

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

**ARGENTINA**

**ADDITIONAL FINANCING FOR THE INSTITUTO DE CARDIOLOGÍA Y  
CIRUGÍA CARDIOVASCULAR (ICYCC)**

**(AR-0046)**

**LOAN PROPOSAL  
AND  
TECHNICAL COOPERATION**

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# Basic Socioeconomic Data of Argentina

## 1. General

Total Population (Millions of Inhabitants, 1988)	32.0
Rural Population (Percentage) (1988)	14.3
Land Area (Thousands of Km2)	2,776.7
Population per Km2	11.5
Birth Rate per 1,000 Inhabitants (1985-90)	23.2
Population Growth Rate (1980-88) (Percentage, average)	1.4
Death Rate per 1,000 Inhabitants (1985-90)	8.6
Infant Mortality Rate per 1,000 Live Birth (1985-90)	32.2
GDP per Capita (1988) Dollars	2,862.0
Life Expectancy at Birth (1985-90)	71.0
Literacy (1982) (Percentage)	94.2
Official Exchange Rate (Australas/Dollars)	0.80
December 1985	0.801
December 1986	1.257
December 1987	3.750
December 1988	13.370
December 1989	1,795.00
Energy Consumption per Inhabitant, 1988 (Kwh)	1,541.7
Low Income Level per Inhabitant (in Australas)	
December 1986	1,423
December 1987	2,415
December 1988	12,230
December 1989	613,115

## Economically Active Population by Sectors (1986):

	<u>T h o u s a n d s</u>	<u>P e r c e n t a g e</u>
<u>T o t a l :</u>	<u>9,989</u>	<u>100.0</u>
Agriculture and Fishing	1,289	12.9
Mining	50	0.5
Manufacture	2,138	21.4
Construction	1,079	10.8
Commerce	1,828	18.3
Transportation	499	5.0
Electricity, Gas and Water	109	1.1
Financial Services and Others	2,997	30.0

## Unemployment and Underemployment Rate (Urban Sector, All Country)

	<u>Unemployment</u>	<u>Underemployment</u>
October 1983	3.9	5.9
October 1984	4.5	5.9
October 1985	5.9	7.4
October 1986	5.2	7.3
October 1987	5.7	8.1
October 1988	6.1	7.9
April 1989	8.1	8.9

Gross Domestic Product a/ (At Market Prices)	Composition (Percentage)						Real Annual Growth Rate (Percent)				
	1984	1985	1986	1987	1988	1989	1984	1985	1986	1987	1989
<u>Expenditure of GDP</u>											
GDP	100.0	100.0	100.0	100.0	100.0	100.0	2.6	-4.3	5.6	2.2	-2
Gross Domestic Investment	12.3	10.3	11.4	13.0	12.0		-11.1	-20.0	16.6	17.1	-10
Consumption	83.7	82.1	84.1	83.3	79.9		6.1	-6.2	8.1	1.2	-6
Exports	14.2	16.7	14.7	14.3	17.8		-0.7	12.5	-7.0	-1.0	21
Imports	10.3	9.2	10.2	10.6	9.7		6.1	-14.5	17.5	6.1	-11
<u>By Origin b/</u>											
	100.0	100.0	100.0	100.0	100.0	100.0	2.6	-4.3	5.6	2.2	-2
Agriculture	13.6	14.0	12.8	13.0	13.2		3.1	-1.7	-3.2	3.6	-1
Mining	2.3	2.4	2.2	2.1	2.4		-0.6	-2.6	-3.8	0.2	9
Manufacturing	21.3	20.0	21.4	20.8	19.9		4.0	-10.3	13.0	-0.6	-6
Construction	2.9	2.8	2.9	3.3	2.9		-20.0	-6.7	9.7	14.7	-14
Electricity, Water and Gas	3.9	4.1	4.2	4.3	4.7		6.5	1.4	7.4	6.1	4
Commerce	13.0	12.4	12.8	12.7	12.3		4.5	-8.3	8.7	1.4	-5
Transportation	10.3	10.3	10.3	10.3	10.3		5.5	-3.8	5.1	2.5	-2
Financial Services	6.7	6.9	7.0	7.0	7.2		1.2	-1.2	7.0	2.9	-0
Government	9.4	10.0	9.7	9.7	10.2		2.8	2.6	1.7	3.0	2
Other Services	5.3	5.6	5.4	5.4	5.5		2.7	1.4	1.6	0.8	0

a/ At 1970 constant prices.

b/ At factor cost.

Source: Central Bank and Ministry of Economy.

Millions of Dollars

3. External Trade	1984	1985	1986	1987	1988	1989
<u>Exports of Goods (FOB)</u>	<u>8,107</u>	<u>8,396</u>	<u>6,852</u>	<u>8,360</u>	<u>8,944</u>	<u>9,511</u>
Beef	182	160	226	274	309	377
Other Meat	75	64	60	63	68	77
Fresh Fruit	95	123	138	153	165	177
Corn	744	766	651	298	377	411
Wheat	923	1,133	393	351	241	211
Sorghum	451	296	152	67	122	133
Oil Seeds	948	731	647	326	626	666
Vegetable Oil	945	970	645	532	873	911
Leather Goods	331	317	381	419	443	477
Wool	112	130	122	127	180	211
Other Agricultural Products	539	481	511	512	600	666
Industrial Foods Products	1,141	855	1,168	1,337	1,947	2,111
Other Manufacture Goods <u>1/</u>	1,284	1,712	1,574	1,778	2,814	3,111
Mineral Products	365	657	184	125	178	211
<u>Imports of Goods (CIF)</u>	<u>4,585</u>	<u>3,814</u>	<u>4,724</u>	<u>5,819</u>	<u>5,322</u>	<u>4,111</u>
Capital Goods	643	648	614	973	847	711
Consumption Goods	250	198	286	318	226	181
Intermediate Goods	3,692	2,968	3,824	4,528	4,249	3,221
Fuel	468	454	415	654	389	n.a.
Other	3,224	2,514	3,409	3,874	3,860	n.a.

1/ Includes textiles other than wool.

n.a. Not available.

Source: Central Bank.

Millions of Dollars

4. <u>Balance of Payments</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
Current Account Balance	-2,543.0	-962.5	-2,855.5	-4,228.3	-1,594.2
Merchandise Balance	3,940.1	4,897.0	2,460.1	975.0	4,254.4
Exports of Goods (FOB)	8,072.0	8,419.2	6,851.3	6,359.3	9,162.1
Imports of Goods (FOB)	4,131.8	3,522.2	4,391.2	5,384.3	4,907.7
Net Services	-6,484.2	-5,859.5	-5,318.0	-5,195.6	-5,848.6
Transfers	1.0	0.0	2.3	-7.8	0.0
Capital Account (Net)	2,738.8	2,462.2	1,671.8	2,496.9	3,634.7
Change in Net Reserves (- = Increase)	-143.5	-977.8	874.0	1,949.9	-1,904.7
Errors and Omissions	-52.3	-521.9	309.7	-218.5	-135.8

\* Preliminary.

n.a. Not available.

Source: International Monetary Fund and Central Bank.

Percentage of GDP

5. <u>Non-Financial Public Sector</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
Current Revenues	21.2	26.2	26.9	25.0	23.9
Current Expenditures	25.6	25.3	24.9	24.6	25.1
Current Savings	-4.3	0.8	2.0	0.4	-1.2
Capital Expenditures	7.2	6.5	6.9	7.0	7.9
Deficit (-) Surplus (+)	-11.6	-5.7	-4.9	-6.6	-9.0
Domestic Financing	5.6	2.0	-1.0	0.3	0.6

\* Preliminary.

n.a. Not available.

Source: Ministry of Economy.

	Annual Growth Rate				
<u>Monetary Survey</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
Domestic Credit <u>a/</u>	535	426	88	250	321
Central Government (Net)	509	508	93	313	292
Private	553	374	83	196	356
Monetary Supply (M1)	567	500	87	125	337

a/ Not included credit to "Other Financial Institutions".

\* Growth rate from December 1988 to October 1989.

Source: International Financial Statistics, June 1990.

<u>P r i c e s</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>
(Annual Growth Rate)											
GDP Deflator	154.0	96.0	107.0	184.0	349.4	653.9	684.0	78.0	128.0	366.0	3,280.0
Consumer Prices (Annual Average)	159.5	100.8	104.5	164.8	343.8	626.7	672.2	90.1	131.3	343.0	3,070.0
(December to December)	139.7	87.6	131.3	109.7	433.7	688.0	385.4	81.9	174.8	387.7	4,920.0
Wholesale Prices (Annual Average)	149.3	75.5	109.6	256.2	360.9	575.1	662.9	63.9	122.9	412.5	2,600.0

Source: Central Bank.

8. <u>External Debt</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>
<u>T o t a l</u>							
(000 Millions of Dollars)	<u>45.07</u>	<u>46.17</u>	<u>49.33</u>	<u>51.42</u>	<u>58.32</u> a/	<u>57.86</u>	<u>58.32</u>
Public Sector	31.71	35.53	40.87	44.72	51.79	51.56	53.12
Private Sector	13.36	10.64	8.46	6.70	6.53	6.30	5.20
Bilateral Institutions	1.34	2.02	0.90	0.59	0.71	1.19	1.19
Paris Club	-	-	2.06	4.53	5.30	5.18	5.18
Multilateral Institutions	1.72	1.68	2.28	2.89	4.50	4.50	4.50
IMF	1.17	1.14	2.29	2.72	3.83	3.72	3.72
Bonds Holders	4.21	4.31	3.92	3.64	3.53	3.10	2.80
Banks	31.87	32.74	33.78	33.70	36.85	36.71	37.12
Other Creditors	4.76	4.29	4.10	3.35	3.62	3.46	3.46
<u>Debt Services</u>							
Total Services							
(000 Millions of Dollars)	8.56	6.26	8.26	6.18	6.45		
Services/Exports of Goods and							
Non-Factorial Services (Percentage)	91.9	86.0	81.8	72.8	81.3		

\* Preliminary.

a/ Non dollar denominated obligations valued at exchange rates as of December 31, 1986.

Source: Central Bank.

9. <u>IDB Loans</u>	<u>Millions of Dollars</u>	<u>Percentage of Total</u>
(Approved through December 31, 1989)		
<u>T o t a l</u>	<u>4,201.2</u>	<u>100.0</u>
Ordinary Capital	3,633.1	86.5
Fund for Special Operations	519.0	12.3
SPTE	45.9	1.1
Other Funds	3.2	0.1
 <u>B Y   S e c t o r</u>	 <u>4,201.2</u>	 <u>100.0</u>
Agriculture and Fishing	671.0	16.0
Industry and Mining	442.0	10.5
Transportation and Communications	344.8	8.2
Energy	1,713.3	40.8
Education, Science and Technology	277.6	6.6
Housing and Urban Welfare	163.5	3.9
Health	465.3	11.1
Preinvestment	3.3	0.1
Export Financing	120.4	2.8

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## ARGENTINA

### Additional financing for the Instituto de Cardiología y Cirugía Cardiovascular (ICYCC) (AR-0046)

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- Appendix II Recommendations
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- Appendix IV Proposed Resolution for technical cooperation
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## ARGENTINA

### Additional financing for the Instituto de Cardiología y Cirugía Cardiovascular (ICYCC) (AR-0046)

#### I. BASELINE DATA

- 1.1 The beneficiary and the borrower: The technical cooperation funding and the FSO loan would be granted to the Fundación Favaloro para la Docencia e Investigación Científica (FF) [Favaloro Foundation for Teaching and Scientific Research], a private nonprofit organization established in 1975.
- 1.2 The guarantor: The Argentine Nation.
- 1.3 The executing agency: Instituto de Cardiología y Cirugía Cardiovascular (ICYCC) [Institute of Cardiology and Cardiovascular Surgery], a decentralized branch of the FF that is run jointly with federal, provincial, and municipal agencies and private institutions.
- 1.4 Bank financing:
  - (i) Loan 125/TF-AR, approved March 11, 1987, for the equivalent of US\$2.4 million in australs, from the Social Progress Trust Fund (SPTF).
  - (ii) Proposal for nonreimbursable technical cooperation funding, in the amount of US\$3,824,400, consisting of US\$3.3 million and the equivalent of US\$524,400 in local currency, from the Social Progress Trust Fund (SPTF), to be disbursed over 24 months from the date the agreement is signed, to finance the procurement and installation of imported equipment and institutional assistance for the start up of the ICYCC; and
  - (iii) Proposed FSO loan, in local currency, for the equivalent of US\$2.7 million to finance the procurement and installation of equipment manufactured in Argentina. The proposed terms of the loan are an amortization period of 20 years, including a two-year grace period, an interest rate of 3% per annum, and an inspection and supervision fee of 1% of the loan amount.
- 1.5 Purpose of the project: The purpose of the project is to support the development of basic experimental research, teaching, health education, hospital care and clinical research to be carried out in Argentina by the ICYCC.

1.6 Description: The project, which has been under way since August 1982, provides for the construction of works and the supply of equipment to permit the three properties comprising the physical plant of the FF to merge their operations. The components of the project are as follows:

- (i) Civil works for the construction of two ICYCC units: building B and building V. Building B, with an area of approximately 17,400 square meters, would be used for treatment, medical residency programs and clinical research. Building V, consisting of three lower levels, a ground floor and five upper levels for a total of approximately 1,800 square meters, would house the administration and the computer center;
- (ii) Equipment for the 15 clinics and the various treatment areas in building B, the preadmission emergency area, and the administrative offices and computer centers in building V;
- (iii) Institutional strengthening through the hiring of experts to help with organizational planning work, the preparation of operating guidelines, as well as the programming and execution of start up activities for the ICYCC; and
- (iv) Initial working capital to finance the purchase of components that are needed to operate the facilities (e.g. electricity and gas service) and medical and laboratory supplies as well as the selection, training and hiring of personnel for the start up of treatment, teaching and administrative facilities.

1.7 Investment: Based on estimates of direct costs, the project will cost the equivalent of US\$42.7 million, of which US\$33.5 million has already been used to leave a balance of only US\$9.2 million. This figure excludes interest accrued and capitalized. The cost of the project by category is summarized below:

<u>Investment category</u>	(US\$ thousands)
Engineering and administration	1,277.0
Direct costs	
- Civil works	17,478.0
- Equipment and furnishings	16,465.0
Concurrent expenses	
- Institutional strengthening	504.4
- Initial working capital	2,467.0
Financial expenses	<u>4,484.0</u>
Total	<u>42,675.4</u>

1.8	Financing:	(US\$ thousands)
	125/TF-AR	2,400.0
	Proposed SPTF non reimbursable technical assistance	3,824.4
	Proposed FSO loan	2,700.0
	BANADE	15,989.0
	Supplier credits	10,957.0
	Fundación Favaloro/ Ministry of Health	<u>6,805.0</u>
	Total	<u>42,675.4</u>

- 1.9 The additional financing requested by FF from both the Bank and BANADE is essentially needed to cover a shortfall in financing attributable to the following factors: (a) a contribution from Instituto Nacional de Obras Sociales (INOS) [National Board of Social Works Agencies], in the amount of US\$7 million equivalent to finance the purchase of equipment did not materialize; (b) disbursement of the balance (US\$1.7 million) of the contribution approved by the Ministry of Health was temporarily delayed as a result of the economic emergency decreed by the National Executive Power in September 1989; (c) an increase of US\$890,000 in the cost of the contract of the firm responsible for supervision owing to delays in execution; and (d) technical assistance for institutional strengthening in the amount of US\$504,400, which was originally to be financed by FF itself, had to be earmarked for other purposes because of the shortfall in financing. Consequently, the proposal that FF has made to the Bank and BANADE is essentially to find alternative sources of resources in order to supplement the financing for the works that have been completed, the equipment, the institutional strengthening of ICYCC, and the start up of operations (see paragraphs 4.16, 4.17, 4.18, and 4.31).

- 1.10 Benefits: The benefits would be as follows:

- (i) In the teaching area, the ICYCC, with support from the Fundación Favaloro's Research and Teaching Department, would support improved training for professional practice by establishing two master's-level programs for physicians who are graduates of institutions recognized by the ICYCC.

Specialized training programs for medical and nursing professionals are also planned, as is the continued training of researchers in the application of bioengineering, computers and mathematics to the fields of cardiology and cardiovascular surgery. With support from the Foundation's Video Department, the ICYCC would also begin to develop innovative training materials based on videos of surgical procedures. These materials would also be made available for use in national and international medical congresses, and exchange and training programs as well as by courses conducted by the Fundación Favaloro for Argentine universities;

- (ii) in the area of medical care, the ICYCC, through its 11 clinics, would be able to handle some 81,000 outpatient consultations and provide surgical treatment to some 5,000 inpatients per year. In addition to its importance for the patients themselves, the ICYCC is the keystone of the system of graduate residencies and specialization in chest and cardiovascular surgery and is also the principal facility for the performance of clinical research and for the validation of basic research carried out by the Foundation's Research and Training Department; and
- (iii) from the standpoint of social benefits, the ICYCC would continue to apply the Fundación Favaloro Medical Care Department's policy of providing medical service to approximately 10% of the country's low-income population. Under the terms of an agreement entered into by the Fundación Favaloro with the Municipality of Buenos Aires, the ICYCC is required to perform a complete cardiological examination each year of all children entering a municipality's primary education system, to provide free treatment to all primary school students with heart ailments whose parents are without proper medical coverage for this type of care, and to admit each year into their professional specialization programs two physicians from the public health system administered by the municipality. Based on its guarantee agreement with the federal government, the ICYCC would provide service free of charge to at least 100 patients per year referred to it by the federal and provincial public health systems and would award full one-year fellowships to professionals from the public health system. Special mention should be made of the contribution ICYCC would make toward solving the problem of emigration of professionals and technicians, by providing jobs for more than 1,200 professionally trained persons and by providing facilities for teaching, research and health education, all supported by a high-level technological infrastructure unprecedented in Argentina.

1.11 Risks: The principal risks of the operation are as follows:

- (i) The financial risk has to do with availability of the funds required to ensure continuity of activities in the areas of research, teaching, hospital care and health education. While the financial projections indicate positive results, securing such results in practice calls for the negotiation and signature of agreements with social works agencies, commercial medical insurance agreements with financial institutions (e.g. credit card companies), and agreements with various types of associations and mutual-aid groups with which the Foundation has no arrangements at present. In order to reduce this risk, consideration has been given to strengthening the administrative capacity of the ICYCC and to including non reimbursable technical assistance funding to be used for hiring other experts including a consultant in financial administration and planning to assist in working out agreements with the various social works institutions, medical insurers, associations and mutual-aid groups; and
- (ii) the main institutional risk, one that could adversely affect the outcome of the project, depends directly on: (a) the ability of the Fundación Favaloro to complete the organizational guidelines and the medical, technical, and administrative operating systems of the ICYCC on a timely basis; and (b) the planning of the necessary start-up activities for the Institute, including simulated tests for facilities, selection, training and hiring of personnel, etc. To reduce this risk, experts, acceptable to the Bank would be hired and paid out of nonreimbursable local-currency funds to be included as part of the non-reimbursable technical assistance.

1.12 Project file: Further information on the project and its background is available in the project file in the Education and Public Health Division of the Project Analysis Department.

## II. FRAME OF REFERENCE

### A. Cardiovascular morbidity and mortality profile

#### 1. Introduction

- 2.1 More than 83% of Argentina's total population lives in urban centers, with approximately 36% concentrated in the Greater Buenos Aires area and a further 47% distributed among other cities and towns, mainly in the provinces of Cordoba, Entre Ríos and Santa Fe. It is expected that the urbanization process will go on and that the urban residents, which accounted for 83% of the population in 1980, will rise to 88% by the year 2000. Life expectancy at birth was 70.6 years for the period 1985-1990, as against 67.3 years for 1970-1975.
- 2.2 As demographic changes become increasingly marked, particularly in terms of an aging population, life-style, and the migration to cities and suburbs, the presence of risk factors such as hypertension, obesity, and high levels of blood cholesterol that are associated with cardiovascular disease has increased. Hence, the high prevalence of ischemic heart disease, arterial hypertension and chronic rheumatic cardiopathy is not surprising.

#### 2. Mortality

- 2.3 The following table gives a breakdown of the principal causes of death in Argentina in 1970, 1980 and 1985.

<u>Groups of causes</u>	<u>1970</u>	<u>1980</u>	<u>1985</u>
	%	%	%
- Cardiovascular diseases	37.7	45.1	46.1
- Tumors	15.7	16.7	18.1
- Infectious diseases, parasites, malnutrition, influenza	13.1	8.0	6.1
- Diabetes, ulcers, cirrhosis, asthma, emphysema	6.2	6.3	6.4
- Accidents and homicide	7.7	6.6	6.2
- Congenital and perinatal defects	4.6	5.5	4.8

- 2.4 The above table indicates that the number of deaths from infectious and parasitic diseases, malnutrition and environmentally-related conditions is on the decline, whereas the number of deaths from noncommunicable chronic diseases (diseases of the cardiovascular system and tumors) together were responsible for 64.2% of all deaths, with cardiovascular diseases alone accounting for 46.1% of



the total in 1985. Furthermore, the incidence of heart disease has been rising since 1980, when it accounted for 37.7% of all deaths in Argentina.

- 2.5 An analysis of cohorts shows that the incidence, prevalence and mortality rates of every kind of cardiovascular disease, including congenital defects, has increased for all age groups, as discussed in the following paragraphs.

(a) Under-five year age group

- 2.6 In 1990 this group included 3.2 million children representing 10% of the total population. In 1986, the number of deaths in the group as a whole was equal to 8.8%, of which 7.5% were under the age of one. The principal causes of death in the latter group were, in order of importance: accidents, malnutrition, pneumonia, influenza and intestinal infections, and cardiovascular disease. In the one-to-four year age group the number of deaths accounted for 1.3% of the total and heart disease was the second most common cause, with a rate of 11.5 per 100,000 children, exceeded only by accidents, with a rate of 23.8 per 100,000 children.

(b) 5-to-14 year age group

- 2.7 In this group, which in 1990 included 6.4 million children, 1985 death rates reflected a downward trend compared with those for the periods 1969-1970 and 1982-1983. Heart disease, however, rose to become the third most common cause of death for this population group, particularly among students entering the school system. While there is no information as to the reasons for the prevalence of cardiovascular disease, there is indirect evidence that cardiac and renal complications in this group are associated with the epidemiologic transmission of streptococcal infection of the upper respiratory tract, to which these children are highly susceptible when they first come in contact with large groups of other children whose immune systems have also not developed sufficiently to protect them from these infections.

(c) 15-to-24 year age group

- 2.8 In this group, which is the segment of the population at the secondary and technical school and university age levels, accidents continue to be the leading cause of death. The second most common cause is mental illness, and the two together account for more than 50%. Death from cardiac disease is third, as in the 25-to-34-year age group, which is cause for concern in a country in which the median age of the population is 27.6 years and is expected to be 28.4 by the year 2000.

(d) Over-24 year age group

- 2.9 A breakdown by age group of deaths attributable to heart disease shows that in the country as a whole the leading causes of death for people in cohorts of up to 34 years of age are pulmonary and cardiovascular diseases and other forms of heart disease, followed in order of importance by acute myocardial infarction, cardiac dysrhythmia, arteriosclerosis, and other ischemic heart disease. In several of the cohorts of people over 24 years of age, however, acute myocardial infarction is the leading cause of death. For people over 70, it is arteriosclerosis.
- 2.10 Ischemic heart disease (angina and heart failure) is the second most common cause of hospitalization nationwide for adults from 35 to 44 years of age, which is currently the country's largest economically active population group. From 1981 to 1983, 50% of all deaths from cardiovascular disease were due to ischemic cardiopathy and in at least 25% of these cases death occurred suddenly without warning.
- 2.11 In nearly one half of all deaths due to ischemic heart disease, death is sudden and in 84% of these cases the cause of death is ventricular fibrillation. Among persons 60 years of age and older it accounts for nearly one half of all deaths.
- 2.12 Death from heart failure and other ischemic heart conditions can usually be delayed or even prevented. The causative nature of the association with such risk factors as habitual smoking, malnutrition, sedentary life-style and lack of exercise, high blood pressure and the like has been amply documented. Such risk factors, which are generally grouped under life-style, can be modified, and their rates brought down, through the application of appropriate prevention and control programs. This requires significant changes in life-style, and the population at large must be properly educated.
- 2.13 A person who suffers a heart attack requires prompt emergency treatment. However, since there are no precise guidelines for identifying high-risk patients, the most effective way of preventing death when heart failure does occur is considered to be the proper application of cardiopulmonary resuscitation (CPR) to the patient. It has been found that, if basic CPR is administered within four minutes of the onset of an attack, and defibrillation is performed within the next eight minutes, the survival rate is greater than 60%, with the rate declining for each minute of delay thereafter. At the present time there is no system in Argentina, even in the city of Buenos Aires, to achieve these time frames, nor is there a system in place for providing adequate and timely emergency treatment to a victim who could otherwise be saved. The public health systems are subject to serious infrastructure shortcomings and significant constraints to the possibility of applying such procedures as thrombolysis and cardiography on a timely basis.

B. Individual health services

- 2.14 Individual health care is provided by three subsectors: public, social security and private. The three operate a total of 6,456 health care establishments lacking inpatient facilities which make up the primary network, and 3,180 hospitals with a total of 147,000 beds, of which 68% are operated by the public sector, social security and the armed forces and the remaining 32% by the private sector.

1. Public sector

- 2.15 In the public sector, health care is the responsibility of the federal government, 23 provincial governments, the city of Buenos Aires and each municipality. The federal government has retained responsibility for the primary health care network and for convalescent hospitals specializing in psychiatry, burns, ophthalmology, leprosy and severe disabilities and has transferred some 200 hospitals to the provinces. In major Argentine municipalities such as Buenos Aires, Cordoba, Rosario and Santa Fe, the provincial system is supplemented by municipal hospitals.
- 2.16 This sector provides basic health services, primarily to low-income groups. It also provides similar care to groups that are theoretically covered by social works agencies but whose access to them is limited either by economic constraints or because of their residence in areas that have no facilities of their own or where existing facilities lack the necessary services. No arrangements have been worked out with social works agencies to coordinate or provide for the recovery of costs incurred for services rendered to their members.
- 2.17 This sector possesses most of the individual health care infrastructure. Nevertheless, progressive deterioration in the quality of this infrastructure is apparent in a number of critical respects, including constraints on the hours of service, failure to supply medication to outpatients, shortages of medical and surgical supplies, low staff-per-bed ratios in provincial hospitals, inadequate training, poor condition of facilities as a result of inadequate maintenance, and a hospital-organization design structured around the concept of inpatient care. Of equal importance is the loss of the public hospital's leading role in teaching and research.

2. Social security

- 2.18 The social security sector may be broken down into two major groups: one is the social works agencies, which focus their efforts on members of labor organizations, which are required by law to contribute through the members of their respective unions (automotive workers, metalworkers, bankers, etc.) and which receive health services from private physicians, clinics and hospitals with

which their particular institutions has an agreement. This group consists of some 337 entities, 87% of which are subject to coordination by the Instituto Nacional de Obras Sociales (INOS) [National Board of Social Works Agencies]. The remaining 13% consists of the social works agencies of the country's 23 provinces, the city of Buenos Aires and various municipalities, the judicial branch, the national congress and the Armed Forces. These agencies have little infrastructure of their own and act primarily as intermediary and financial institutions, since most of the services they offer are subcontracted out to the private sector.

- 2.19 The other group, consisting of the mutual-aid groups that emerged in response to the needs of specific immigrant groups, have their own clinics. There are also some nonprofit mutual aid groups whose operation is similar to that of a credit union that offer medical-care programs financed by individual contributions.
- 2.20 The wide range of institutions and contractual arrangements means that service varies considerably within the system. Another problem for the members is that they receive necessary medical attention only so long as they are employed and are therefore paying their dues. If they become unemployed, they must turn to the public health subsystem.

### 3. The private sector

- 2.21 The private sector generally covers the needs of patients who are members of social works agencies or prepaid medical plans and individuals in higher income brackets. The 2,000 health-care facilities in this sector may be classified into three groups: (a) nonprofit community hospitals, some of which have contracts with social works agencies and medical insurance companies; (b) nonprofit clinics, with fewer than 40 beds, which are owned by medical groups and which together operate 15% of the country's total number of beds; and (c) hospitals with up to 1,000 beds, which are administered as commercial undertakings and have contracts with social works agencies and other institutions. Located mainly in the major cities, these hospitals account for 50% to 60% of the country's more sophisticated hospital equipment, 32% of the total number of beds and approximately 50% of the total number of short-stay hospital discharges.
- 2.22 The three sectors absorb a total amount of resources equivalent to US\$5 billion (approximately 7% of GDP), an amount which ought to suffice to cover the basic health requirements of the country's total population. In general, the three systems are designed to meet only such demand as they are faced with in the absence of any active patient-search effort or preventive programs. This is due to a shortage of agreements for improvement of services. It should be noted, finally, that the contribution of private-sector institutions to teaching and research is extremely limited.

C. Research and human-resource development

- 2.23 Human-resource development in the health area has deteriorated to a significant extent. University health-science schools are not allocating the funding required to cover the basic costs of research that would be needed to bring curricula into line with the country's present morbidity and mortality profiles. Funding that might otherwise be made available for such purposes are generally devoted to covering costs arising from increased enrollment.
- 2.24 Nursing education has been relatively neglected. As of 1980, fewer than 400 nurses had completed the university studies required for a graduate nursing degree (licenciatura), and training for nurses in cardiovascular diseases was inadequate. All of this has led to a decline in the quality of medical care.

### III. THE BORROWER AND BENEFICIARY AND THE EXECUTING AGENCY

#### A. The Fundación Favaloro para la Docencia e Investigación Científica (FF)

- 3.1 The Fundación Favaloro para la Docencia e Investigación Científica (FF) [Favaloro Foundation for Scientific Teaching and Research] would be the borrower and also the beneficiary of the operation described herein. It is a privately chartered nonprofit corporate entity established in the city of Buenos Aires by public instrument of July 4, 1975. Its primary purpose is to foster progress in cardiology in general and cardiovascular surgery in particular.
- 3.2 The Fundación has defined its role as that of operating in the following fields: (a) basic experimental research; (b) teaching; (c) health education for the public at large; (d) medical-care (outpatient, emergency and inpatient care); and (e) clinical research. A brief description of its activities to date in each of these fields is given in the following paragraphs.

##### 1. Experimental research

- 3.3 The FF's research and training department operates in a nine-story building in central Buenos Aires. Its present staffing structure and equipment date back to 1983. Its research division has a staff of 16 research workers: 10 physicians, 1 electronics engineer, 3 biologists, 1 physiologist and 1 veterinarian. In addition it has 3 veterinarians and 3 nurses who are responsible for pre- and post-operative care of animals used in research.
- 3.4 Advanced technologies are followed in the research area, which includes, notably, experimental research focused on experiments in global cardiac mechanics, motility and regional coronary flows, arterial mechanics, and electrophysiology. The division also does in vitro research in connection with its work on mechanics and electrophysiology, using computer models.
- 3.5 Its research findings have been published in some of the world's most prestigious journals devoted to cardiology and bioengineering, as well as in domestic journals. This division has also published two books in its field.
- 3.6 The FF maintains personnel and fellowship exchanges with various national and foreign institutions. The national institutions include the Consejo Nacional para la Investigación Científica y Técnica (CONICET) [National Council for Scientific and Technical Research]; the Instituto de Ingeniería Biomédica [Biomedical Engineering Institute] of the School of Engineering of the University of Entre Ríos; the Instituto Superior de Investigaciones Biológicas (INSIBIO) [Advanced Institute of Biological Research]; and the University of Buenos Aires, through the Instituto de

Ingeniería Biomédica [Biomedical Engineering Institute] of its School of Engineering, and through its Centro de Investigaciones Cardiológicas [Center for Cardiological Research] and the Department of Physiology of its School of Medicine. The foreign institutions with which the Fundación conducts joint activities include unit 28 of INSERM, located at the Center for Diagnosis at Broussais Hospital in Paris, the Institute of Biomedical Engineering of the University of Utah, the Division of Cardiology of the University of California, the Department of Biomedical Engineering at Johns Hopkins University, and the Department of Electrophysiology of the University of Pennsylvania.

## 2. Teaching

- 3.7 The teaching function is discharged by staff of the research and training medical care departments. The modalities range from formal university-level education to the conduct of and participation in medical congresses and other events, and include specialization and training courses for physicians, researchers, nurses and paramedical personnel.

### (a) Formal training

- 3.8 The formal education function takes the form of regular university courses. These may be grouped under three headings. The first is university courses, which include research-oriented programs such as the course in cardiorespiratory biophysics and a parallel course in physiology and cardiovascular biophysics offered at the Department of Physiology of the School of Medicine of the University of Buenos Aires. Another university program is the one in cardiac mechanics offered at the School of Bioengineering of the University of Entre Ríos.
- 3.9 A second category is the medical residencies program for chest and cardiovascular surgery established by the FF. This is a three-year graduate program for physicians 35 years of age or younger who have completed the residency in general surgery at an institution recognized by the Institute. Candidates are selected by a rigorous system that includes examinations and assessments of skills and qualifications. According to the records of the Foundation, this program has been completed by 285 physicians, of whom 78% come from Argentina and 22% from other Latin American countries.
- 3.10 The third category pertains to the program for the training of medical specialists in cardiology, created in 1988 by the Council of the School of Medicine of the University of Buenos Aires with the support of medical staff from the FF's training division. The purpose of this program is to train cardiologists, providing them with a good grounding in their area of specialization, who are prepared to practice cardiovascular diagnosis and therapy. The program is designed for a 2-year duration. The admission quota is 20 students, who are selected by a jury consisting of the director

and four university professors. At the time of admission, each student is required to submit a sworn certification or statement undertaking to cover the cost of his or her transportation, housing, meals and other expenses for the duration of the course. A student successfully completing the program is awarded a diploma entitling him or her to practice as a university-trained cardiologist.

- 3.11 Classes and other training activities are conducted in the building of the research and training department and in facilities of the cardiology division of the José de San Martín Clinical Hospital. Following completion of the project for construction and equipping of the Instituto de Cardiología y Cirugía Cardiovascular (ICYCC) [Institute of Cardiology and Cardiovascular Surgery], this program's practice and internship operations would be conducted at the institute's own facilities.

(b) Other training modalities

- 3.12 Another approach to training by the FF is provided by its courses entitled "Cardiology for consultants", which are designed to accommodate trained cardiologists. Six such courses have been offered to date (1977, 1979, 1983, 1984, 1985 and 1987). These courses have brought to Argentina leading figures in world cardiology and heart surgery, who have worked with cardiologists from Argentina and other Latin American countries for the purpose of updating and comparing the various experiences. Average attendance at these courses has been 1,500 participants. The courses have been temporarily discontinued until the ICYCC becomes operative.
- 3.13 In addition, continuing education courses in cardiology and cardiovascular surgery are conducted for physicians living in rural areas and towns, during which the participants describe the results of their research and clinical experience and participate actively in lectures, university extension courses, and medical societies.

3. Health education

- 3.14 The health-education function is carried out through the department of development. This department has a complete radio and television studio in which scientific and cultural programs for the community and various Argentine professional organizations are prepared.
- 3.15 Since 1987, this department has been cooperating with Radio Nacional on the production of a weekly program entitled "Curar en salud" in which guest physicians are invited to discuss various topics, with emphasis on preventive medicine.



- 3.16 Among the department's major TV accomplishments are 150 documentaries in a series entitled "Los grandes temas médicos" [Great issues in medicine], the aim of which is to develop public awareness of medical-social problems, with special emphasis on preventive medicine. This program has also been made available to primary and secondary schools and to various cultural and sports associations.
- 3.17 The 30 programs making up the series entitled "Fundación Favaloro para la Juventud" [Favaloro Foundation for youth] have been aired on Argentine TV since March 1990. This series constitutes a drive for the prevention of illegal drug use and includes messages designed to promote healthy habits in the young and to indicate possible new activities in the world of the arts, sports, nature, education and community life.
- 3.18 Upon completion of the ICYCC project, films of surgical procedures will be made for instructional use in its residency and undergraduate programs, medical congresses or the FF's exchange and teaching programs.

#### 4. Medical-care function

- 3.19 The medical-care function was instituted in July 1975 under an agreement with the Guemes Sanatorium (private) of Buenos Aires, with which the Fundación Favaloro established the Instituto de Cirugía Torácica y Cardiovascular (ICTC) [Institute of Chest and Cardiovascular Surgery]. Under the terms of the agreement, the sanatorium makes available 54 beds and its hospital facilities, equipment and administrative and accounting services. The Health-care Department of the Fundación Favaloro in turn provides medical staff (41 physicians), microbiologists, electronic engineers and nurses for the outpatient and inpatient services.
- 3.20 The medical-care services are open to the community. Many of the patients receive treatment on the basis of a schedule of fees set forth in the national nomenclature (Nomenclador Nacional), which regulates the fees paid by the social works agencies for medical services provided to their members. Private patients (approximately 10% of the cases) pay on the basis of freely established medical fees. In the case of low-income individuals, the patient is generally a referral from the public health system administered by the municipality of Buenos Aires. In each such case, the medical staff of the FF provides the necessary staff services, the sanatorium provides a bed free of charge, and the public health system provides the medication and other medical supplies.
- 3.21 Over the period from 1978 through 1989, the average number of surgical procedures performed was 1,653 per year, of which 14.1% were for peripheral vascular surgery, 49.3% coronary, 12.9% valvular, 4.7% chest surgery, and 7% for organ transplants,

defibrillator implants and other types of surgery. The yearly averages of other services may be broken down as follows: (i) outpatient consultations, 15,717; (ii) hemodynamics, 2,423; (iii) echocardiography, 5,453; (iv) Holter, 1,694; (v) coronary unit, 2,705; and (vi) ergometry, 11,551 cases. Apart from the importance of the service to specific patients, this activity is the basis for the medical residencies program mentioned before.

- 3.22 Pursuant to an agreement with the Guemes Sanatorium, the Institute will cease its operations after the ICYCC opens. The sanatorium has planned alternatives to its use as an institution in the private sector.

5. Clinical research

- 3.23 It has not been possible as yet to integrate this function into the work of the institution, notwithstanding its importance for the validation and review of experimental research findings. It is hoped that this can be done after the ICYCC begins operation. The perception of its importance goes beyond the Foundation itself, which, as discussed in the following paragraphs, has secured strong statements of support for the clinical-research function from a variety of social agencies, private companies, government agencies and various federal and municipal government administrations.

B. Instituto de Cardiología y Cirugía Cardiovascular (ICYCC)

- 3.24 The Instituto de Cardiología y Cirugía Cardiovascular (ICYCC) [Institute of Cardiology and Cardiovascular Surgery] will be responsible for implementation of the project described in the following chapter. Once the buildings have been completed and provided with the necessary equipment, the ICYCC will be in a position to assume responsibility for the work of the Fundación Favaloro in the areas of experimental research, training, health education, medical care, and clinical research. As stated in the preceding paragraphs, the FF has been performing all of these functions, with the exception of clinical research, under agreements with other health-sector agencies and universities.
- 3.25 The Institute, a project of Fundación Favaloro, was legally constituted on April 6, 1979, under the terms of ordinance 34,874 of the municipality of the city of Buenos Aires. From the standpoint of its nature and purpose, the Institute is a not-for-profit autonomous institution established for the purpose of providing comprehensive medical care to cardiovascular patients and making available to professionals and technicians from Argentina and other countries, particularly those of Latin America, a facility where they can acquire advanced training in this specialty by means of continuing education and research in basic and applied sciences.

- 3.26 Its institutional design shows that it would be operated by the FF in conjunction with a number of associations representing the community that have helped to carry out the project. In this regard, it should be noted that on its board of governors would sit two representatives of the FF, five members of the ICYCC medical team, three individuals from the public sector representing the Ministry of Health and Social Action, the Municipality of the City of Buenos Aires, and the National Board of Social Works Agencies, and one representative from the private sector to be designated by Sociedad Distribuidora de Diarios, Revistas, and Afines.

#### IV. THE PROJECT, ITS COST, FINANCING AND EXECUTION

##### A. The project

###### 1. Principal characteristics

- 4.1 The updated project analysis was done by a team of consultants hired by the Bank. The conclusions reached are summarized herein.
- 4.2 As in the case of loan 125/TF-AR, the project calls for building the ICYCC and equipping it for operation. The project and its objectives continue to be the same. The differences in the wording to be found in this version are basically attributable to emphasis being placed on different aspects of the operation, given the context in which the two operations financed by the Bank were carried out, they were prepared by different teams, and greater understanding of the project within the Bank (see Appendix V and Appendix VI to amend the normative documents of loan 125/TF-AR). From the standpoint of infrastructure, the ICYCC comprises two parcels of land with a total area of 1,935 square meters on which two buildings with a total area of 19,360,15 square meters have been erected, one on Calle Belgrano (building B) and the other on Calle Venezuela (building V).

##### B. Objective

- 4.3 The purpose of the project under consideration is to support the development of research to be carried out by the ICYCC.

##### C. Description of the project

- 4.4 The ICYCC is located in the heart of the city of Buenos Aires in a square block bounded by Solís, Venezuela, Entre Ríos streets and Belgrano avenue. Its basic components are described below:

###### 1. Civil works

- 4.5 The civil works are concentrated in the medical care and teaching building (building B), with an area of 17,400 square meters, and in the Institute's administration and computer center building (building V), with an area of 1,800 square meters.
- 4.6 From the medical standpoint, building B includes the patient admissions unit and visitor and staff entrances, as well as the pharmacy, on the ground floor; the first and second floors will be devoted to outpatient care and diagnosis and treatment areas; the third, fourth and fifth floors will contain the operating and post-operative recovery rooms and hemodynamics, coronary unit and intensive care units; and the sixth through ninth floors will each contain two 22-bed intermediate care units. The central supply and processing facility, general storeroom, anatomical pathology units

and the morgue will operate on the three lower levels. The graduate teaching programs in clinical cardiology and the residency program in cardiovascular surgery will be conducted in this building. The clinical research activities will be carried out in this building, in close coordination with the experimental research work to be done in the building on Calle Solís (building S) of the Fundación Favaloro and with the computer center that will operate in ICYCC building V.

- 4.7 The administration and computer center building (building V) will include a reception area on the ground floor, and FF and ICYCC executive offices, as well as administration and the computer center on the four upper levels. The three lower levels will contain a passageway to building B, supply storerooms and electrical installations.

## 2. Acquisition and installation of equipment

- 4.8 This component includes the equipment for the various building B units, the pre-hospital emergency unit, start-up requirements for administration, and the computer center.
- 4.9 The equipment for the medical care facility (building B) includes auxiliary and electromechanical equipment (stairways, elevators), as well as the necessary items for operation of the diagnostic and treatment units (in the areas of graphic tracings with ergometry, echocardiography, ECG, vectorcardiography, phonocardiography, "doppler" and "Holter"), the clinical analysis laboratory, radiology, hematology, immunogenetics and histocompatibility, and invasive hemodynamics. It also includes the equipment and furnishings needed for the inpatient areas beginning with surgery (6 operating rooms), post operative recovery rooms, with extracorporeal circulation for adults and without extracorporeal circulation for adult and pediatric patients, coronary and intensive care units and a total of approximately 230 beds. Finally, it includes all of the kitchen and cafeteria equipment, the sterilization room and the equipment to supply water and electricity to ICYCC.
- 4.10 The equipment needed for the pre-hospital emergency service to be provided outside the facilities of ICYCC for the treatment of heart-disease patients stricken by infarct and other ischemic cardiopathies includes: (i) coronary units for installation on 12 ambulances to operate in the nine geographic areas into which the city was divided for this purpose; (ii) six motorcycles to be distributed among the areas of the city with the heaviest volumes of motor-vehicle traffic to be driven by medical or paramedic personnel properly trained to provide basic CRP and cardiovascular defibrillation treatment as needed until an ambulance with a coronary unit arrives; and (iii) equipment for intercommunication between ambulances, motorcycles and the dispatch unit at ICYCC headquarters.

- 4.11 The equipment for administration (building V) includes computer-center requirements as well as general furnishings (desks, files, etc.)

3. Institutional strengthening

- 4.12 At least four experts (a physician, a nurse, an economist and an expert in business administration) would be hired to assist the institute's physicians and staff in the following areas: (i) organizational planning in the medical, nursing, technical, administrative and control areas; (ii) development of operating rules (regulations, procedural and technical manuals), standard forms of invoices, etc. for each of the hospital's services and the medical residencies program; (iii) programming of start-up activities for the hospital, including the dry run of facilities, which is one of the more complex aspects of this phase of the project; and (iv) support for the start-up activities, including necessary adjustments. The terms of reference for each of the experts who would participate in this component by providing support to FF staff in charge of ICYCC start-up will be found in Annex IV-1. These terms of reference would be appended as an annex to the respective technical cooperation agreement.
- 4.13 These institutional-strengthening activities would originally be financed with funds of the Fundación and continue to be important requirements for the start-up and subsequent operations of ICYCC. However, considering the current status of the project, and given the fact that the Fundación is concentrating its financial resources on completing the supply of equipment and commencing operations, it is recommended that the Bank provide non-reimbursable resources to finance the hiring of experts in these areas to advise, also, on the programming and start-up of ICYCC. It is further recommended that, as a condition precedent to the first disbursement from the proposed Bank loan, evidence be provided that the experts have been hired and that they and the Fundación counterpart staff assigned to the ICYCC have begun working (see Proposed Resolution, FSO loan). The officials to be provided through the local counterpart would be the medical director of the ICYCC, a nurse, an administrator to be responsible for accounting and finance of the ICYCC, an administrator who would be in charge of marketing services and the negotiation of the ICYCC's services contracts and medical insurance agreements with various agencies, associations, and mutual-aid groups, and support staff to help with the consulting services. It should be noted that in addition to the local counterpart personnel mentioned above, that are the minimum number required for the success of the operation, the services of medical, paramedical and technical staff will also be needed for senior positions in the ICYCC.

4. Initial working capital

- 4.14 This item was not included in the original project. Its inclusion has been recommended by the consultants hired to revise the project. This subcategory includes the charges for the energy, water and gas hook ups and for fuel, stationery, uniforms, staff selection, training and recruitment, and acquisition of medical, laboratory and other inputs needed for putting the medical-care and administrative facilities of the institute into operation.

D. Cost and financing

1. Cost

- 4.15 The cost estimate shown in the following table totals US\$42.7 million, of which US\$33.4 million represent investments made and costs financed up to October 30, 1990.<sup>1/</sup> The estimate includes the cost of the medical equipment to be acquired and the services of experts to be hired with the additional Bank financing, notwithstanding the fact that US\$3.8 million would be granted as non-reimbursable technical assistance. In keeping with customary Bank policy this sum would not be included in a cost table of this type, but given the nature of the goods and services it was deemed advisable to include it so as to provide a complete picture of the estimated direct costs associated with the investment components.

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<sup>1/</sup> Both figures include the amount of DM14,072,100 representing the cost of the contract with Siemens, adjusted to reflect the differential between the exchange rate on the date of the first Bank financing and the date of preparation of this report. The present equivalent of this amount is US\$10,957,000 (US\$1 = DM\$1.28).

INVESTMENT AND FINANCING PLAN  
(in US\$ thousands)

	<u>IDB</u>			<u>LOCAL COUNTERPART</u>		
	<u>125/TF</u>	<u>ATN/ proposal</u>	<u>SF/ BANADE</u>	<u>Supplier's credit</u>	<u>Fundación1/</u>	<u>TOTAL</u>
<u>Engineering and Administration</u>	-	-	-	890.0	-	1,277.0
<u>Other Costs</u>	2,301.0	3,320.0	2,609.0	15,099.0	7,633.0	33,943.0
<u>Works and Construction</u>	2,301.0	-	-	12,517.0	2,660.0	17,478.0
<u>Equipment and Furnishings</u>	-	3,320.0	2,609.0	2,582.0	321.0	16,465.0
<u>Interest Costs</u>	-	504.4	-	-	2,467.0	2,971.4
<u>Institutional Strengthening</u>	-	504.4	-	-	-	504.4
<u>Initial Working Capital</u>	-	-	-	-	2,467.0	2,467.0
<u>Other Costs</u>	99.0	-	91.0	-	970.0	4,484.0
<u>Interest</u>	75.0	-	64.0	-	970.0	4,433.0
<u>Inspection and supervision charge</u>	24.0	-	27.0	-	-	51.0
 TOTAL	 2,400.0	 3,824.4	 2,700.0	 15,989.0	 10,957.0	 42,675.4

US\$6.0 million of the contribution authorized by the Ministry of Health and Social Action.



## 2. Differences in cost

- 4.16 This cost exceeds the amount originally quoted in loan 125/TF-AR by US\$18.4 million owing to the following factors: (a) the omission of the equivalent of US\$2.7 million for construction completed on building B representing an area of approximately 2,000 square meters and US\$7 million for a contribution made by INOS to finance the purchase of equipment and technical assistance; and (b) no consideration was given to the investment required in the form of start up costs for the project, estimated at the equivalent of US\$2.5 million, because at the time of the first IDB operation the FF had been guaranteed the funding and the Bank's participation was limited to only three floors of one of the buildings.
- 4.17 As the project proceeded, a number of other developments subsequently occurred, namely: (a) the Foundation established the preadmission emergency service (approximately US\$1.4 million) and the institutional strengthening component (approximately US\$500,000); and (b) as a result of delays in execution, it was necessary to extend the contract with the firm responsible for supervision (approximately US\$1 million) and to give recognition for accounting purposes to the exchange difference resulting from a supplier credit in Deutsche Marks (equivalent to US\$3.3 million). This does not yet need to be financed since the loan has a 10-year amortization period and the grace period is still in effect. The normative documents as amended to loan 125/TF-AR reflect these differences.

## 3. Financing

- 4.18 The following table shows the financing by investment category.

Investment and Sources of Financing  
(in US\$ thousands)

<u>Investment category</u>	<u>Through October 1990</u>	<u>1991-1992</u>	<u>Total</u>
Engineering and Administration	958.0	319.0	1,277.0
Civil Works	17,478.0	-	17,478.0
Equipment and Furnishings	10,529.0	5,936.0	16,465.0
Institutional Strengthening	-	504.4	504.4
Initial Working Capital	-	2,467.0	2,467.0
Financial Costs	4,484.0	-	4,484.0
Total	<u>33,449.0</u>	<u>9,226.4</u>	<u>42,675.0</u>

Source

125/TF-AR	2,400.0 <u>1/</u>	-	2,400.0
Proposed ATN	-	3,824.4	3,824.4
Proposed FSO Loan	-	2,700.0	2,700.0
BANADE	15,247.0	742.0	15,989.0
Supplier credits	10,957.0 <u>1/</u>	-	10,957.0
Foundation	<u>4,845.0</u>	<u>1,960.0</u>	<u>6,805.0 <u>2/</u></u>
Total	<u>33,449.0</u>	<u>9,226.4</u>	<u>42,675.4</u>

- 4.19 The budget for these investments was reviewed and adjusted in 1990 by a team of experts hired by the Pan American Health Organization (PAHO/WHO) to examine the status of the project and the aspects pending execution. The amount of expenditures for direct costs through October 1990 comes to the equivalent of US\$30.5 million. These expenditures correspond to the civil works for the two ICYCC buildings, which were carried out by the construction firm submitted for the Bank's consideration in due course.
- 4.20 The consultants' review showed that the basic equipment for kitchens, laundries and the sterilization center had been acquired and installed, as had the central installations for water and electricity, emergency generators, air conditioning, oxygen, vacuum, compressed air, etc. all of which was financed out of funds from the BANADE loan and will be put in service following the dry run. The equipment purchased from Siemens, S.A. is at the construction site. The equipment purchased was of proven quality and is based on state-of-the-art technology. Work on its installation began in March 1991.
- 4.21 The expenditures still to be covered come to the equivalent of US\$11.8 million and are concentrated mainly on the funding for extension of the contract with the supervisory firm (US\$200,000); acquisition of the items needed to complete the equipment for the ICYCC (US\$6.0 million); hiring of the experts who would carry out the institutional-strengthening work (US\$504,400), and who would also advise on the programming of start-up activities (US\$2.6 million); and funds to cover contingencies (US\$2.5 million).

1/ Disbursed in full.

2/ Includes the US\$6.0 million contribution from the Ministry of Health.

#### 4. Additional Bank financing

- 4.22 In addition to loan 125/TF-AR, the Bank was requested to provide an amount of US\$6.52 million, of which the equivalent of US\$5.94 million would be used for the acquisition and installation of equipment, US\$0.5 million for the hiring of experts and the balance to cover financial costs during the execution period. Broken down by currency of origin, the financing includes US\$3.3 million in foreign exchange and US\$3.2 million in local currency.
- 4.23 The additional Bank financing, independently of modality and type of currency, would break down as follows:

<u>Medical care complex</u>	<u>Financing (US\$)</u>
Laboratory	617,100
Histocompatibility and immunogenetics	161,300
Hemotherapy and immunohematology	432,200
Hemostasis and thrombolysis	112,000
Pathology	512,000
Surgery and instruments	590,000
Critical (postoperative) cardiology	130,800
Hemodynamics and hemodialysis	176,220
Outpatient department and pneumology	210,900
Extracorporeal circulation	500,000
Non-invasive procedures	122,000
Pre-admission emergency care (Mobile coronary units and their communications system)	1,200,000
Computer center	600,000
Dentistry	12,400
Furnishings	140,000
Preinstallations and contingencies	<u>418,800</u>
Total	<u>5,935,720</u>

#### (a) Nonreimbursable technical assistance (ATN)

- 4.24 The total amount of nonreimbursable technical assistance, to be drawn on the Social Progress Trust Fund (SPTF), would amount to the equivalent of US\$3,824,400, including US\$3.3 million in foreign exchange and the equivalent of US\$524,000 in local currency. Annex IV-2 gives a breakdown of the budget to be included in the agreement. Presented below is the consolidated budget:

(in US\$ thousands)

<u>Expenses</u>	<u>Bank</u>	<u>FF</u>	<u>Total</u>
2.0 Individual consultants	367.0	72.0	439.0
5.0 Other staff	38.0	-	38.0
6.0 General support	3,394.4 <sup>3/</sup>	-	3,394.4
98. Contingencies	<u>25.0</u>	<u>8.0</u>	<u>33.0</u>
Total US\$	<u>3,824.4</u>	<u>80.0</u>	<u>3,904.4</u>

- 4.25 The equivalent of US\$504,400 from the local-currency component would be used to pay for the services of the senior experts who would be hired for these purposes, as well as the cost of certain microcomputer equipment, software, back projectors, books, specialized journals and operations manuals of similar institutions. This material would remain the property of the ICYCC at the end of the consulting services.
- 4.26 The foreign exchange from the grant (US\$3.3 million) and the local currency remainder of US\$20,000 equivalent would be used to purchase the imported equipment needed to set up the emergency room and the computer center in building V.
- 4.27 The period for submittal of requests for disbursement out of the contribution is 18 months, and the period for the processing of disbursements 24 months. Both periods would be counted as from the date of the relevant agreement.

(b) FSO loan

- 4.28 This loan would be for US\$2.7 million, in local currency, from the Fund for Special Operations (FSO). Annex IV-3 presents the schedule of costs and financing to be included in the contract.
- 4.29 The equivalent of US\$2.6 million from the loan would be used for the purchase of domestic equipment, furnishings and materials needed to complete the equipment installation.
- 4.30 The terms and conditions of the proposed Bank loan would be as follows: the amortization term would be 20 years, including a two-year grace period; the interest rate would be 3% per annum on principal amounts outstanding; and the inspection and supervision charge would be 1% on the loan amount.

5. Local contribution

- 4.31 The local contribution needed for completing the project would come from the additional financing in an amount equivalent to US\$4,473,000 that has been made available by BANADE and from the contribution by the Fundación in the equivalent of US\$2,467,000,

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<sup>3/</sup>Includes US\$3.32 million for hospital equipment.

which includes the US\$1.7 million contribution from the Ministry of Health. The funds from BANADE would be used to finance the extension of the supervision contract (US\$890,000), the works already completed for the two ICYCC buildings (US\$1.74 million); and acquisition of a portion of the domestic equipment and furnishings (US\$1.8 million). The funds from the Fundación and the Ministry of Health would be used to finance the initial working capital (US\$2.5 million). Given the importance of the financial participation by the Ministry of Public Health and Social Action as a factor for completing the project's table of financing, it is recommended that the submittal of evidence that the necessary funds will be available for use in the project be established as a condition precedent to the first disbursement (see Proposed Resolution, FSO loan).

- 4.32 The initial working capital would be financed by the Fundación Favaloro. The timing of the contributions to be provided after the start of the Institute's operations are estimated in accordance with the following schedule:

	(US\$)
Trimester I	800,000
Trimester II	700,000
Trimester III	550,000
Trimester IV	400,000

E. Execution of the project

1. Present status

- 4.33 After the project was reprogrammed it was determined that the ICYCC would begin operations during the first half of 1992. This necessitates completing the purchase of equipment and the institutional-strengthening work provided for in the technical-assistance component, as explained in the following paragraphs.

(a) Civil works

- 4.34 One hundred per cent of the civil works in the project have been completed, including the physical facilities and equipment for the ground floor and the first and second stories of building B, for which financing was provided under Bank loan 125/TF-AR. Construction of both buildings is well advanced, and excellent materials have been used. The installations are consistent with all technical requirements and provide satisfactory access for maintenance and modifications.

(b) Procurement of equipment

- 4.35 Will be carried out in accordance with the Bank's normal procedures for purchases made by public-sector agencies and will be subject to prior submittal of price quotations received from each bidder.

(c) Institutional strengthening

- 4.36 As previously stated, this component would be financed with funds from the technical-cooperation grant, and all consultants would have to be hired within a period of 60 days following the date of the agreement. Each consultant will be required to present his or her work plan and timetable of activities to the Director of the ICYCC within 30 days following the date of his or her contract, and a copy of those documents is to be forwarded to the Bank. The length of the period of service of each consultant would be approximately 12 months from the effective date of the relevant contract, and the services are to be provided in accordance with the terms of reference included as an annex hereto, which shall also be included as an annex to the agreement to be entered into by the Fundación Favaloro with the Bank. The hiring of these consultants is a condition precedent to the first disbursement from the respective FSO loan.

2. Environmental impact assessment

- 4.37 The project was submitted to the Environmental Committee on November 5, 1990. As a result of the analysis made, it was classified in category 2. For further details see paragraph 5.10.

3. External auditing

- 4.38 For this new operation, it is recommended that the borrower be required to present its financial statements, audited by a firm of independent public accountants, during the life of the loan, and those of the project during its implementation (see Recommendations, FSO loan).

4. Progress reports

- 4.39 With a view to monitoring the execution of the project, it is recommended that a provision be included in the contract for the proposed loan requiring the borrower, through its executing unit, to submit to the Bank, within 30 days after the end of each calendar quarter, a progress report on implementation of the project. The rules that were approved by the Bank with respect to 125/TF-AR are to be followed in this regard.

5. Inspection and supervision

- 4.40 Inspection and supervision will be carried out by the Bank's field office in Argentina.

## V. JUSTIFICATION OF THE PROJECT

### A. Introduction

- 5.1 The project was examined at the time the Bank granted loan 125/TF-AR. Its characteristics remain unchanged, and the additional financing under consideration is intended to cover, primarily, the financial gap resulting from the fact that financing originally foreseen did not materialize and from the need to hire experts to provide support in getting services under way and strengthening the administrative, technical and financial capacity of the ICYCC.
- 5.2 At the date of this document, the ICYCC project is in its final stage of implementation. Total investment, in excess of US\$30 million, has been used to complete the civil works and to procure 63% of the equipment and furnishings. A further amount of US\$9.2 million is needed which could mean the difference between the investment remaining unproductive and the start up of operations. The consultants from the Operations Department and the Office of Organization and Management Services have stated in their report that additional financing from the Bank would ensure that the ICYCC has all the essential equipment required for regular operations, and it could hire a team of experts to prepare the preorganizational plans and to be present for the implementation of ICYCC's services and the commencement of operations within a relatively short time after the IDB financing is approved.
- 5.3 The project has been given priority by the Government of the Argentine Republic, which in 1985 declared it to be in the national interest. This priority was confirmed by the National Executive Branch on the occasion of the present request for additional financing, and also by the programming mission that visited Argentina in March 1991.

### B. Technical analysis

#### 1. Sizing

- 5.4 The sizing of the civil works had been fully established when the first application was presented to the Bank in 1986. Available information shows that the physical and operational planning of the ICYCC and the architectural plans were completed in 1987 by a professional architect and evaluated by a team of medical specialists. The experience of these specialists also contributed to the scaling of the medical and technical bid. The consultants from the Operations Department and the Office of Organization and Management Services who reviewed the criteria used as a basis for the medical and technical bid and corresponding sizing found it reasonable and meeting the minimum requirements of efficiency. Any undersizing, in their judgment, would jeopardize the technical

feasibility of integrating a range of subspecializations, maintaining the professional skills and a system of proper quality control stemming from medical insurance coverage and permitting teaching and clinical research activities in cardiology and cardiovascular surgery to be conducted.

- 5.5 Furthermore, their experience in an institute similar to the ICYCC in the Porto Alegre, Brazil, a city with a population of 1.2 million compared with 3.5 million in Buenos Aires and 11 million in Greater Buenos Aires, should be noted as well. The institute in Porto Alegre which is expanding its capacity from 120 to 240 beds confirmed their view that the occupancy level projected for the ICYCC is fairly reasonable. An additional factor which, they felt, could help in the case of the ICYCC was the use of the national nomenclature (Nomenclador Nacional) to collect payment for medical services provided to affiliates of the social works agencies, which are considered to represent 50% of the ICYCC's patients.

## 2. Research, training and service programs

- 5.6 The research, training, medical care and community-education programs are well designed and are responsive to the current morbidity and mortality profile of Argentina, where cardiovascular diseases are the leading cause of death (accounting for over 46% of all deaths) and are trending upward, with a relative increase of 8.4% between 1980 and 1985. An examination of the prevalence of these diseases among various age groups shows the importance of preventing and treating diseases of the cardiovascular system at every stage of life from birth to old age, as would be done at the ICYCC, beginning with the program of checkups for children entering the public education system of the city of Buenos Aires for the first time, continuing with the community-education programs being broadcast on national radio and TV, and including the medical-care services.
- 5.7 The ICYCC, as a project of the Fundación Favaloro, will enjoy the support of suitably-trained research and medical staff as needed to carry out the technical and scientific phases of the various programs to be assigned to it. Its teaching programs at the graduate level have been duly approved by both the Governing Council of the ICYCC and the Council of the School of Medicine of the University of Buenos Aires. The residents and interns will be professionals with prior experience (clinical and/or surgical). The rigorous application of standards of excellence with regard to research, training and medical and surgical care which have merited national and international recognition support a reasonable expectation that those standards will be maintained when the ICYCC commences operation.



### 3. Preadmission emergency system

- 5.8 This system is designed as a means of responding to high-risk cardiological cases, such as emergencies resulting from arterial wounds, obstruction of the respiratory tract, electrocution, asphyxia from immersion, etc., as well as cases of heart-disease patients affected, for example, by acute myocardial infarction, since it has been shown that in Argentina 50% of all deaths from cardiovascular disease are due to ischemic heart disease and at least 25% are sudden.
- 5.9 The geographic decentralization of the system, in accordance with which mobile coronary units are allocated to nine zones, would make it possible to provide service with the promptness demanded by a cardiological emergency. The boundaries of the zones were determined after consulting the Traffic Bureau of the Federal Police, taking into account, in addition to the physical coverage area of each unit, the density of traffic (high or low at the various times of day), and the distribution of the population of Buenos Aires. The reliability or quality of the system's service is assured by the caliber of medical and paramedical personnel assigned to it and by the array of equipment assigned to the system, which was determined and incorporated into the project as part of the equipment eligible for financing by the Bank. All the mobile units are interconnected with one another and with the ICYCC by means of radio equipment, which has also been included in the Bank's financing.

### 4. Control of infections

- 5.10 As explained in the Environmental Management Committee of the Bank, in addition to those aspects relating to the proper disposal of used supplies and surgical and laboratory wastes, the FF has paid particular attention to the problem of controlling inhospital infection. This is reflected below and in other aspects of the architectural plans for the medical-care building: (i) the clear definition of the areas for the circulation of people, and the lack of access, even by mechanical means, to the areas restricted to authorized personnel; (ii) the safeguards built into the air conditioning system, which was designed to operate at differential pressures to raise the degree of protection to incoming contaminants; and (iii) as a clear indication of acute concern in this regard, the technical improvement of the sterilization center, with the resulting isolation between contaminated and clean areas. Provision was also made for setting up an infection-control committee after the commencement of operations.

### C. Economic analysis

- 5.11 A regular economic analysis was not conducted primarily because the project is essentially the same as the one analyzed for loan 125/TF-AR and this operation of additional financing is an

extension of the previous loan. Moreover, the sizing of the project cannot be modified but seems to be reasonable as far the bidding is concerned, as explained above. It should also be noted that the project is in its final stages. The civil works have been fully completed and over 60% of the equipment procured, with sunken costs in excess of US\$30 million. This suggests that the economic return on the additional investment of under US\$10 million would be very high.

D. Low-income beneficiaries

- 5.12 Based on available information, it is estimated that 25% of the outpatients would be low-income beneficiaries. In terms of inpatient care, 10% of the patients would be low-income beneficiaries, 40% would have incomes above the low-income threshold, and the remaining 50% would be patients referred by social works agencies, whose income structure cannot be determined as yet. For the latter reason, it would not be possible to assign a total low-income percentage to the project.

E. Other benefits

- 5.13 It is important to note the contribution that the ICYCC would be making to the solution of the problem of emigration of professionals and technicians, since in addition to the graduate programs, it would provide professional specialization to physicians proposed by the public health system (municipal, provincial and federal) and, of no less importance, it would provide employment to more than 1,200 persons with professional training, as well as facilities for training, research and health education based on a high-level technological infrastructure unprecedented in Argentina.

F. Risks and safeguards

- 5.14 The principal risks of the operation are of an institutional and financial nature.

1. Institutional risks

- 5.15 The institutional risk that could adversely affect the outcome of the project has two basic aspects, both of which are described below. The first is associated with the ability of the Fundación to complete the organizational manuals and the systems for the medical, technical and administrative operations of the ICYCC. The second refers to the planning and execution of the necessary activities for starting up the operations of the Institute.
- 5.16 With respect to the medical, technical and administrative organization of the ICYCC, there are a number of studies, proposals and preliminary plans having to do with the future organization, medical-care services, teaching programs (medical residencies,

clinical cardiology) and exchanges with specialized institutions, as well as staffing, personnel estimates, maintenance programs (for buildings, equipment, installations, computer center), personnel and salary policies, etc., all of which constitute a good foundation. Nevertheless, additional efforts are required in order to work them out in greater detail and ensure compatibility in all aspects pertaining to this phase of the project, particularly if the intention of beginning operations in the first quarter of 1992 is taken into account.

- 5.17 It is also necessary to program, coordinate and implement all start-up activities for the ICYCC, including utility hook-ups (water, gas, electricity) for the dry run phase of all installations and equipment; and to select, train and hire personnel to transfer services from the Guemes Sanatorium to the ICYCC, etc. Consequently, it is considered essential to provide funding for the hiring of experts to help the Institute plan the administrative, economic, financial and control systems as envisaged in the institutional-strengthening component, to be financed out of nonreimbursable technical cooperation funds. This would facilitate the start of operations and the generation of revenues and would reduce the project's reliance on non-operational income and grants.

## 2. Financial risks

- 5.18 The analysis of the program, supports the conclusion that the source of financing for completion of the construction, equipping and start-up stage has sufficient financing at its disposal. The only requirement it is considered advisable to set up concerns the submittal of evidence with regard to the contribution by the Argentine Republic, through the Ministry of Health and Social Action, to cover the outlays for initial working capital. With respect to the financial situation expected to obtain during the operation of ICYCC, it is considered that the financial risk depends on the outcome of the efforts being made to secure funding to ensure continuity in the research, training, outpatient care, and health education activities.
- 5.19 In the absence of a demand study, it was necessary to focus the financial analysis on supply, taking into account how reasonable expectations were of the usefulness of the facilities compared with similar institutions in other countries. In this regard, the consultants from the Operations Department and the Office of Organization and Management Services are of the view that the volume of outside doctor's visits projected from the seventh year of operations of the ICYCC (81,000/year) is reasonable and realistic, taking into account such factors as: (i) cardiovascular disease is the principal cause of death in Argentina (46% of the total) and the trend is rising; (ii) the fact that in addition to the volume reported at the Guemes sanatorium (15,717 outpatient visits on average each year, making available 54 beds compared with

240 beds at the ICYCC, more outpatient visits would result from contractual arrangements that the FF has entered into with other private institutions (Sociedad Distribuidora de Diarios, Revistas y Afines) and institutions in the public sector to obtain their support for the project. These different commitments include an arrangement with the Municipality of the City of Buenos Aires which requires a complete radiological exam each year for about 22,000 children, who enter the public school system in its jurisdiction as well as care for all children with cardiopathy in the system; (iii) a number of the latest services in the country would be provided such as preadmission emergency treatment for high-risk cardiac patients; (iv) it would be a center for meetings with world experts in cardiology through programs that the FF would organize and has proposed to resume once the ICYCC become operational. This would certainly help to build the national and international prestige enjoyed by the team at the FF, and to confirm the reliability of the medical services provided by the ICYCC; and (v) the successful negotiation and signature of agreements for services and medical insurance with financial institutions, various associations, mutual-aid groups (social works agencies of the Municipality and the Province of Buenos Aires) to make these services accessible to the affiliates of these institutions. It is pertinent to note here that it can be reasonably expected that a number of these agreement will be signed shortly chiefly because of the participation of representatives of the public health sector (municipal, provincial, and federal levels) and of the social security system in its board of directors.

- 5.20 The primary assumptions for the financial projections are based on the foregoing. The critical assumptions underlying the projections are as follows: (a) as the patient-care structure, it was assumed that 10% of the patients would be private, 50% would be members of social works organizations, 30% would be members of a pre-payment system (principally for pre-hospital emergency care) and 10% would be low-income patients; (b) the project would commence operation in year one with utilization rates of approximately 63% of capacity for operating rooms and 58% for total beds; and (c) a utilization rate of 70% of capacity would be achieved by year seven.
- 5.21 Despite the fact that the degree of utilization parameters for the various services are reasonable from a hospital-administration point of view and that the financial projections indicate positive results, with profits from year one, materialization of these results depends on the negotiation and conclusion of agreements with a variety of social works agencies (the formalization of which, in many cases, depends in turn on bidding operations), as well as commercial medical-insurance agreements with financial entities (e.g. credit card companies, and various arrangements with associations and mutual-aid societies). The Institute has not as yet recruited staff for negotiations of this kind and therefore has no agreements of this kind at the present time.

- 5.22 Four provisions have been made to reduce this risk. First, to strengthen the administrative capacity of the ICYCC it is being recommended that, the consultants include an expert in financial administration and planning be hired to help the Institute draw-up and negotiate such agreements in keeping with the term of the ATN institutional-strengthening component being proposed. Second, it is further recommended that his or her recruitment and commencement of activities, as well as those of the experts on other institutional aspects, be made a condition precedent to the first disbursement from the prospective Bank loan (see Proposed Resolution for the FSO loan). Third, a recommendation is being made for the inclusion of a clause reflecting the obligation on the part of the FF, through the ICYCC, to finalize the agreements for services and medical insurance with financial institutions, associations, and mutual-aid groups to ensure that there are sufficient resources for the operation of the ICYCC, and to forward them to the Bank within six months of the date the loan contract is signed (see Recommendations). Fourth, \$3.8 million from the additional Bank financing would be made available on concessional terms as described above.

G. Recommendations

- 5.23 For the reasons outlined above, it is recommended that the additional financing be approved, and to this end the following normative documents are hereby submitted to the Board of Executive Directors for consideration:

- Appendix I Proposed Resolution for the FSO loan
- Appendix II Recommendations
- Appendix III The project (Annex A of the FSO loan contract)
- Appendix IV Proposed Resolution for technical cooperation
- Appendix V Proposed Resolution (Amendment to Resolution DE-31/87 - Loan 125/TF-AR)
- Appendix VI Loan 125/TF-AR. Amendments to Appendix III (Annex B of the loan contract) to the proposal for loan PR-1564 of February 24, 1987

INSTITUTIONAL STRENGTHENING  
ICYCC-FUNDACION FAVALORO PROJECT

Recommendation for institutional strengthening of the ICYCC by means of a nonreimbursable technical cooperation project under which four consultants will be hired. The terms of reference for the physician-hospital administrator, registered nurse, hospital administrator and economist are presented below:

CONSULTANT I: PHYSICIAN-HOSPITAL ADMINISTRATOR

Terms of reference

I. OBJECTIVES

(1) General

The physician-hospital administrator consultant will form part of the IDB-Fundación Favaloro consulting team in charge of providing medical, technical, administrative and financial advisory services. As such, he or she will be responsible for coordinating the work of the team and will endeavor to ensure compatibility among, and support and advise on the implementation of, all of the Institute's systems or services, as well as its respective plans, programs, projects and guidelines for start-up and subsequent evaluation and such adjustments as deemed necessary and appropriate, in an effort to achieve the medical-care standards of a specialized modern hospital, with a view to ensuring their technical and financial feasibility once the project becomes operative.

(2) Specific

The specific objectives for this consultant are:

To participate in the planning, study, evaluation, replanning or adjustments of projects, proposals or strategies for conducting the work of the Departments of Surgery and Cardiology, the mobile coronary units, the Hospital-infection Control Committee, and the Auxiliary, diagnostic and treatment services under the direction of physicians or paramedics.

To coordinate with the other consultants (Registered Nurse, Hospital Administrator and Economist) so as to ensure that all strategies for implementation of services and staff training are compatible with approved policies and guidelines and to cooperate

with them in the monitoring and performing periodic assessments of performance in the various sectors in conjunction with the system.

To participate in meetings at the request of the Director General and of heads of medical services.

To submit monthly and quarterly reports on the principal activities of the IDB-FF consulting team, including his or her own activity.

In conjunction with the other consultants, to submit the start-up subproject work plan, and activities timetable for approval by the Director of ICYCC 30 days after being recruited.

## II. DUTIES OF THE CONSULTANT

The basic duties of the consultant, without excluding such others as may be requested by the Office of the General Director of the ICYCC, are to:

Prepare regulations for the consultancy and submit them for approval.

Prepare and propose preliminary draft regulations of the ICYCC, including, inter alia, specific chapters for the clinical corps and for the teaching, research and health-education programs.

Supervise the work of the other consultants (registered nurse, hospital administrator, and economist) and of any other consultants who may be appointed, calling and coordinating periodic meetings.

Provide technical and administrative assistance to heads of medical units in charge of services or systems, including outpatient and inpatient statistics.

Schedule meetings and submit projects, reports and plans for the training of senior staff and advisors.

Submit monthly reports to the Director General of ICYCC on the activities of the consulting team, such reports to include the pertinent analyses, information on risks, and recommendations deemed appropriate and necessary for improving the medical, technical, administrative and financial performance of the ICYCC and the coverage provided to members of institutions and social-works agencies with which the FF plans to enter into agreements.

Assist in the preparation of the necessary instruments for the hiring of staff to provide outpatient and inpatient medical care.

Perform other duties as requested by the Director General or the IDB field office in Buenos Aires.

Analyze, issue opinions on, and/or supervise the work of the other consultants or propose other subjects or studies on medical, technical or administrative organization or restructuring.

Submit monthly reports to the Director General of the ICYCC and the IDB.

Submit the final report 30 days after completion of the consultancy.

### III. REQUIREMENTS FOR CONSULTANT I

A physician with at least one specialization in medicine, and with at least 10 years' experience in the management of a public health service and/or hospital, who has successfully completed a course in hospital administration requiring at least 800 hours per year of technical and practical instruction.

Familiarity with and management of the administrative function in public or private hospitals.

Proven ability to establish effective interdisciplinary or interprofessional and/or interdepartmental relations, including those involved in the leadership of work teams in the health or hospital care and/or teaching sector.

Ability to communicate orally or in writing in Spanish.

Continuous availability at ICYCC, Buenos Aires for a period of 12 months.

### IV. DURATION

The term of the consultancy would be 12 months.



CONSULTANT II: GRADUATE NURSE

Terms of reference

I. OBJECTIVES

(1) General

Consultant II will form part of the IDB-Fundación Favalaro consulting team in charge of providing medical, technical, administrative and financial advisory services. As such, he or she will play an active role in efforts to ensure compatibility among, and will support and advise on the implementation of, all services or systems of the Instituto de Cardiología y Cirugía Cardiovascular (ICYCC) in Buenos Aires, contributing to its relevant plans, programs, projects, agreements and guidelines for start-up and subsequent evaluation of and to such adjustments to as deemed necessary and appropriate in an effort to achieve the medical-care standards of a specialized modern hospital.

(2) Specific

The specific objectives for consultant II, Graduate Nurse, are to:

Submit the work plan and relevant timetable of activities for the nursing system of the ICYCC to the Physician-Consultancy Coordinator, 20 days after being hired.

Participate in the planning, study, evaluation and replanning of activities with a view to providing advice and support on the appropriate implementation of projects, proposals, programs and/or strategies aimed at integrating the nursing staff into the ICYCC's services and units.

Propose preliminary draft regulations for the nursing system, preliminary and final versions of the manual of nursing procedures, the manual of nursing routines and functions or duties for nursing staff at various levels.

Coordinate the nursing system plan with the Physician-Hospital Administrator and Economic Consultants and with ICYCC department heads to ensure compatibility with the guidelines, policies, goals and strategies approved for the implementation of ICYCC services.

Submit monthly reports, including suggestions and/or recommendations, on principal activities and problem situations.

Advise and participate in the training and integration of registered nurses hired for start-up.

## II. DUTIES OF CONSULTANT II

The specific duties of the nursing consultant will be the following and any others subsequently included in the work plan and/or regulations for the consultancy:

Develop and propose preliminary drafts for the preparation of the Nursing Staff Regulations and the Regulations of the Nursing Department of ICYCC.

Provide continuing advice and support to the Physician consultant, to senior staff of the nursing system and/or to operational units in which the graduate nurses operate.

Propose preliminary plans for the implementation of manuals of procedure for each of the nursing units of the ICYCC, the supply and sterilization center, the storeroom, and the Hospital-infections Control Committee, including guidelines, policies, specific standards, functions and duties of the staff, as well as adjustments to proposed procedures and routines.

Participate in seminars, interviews and meetings with heads of ICYCC departments and senior staff of the nursing system, providing support, advice and suggestions on adjustments to procedures in the nursing area.

Submit monthly reports, including information on irregularities found to exist and recommendations thereon, to the Physician Hospital Administrator Consultant and to the graduate nurse responsible for coordinating the nursing system.

Analyze and issue opinions on and/or propose alternative solutions to problem situations encountered in the course of the consultancy.

Maintain continuous contact with the consultants, with chiefs of departments headed by physicians, and with senior technical staff.

Submit proposed revisions to the final (1992-1993) version of each of the ICYCC manuals of procedure deemed appropriate for years 2 and 3.

Provide advisory services and/or cooperation at the request of the Physician-Hospital Administrator Consultant or the Director General of ICYCC on the program for integration and in-service training of nursing staff.

Submit a final report 30 days after completion of the consultancy.

III. REQUIREMENTS FOR CONSULTANT III

Consultant must be a registered nurse with a degree in administration as applied to nursing systems and/or in hospital administration or health-care administration.

Must have at least 10 years' experience in the management of a nursing department or service in a general hospital, preferably in a cardiology or heart surgery hospital.

Familiarity with and a proven record of teamwork with physicians and with senior staff of technical or medical departments conducive to the establishment of effective interdisciplinary or interdepartmental relations with senior staff of the nursing system and to the integration of efforts and avoidance of duplication.

Ability to communicate orally and in writing in Spanish.

Continuous dedication to the ICYCC for a 12-month period beginning at least 90 days after start-up.

IV. DURATION

The term of the consultancy would be 12 months.

CONSULTANT III: HOSPITAL ADMINISTRATOR

Terms of reference

I. OBJECTIVES

(1) General

The consultant will form part of the IDB-Fundación Favaloro consulting team in charge of providing medical, technical, administrative and financial advisory services. As such, he or she will play an active role in efforts to ensure compatibility among, and will support and advise on the implementation of, all services or systems of the Instituto de Cardiología y Cirugía Cardiovascular (ICYCC) in Buenos Aires, contributing to its relevant plans, programs, projects and guidelines for start-up and subsequent evaluation and to such adjustments as deemed necessary and appropriate in an effort to achieve the medical-care standards of a modern specialized hospital.

(2) Specific

The specific objectives for the Hospital Administrator consultant are to:

Submit the work plan and pertinent timetable of activities to the consulting team's Physician-Coordinator 20 days after his or her recruitment.

Participate in the planning, study, evaluation and evaluation activities of the consulting team with a view to advising and assisting it and the office of the Director General of the ICYCC in the proper implementation and conduct of projects, proposals or programs and/or strategies, particularly those concerned with systems for the administration of human resources, materials, finances, accounting and costs; and to ensuring compatibility with other ICYCC systems and services.

Participate in the subproject for start-up, staff training, and dry runs, including the continuing-evaluation process, proposing adjustments thereto.

Submit a preliminary and a final version of each ICYCC manual of procedures for the area of administration and finance, including accounting and average costs.

Submit monthly reports on principal activities, with suggestions or recommendations thereon, to the Physician Hospital Administrator consultant.

## II. DUTIES

The specific duties of the Hospital Administrator consultant will be the following and any others that may be included in the regulations of the consultancy:

Propose preliminary drafts and/or inputs for the Regulations of the ICYCC, the ICYCC staff rules, and the Regulations for the Consultancy.

Provide continuous advice and support to the Physician-Hospital Administrator, consultant to the Director General of ICYCC or his associate, and to senior and technical staff of systems in the area of administrative and financial support and internal control.

Prepare the preliminary version of manuals of procedure for the various systems in his or her field, including information on guidelines, policies, competence, structure, staff responsibilities, senior technicians, work procedures and relevant standards, instructions, timetables, and standard forms.

Analyze problem situations arising at the various phases of start-up, issue opinions thereon and/or propose alternative solutions thereto.

Promote evaluation and training meetings with senior staff of each of the systems concerned with the work plan, with a view to providing orientation and/or advice on adjustments and/or changes in procedures or flows to ensure optimal administrative and financial performance of the ICYCC.

Maintain continuous contact with the other consultants and with ICYCC department heads, specialists and technicians through seminars and meetings and the development of reports, and subprojects.

Submit the final version of the 1992-1993 manuals of procedures by the ninth month of the contract.

Advise on the implementation of systems for hospital accounting, inpatient statistics and monthly processing of average ICYCC direct and indirect costs.

Provide advice and/or cooperation at the request of the Director General of ICYCC, the Consultancy Coordinator and the consultants in the areas of nursing, economics and marketing.

Submit the final report 30 days after completion of the consultancy.

### III. SPECIFIC REQUIREMENTS FOR CONSULTANT III

A hospital administrator with a postsecondary degree in administration and/or economics and/or accounting, with a graduate degree in hospital administration requiring at least one year's theoretical and practical course work.

At least 10 years' experience in the management of a public or private hospital with more than 150 beds and/or of health-care services or systems.

Experience in the start-up of hospital-administration and control services, either as an advisor or supervisor or as coordinator of a group of systems or services.

Familiarity with and a proven record of effective relations with medical or technical directors, hospital administrators and senior staff of technical and administrative hospital services.

Ability to communicate orally or in writing in Spanish.

### IV. DURATION

The term of the consultancy would be 12 months.

CONSULTANT IV: ECONOMIST (CONSULTANT IN HEALTH-SERVICES MARKETING)

Terms of reference

I. OBJECTIVES

(1) General

The consultant will form part of the IDB-Fundación Favaloro consulting team in charge of providing medical, technical, administrative and financial advisory services. As such he or she will play an active role in efforts to ensure compatibility among, and will support and advise on the implementation of, all services or systems of the Institute of Cardiology and Cardiovascular Surgery (ICYCC) in Buenos Aires, and in the implementation of all plans, programs, projects agreements and guidelines for start-up of the ICYCC, with emphasis on ensuring the necessary arrangements, contracts and agreements to provide medical care at the outpatient, inpatient and prehospital (mobile coronary units) levels above and beyond the existing demand in Buenos Aires and other provinces, with a view to ensuring sufficient revenue to cover ICYCC's expenditures and debt service as from the time the project begins to operate.

(2) Specific

The specific objectives for the Health-services Marketing Consultant-Economist are to:

Participate in the planning, study, evaluation and replanning activities with a view to advising and assisting in the execution of projects, proposals or programs and/or strategies concerned with bringing about a substantial increase in the negotiation of agreements and contracts to provide inpatient, outpatient and prehospital care to members of entities and social works agencies interested in obtaining ICYCC services.

Propose an ICYCC coronary units marketing project designed to develop public awareness of the availability of the new services and endeavor to assess the amount of unsatisfied or repressed demand in the area of cardiology and cardiovascular surgery with a view to channeling new funding into the project.

Coordinate with the medical, registered nursing and hospital-administrator consultants and with heads of departments and other units, as deemed necessary, efforts to target a better-defined clientele for the ICYCC so as to ensure sufficient revenues for its economic and financial performance as from year 1.

Contribute to the maintenance of a "positive" image of the ICYCC and its mobile coronary units on the streets of central Buenos Aires.

II. SPECIFIC DUTIES OF CONSULTANT IV: ECONOMIST

Submit the work program and the activities timetable to the Coordinator of the Consultancy 20 days after being recruited.

Submit monthly reports on his or her activities to consultant I: Physician-Hospital Administrator.

Attend meetings of the consulting team, department heads, and senior ICYCC management to prepare proposals and enter into agreements for services and prepayment arrangements for the operation of the Institute.

Maintain interagency liaison, meetings and relations with a view to adjusting targets pertaining to coverage and/or emergency and/or outpatient and inpatient care to a client population targeted by the ICYCC.

Advise and assist the senior staff of the system that processes bills or accounts for contracts and for services rendered, monitoring and enforcing the prices adopted by the Governing Council of the ICYCC and compliance with agreements entered into.

Propose and design brochures, fliers and other publicity and marketing materials.

Propose an opinion survey to gauge public expectations with respect to the ICYCC and its performance on at least three occasions.

Conduct frequent reconciliations of the economic and institutional demand targets with the potential supply of services being careful not to exclude from the obligations any social aspects included in the medical-care targets.

III. SPECIFIC REQUIREMENTS FOR CONSULTANT IV: ECONOMIST

Graduate degree (Licenciatura) in economic sciences, with experience in the supervision of health, hospital, or social services.

A concentration in business administration, marketing, or advertising.



Demonstrated ability to deal with public, public or private entities, private sanatoriums or clinics, and prepayment health insurance companies.

Experience in promoting or making contractual arrangements for publicity campaigns.

Ability to communicate verbally or in writing in Spanish, including participation in meetings.

The consultant must live in Buenos Aires and devote himself continuously to his work.

#### IV. DURATION

The term of the consultancy will be 12 months.

ITEMIZED BUDGET  
(in US\$ equivalent)

	IDB	Local	Total
2.0 <u>Individual consultants</u>	<u>367,000</u>	<u>72,000</u>	<u>439,000</u>
2.1 Remuneration			
2.1.1. Fees			
Long-term consultants			
(a) Coordinator (12 ms x \$5,500)	66,000		66,000
(b) Local coordinator (12 ms x \$2,500)		30,000	30,000
(b) Hospital administrator (12 ms x \$5,000)	60,000		60,000
(c) Registered nurse (12 ms x \$5,000)	60,000		60,000
(d) Economist (12 ms x \$5,000)	60,000		60,000
(e) Local specialists (12 ms x 2 spec. x \$1,750)		42,000	42,000
Short-term consultants			
(a) Local specialists (10 cons. x 3 ms x \$1,500)	45,000		45,000
2.3 Recruitment and repatriation			
2.3.1 Air fares (2 tickets Country of origin/ Buenos A./Country of origin)	4,000		4,000
2.4 Other payments and insurance			
2.4.2 International travel adjustment (12 ms x \$100 x 30 ds x 2 cons.)	72,000		72,000
5. <u>Other staff</u>	<u>38,000</u>		<u>38,000</u>
5.1 Travel on official business			
5.1.1.1 Air fares (7 tickets x \$1,500)	10,000		10,000
5.1.1.2 Per diem (7 x \$100 x 40 ds)	28,000		28,000

6.	<u>General support</u>	<u>3,394,400</u>		<u>3,394,400</u>
6.3	Hospital equipment	3,320,000		3,320,000
6.4	Supplies	10,000		10,000
6.4.1	Teaching materials	25,000		25,000
6.5	Computer services	25,000		25,000
6.6	Support staff (3 x 12 ms x \$400)	14,400		14,400
98.	<u>Contingencies</u>	<u>25,000</u>	<u>8,000</u>	<u>33,000</u>
	TOTAL US\$	<u>3,824,400</u>	<u>80,000</u>	<u>3,904,400</u>

# Institute of Cardiology and Cardiovascular Surgery (ICYCC)

COST AND FINANCING (in US\$ thousands)						
EXPENDITURE CATEGORIES	BANK		LOCAL COUNTERPART			TOTAL
	125/TF	Proposed /SF-	BANADE	Supplier Credits	FUNDACION 1/	
Operating and Administration	-	-	890.0	-	387.0	1,277.0
Costs	2,301.0	2,609.0	15,099.0	7,633.0	2,981.0	30,623.0
Buildings and construction	2,301.0	-	12,517.0	-	2,660.0	17,478.0
Equipment and furnishings	-	2,609.0	2,582.0	7,633.0	321.0	13,145.0
Current expenses	-	-	-	-	2,387.0	2,387.0
Initial working capital	-	-	-	-	2,387.0	2,387.0
Operating expenses	99.0	91.0	-	3,324.0	970.0	4,484.0
Interest	75.0	64.0	-	3,324.0	970.0	4,433.0
Inspection and supervision	24.0	27.0	-	-	-	51.0
TOTAL	2,400.0	2,700.0	15,989.0	10,957.0	6,725.0	38,771.0

1/ Includes US\$6.0 million from the contribution authorized by the Ministerio de Salud y Acción Social.

PROPOSED RESOLUTION<sup>1</sup>

ARGENTINA. LOAN /SF-AR TO THE FUNDACION FAVALORO  
PARA LA DOCENCIA E INVESTIGACION CIENTIFICA  
(Additional financing for the Instituto de  
Cardiología y Cirugía Cardiovascular Project)

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with the Fundación Favaloro para la Docencia e Investigación Científica, of Buenos Aires, Argentina, as Borrower, and with the Nación Argentina, as Guarantor, for the purpose of granting additional financing to the former to cooperate in the execution of the Instituto de Cardiología y Cirugía Cardiovascular Project, hereinafter called "the Project". This financing shall be subject substantially to the following conditions:

1. Amount and currencies: Up to the equivalent of US\$2,700,000 in australs which are part of the Fund for Special Operations of the Bank, to cover local expenses and for such other purposes as may be specified in the loan contract. Payments of amortization and interest shall be made in australs.
2. Source of funds: The Fund for Special Operations.
3. Guarantee: Joint and several guarantee of the Nación Argentina.
4. Amortization: The Borrower shall amortize the loan in a period of 20 years from the date of the loan contract, by means of semiannual, consecutive and, insofar as possible, equal installments. The first installment shall be paid on the first due date for the payment of interest after 6 months have elapsed since the date scheduled for the last disbursement of the Financing.

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<sup>1</sup> The provisions contained in this Appendix and in Appendices II, III, IV, V and VI shall only be final when the Board of Executive Directors has approved the loan proposal.

5. Interest: 3% per annum, payable semiannually on the outstanding balances. The first payment shall be made six months from the date of the loan contract. At the request of the Borrower, the loan resources may be used to pay interest on the loan during the disbursement period thereof.
6. Disbursement: The term for disbursement of the Financing shall expire 2 years from the effective date of the loan contract.
7. Special conditions:
  - (a) The Project shall be executed and the resources of the loan shall be utilized in their entirety by the Borrower, through the Instituto de Cardiología y Cirugía Cardiovascular, hereinafter referred to as the "ICYCC". If modifications in the legal provisions or the basic regulations concerning the Borrower or the ICYCC are approved which, in the opinion of the Bank, may substantially affect the Project, the Bank shall have the right to require the Borrower, the ICYCC and the Guarantor to provide explanatory and detailed information in order to determine whether such modification or modifications have or may have an adverse impact on the execution of the Project. Only after hearing the information and clarifications requested may the Bank take such measures as it deems appropriate, in accordance with provisions to be set forth in the loan contract and in the guarantee contract.
  - (b) The resources of the loan, along with those of loan 125/TF-AR, shall be used to participate in the execution of a Project with an estimated total cost of the equivalent of US\$38,771,000. Consequently, the loan and guarantee contracts shall contain appropriate provisions to ensure that such resources, in addition to those of the two loans, as may be necessary for the complete execution of the Project shall be duly provided, in accordance with a plan of investments satisfactory to the Bank and in an amount estimated at the equivalent of US\$33,671,000, which includes two loans from the Banco Nacional de Desarrollo, "BANADE", of Argentina for an amount equivalent to US\$15,989,000, and a loan from Siemens, S.A. of Germany, for the equivalent of US\$10,957,000."
  - (c) Prior to the first disbursement of the Financing, the Borrower, through the ICYCC, shall submit to the satisfaction of the Bank evidence that:

- (i) The experts provided for in the Nonreimbursable Technical Cooperation Program referred to in Appendix IV of this document have been hired and both they and the personnel hired with local counterpart resources have begun their work;
  - (ii) The undisbursed balance of the contribution to the Borrower from the Ministerio de Salud y Acción Social of the Nación Argentina, authorized in 1980, is available;
  - (iii) The Borrower and the ICYCC have signed an agreement which establishes: (a) the procedure for the transfer to the latter of the resources of the Financing and of the Technical Cooperation financing referred to in Appendix IV, in the same terms and conditions agreed upon by the Bank and the Borrower; and (b) their mutual rights and obligations with respect to the execution of the Project, in accordance with the provisions of the Loan Contract and the Technical Cooperation Agreement.
- (d) The Bank shall establish such inspection procedures as it deems necessary to assure the satisfactory execution of the Project, and the Borrower, the ICYCC and the Guarantor shall extend all the cooperation which is required for the most effective accomplishment of this purpose. From the amount of the financing the sum of US\$27,000 in australs shall be credited to the income accounts of the Bank to meet expenses of general inspection and supervision.

RECOMMENDATIONS

- A. It is recommended that the following conditions, to be fulfilled to the satisfaction of the Bank, be included in the loan contract and the guarantee contract, as the case may be, in addition to those set forth in the proposed resolution:
1. Prior to each acquisition of goods financed wholly or in part with resources of the Financing, the Borrower, through the ICYCC, shall submit to the Bank for its approval the specifications and price quotes received from the various offerors. Subject to prior authorization by the Bank, the ICYCC may acquire said goods by direct contracting provided that: a) only such equipment is compatible with existing equipment; or b) sole suppliers exist.
  2. Within 30 days following the conclusion of each calendar semester, or within some other period agreed upon by the parties, the Borrower, through the ICYCC, shall submit to the Bank reports on the progress made in the execution of the Project in relation to the investments made, in accordance with standards approved by the Bank.
  3. The Borrower and the ICYCC shall undertake to: (a) ensure that the works and equipment included in the Project will be adequately maintained in accordance with generally accepted technical standards; and (b) present to the Bank, during the 10 years following the completion of the first of the works of the Project and within the first quarter of each calendar year, the annual maintenance plan for the Project equipment and works for that year and a report on their state of repair, in accordance with Section V of Appendix III. Should it be found, from inspections conducted by the Bank or reports received by it, that the maintenance is below the agreed-upon levels, the Borrower and the ICYCC shall take appropriate measures to have the deficiencies fully corrected.
  4. Within 6 months from the date of the loan contract, the Borrower, through the ICYCC, shall submit to the Bank's satisfaction evidence that medical service agreements or insurance agreements have been signed with financial institutions, associations and mutual benefits funds, which allow for obtaining the necessary resources for the operation of the ICYCC.



5. The financial statements of the Project, during its execution and for 5 years following the date of the final disbursement of the Financing, and the financial statements of the Borrower, during the life of the loan contract, shall be submitted annually to the Bank, audited by an independent firm of public accountants acceptable to the Bank.
- B. Simultaneously with the signing of the loan contract, the Borrower shall sign with the Bank an amendatory contract for Loan 125/TF-AR to introduce the changes referred to in Appendices V and VI of this document, and a technical cooperation agreement based on the provisions of Appendix IV.
- C. The loan contract shall include an annex substantially similar in content to Appendix III of this document ("The Project").

## THE PROJECT

(Annex A of the Loan Contract)

### I. Objective

- 1.01 The purpose of the Project is to support the development of basic experimental research, teaching, health education, hospital care and clinical research to be carried out in Argentina by the ICYCC.

### II. Description

- 2.01 The Project consists of the construction of works and the acquisition of equipment to facilitate the functional integration of the buildings comprising the physical plant of the ICYCC.
- 2.02 The Project components are as follows: (a) The execution of civil works in two of the ICYCC's buildings. The first, referred to as Building "B", with an approximate area of 17,400 square meters, composed of three lower levels, a ground floor, nine upper floors and a flat roof, to be used for treatment, medical residency programs and clinical research. The second, referred to as Building "V", with an area of approximately 1,800 meters, composed of three lower levels, a ground floor, four upper floors and a flat roof, to be used for general administration and for the computer center; (b) The acquisition and installation of equipment for the fifteen clinics and the various treatment areas in Building "B"; the pre-hospitalization emergency room, and the administrative offices and computer center in Building "V" for the commencement of operations; (c) The hiring of experts to support the organizational planning tasks and the establishment of operating guidelines, as well as the programming and execution of start-up activities for the ICYCC; and (d) The acquisition of elements required for the operation of the facilities, and for medical and laboratory inputs, as well as the selection, training and hiring of personnel to start up the treatment, teaching and administrative facilities.

### III. Project cost and financing plan

- 3.01 The estimated cost of the Project is the equivalent of US\$38,771,000, distributed as follows by investment category and source of financing:

1/ Includes US\$6.0 million from the contribution authorized by the Ministerio de Salud y Acción Social.

IV. Procurement

- 4.01 All of the Project goods financed with resources of the Loan shall originate in the member countries of the Bank.
- 4.02 When sources of credit are used other than the resources of Financing and the local counterpart, the Borrower may arrive at an agreement with the lender on the procurement procedures to be followed. Nevertheless, at the request of the Bank, the Borrower shall demonstrate that both the purchase price agreed or paid for the goods and the financial terms applicable to the credit are reasonable. The Borrower shall also demonstrate that the quality of the goods fulfills the technical requirements of the Project.

V. Maintenance

- 5.01 The purpose of the maintenance will be to conserve the Project works and equipment in the same operating condition as upon their completion or installation, in accordance with a standard compatible with the services they shall provide.
- 5.02 The first annual maintenance plan shall correspond to the fiscal year following the commencement of operations of the first of the Project works.
- 5.03 The annual maintenance plan shall include as a minimum: (i) an up-to-date list of the equipment acquired and its operating status; (ii) the maintenance expenses incurred the previous year and the amount of funds to be allocated for such purpose in the budget for the following year; (iii) the costs of contracts with suppliers or firms specializing in the maintenance of the most sophisticated equipment; and (iv) the ICYCC personnel in charge of maintenance, with their respective titles.

PROPOSED RESOLUTION

ARGENTINA. NONREIMBURSABLE TECHNICAL COOPERATION PROGRAM  
(SOCIAL PROGRESS TRUST FUND)  
INSTITUTO DE CARDIOLOGIA Y CIRUGIA CARDIOVASCULAR

The Board of Executive Directors

RESOLVES:

1. That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such agreements as may be necessary and to adopt such other measures as may be pertinent for the execution of the technical cooperation program referred to in Document PR- , with the Fundación Favaloro para la Docencia e Investigación Científica, for institutional strengthening and the provision of equipment for the Instituto de Cardiología y Cirugía Cardiovascular.
2. That up to the equivalent of US\$3,824,400 is authorized for the purposes of this resolution, chargeable to the resources of the Social Progress Trust Fund.
3. That the above-mentioned sum be provided on a nonreimbursable basis, and that of said sum the equivalent of US\$524,400 is to be disbursed entirely in australs and the sum of US\$3,300,000 is to be disbursed entirely in United States of America dollars. The corresponding technical cooperation agreement shall be signed simultaneously with loan contract /SF-AR.

## PROPOSED RESOLUTION

ARGENTINA. LOAN 125/TF-AR TO THE FUNDACION FAVALORO  
(Instituto de Cardiología y Cirugía Cardiovascular Project)  
(Amendment of Resolution DE-31/87)

The Board of Executive Directors

## RESOLVES:

To amend Clauses 7(a) and 7(b) of Resolution DE-31/87, approved on March 11, 1987, in the following manner:

"7. Special conditions:

- (a) The Project shall be executed and the resources of the loan shall be utilized in their entirety by the Borrower, through the Instituto de Cardiología y Cirugía Cardiovascular, hereinafter referred to as the "ICYCC". If modifications in the legal provisions or the basic regulations concerning the Borrower or the ICYCC are approved which, in the opinion of the Administrator, may substantially affect the Project, the Administrator shall have the right to require the Borrower, the ICYCC and the Guarantor to provide explanatory and detailed information in order to determine whether such modification or modifications have or may have an adverse impact on the execution of the Project. Only after hearing the information and clarifications requested may the Administrator take such measures as it deems appropriate, in accordance with provisions to be set forth in the loan contract and in the guarantee contract.
- (b) The resources of the loan, along with those of Loan /SF-AR, shall be used to participate in the execution of a Project with an estimated total cost of the equivalent of US\$38,771,000. Consequently, the loan and guarantee contracts shall contain appropriate provisions to ensure that such resources, in addition to those of the two loans, as may be necessary for the complete execution of the Project shall be duly provided, in accordance with a plan of investments satisfactory to the Administrator and in an amount estimated at the equivalent of US\$33,671,000, which includes two loans from the Banco Nacional de Desarrollo, "BANADE", of Argentina for an amount equivalent to US\$15,989,000 and a loan from Siemens, S.A. of Germany, for the equivalent of US\$10,957,000."

ARGENTINA

INSTITUTO DE CARDIOLOGIA Y CIRUGIA CARDIOVASCULAR PROJECT

(Loan 125/TF-AR)

Amendments to Appendix III (Annex B to the Loan Contract) of Loan Proposal PR-1564 of February 24, 1987:

Existing text

"I. Objectives

- 1.01 The purposes of the project are: (a) to improve the health conditions of the population, located primarily in Buenos Aires and neighboring areas, through the construction and equipping of the Instituto de Cardiología y Cirugía Cardiovascular (ICYCC); and (b) to improve the physical and technical conditions for research and teaching at the Fundación Favaloro."

Existing text

"II. Description

- 2.01 The project consists of the construction and equipping of the ICYCC, which will occupy a physical space of 15,388.71 square meters, composed of three lower levels, a ground floor and ten upper floors, used for all kinds of treatment, research, teaching and specialization in the field of cardiology and cardiovascular surgery. The financial participation by the Administrator will be

Proposed text

"I. Objective

- 1.01 The purpose of the project is to support the development of basic experimental research, teaching, health education, hospital care and clinical research to be carried out in Argentina by ICYCC."

Proposed text

"II. Description

- 2.01 The project consists of the construction of works and the acquisition of equipment to facilitate the functional integration of the buildings comprising the physical plant of the ICYCC.
- 2.02 The project components are as follows: (a) The execution of civil works in two of the ICYCC's buildings. The first, referred to as Building

used primarily to set up consultation, diagnosis and laboratory services for treating heart diseases, through the construction of a unit to occupy an area of 3,561 square meters located on the ground floor and the first two floors of the building of the ICYCC and the procurement and installation of electromechanical equipment.

"B", with an approximate area of 17,400 square meters, composed of three lower levels, a ground floor, nine upper floors and a flat roof, to be used for treatment, medical residency programs and clinical research. The second, referred to as Building "V", with an area of approximately 1,800 meters, composed of three lower levels, a ground floor, four upper floors and a flat roof, to be used for general administration and for the computer center; (b) The acquisition and installation of equipment for the fifteen clinics and the various treatment areas in Building "B", the pre-hospitalization emergency room, and the administrative offices and computer center in Building "V" for the commencement of operations; (c) The hiring of experts to support the organizational planning tasks and establishment of operating guidelines, as well as the programming and execution of start-up activities for the ICYCC; and (d) The acquisition of elements required for the operation of the facilities, and for medical and laboratory inputs, as well as the selection, training and hiring of personnel to start up the treatment, teaching and administrative facilities."



Existing text

III. Project Cost and Financing

3.01 The total cost of the project is estimated at the equivalent of US\$24,200,000 and would be financed approximately as follows:

(in thousands of US\$)

	<u>BANK</u>	<u>FUNDACION FAVALORO</u>	<u>BANADE</u>	<u>SIEMENS</u>	<u>TOTAL</u>
1. <u>Engineering and Administration</u>	-	308	-	-	308
1.1 Administration and supervision	-	308	-	-	308
	<u>2,211</u>	-	<u>7,484</u>	-	<u>9,695</u>
2. <u>Works and construction</u>	2,213	-	7,484	-	9,697
2.1 Construction	-	450	1,350	7,200	9,000
3. <u>Equipment and furnishings</u>	-	450	1,350	-	1,800
3.1 Domestic	-	-	-	7,200	7,200
3.2 Imported	-	-	-	-	-
	-	<u>2,005</u>	<u>1,516</u>	<u>450</u>	<u>3,971</u>
4. <u>Unassigned</u>	-	515	1,516	450	2,481
4.1 Contingencies	-	1,490	-	-	1,490
4.2 Escalation	-	-	-	-	-
	<u>189</u>	<u>1,037</u>	-	-	<u>1,226</u>
5. <u>Financing costs</u>	165	-	-	-	165
5.1 Bank interest	-	1,037	-	-	1,037
5.2 Other interest	24	-	-	-	24
5.3 FIV	-	-	-	-	-
<b>TOTAL:</b>	<b>2,400</b>	<b>3,800</b>	<b>10,350</b>	<b>7,650</b>	<b>24,200</b>
<b>PERCENTAGE:</b>	<b>9.9</b>	<b>15.7</b>	<b>42.8</b>	<b>31.6</b>	<b>100.0</b>

