believe the Corporation should undertake fish processing in their region? Why or why not?

6. What are fishermen's opinions on the location and staffing of delivery points and packing stations in their area?

SECTION IV - IMPACT OF THE CORPORATION ON PROFITABILITY

7. Has the FFMC improved or reduced the profitability of the majority of fishermen in your association?

7a. Improved - How has the FFMC contributed to improvements in profitability:
(pause and let res. suggest answer)

by increasing prices;

by decreasing costs of marketing;

by creating new markets;

by decreasing costs of processing;

7b. Reduced - In what ways has the FFMC reduced profitability:
(pause and let res. suggest answer)

through costly and ineffective

marketing;

limiting private markets;

decreases in the price of fish;

centralization of processing in Winnipeg;

inappropriate placement of delivery points;

8. Do the members of your association think that they would benefit from selling their fish outside the Corporation to a greater degree than is already permitted? Why or why not? In what specific ways?

key issues

by allowing greater freedom for fishermen to sell within their own province.

by allowing fishermen to sell into export markets.

by exempting some fish species or products from the Corporation's control.

by allowing fishermen to sell their fish completely unrestricted.

SECTION V - PROVISION FOR WORKING CAPITAL

10. What are the opinions of fishermen in your association of the FFMC's policy on operating credit

10a. Is the level of credit offered, 20% of average production in the last three years, high enough?

10b. What are fishermen's opinions of the rates charged on operating credit by the FFMC? (corporation's borrowing rate plus 2%)

10.c What do fishermen think of the terms of repayment on operating credit? (within the season at a minimum of 30% of weekly gross fishing receipts and assigned against all final payments)

10d. Are changes to the present credit policy needed? In what ways should the policy be changed? Why?

SECTION VI - REPRESENTATION

11. What are fishermen's opinions of the representation they receive with respect to decisions on the operation and management of the FFMC?

11a. Do fishermen believe they are adequately represented by the advisory council? Why or why not?

key issues

-what are fishermen's perceptions of the ability of the advisory council to represent their views?

- is the number of representatives from each region satisfactory?

- is the selection process for representatives satisfactory?

11b. Do fishermen believe they are adequately represented on the board of directors of the Corporation? Why or why not?

11c. Does the representation of fishermen need to be improved? In what ways could representation be improved?

SECTION VII - CONCLUSIONS

12. Should the FFMC be retained in its present form? Why or Why not?

12a. What changes do fishermen think need to be made to the FFMC?

Key areas:

Pricing system;

Processing of fish;

Marketing in all aspects;

Fishermen's representation;

Credit policy offered by the FFMC;

Location and operation of delivery points.

13. Are there any specific problems or concerns with respect to the FFMC, other than those already discussed, which are of interest to you or the fishermen in your association?

14. Has your association passed any resolutions, with respect to the FFMC, related to:

fish pricing;

fish marketing;

representation in the FFMC;

centralization of processing;

location and staffing of delivery points and packing stations;

operating credit available to
fishermen through the FFMC;

or any other type of resolution which
involves the operations of the FFMC,

in the last three years? Would it be possible for me to see the text of these resolutions?

Interview Schedule #2 - Fishermen's Representatives

Purpose: (see section three of Chapter 1) To determine fishermen's attitudes and opinions concerning the operation and management of the FFMC in order to discover their level of satisfaction with the Corporation.

(Responses need not be restricted to opinions and evaluations of the Corporation expressed in this year. Please attempt to answer the questions with reference to the past history of the Corporation as well.

GROUP DATA AND REPRESENTATIVE CHARACTERISTICS

Province or Territory.........

Explain the process through which an advisory committee member is appointed.

-do fishermen have input into the selection process? How?

As a member of the Advisory Committee how do you gather input, concerning the FFMC, from fishermen in your region? (Advisory committee members)

-do constituents regularly contact you with their concerns?

-do you hold meetings in an effort to gather fishermen's concerns on issues.

SECTION I - MARKETING

1. What are the opinions of fishermen in your region of the FFMC's ability to market fish?

1a. has the FFMC proven able to get the best price possible for your fish?

if no, why not?

1b. has the FFMC marketed fish at a level cost which benefits fishermen?

if no, what makes fishermen think this?

1c. Do fishermen believe changes are necessary to the present marketing policy?

What changes need to be made to the FFMC's marketing approach?

2. What are the opinions of fishermen in your region with respect to the FFMC's marketing of rough fish such as carp and mullet (sucker)?

key issues

2a. Do fishermen think the FFMC has placed enough effort and emphasis on marketing this type of fish?

yes - Why?

No - Why?

2b. Do fishermen think changes need to be made to the rough fish marketing strategy? Why? What kinds of changes?

3. What are the opinions of fishermen in your region concerning the FFMC's development of local (Canadian)

markets?

3a. Has the FFMC placed enough effort on the development of these markets?

Yes - Why do you think so?

No - Why?

3b. Does the current domestic market strategy require changes? What types of changes?

SECTION II - PRICING

4. What are fishermen's opinions concerning the FFMC's price system, which includes a guaranteed initial price and a surplus or final payment paid on species pools.

4a. What are fishermen's opinions of the way the FFMC sets initial prices for the various fish species?

Does the system of initial payments require changes?

In what ways should the initial price mechanism be changed?

4b. What are fishermen's opinions of the way in which final payments are determined?

do fishermen think the payment of final payment on a species pool based on volume delivered but not grade is fair? Why or why not?

Do differences in initial prices based on grade make up for the pooling of final payments? Why or why not?

Does the method of determining final payments need changing?

What changes should be made to the final payments mechanism?

SECTION III - CENTRALIZATION OF PROCESSING AND INFRASTRUCTURE

5. What have the financial impacts been on fishermen in your region due to the centralization of processing in Winnipeg (Transcona)?

5a. In what specific ways has this affected fishermen's operations?

5b. Do fishermen believe the Corporation should undertake fish processing in their region? Why or why not?

6. What are fishermen's opinions on the location and staffing of delivery points and packing stations in their area.

SECTION IV - IMPACT OF THE CORPORATION ON PROFITABILITY

7. Has the FFMC improved or reduced the profitability of the majority of fishermen in your region?

7a. Improved - How has the FFMC contributed to improvements in profitability: (pause and let res. suggest answer)

by increasing prices;

by decreasing costs of marketing;

by creating new markets;

by decreasing costs of processing;

7b. Reduced - In what ways has the FFMC reduced profitability:
(pause and let res. suggest answer)

through costly and ineffective marketing;

limiting private markets;

decreases in the price of fish;

centralization of processing in Winnipeg;

inappropriate placement of delivery points;

8. Do the fishermen in your region think that they would benefit from selling their fish outside the Corporation to a greater degree than is already permitted? Why or why not? In what specific ways?

key issues

by allowing greater freedom for fishermen to sell within their own province.

by allowing fishermen to sell into export markets.

by exempting some fish species or products from the Corporation's control.

by allowing fishermen to sell their fish completely unrestricted.

SECTION V - PROVISION FOR WORKING CAPITAL

10. What are the opinions of fishermen in your region of the FFMC's policy on operating credit

10a. Is the level of credit offered, 20% of average production in the last three years, high enough?

10b. What are fishermen's opinions of the rates charged on operating credit by the FFMC? (corporation's borrowing rate plus 2%)

10.c What do fishermen think of the terms of repayment on operating credit? (within the season at a minimum of 30% of weekly gross fishing receipts and assigned against all final payments)

10d. Are changes to the present credit policy needed? In what ways should the policy be changed? Why?

SECTION VI - REPRESENTATION

11. What are fishermen's opinions of the representation they receive with respect to decisions on the operation and management of the FFMC?

11a. Do fishermen believe they are adequately represented by the advisory council? Why or why not?

key issues

-what are fishermen's perceptions of the ability of the advisory council to represent their views?

- is the number of representatives from each region satisfactory?

- is the selection process for representatives satisfactory?

11c. Does the representation of fishermen need to be improved? In what ways could representation be improved?

SECTION VII - CONCLUSIONS

12. Should the FFMC be retained in its present form? Why or Why not?

12a. What changes do fishermen think need to be made to the FFMC?

Key areas:

Pricing system;

Processing of fish;

Marketing in all aspects;

Fishermen's representation;

Credit policy offered by the FFMC;

Location and operation of delivery points.

13. Are there any specific problems or concerns with respect to the FFMC, other than those already discussed, which are of interest to you or the fishermen in your region?

Interview Schedule #3 - Government Officials

Purpose: (see section three of Chapter 1) To determine Clients, provincial fisheries departments, evaluations and opinions concerning the operation and management of the FFMC in order to discover their level of satisfaction with the Corporation.

SECTION I - FFMC - PROVINCIAL FISHERIES DEPARTMENT RELATIONSHIP.

1. Identify and describe the elements of the relationship between your department and the FFMC?

1a. Does your department communicate with the FFMC?

1b. How often?

1c. What channels exist between yourselves and the FFMC to facilitate communication?

1d. What kinds of issues are discussed?

1e. On what types of issues might your department seek the input of the FFMC?

2. Does the FFMC consult with your department in an effort to coordinate the timing of fish harvests with market demand?

(if yes)

2a. What steps are taken between your department and the FFMC to coordinate the supply and timing of fish harvests with market demand?

2b. Identify the elements of the FFMC's role in this process.

3. Identify the problems that exist between your department and the FFMC.

(pause and allow res. time to answer)

3a. Do the channels of communication between your department and the FFMC need improvement?

(if yes)

3b. Identify the ways communication could be improved.

3c. Do the marketing efforts of the FFMC in any way impact upon your departments ability to manage the fishery? In what ways? Positively or negatively? Why?

3d. Are there conflicting goals between your department and the FFMC?

SECTION II - MARKETING

4. What is your departments assessment of the FFMC's ability to market fish?

4a. Is the Corporation able to obtain satisfactory prices for most species of fish? Why or why not?

4b. Does the Corporation market fish at a level of cost which benefits fishermen?

4c. Does the FFMC's marketing strategy require changes?

4d. In what ways? Explain.

5. What is your departments assessment of the way Corporation handles the marketing of rough fish such as carp and mullet (sucker)?

5a. Are the Corporation's efforts to market this kind of fish satisfactory?

No - Why not?

Yes - Why?

5b. Are changes required to the rough fish marketing strategy? In what ways?

6. What is your departments view of the Corporation's marketing strategy with respect to domestic (Canadian) markets?

6a. Has the Corporation placed sufficient effort on the development of these markets?

Yes - Why does your department think so?

No - Why not?

6b. Are changes required the Corporation's marketing strategy? In what ways?

7. Does your department believe that fishermen could benefit from marketing their catch outside the Corporation to a greater extent than is already permitted? Why or why not?

7a. Into domestic markets only?

7b. Into domestic and export markets?

7c. By exempting only specific species?

SECTION III - PRICING

8. What is your department's assessment of the price system employed by the Corporation?

8a. What is your department's assessment of the method of setting initial prices for fish?

Does the system require changes? In what ways should it be changed?

8b. Is the method of issuing final payments on a species pool, based on volume delivered but not grade, fair to fishermen in your region? Why or why not?

Does the final payments system require changes? In what ways should final payments be changed?

9. What is your departments view of the claim that significant cross-subsidization occurs between species pools?

SECTION IV - CENTRALIZATION OF PROCESSING

10. What is your department's assessment of the financial impacts, on the fishermen in your region, of the centralization of processing in Winnipeg?

10a. Have fishermen benefited from centralization? Why or why not?

10b. Should the Corporation undertake greater processing of fish in your region? Why or why not?

SECTION V - FISHERMEN'S PROFITABILITY

11. What is your department's view of the effect of the FFMC on the profitability of fishermen?

Improved - How has the FFMC improved fishermen's profitability?

Reduced - How has the FFMC reduced fishermen's profitability?

SECTION VI - CREDIT AVAILABILITY TO FISHERMEN.

12. What is your department's view of the FFMC's provisions for working capital made to fishermen?

12a. Is the level of credit offered, 20% of average production in the last three years sufficient?

12b. What is your department's evaluation of the rates charged on working capital loans? (the Corporation's cost of debt plus 2%)

12c. What is your department's evaluation of the terms of repayment on operating credit? (within the season at a minimum of 30% of weekly gross fishing receipts and assigned against all final payments)

12d. Are changes to the present credit policy needed? In what ways should the policy be changed?

SECTION VII - CONCLUSIONS

13. Should the FFMC be retained in its present form? Why or why not?

13a. What changes need to be made to the FFMC?

Key areas;

Pricing system;

Processing of fish;

Marketing in all aspects;

Credit policy to fishermen.

14. Are there any other problems or issues, with regard to the operation and management of the FFMC, which are of concern to your department.

John Snell
Natural Resources Institute
177 Dysart Road
University of Manitoba
Winnipeg, Man.
R3T 2N2

Name of Representative

Sir/Madam,

I am a student at the Natural Resources Institute, University of Manitoba. As part of my studies I have undertaken a review of the impacts of the Freshwater Fish Marketing Corporation on the freshwater fish industry.

With your permission I would like to interview you as the head of a Fishermen's Association in order to get an impression of what fishermen think and feel about the FFMC and its operations. The topics I wish to discuss will include: the FFMC's marketing of fish; pricing policy; fishermen's representation within the Corporation; the impact of the centralization of processing in Winnipeg; impact of the Corporation on profitability; the Corporation's credit policy and any other issues that you might wish to discuss. I expect that the interview should take no longer than 45 minutes.

I will be in your area and would like to interview you on the (specific date). I will contact you by phone, during the week of May 8 - 12, to confirm or arrange an alternate date and time. Your participation is highly important to this study and greatly appreciated. If you have any questions I can be reached at (204) 275-0367 until 11:00 pm (C.S.T.), please call collect.

A copy of the results of my report will be made available to you upon request. Thank you for your time and cooperation.

Sincerely,

John Snell
Graduate Student

John Snell
Natural Resources Institute
177 Dysart Road
University of Manitoba
Winnipeg, Man.
R3T 2N2

Name of Representative

Sir,

I am a student at the Natural Resources Institute, University of Manitoba. As part of my studies I have undertaken a review of the impacts of the Freshwater Fish Marketing Corporation on the freshwater fish industry.

With your permission I would like to interview you as an Advisory Committee member in order to get an impression of what fishermen think and feel about the FFMC and its operations. The topics I wish to discuss will include: the FFMC's marketing of fish; pricing policy; fishermen's representation within the Corporation; the impact of the centralization of processing in Winnipeg; impact of the Corporation on profitability; the Corporation's credit policy and any other issues that you might wish to discuss. I expect that the interview should take no longer than 45 minutes.

I will be in your area and would like to interview you on the (specific date). I will contact you by phone, to arrange a specific time. Your participation is highly important to this study and greatly appreciated. If you have any questions I can be reached at (204) 275-0367 until 11:00 pm C.S.T. please call collect.

A copy of the results of my report will be made available to you upon request. Thank you for your time and cooperation.

Sincerely,

John Snell
Graduate Student

John Snell
Natural Resources Institute
177 Dysart Road
University of Manitoba
Winnipeg, Man.
R3T 2N2

Name of Official

Sir,

I am a student at the Natural Resources Institute, University of Manitoba. As part of the requirements for my degree (Masters of Natural Resources Management) I have undertaken a research project entitled, "An Assessment of the Impacts of the Freshwater Fish Marketing Corporation on the Freshwater Fish Industry".

A component of the research involves the gathering of information, from fisheries officials, concerning the performance and operation of the Corporation and its relationship with Provincial and Territorial Fisheries departments. I intend to conduct interviews with officials from each of the provinces and the North West Territories and would appreciate your participation. I expect that the interview should take no longer than 45 minutes.

I would appreciate an interview on the (specific date) if this is convenient for you. I will contact you by phone to confirm or arrange another time and date for the interview. Your participation is highly important to this study and is greatly appreciated.

A copy of the executive summary of the report will be made available to you upon request. Thank you for your time.

Sincerely,

John Snell