CHAPTER 10. FINANCIAL ANALYSIS

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Before entering into financial analysis, some study is mentioned below with respect to the scope of business of PMU Irene and its administrative organization.

10-1 Scope of Businesses of PMU Irene and its Administrative Organization

(1) Present Administrative Organization

The PMU is headed by a Port Manager (Acting Port Manager) who has the basic function of managing it. He is assisted by senior staffs in the discharge of daily responsibilities in operating the port and in implementing overall policies affecting private ports and municipal ports. His prime task is to implement the policies and procedures established by PPA.

PMU Irene handles such administrative and management work as supervision, control and assistance for ports listed in Chapter 2. The PMU Irene has an organization chart as shown in Fig. 10-1 and is composed of 20 staff members including a Port Manager.

Normally, a PMU is composed of six sections: Administrative Section, Finance Section, Operation Section, Engineering Section, Commercial Development Section and Port Safety & Security Section. But PMU Irene is composed of only five sections, the Commercial Development Section being omitted. This is because of the present status of port facilities under its jurisdiction, the number of ships calling and the volume of cargo handled. Its personnel is also minimized with a view to reducing that financial burden.

(2) Responsibilities of PMU Sections

As stated above, a PMU is usually composed of a Port Manager and six sections and the main responsibilities of its sections are as follows:

1) Administrative Section

Main responsibilities of this section are the personnel administration, communications, materials and equipment supplies and the general administration services such as transportation, insurances, cleaning.

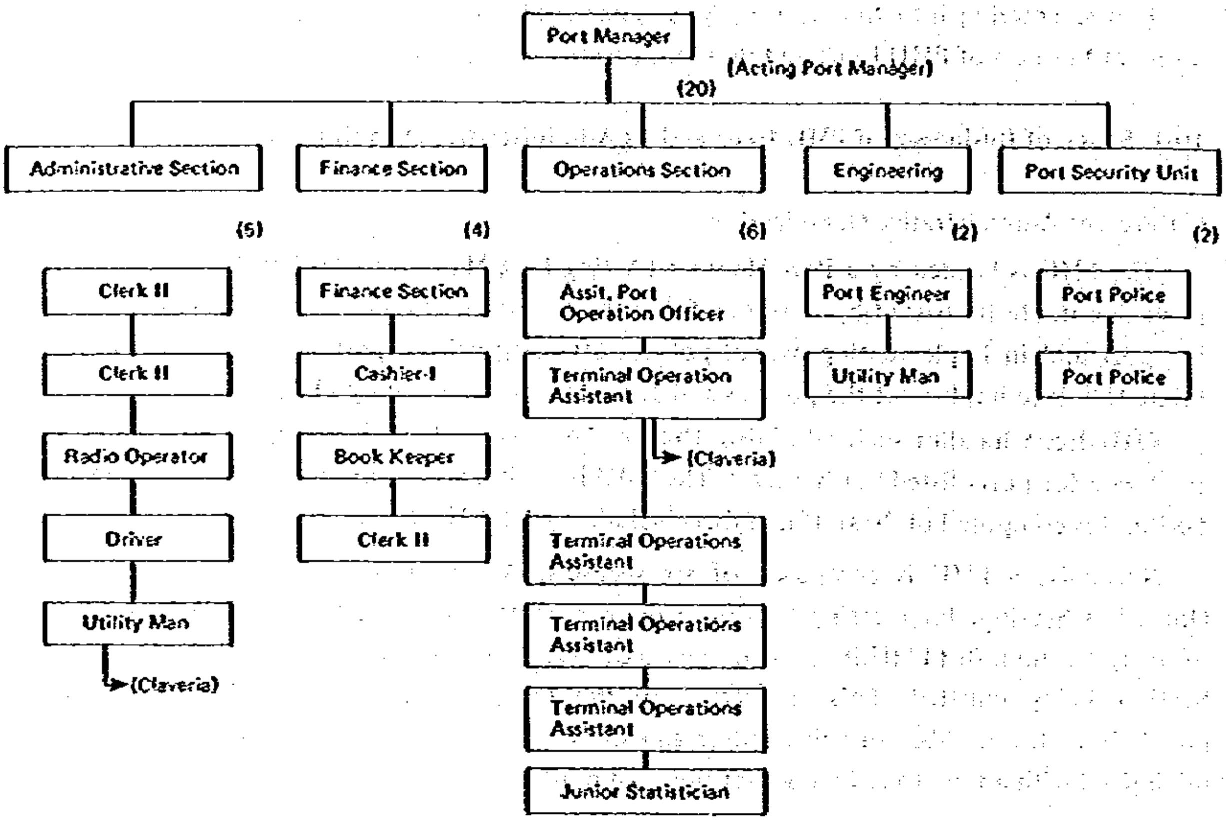
2) Finance Section

The main task of this section is to collect all fees, charges and dues and it is responsible for developing financial management systems for a PMU (always within the general guidelines set by the PPA), for preparing and controlling the budget and guarantee a sound budget management.

3) Operations Section

Main responsibilities of the section are the supervision and control of all piers and port operation. This includes movement of ships, berth allocation, discharging and loading operations and transport and storage of cargoes.

Fig. 10-1 Organization Chart of PMU Irene



PMU does not take direct responsibility for cargo handling and storage operations which is basically taken by private arrastre and stevedore contractors.

4) Engineering and Maintenance Section

The section has the important task to plan and implement maintenance and rehabilitation programs for the port and to take in general all measures necessary to guarantee an adequate service level of a port.

5) Commercial Development Section

The main task of this section is to promote the image of a port through press releases, brochures and marketing research. This section provides the management of a PMU and the PPA with information on the works of the port users and other parties in the port business. An important task is the collection, evaluation and development of data and statistics on shipping, trade, cargo handling methods and other relevant information.

6) Port Safety and Security Section

This section ensures the control of cargo, vehicles and persons entering or leaving the port area and enforces traffic rules and regulations within that area. It has to provide further ways and means for securing cargo, equipment and other properties in the port area against theft or pilferage.

(3) Study of Responsibilities, Organization and Personnel of PMU Irene After Implementation of This Project

As already stated in Chapter 2, the PMU is a local agency of PPA and mainly work to carry out actual port control and management according to the policies, target and procedures set by the headquarters. The policies, targets and main responsibilities of PPA are also as stated in Chapter 2. Since, however, the present organization and personnel of Port of Irene are in accord with its present facilities and port activities, they will naturally have to be reconsidered in line with the development of Port of Irene.

Below is a study of the new organization and number of personnel for PMU Irene. This study is aimed, primarily, at expansion based on its present organization and staff, but lessening of the financial burden is, of course, taken into consideration. Its new organization and personnel are determined in view of the proposed facilities and port demand forecast and by referring to examples from the neighboring port of San Fernando and a few PMUs. Needless to say, Port of Irene will become the base port of PMU Irene after the execution of this project. The results of this study are shown in Table 10-1 and Fig. 10-2.

As to organization, the Commercial Development Section will be created with the development of the port. Also, the Office of the Port Manager will be expanded and the sub-port of Aparri and Claveria will be clearly defined in terms of organization.

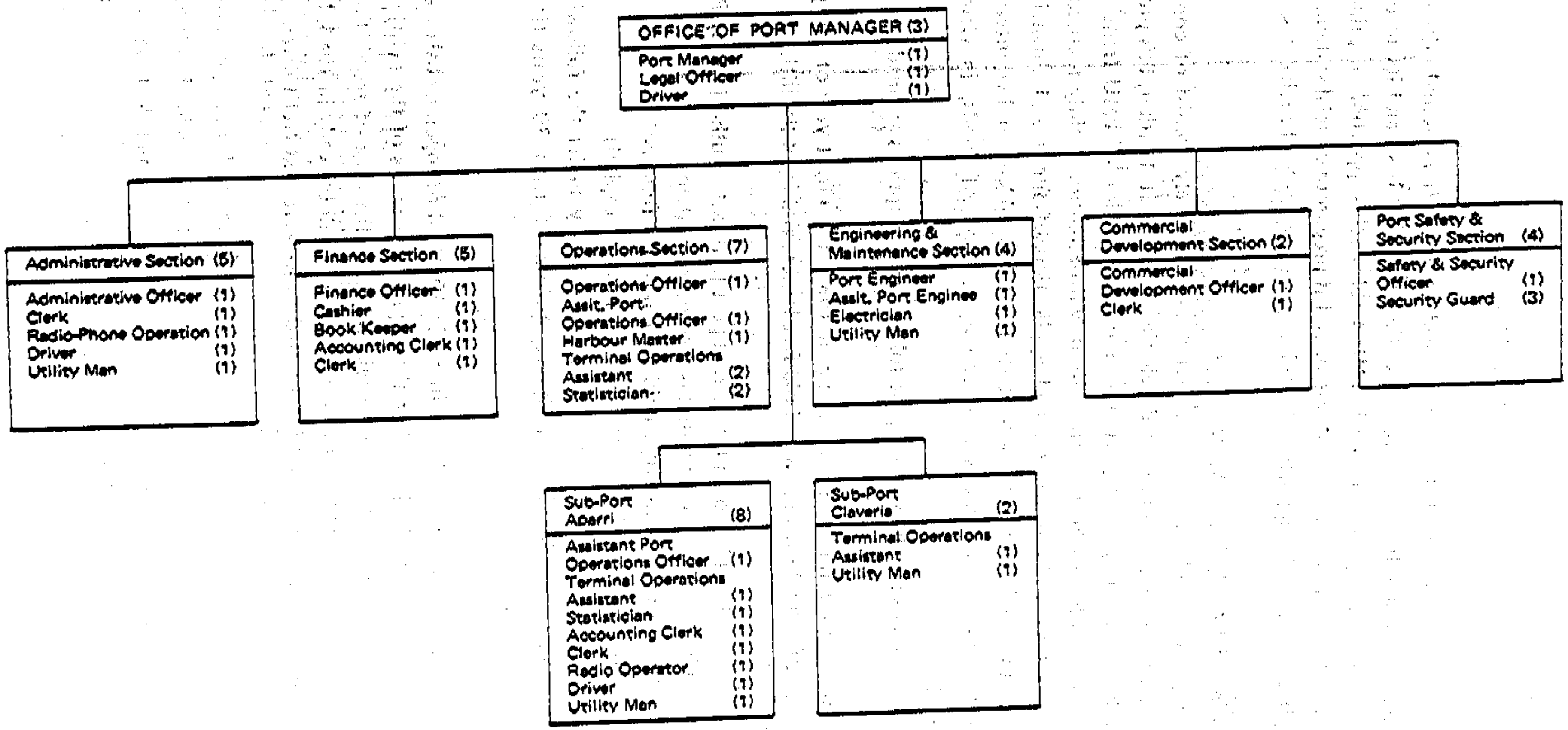
In view of the scale of facilities of this port and the volume of its port activities, full specialization in organization and personnel is not strictly necessary but transition to the above-mentioned standard form of organization is considered desirable since the volume of cargo to be handled by Port of Irene will greatly increase with the development and since the prospects for its future development are promising. The Commercial Development Section, which is charged with the aforementioned responsibilities, will be important to the new Port of Irene.

As to number of personnel, not more than 40 is the estimate for 1987, the target year, based on the present staff of 20 (Plantilla Positions = 25) for the cargo volume of 200 thousand tons at the PMU Irene and the staff of 41 (Plantilla Positions = 45) for the cargo volume of 440 thousand tons (1979) at PMU San Fernando. From 1988, personnel increases in proportion to cargo volume are anticipated. The number of Fig. 10-2 is an example of personnel assignments by section and by position after the start of operations of the newly constructed facilities.

Table 10-1 The Number of Personnel

Section	1987	1988	1989
Office of Port Manager	3	3	3
Administrative Section	5	5	5
Finance Section	5	6	7
Operations Section	7	8	9
Engineering & Maintenance Section	4	5	6
Commercial Development Section	2	2	2
Port Safety & Security Section	4	5	6
Sub-Port Aparri	8	8	8
Sub-Port Claveria	2	2	2
Total	40	44	48

Fig. 10-2 Organization Chart



10-2 Financial Analysis

(1) General

PPA is authorized by a presidential decree to provide port tariff rates and raise necessary funds. Its management aims at self-supporting accounting on a cost basis and its accounting is based on the business accounting system. Each PMU is also self-supporting in principle. Its accounting is based on the business accounting system and it prepares financial statements. Yet, some PMUs are not, in actuality, self-supporting. PMU Irene is an example of such cases.

(2) Purpose of this Financial Analysis and Assumptions

As stated in the preceding chapter, this project does not merely consist of constructing additional facilities but, in essence, amounts to developing a new port. Further, this project will make Port of Irene by far the largest of ports under the jurisdiction of PMU Irene. So, this financial analysis will be limited to Port of Irene itself, with attention mainly focused on this project. The revenue and expenditure, source and application of funds and financial status resulting from the execution of the project will be studied and problems and countermeasures will be discussed with emphasis on the source and application of funds, in view of the characteristics of this project.

To conduct financial analysis for this purpose, the following assumptions are made:

1) Port of Irene will start a financial accounting in 1987, the target year of this project, whereby Port of Irene itself will take over new and old fixed assets and meet liabilities concerned with this project.

2) Its revenue will be calculated based on the current port tariff rates authorized by PPA.

3) Its accounting will be according to the business accounting system.

4) The funds necessary to execute this project are to be raised as follows:

   i) Domestic currency portion: Corporate funds (PPA-owned capital)

   ii) Foreign currency portion: Loans from a foreign country under the following loan conditions: – Interest rate 3% annually, repayment of term 30 years (including 10-year grace period)

The fixed assets to be taken over are as shown in Table 10-2 and the opening balance at the beginning of 1987 is as shown in Table 10-3. For the depreciable assets of the existing fixed assets, residual value after depreciation is used in consideration at the time of acquisition. It is assumed that the incomplete extension (66 m) of the existing pier will be ready in 1984. Interest on long-term loans for the construction period is indicated as Reserve and Net Current Assets. The 1981 prices are used as basic prices.

Table 10-2 Fixed Assets

(Unit: ₱1,000)

Facilities	Value
(1) New Facilities	
Wharf	48,214
Navigation Aids	642
Transit Shed	7,556
Administrative Bldg.	631
Road/Pavement	2,792
Electrical Installation	1,137
Open Shed	771
Motor Vehicles	208
Mooring Basin	29,378
Land/Revetment	8,595
Sub-Total	99,924
(2) Old Facilities	
Wharf (210m)	5,993
Road/Pavement	778
Land/Bulkhead	2,995
Sub-Total	9,766
Total	109,690

Table 10-3 Opening Balance (Beginning at 1987)

(Unit: ₱1,000)

Assets		Liabilities	
Old Fixed Assets	9,766	Capital	9,766
Non-Depreciable Assets	2,995	Corporate Fund	30,447
Depreciable Assets	6,771	Long-Term Loan	69,477
New Fixed Assets	99,924		
Non-Depreciable Assets	37,973		
Depreciable Assets	61,951		
Net Current Assets	Δ767	Reserve	Δ767
Total	108,909		108,909

(3) Estimate of Revenues and Expenditures

1) Revenues

As indicated in the assumptions, the revenue is calculated by the PPA-set nationally uniform tariff rates, not by special port tariff rates for Port of Irene on a cost basis resulting from this project. The current port tarif rates are new rates in the revision of July 1, 1981. Dues and charges are composed of the following types.

	Unit Charge	
i) Harbor Fees		
For each entrance from a foreign port	vessel	₱80.00
For each departure to a foreign port	vessel	80.00
For each coastwise entrance or departure more than 400 NRT	vessel	32.00
ii) Tonnage Dues		
for vessels engaged in foreign trade	NRT	0.80
iii) Berthing Fees		
For Vessel Engaged in Foreign Trade		
for the 1st 24 hrs or part thereof	GRT	0.16
for each succeeding 24 hrs	GRT	0.16
For Vessels Engaged in Philippine Coastwise Trade		
Vessels of more than 1,000 GRT		
–first day or part thereof		
first 1,000 GRT	GRT	0.08
in excess of 1,000 GRT	GRT	0.032
–succeeding days		
first 1,000 GRT	GRT/day	0.04
in excess of 1,000 GRT	GRT/day	0.016
iv) Wharfage Dues		
Import	GMT	12.60
Export		
General Cargo	GMT	6.40
Logs	cu.m.	4.80
Domestic		
General Cargo	GMT	1.60
Logs	cu.m.	1.28

v) Storage Charges (after FSP)

Domestic Cargo	ton/day	2.40
Import Cargo	ton/day	0.64
Export Cargo	ton/day	0.80

vi) Arrastre Income

	Arrastre (₱/t)	Stevedoring (₱/t)
Logs	4.80	4.32
Lumber	15.12	15.12
Plywood & Veneer	7.00	7.00

For cargo other than the above-mentioned items, ₱10/mt is assumed in the absence of arrastre and stevedoring rates. In this port, the PMU is entitled to 10% of the gross arrastre proceeds.

vii) Others

As land rent and other miscellaneous revenues, 1% of the above revenues will be added up.

2) Ships and Cargoes Utilization of the Port

The number of ships calling at the port and the volume of cargo handled by the port facilities are set in accordance with the demand forecast in Chapter 5 in Table 10-4 and Table 10-5. Cargo volume handled at shed and open strage is shown in Table 10-6.

Table 10-4 Number of Ships Calling at the Port

Ships \ Year		1987	1988	1989
Ships in foreign trade	4,000 DWT Class	40	43	45
	15,000 DWT Class	40	42	45
Ships in domestic trade	3,000 DWT Class	65	70	75

Table 10-5 Cargo Volume

(Unit: 1,000t)

	1987				1988				1989			
	Foreign		Domestic		Foreign		Domestic		Foreign		Domestic	
	Export	Import	Outbound	Inbound	Export	Import	Outbound	Inbound	Export	Import	Outbound	Inbound
Lumber	17		33		18		36		19		39	
Plywood/Veneer	19		32		32		35		35		38	
Cement				5				5				5
Fertilizer		20				22				24		
Palay	60				42				45			
Others		7		5		8		7		9		9
Sugar	22				24				26			
Molasses	8				9				10			
Logs	10		20		11		21		12		22	
TOT.	126	27	85	10	136	30	92	12	147	33	99	14

Table 10-6 Cargo Using Shed and Storage

(Unit: 1,000t)

1987	1988	1989
150	164.5	179

(2) Expenditures

Expenditure may be classified into five items: personnel costs, general administrative costs, maintenance/operation costs, depreciation expense and interest on loans. They are to be calculated as follows:

As to taxes (business tax and income tax), income tax is exempted and the business tax may also be exempted, according to the Financial Plan of the PPA. So, payment of taxes is not considered here.

1) Personnel Costs

In 1980, the average annual per capita personnel cost for PMU Irene (salaries and allowances) is 21,240 pesos. Here, the average annual per capita personnel cost in 1981 is estimated at 23,500 pesos by adding more than 10% to the 1980 figure.

The number of personnel at the PMU Irene is as determined in the preceding section. In consideration of Port Irene's position as the base port, the following is used as the number of personnel to be paid from the revenues of this port:

Table 10-7 Number of Personnel

1987	1988	1989
25	29	33

2) General Administrative Costs

The average general administrative costs of PMU Irene for the two years, 1979 and 1980, are 21.55% of the personnel costs. In the entire PPA, this ratio is 22% in 1980. So, 22% of the personnel cost is estimated here as the general administrative costs.

3) Maintenance/Operation Costs

The maintenance/operation costs of each facility is estimated as in Table 10-8 by setting a maintenance/operation ratio representing a certain proportion of the construction or purchase cost of that facility. The maintenance/operation cost will be increased proportionately to the increase of cargo volume.

Table 10-8 Maintenance Cost

Facility	Percentage of Construction or Purchase Cost
Mooring Basin	3.0
Wharf	1.0
Revetment	0.2
Bulkhead	0.2
Navigation Aids	3.0
Transit Shed	1.0
Administrative Bldg.	3.0
Road/Pavement	1.0
Electrical Installation	2.0
Open Shed	3.0
Motor Vehicle	15.0

4) Depreciation Expense

Of the fixed assets indicated in Table 10-2, basin, land and revetments and bulkheads are excluded from depreciation as non-depreciable assets. As for depreciable assets, service life and depreciation rate of each facility are set as in Table 10-9 according to the PPA guide line. And the average service life weighted by individual cost is 37.7 years. Based on this average service life, the annual amount of depreciation expense may be computed by the straight line method, assuming no residual value. The fixed assets schedule is as indicated in Table 10-10.

Table 10-9 Service Life & Depreciation Rate

Facility	Service Life in Years	Depreciation Rate (%)
Wharves	50	2.00
Navigation Aids	25	4.00
Administrative Building	30	3.33
Transit Shed	30	3.33
Roads/Pavements	20	5.00
Open Shed	10	10.00
Electrical Installation	15	6.67
Motor Vehicles	8	12.50

Table 10-10 Fixed Assets Schedule

(Unit: ₱1,000)

	(1986)	1987	1988	1989	1990	1991	1996	2002
Fixed Assets at Beginning of Year	(9,982)	109,690	107,869	106,048	104,227	102,406	93,301	82,335
Land & Non-Depreciable Assets	(2,995)	40,968	40,968	40,968	40,968	40,968	40,968	40,968
Depreciable Assets	(6,987)	68,722	66,901	65,080	63,259	61,438	52,333	41,407
Construction in Process	(34,592)	–	–	–	–	–	–	–
Accumulated Investment	(99,924)	–	–	–	–	–	–	–
Depreciation	(216)	1,821	1,821	1,821	1,821	1,821	1,821	1,821
Fixed Assets at End of Year	(109,690)	107,869	106,048	104,227	102,406	100,585	91,480	80,554
Land & Non-Depreciable Assets	(40,968)	40,968	40,968	40,968	40,968	40,968	40,968	40,968
Depreciable Assets	(68,722)	66,901	65,080	63,259	61,438	59,617	50,512	39,586
Construction in Process	–	–	–	–	–	–	–	–

5) Interest on Long-Term Loans

This is calculated as in Table 10-11 on the assumption that the foreign currency portion of the project cost be met by the above-mentioned foreign loans.

Table 10-11 Long Term Loan Schedule

(Unit: ₱1,000)

Year	Investment			Loan Repayment Amount	Loan Balance at End	Interest on Loan
	Corporate Fund	Long-Term Loan	Total			
1983	483	121	604	-	121	
1984	653	813	1,466	-	934	4
1985	8,967	23,555	32,522	-	24,489	28
1986	20,344	44,988	65,332	-	69,477	735
1987				-	69,477	2,084
1988-1992				-	69,477	10,420
1993				3,473	66,004	2,084
1994				3,473	62,531	1,980
1995				3,473	59,058	1,876
1996				3,474	55,584	1,772
1997				3,474	52,110	1,668
1998				3,474	48,636	1,563
1999				3,474	45,162	1,459
2000				3,474	41,688	1,355
2001				3,474	38,214	1,251
2002				3,474	34,740	1,146

(4) Financial Situation

Financial statements for 1987 to 2002 are prepared according to the above estimate of revenues and expenditures, Table 10-12 is a statement of revenue and expenditure, Table 10-13 is a statement of sources and applications of funds and Table 10-14 is a balance sheet.

The statement of revenue and expenditure shows that the operating revenue is sufficient to cover the operating expenditure. But it is impossible to depreciate after the interest on the loans. The statement of sources and applications of funds shows the cash flow after the execution of the project to mainly ascertain the long term debt or the repayment position of the loans. According to it, fund shortage occurs as soon as the repayment of the principal of the loans starts.

Table 10-12 Statement of Revenue and Expenditure

(Unit: ₱1,000)

Item \ Year	(1983 - 1986)	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997 - 2002
Operating Revenue		4,651	5,062	5,476	5,476	5,476	5,476	5,476	5,476	5,476	5,476	32,856
Operating Expenditure		2,397	2,591	2,794	2,794	2,794	2,794	2,794	2,794	2,794	2,794	16,764
Operating Profit		2,254	2,471	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	16,092
Depreciation		1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	10,926
Profit after Depreciation		433	650	861	861	861	861	861	861	861	861	5,166
Interest on Loan	(767)	2,084	2,084	2,084	2,084	2,084	2,084	2,084	1,980	1,876	1,772	8,442
Profit after Interest on Loan	(Δ767)	Δ1,651	Δ1,434	Δ1,223	Δ1,223	Δ1,223	Δ1,223	Δ1,223	Δ1,119	Δ1,015	Δ911	Δ3,276
Accumulated Profit	(Δ767)	Δ2,418	Δ3,852	Δ5,075	Δ6,298	Δ7,521	Δ8,744	Δ9,967	Δ11,086	Δ12,101	Δ13,012	Δ16,288

Table 10-13 Statement of Source and Application of Funds

(Unit: ₱1,000)

Item \ Year	(1983 - 1986)	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997 - 2002
Source of Funds (A)												
Depreciation		1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	10,926
Profit after Depreciation		433	650	861	861	861	861	861	861	861	861	5,166
TOTAL		2,254	2,471	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	16,092
Application of Funds (B)												
Interest on Loan	(767)	2,084	2,084	2,084	2,084	2,084	2,084	2,094	1,980	1,876	1,772	8,442
Repayment of Long-Term Loan								3,473	3,473	3,473	3,474	20,844
TOTAL		2,084	2,084	2,084	2,084	2,084	2,084	5,557	5,453	5,349	5,246	29,286
Increase/Decrease of Net Current Assets (C=A-B)	(Δ767)	170	387	598	598	598	598	Δ2,875	Δ2,771	Δ2,667	Δ2,564	Δ13,194
Net Current Assets at Beginning of Year (D)	-	Δ767	Δ597	Δ210	288	986	1,584	2,182	Δ693	Δ3,464	Δ6,131	Δ8,695
Net Current Assets at End of Year (E=C+D)	(Δ767)	Δ597	Δ210	388	986	1,584	2,182	Δ693	Δ3,464	Δ6,131	Δ8,695	Δ21,889

Table 10-14 Balance Sheet

(Unit: ₱1,000)

Item \ Year	(1986)	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	2002
Assets												
Fixed Assets	(109,690)	107,869	106,048	104,227	102,406	100,585	98,764	96,943	95,122	93,301	91,480	80,554
Non Depreciable Assets	(40,968)	40,968	40,968	40,968	40,968	40,968	40,968	40,968	40,968	40,968	40,968	40,968
Depreciable Assets	(68,722)	66,901	65,080	63,259	61,438	59,617	57,796	55,975	54,154	52,333	50,512	39,586
Net Current Assets	(Δ767)	Δ597	Δ210	388	986	1,584	2,182	Δ693	Δ3,464	Δ6,131	Δ8,695	Δ21,889
TOTAL	(108,923)	107,272	105,838	104,615	103,392	102,169	100,946	96,250	91,658	87,170	82,785	58,665
Liabilities												
Capital	(40,213)	40,213	40,213	40,213	40,213	40,213	40,213	40,213	40,213	40,213	40,213	40,213
Long-Term Loan	(69,477)	69,477	69,477	69,477	69,477	69,477	69,477	66,004	62,531	59,058	55,584	34,740
Reserve	(Δ767)	Δ2,418	Δ3,852	Δ5,075	Δ6,298	Δ7,521	Δ8,744	Δ9,967	Δ11,086	Δ12,101	Δ13,012	Δ16,288
TOTAL	(108,923)	107,272	105,838	104,615	103,392	102,169	100,946	96,250	91,658	87,170	82,785	58,665

From the above, it can be seen that the operating revenue based on the current level of tariff rates cannot cover all the necessary expenditures. Financial ratios defined below are as shown in Table 10-15.

i) Working Ratio ..... to ascertain the income position

$$\frac{\text{Operating expenditure}}{\text{Operating revenue}} \times 100$$

ii) Operating Ratio ..... to ascertain the income position

$$\frac{\text{Total operating expenses}}{\text{Total operating revenues}} \times 100$$

iii) Return on Net Fixed Assets ..... to ascertain the earning capacity

$$\frac{\text{Profit after depreciation}}{\text{Net fixed assets at end of year}} \times 100$$

iv) Interest Earned Ratio ..... to ascertain interest payment capacity

$$\frac{\text{Profit after depreciation}}{\text{Interest on long term loans}}$$

Table 10-15 Financial Ratios (I)

Item \ Year	1989	1992	1996	2002
Working ratio (%)	51.0	51.0	51.0	51.0
Operating ratio (%)	122.3	122.3	116.6	105.2
Return on net fixed assets (%)	0.83	0.87	0.94	1.07
Interest earned ratio (No. of times)	0.41	0.41	0.49	0.75

The reasons for the situation are considered as follows:

1) Level of Tariff Rates

As stated in the assumptions in this analysis, the revenue is calculated according to the PPA-set nationally uniform tariff rates and cost-basis tariff rates for this project are not used.

2) Character of the Project

This project does not merely consist of constructing additional facilities but it is almost, in essence, a project to develop a new port. So, 43.4% of the project cost must be invested in "non-profitable facilities", namely, facilities other than wharf, transit shed and open shed which are directly related to revenue.

3) Interest Paid and Depreciation Expense

This is a problem that arises from the fact that this project is almost, in essence, a project to develop a new port, also. Since about 70% (representing the foreign currency portion) of the project cost consists of the long-term loans, the burden of the interest to be paid for the loans is, indeed, immense, though the terms of the loans are favorable. Further, the depreciation expense is a heavy burden because most of the depreciable assets have not been depreciated yet and because the wharf construction costs an extra 50% or more due to the poor soil conditions.

(5) Countermeasures

It has become known that, under the aforementioned conditions, Port of Irene can afford not only the operating costs but also the payment of interest on loans. However, depreciation cannot be covered sufficiently and this is the problem with the account. So, some measures will be studied herein.

1) Study of the level of tariff rates

The primary means suggested to supplement the insufficient amount of the revenue is to increase tariff rates.

If the financial accounting of Port of Irene is to be self-supporting on a cost basis, it is, of course, necessary to set tariff rates that can cover the operating costs, renew the facilities and repay debts.

So, in this section we have calculated revenues by also studying the level of tariff rates financially desirable after the execution of this project, rather than simply adhering to the precondition of the current tariff rates. Five alternatives are studied herein by financial ratios and financial internal rate of return (FIRR).

FIRR will be obtained from comparing the amount of investments and the profit before depreciation and before interest payments. It is an attempt to determine profitability by calculating the earning increase due to the execution of this project as the benefit and calculating the project cost as the cost.

i) Case A: Case where the level of the current tariff rates is raised by 30%.
ii) Case B: Case where the level of the current tariff rates is raised by 50%.
iii) Case C: Case where the level of the current tariff rates is raised by 75%.
iv) Case D: Case where the level of the current tariff rates is doubled.
v) Case E: Case where the level of the current tariff rates is raised by 250%.

Table 10-18 to 10-20 are the financial statements consolidating the five cases: A, B, C, D and E. Table 10-16 and 10-17 show the financial ratios and FIRR in the five cases. (Tables 10-29 to 10-33 are FIRR calculation tables.) It can be said from the above results that in Case D, namely, if the current tariff rates can be doubled, both the soundness and profitability of the accounting can be assured from the financial ratios and the FIRR.

Table 10-16 Financial Ratios (II)

Item \ Year	Case	1989	1992	1996	2002
Operating Ratio (%)	A	94.1	94.1	89.7	80.9
	B	81.6	81.6	77.8	70.1
	C	69.9	69.9	66.6	60.1
	D	61.2	61.2	58.3	52.6
	E	48.9	48.9	46.7	42.1
Return on Net Fixed Assets (%)	A	2.4	2.5	2.7	3.1
	B	3.5	3.6	3.9	4.5
	C	4.8	5.0	5.4	6.2
	D	6.1	6.4	6.9	7.9
	E	8.7	9.2	9.9	11.3
Interest Earned Ratio (No. of times)	A	1.2	1.2	1.4	2.2
	B	1.7	1.7	2.0	3.1
	C	2.4	2.4	2.8	4.3
	D	3.0	3.0	3.6	5.5
	E	4.4	4.4	5.1	7.9

Table 10-17 FIRR

CASE	A	B	C	D	E
%	0.4	1.8	3.5	5.2	8.2

Table 10-18 Statement of Revenue and Expenditure

(Unit: ₱1,000)

Item \ Year	Case	1983 –1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997 –2002
Operating Revenue	A		6,046	6,581	7,119	7,119	7,119	7,119	7,119	7,119	7,119	7,119	42,714
	B		6,977	7,593	8,214	8,214	8,214	8,214	8,214	8,214	8,214	8,214	49,284
	C		8,139	8,859	9,583	9,583	9,583	9,583	9,583	9,583	9,583	9,583	57,498
	D		9,302	10,124	10,952	10,952	10,952	10,952	10,952	10,952	10,952	10,952	65,712
	E		11,628	12,655	13,690	13,690	13,690	13,690	13,690	13,690	13,690	13,690	82,140
Operating Expenditure			2,397	2,591	2,794	2,794	2,794	2,794	2,794	2,794	2,794	2,794	16,764
Operating Profit	A		3,649	3,990	4,325	4,325	4,325	4,325	4,325	4,325	4,325	4,325	25,950
	B		4,580	5,002	5,420	5,420	5,420	5,420	5,420	5,420	5,420	5,420	32,520
	C		5,742	6,268	6,789	6,789	6,789	6,789	6,789	6,789	6,789	6,789	40,734
	D		6,905	7,533	8,158	8,158	8,158	8,158	8,158	8,158	8,158	8,158	48,948
	E		9,231	10,064	10,896	10,896	10,896	10,896	10,896	10,896	10,896	10,896	65,376
Depreciation			1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	10,926
Profit after Depreciation	A		1,828	2,169	2,504	2,504	2,504	2,504	2,504	2,504	2,504	2,504	15,024
	B		2,597	3,181	3,599	3,599	3,599	3,599	3,599	3,599	3,599	3,599	21,594
	C		3,921	4,447	4,968	4,968	4,968	4,968	4,968	4,968	4,968	4,968	29,808
	D		5,084	5,712	6,337	6,337	6,337	6,337	6,337	6,337	6,337	6,337	38,022
	E		7,410	8,243	9,075	9,075	9,075	9,075	9,075	9,075	9,075	9,075	54,450
Interest on Loan		(767)	2,084	2,084	2,084	2,084	2,084	2,084	2,084	1,980	1,876	1,772	8,442
Profit after Interest on Loan	A		Δ256	85	420	420	420	420	420	524	628	732	6,582
	B		513	1,097	1,515	1,515	1,515	1,515	1,515	1,619	1,723	1,827	13,152
	C		1,837	2,363	2,884	2,884	2,884	2,884	2,884	2,988	3,092	3,196	21,366
	D		3,000	3,628	4,253	4,253	4,253	4,253	4,253	4,357	4,461	4,565	29,580
	E		5,326	6,159	6,991	6,991	6,991	6,991	6,991	7,095	7,199	7,303	46,008
Accumulated Profit	A		Δ1,023	Δ938	Δ518	Δ98	322	742	1,162	1,686	2,314	3,046	9,628
	B		Δ254	843	2,358	3,873	5,388	6,903	8,418	10,037	11,760	13,587	26,739
	C	(Δ767)	1,070	3,433	6,317	9,201	12,085	14,969	17,853	20,841	23,933	27,129	48,495
	D		2,233	5,861	10,114	14,367	18,620	22,873	27,126	31,483	35,944	40,509	70,089
	E		4,559	10,718	17,709	24,700	31,691	38,682	45,673	52,768	59,967	67,270	113,278

Table 10-19 Statement of Source and Application of Funds

(Unit: ₱1,000)

Item \ Year	Case	1983 –1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997 –2002
Source of Funds (A)													
Depreciation			1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	10,926	10,926
Profit after Depreciation	A		1,828	2,169	2,504	2,504	2,504	2,504	2,504	2,504	2,504	2,504	15,024
	B		2,597	3,181	3,599	3,599	3,599	3,599	3,599	3,599	3,599	3,599	21,594
	C		3,921	4,447	4,968	4,968	4,968	4,968	4,968	4,968	4,968	4,968	29,808
	D		5,084	5,712	6,337	6,337	6,337	6,337	6,337	6,337	6,337	6,337	38,022
	E		7,410	8,243	9,075	9,075	9,075	9,075	9,075	9,075	9,075	9,075	54,450
TOTAL	A		3,649	3,990	4,325	4,325	4,325	4,325	4,325	4,325	4,325	4,325	25,950
	B		4,418	5,002	5,420	5,420	5,420	5,420	5,420	5,420	5,420	5,420	32,520
	C		5,742	6,268	6,789	6,789	6,789	6,789	6,789	6,789	6,789	6,789	40,734
	D		6,905	7,533	8,158	8,158	8,158	8,158	8,158	8,158	8,158	8,158	48,948
	E		9,231	10,064	10,896	10,896	10,896	10,896	10,896	10,896	10,896	10,896	65,376
Application of Funds (B)													
Interest on Load		(767)	2,084	2,084	2,084	2,084	2,084	2,084	2,084	1,980	1,876	1,772	8,442
Payment of Long-Term Loan			–	–	–	–	–	–	3,473	3,473	3,473	3,473	20,844
TOTAL		(767)	2,084	2,084	2,084	2,084	2,084	2,084	5,557	5,453	5,349	5,246	29,286
Increase/Decrease of Net Current Assets (C=A–B)	A		1,565	1,906	2,241	2,241	2,241	2,241	Δ1,232	Δ1,128	Δ1,024	Δ921	Δ3,336
	B		2,334	2,918	3,336	3,336	3,336	3,336	Δ137	Δ33	71	174	3,234
	C	(Δ767)	3,658	4,184	4,705	4,705	4,705	4,705	–1,232	1,336	1,440	1,543	11,448
	D		4,821	5,449	6,074	6,074	6,074	6,074	2,601	2,705	2,809	2,912	19,662
	E		7,147	7,980	8,812	8,812	8,812	8,812	5,339	5,443	5,547	5,650	36,090
Net Current Assets at Beginning of Year (D)	A			798	2,704	4,945	7,186	9,427	11,668	10,436	9,308	8,284	7,363
	B			1,567	4,485	7,821	11,157	14,493	17,829	17,692	17,659	17,730	17,904
	C		Δ767	2,891	7,075	11,780	16,485	21,190	25,895	27,127	28,463	29,903	31,446
	D			4,[illegible]4	9,503	15,577	21,651	27,725	33,799	36,400	39,105	41,914	44,826
	E			6,380	14,360	23,172	31,984	40,796	49,608	54,947	60,390	65,937	71,587
Net Current Assets at End of Year (E=C+D)	A		798	2,704	4,945	7,186	9,427	11,668	10,436	9,308	8,284	7,363	4,027
	B		1,567	4,485	7,821	11,157	14,493	17,829	17,692	17,659	17,730	17,904	21,138
	C	(Δ767)	2,891	7,075	11,780	16,485	21,190	25,895	27,127	28,463	29,903	31,446	42,894
	D		4,054	9,503	15,577	21,651	27,725	33,799	36,400	39,105	41,914	44,826	64,488
	E		6,380	14,360	23,172	31,984	40,796	49,608	54,947	60,390	65,937	71,587	107,677

Table 10-20 Balance Sheet

(Unit: ₱1,000)

Item / Year	Case	(1986)	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	2002
Assets													
Fixed Assets		(109,690)	107,869	106,048	104,227	102,406	100,585	98,764	96,943	95,122	93,301	91,480	80,554
Net Current Assets	A		798	2,774	4,945	7,186	9,427	11,668	10,436	9,308	8,284	7,363	4,027
	B		1,567	4,485	7,821	11,157	14,493	17,829	17,692	17,659	17,730	17,904	21,138
	C	(△767)	2,891	7,075	11,780	16,485	21,190	25,895	27,127	28,463	29,903	31,446	42,894
	D		4,054	9,503	15,577	21,651	27,725	33,799	36,400	39,105	41,914	44,826	64,488
	E		6,380	14,360	23,172	31,984	40,796	49,608	54,947	60,390	65,937	71,587	107,677
TOTAL	A		108,667	108,752	109,172	109,592	110,012	110,432	107,379	104,430	101,585	98,843	84,581
	B		109,436	110,533	112,048	113,563	115,078	116,593	114,635	112,781	111,031	109,384	101,692
	C	(108,923)	110,760	113,123	116,007	118,891	121,775	124,659	124,070	123,585	12,3204	122,926	123,448
	D		111,923	115,551	119,804	124,057	128,310	132,563	133,343	134,227	135,215	136,306	145,042
	E		114,249	120,408	127,399	134,390	141,381	148,372	151,890	155,512	159,238	163,067	188,231
Liabilities													
Capital		(40,213)	40,213	40,213	40,213	40,213	40,213	40,213	40,213	40,213	40,213	40,213	40,213
Long-Term Loan		(69,477)	69,477	69,477	69,477	69,477	69,477	69,477	66,004	62,531	59,058	55,584	34,740
Reserve	A		△1,023	△938	△518	△98	322	742	1,162	1,686	2,314	3,046	9,628
	B		△254	843	2,358	3,873	5,388	6,903	8,418	10,037	11,760	13,587	26,739
	C	(△767)	1,070	3,433	6,317	9,201	12,085	14,969	17,853	20,841	23,933	27,129	48,495
	D		2,233	5,861	10,114	14,367	18,620	22,873	27,126	31,483	35,944	40,509	70,089
	E		4,559	10,718	17,709	24,700	31,691	38,682	45,673	52,768	59,967	67,270	113,278
TOTAL	A		108,667	108,752	109,172	109,592	110,012	110,432	107,379	104,430	101,585	98,843	84,581
	B		109,436	110,533	112,048	113,563	115,078	116,593	114,635	112,781	111,031	109,384	101,692
	C	(108,923)	110,760	113,123	116,008	118,891	121,775	124,659	124,070	123,585	123,204	122,926	123,448
	D		111,923	115,551	119,804	124,057	128,310	132,563	133,343	134,227	135,215	136,306	145,042
	E		111,249	120,408	127,399	134,390	141,381	148,372	151,890	155,512	159,238	163,067	188,231

2) Introduction of Public Funds

The measure to be considered after the raising tariff rates level is the introduction of public funds. This project is a prior investment aiming at the regional development and can greatly contribute to the development of the region. It is, therefore, considered proper for the Government or Agencies concerned to subsidize the port finance. There are two conceivable methods.

i) Subsidy

One method is for the government or regional development agencies to supplement shortages in the revenue. This will be a subsidy for the port finance with public funds by the agencies. There are several alternatives as to the object and amounts of this subsidy, but the assumption here is that subsidization will be in an amount equivalent to 70% of the initial interest on the long-term loans. Tables 10-23 to 10-25 are the financial statements for this case. No problems due to this measure exist in the revenue and expenditure and the source and application of funds.

Table 10-21 Financial Ratio (III)

Year	1989	1992	1996	2002
Total Expenditures / Total Revenues	96.6%	96.6%	92.1%	83.1%

ii) Government Fund (Investment Subsidy)

The second method is for the government to grant its fund for the initial construction costs of the project. Tables 10-26 to 10-28 are for the case where it is assumed that funds necessary for this project will be raised as follows: 30% from the PPA fund (owned capital), 30% from the long term loans and 40% from the Government fund.

In this case, however, since the burden of payment of the interest lessens, the financial accounting will be able to be self-supporting.

Table 10-22 Financial Ratios (IV)

Item \ Year	1989	1992	1996	2002
Operating ratio	100.7%	100.7%	98.2%	93.3%
Interest earned ratio	0.96	0.96	1.13	1.74

Table 10-23 Statement of Revenue and Expenditure

(Unit: ₱1,000)

Item \ Year	(1983 – 1986)	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997 -2002
Operating Revenue		4,651	5,062	5,476	5,476	5,476	5,476	5,476	5,476	5,476	5,476	32,856
Operating Expenditure		2,397	2,591	2,794	2,794	2,794	2,794	2,794	2,794	2,794	2,794	16,764
Operating Profit		2,254	2,471	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	16,092
Depreciation		1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	10,926
Profit after Depreciation		433	650	861	861	861	861	861	861	861	861	5,166
Interest on Loan	(767)	2,084	2,084	2,084	2,084	2,084	2,084	2,084	1,980	1,876	1,772	8,442
Profit after Interest on Loan		Δ1,651	Δ1,434	Δ1,223	Δ1,223	Δ1,223	Δ1,223	Δ1,223	Δ1,119	Δ1,015	Δ911	Δ3,276
Subsidy	(767)	1,460	1,460	1,460	1,460	1,460	1,460	1,460	1,460	1,460	1,460	8,760
Net Profit		Δ191	26	237	237	237	237	237	341	445	549	5,484
Accumulated Profit	(0)	Δ191	Δ165	72	309	546	783	1,020	1,361	1,806	2,355	7,839

Table 10-24 Statement of Source and Application of Funds

(Unit: ₱1,000)

Item \ Year	(1983 -1986)	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997 -2002
Source of Funds (A)												
Depreciation		1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	10,926
Profit after Depreciation		433	650	861	861	861	861	861	861	861	861	5,166
Subsidy	(767)	1,460	1,460	1,460	1,460	1,460	1,460	1,460	1,460	1,460	1,460	8,760
TOTAL		3,714	3,931	4,142	4,142	4,142	4,142	4,142	4,142	4,142	4,142	24,852
Application of Funds (B)												
Interest on Loan	(767)	2,084	2,084	2,084	2,084	2,084	2,084	2,084	1,980	1,876	1,772	8,442
Repayment of Long-Term Loan								3,473	3,473	3,473	3,474	20,844
TOTAL		2,084	2,084	2,084	2,084	2,084	2,084	5,557	5,453	5,349	5,246	29,286
Increase/Decrease of Net Current Assets (C=A-B)		1,630	1,847	2,058	2,058	2,058	2,058	Δ1,415	Δ1,311	Δ1,207	Δ1,104	Δ4,434
Net Current Assets at Beginning of Year (D)		-	1,630	3,477	5,535	7,593	9,651	11,709	10,294	8,983	7,776	6,672
Net Current Assets at End of Year (E=C+D)	(0)	1,630	3,477	5,535	7,593	9,651	11,709	10,294	8,983	7,776	6,672	2,238

Table 10-25 Balance Sheet

Item \ Year	(1986)	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	2002
Assets												
Fixed Assets	(109,690)	107,869	106,048	104,227	102,406	100,585	98,764	96,943	95,122	93,301	91,480	80,554
Non-Depreciable Assets	(40,968)	40,968	40,968	40,968	40,968	40,968	40,968	40,968	40,968	40,968	40,968	40,968
Depreciable Assets	(68,722)	66,901	65,080	63,259	61,438	59,617	57,796	55,975	54,154	52,333	50,512	39,586
Net Current Assets		1,630	3,477	5,535	7,593	9,651	11,709	10,294	8,983	7,776	6,672	2,238
TOTAL	(109,690)	109,499	109,525	109,762	109,999	110,236	110,473	107,237	104,105	101,077	98,152	82,792
Liabilities												
Capital	(40,213)	40,213	40,213	40,213	40,213	40,213	40,213	40,213	40,213	40,213	40,213	40,213
Long-Term Loan	(69,477)	69,477	69,477	69,477	69,477	69,477	69,477	66,004	62,531	59,058	55,584	34,740
Reserve		Δ191	Δ165	72	309	546	783	1,020	1,361	1,806	2,355	7,839
TOTAL	(109,690)	109,499	109,525	109,762	109,999	110,236	110,473	107,237	104,105	101,077	98,152	82,792

Table 10-26 Statement of Revenue and Expenditure

(Unit: ₱1,000)

Item \ Year	(1983 -1986)	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997 -2002
Operating Revenue		4,651	5,062	5,476	5,476	5,476	5,476	5,476	5,476	5,476	5,476	32,856
Operating Expenditure		2,397	2,591	2,794	2,794	2,794	2,794	2,794	2,795	2,794	2,794	16,764
Operating Profit		2,254	2,471	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	16,092
Depreciation		1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	10,926
Profit after Depreciation		433	650	861	861	861	861	861	861	861	861	5,166
Interest on Loan	(335)	899	899	899	899	899	899	899	854	809	764	3,645
Profit after Interest on Loan	(Δ335)	Δ466	Δ249	Δ38	Δ38	Δ38	Δ38	Δ38	7	52	97	1,521
Accumulated Profit	(Δ335)	Δ801	Δ1,050	Δ1,088	Δ1,126	Δ1,164	Δ1,202	Δ1,240	Δ1,233	Δ1,181	Δ1,084	437

Table 10-27 Statement of Source and Application of Funds

(Unit: ₱1,000)

Item \ Year	(1983 -1986)	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997 -2002
Source of Funds (A)												
Depreciation		1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	10,926
Profit after Depreciation		433	650	861	861	861	861	861	861	861	861	5,166
TOTAL		2,254	2,471	2,682	2,682	2,682	2,682	2,682	2,682	2,682	2,682	16,092
Application of Funds (B)												
Interest on Loan	(335)	899	899	899	899	899	899	899	854	809	764	3,645
Repayment of Long-Term Loan								1,498	1,498	1,499	1,499	8,994
TOTAL	(335)	899	899	899	899	899	899	2,397	2,352	2,308	2,263	12,639
Increase/Decrease of Net Current Assets (C=A-B)	(Δ335)	1,355	1,572	1,783	1,783	1,783	1,783	285	330	374	419	3,453
Net Current Assets at Beginning of Year (D)	-	Δ335	1,020	2,592	4,375	6,158	7,941	9,724	10,009	10,339	10,713	11,132
Net Current Assets at End of Year (E=C+D)	(Δ335)	1,020	2,592	4,375	6,158	7,941	9,724	10,009	10,339	10,713	11,132	14,585

Table 10-28 Balance Sheet

(Unit: 1,000)

Item \ Year	(1986)	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	2002
Assets												
Fixed Assets	(109,690)	107,869	106,048	104,227	102,406	100,585	98,764	96,943	95,122	93,301	91,480	80,554
Non-Depreciable Assets	(40,968)	40,968	40,968	40,968	40,968	40,968	40,968	40,968	40,968	40,968	40,968	40,968
Depreciable Assets	(68,722)	66,901	65,080	63,259	61,438	59,617	57,796	55,975	54,154	52,333	50,512	39,586
Net Current Assets	(Δ335)	1,020	2,592	4,375	6,158	7,941	9,724	10,009	10,339	10,713	11,132	14,585
TOTAL	(109,355)	108,889	108,640	108,602	106,564	108,526	108,488	106,952	105,461	104,014	102,612	95,139
Liabilities												
Capital	(40,213)	40,213	40,213	40,213	40,213	40,213	40,213	40,213	40,213	40,213	40,213	40,213
Government Fund	(39,499)	39,499	39,499	39,499	39,499	39,499	39,499	39,499	39,499	39,499	39,499	39,499
Long-Term Loan	29,978	29,978	29,978	29,978	29,978	29,978	29,978	28,480	26,982	25,483	23,984	14,990
Reserve	(Δ335)	Δ801	Δ1,050	Δ1,088	Δ1,126	Δ1,164	Δ1,202	Δ1,240	Δ1,233	Δ1,181	Δ1,084	437
TOTAL	(109,355)	108,889	108,640	108,602	108,564	108,526	108,488	106,952	105,461	104,014	102,612	95,139

6. Concluding Remarks

The financial analysis shows that the soundness and the profitability of this project can be ensured by raising current tariff rates.

If the current tariff is doubled, FRR of this project is estimated to be 5.2 percent. The revised tariff rates are acceptable since all the dues and charges collected by this tariff rate raise are well within the entire benefit of this project. This raise can also be said reasonable compared to those in neighbouring countries.

And introduction of public funds to secure the financial self-supporting seems to be a recommendable alternative, since this project contributes greatly to the regional development and is expected to yield great benefit to the national economy.

Table 10-29 Financial Internal Rate of Return (CASE-A)

(Unit: ₱1,000)

Year		Project Cost	Profit	Present Value Discounted at 0.4%	
				Project Cost	Profit
1	1983	604		604	
2	1984	1,466		1,460	
3	1985	32,522		32,263	
4	1986	65,332		64,554	
5	1987		3,649		3,591
6	1988		3,990		3,911
7	1989		4,325		4,223
8	1990		4,325		4,206
9	1991		4,325		4,189
10	1992		4,325		4,172
11	1993		4,325		4,156
12	1994		4,325		4,139
13	1995		4,325		4,123
14	1996		4,325		4,106
15	1997		4,325		4,090
16	1998		4,325		4,074
17	1999		4,325		4,057
18	2000		4,325		4,041
19	2001		4,325		4,025
20	2002		4,325		37,631
Residual Value			36,271		
Total		99,924	104,460	98,883	98,734

FRR = 0.4%

Table 10-30 Financial Internal Rate of Return (CASE-B)

(Unit: ₱1,000)

Year		Project Cost	Profit	Present Value Discounted at 1.8%	
				Project Cost	Profit
1	1983	604		604	
2	1984	1,466		1,391	
3	1985	32,522		31,382	
4	1986	65,332		61,927	
5	1987		4,580		4,265
6	1988		5,002		4,575
7	1989		5,420		4,870
8	1990		5,420		4,784
9	1991		5,420		4,699
10	1992		5,420		4,616
11	1993		5,420		4,534
12	1994		5,420		4,454
13	1995		5,420		4,375
14	1996		5,420		4,298
15	1997		5,420		4,222
16	1998		5,420		4,147
17	1999		5,420		4,074
18	2000		5,420		4,002
19	2001		5,420		3,931
20	2002		5,420		29,705
Residual Value			36,271		
Total		99,924	121,733	95,362	95,551

FRR=1.8%

Table 10-31 Financial Internal Rate of Return (CASE-C)

(Unit: ₱1,000)

Year		Project Cost	Profit	Present Value Discounted at 3.5%	
				Project Cost	Profit
1	1983	604		604	
2	1984	1,466		1,416	
3	1985	32,522		30,360	
4	1986	65,332		58,926	
5	1987		5,742		5,004
6	1988		6,268		5,277
7	1989		6,789		5,523
8	1990		6,789		5,336
9	1991		6,789		5,156
10	1992		6,789		4,981
11	1993		6,789		4,813
12	1994		6,789		4,650
13	1995		6,789		4,493
14	1996		6,789		4,341
15	1997		6,789		4,194
16	1998		6,789		4,052
17	1999		6,789		3,915
18	2000		6,789		3,783
19	2001		6,789		3,655
20	2002		6,789		22,398
Residual Value			36,271		
Total		99,924	143,327	91,324	91,571

FRR= 3.5%

Table 10-32 Financial Internal Rate of Return (CASE-D)

(Unit: ₱1,000)

Year		Project Cost	Profit	Present Value Discounted at 5.2%	
				Project Cost	Profit
1	1983	604		604	
2	1984	1,466		1,394	
3	1985	32,522		29,386	
4	1986	65,332		56,115	
5	1987		6,905		5,638
6	1988		7,533		5,846
7	1989		8,158		6,019
8	1990		8,158		5,721
9	1991		8,158		5,438
10	1992		8,158		5,169
11	1993		8,158		4,914
12	1994		8,158		4,671
13	1995		8,158		4,440
14	1996		8,158		4,221
15	1997		8,158		4,012
16	1998		8,158		3,814
17	1999		8,158		3,625
18	2000		8,158		3,446
19	2001		8,158		3,276
20	2002		8,158		16,958
Residual Value			36,271		
Total		99,924	164,921	87,524	87,208

FRR= 5.2%

Table 10-33 Financial Internal Rate of Return (CASE-E)

(Unit: ₱1,000)

Year		Project Cost	Profit	Present Value Discounted at 8.2%	
				Project Cost	Profit
1	1983	604		604	
2	1984	1,466		1,355	
3	1985	32,522		27,779	
4	1986	65,332		51,576	
5	1987		9,231		6,735
6	1988		10,064		6,786
7	1989		10,896		6,791
8	1990		10,896		6,275
9	1991		10,896		5,800
10	1992		10,896		5,361
11	1993		10,896		4,954
12	1994		10,896		4,579
13	1995		10,896		4,232
14	1996		10,896		3,911
15	1997		10,896		3,615
16	1998		10,896		3,341
17	1999		10,896		3,088
18	2000		10,896		2,854
19	2001		10,896		2,637
20	2002		10,896		10,552
Residual Value			36,271		
Total		99,924	208,110	81,353	81,512

FRR = 8.2%

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