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United Nations Industrial Development Organization

Distr.
LIMITED

ID/WG.146/83
19 June 1973

ORIGINAL: ENGLISH

Third Interregional Symposium
on the Iron and Steel Industry

Brasilia, Brazil, 14 - 21 October 1973

Agenda item 3

METHODS OF EXTERNAL FINANCING FOR THE IRON AND STEEL INDUSTRY IN DEVELOPING COUNTRIES[1/]

by

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id.73-4515

Summary

In order to carry out the expansion programme of the iron and steel sector, designed to increase its installed capacity of approximately six million tons per year in 1971 and 25 million tons per year in 1980, the Government of Brazil took steps to set up an appropriate financing scheme for the iron and steel industry; this is the subject of the present paper.

The section on "General Aspects" describes the various sources of financing for industrial projects, classified as follows:

(a) International Agencies - IBRD (World Bank) and IFC (International Finance Corporation);

(b) Regional Agencies, numbering 13 (the BID is especially important in Latin America);

(c) Financing sources in industrialized countries. Description of methods of operation of these agencies, with special reference to those in the USA, Japan, France, and Federal Republic of Germany.

Details are also given of the differences between "Buyer's Credits" and "Supplier's Credits".

The section on "The Brazilian Model" describes the process followed to secure the necessary resources for the implementation of the expansion programme of the Brazilian iron and steel industry, relating to the three plants manufacturing flat products. Four alternatives are examined, as well as the reasons for the Government's choice of independent credits, implying the division of the total volume of equipment to be acquired into two parts - one financed by IBRD/BID and the other financed with loans from financing agencies in manufacturing countries through "stand-by credits", known as "parallel financing". This method is called the "Brazilian Model".

As regards the procedure for international bids, the Brazilian Model adopted a flexible system, allowing the greatest possible benefit to be derived from price competition but, however, avoiding losses in terms of technical specifications.

1. Introduction

The iron and steel industry in a developing country is a basic element for the building up of its industrial sector and, consequently, of capital importance in the acceleration of its progress.

Studies endorsing this thesis have recently been carried out in Brazil and are being submitted to this Symposium. The establishment of iron and steel complexes requires, however, not only large amounts of capital but also the support of an industry manufacturing highly specialized steel equipment which is aware of the latest improvements in order to guarantee to the plant an operation under the best conditions of profitability and capacity for international competition.

The majority of developing countries lack capital as well as manufacturing capacity of steel equipment and specialized manpower for construction and installation; for this reason the "turn-key" system is very often applied; this consists in buying an iron and steel plant from a foreign company which takes charge of all the installation stages.

This method makes only a very small contribution towards the creation of local technology. Sometimes it does not offer the opportunity to choose more modern technologies nor does it permit a comparison of prices on the international market.

For these reasons Brazil decided to create its own model, which would not only be of great interest to the iron and steel enterprises in obtaining the best technology at the lowest price, but would also permit Brazilian manufacturers to participate in the manufacturing of equipment and to acquire know-how by association with the leading international suppliers, together with the adoption of competitive prices with accepted margins of protection in world terms. It was within these premises that the Brazilian model of financing for the iron and steel industry was created. In the following chapters we will try to describe this model briefly.

2. <u>General Aspects</u>

External sources of credit aim at providing a financing mechanism for suppliers in producing countries if industrial products and technical specialized services, by means of which purchasing enterprises, especially those of the developing countries, can secure goods and services, on medium- and long-term credits and, moreover, at a better rate of interest than the conditions usually offered by commercial banks.

These sources for industrial projects can be classified as: (a) International Agencies, (b) Regional Agencies, and (c) Sources in the industrialized countries.

(a) <u>International Agencies</u>
For industrial projects, the following are available:

(i) The International Bank for Reconstruction and Development - IBRD (World Bank) - which is an intergovernmental institution, operating since 1946 as a UN specialized agency. Its membership includes all the countries participating in the International Monetary Fund.

This agency grants loans for projects of high development priority and which promote economic growth, international trade and investment, and improvements in living standards.

(ii) The International Finance Corporation - IFC - which is an entity affiliated to the IBRD, whose purpose is to promote growth of the private sector in the developing countries by operating as an international investment bank.

The IFC grants loans individually or in association with private investors. It can participate directly in the capital of the enterprises or underwrite operations, in this way endeavouring to make available in all sectors opportunities for investment in the projects which it has approved.

The participation of IFC is determined not only by the soundness and profitability of the project but also by the economic priority it has in the country concerned.

(b) Regional Agencies

There are at present 13 Regional Agencies:

- Inter-American Development Bank - IDB
- ADELA Investment Company S/A
- Asian Development Bank
- Banco Centroamericano de Integración Economica (Central American Bank for Economic Integration).
- Caribbean Development Bank
- East African Development Bank
- European Development Fund (Fonds Européen de Développement - FED)
- European Investment Bank - EIB (Banque Européenne d'Investissement)
- Fonds d'Entr'aide et de Garantie des Emprunts du Conseil de l'Entente
- Kuwait Fund for Arab Economic Development
- Private Investment Company for Asia - PICA
- Société Internationale Financière pour les Investissements et le Développement en Afrique - SIDFA.

These agencies, as their names indicate, grant loans only to countries which are members of their regional agreements, and are for the private sector, the public sector, or both.

(c) Sources in the industrialized countries

The number of financing agencies and the forms of operation adopted varies and is dependent on each country's financial policy.

However, in order to promote mutual protection and to avoid competition, which could cause problems to them, the main industrialized countries met in Berne, Switzerland, and signed an agreement known as the "Berne Union", under which, having regard to the individual operating characteristics of the different national financing agencies, the basic criteria for offers of finance by the signatories were defined.

These basic criteria cover the following main points:

- Percentage of financing in relation to total value of the order
- Period of loan requirement
- Period of loan amortization
- Extension of financing to cover buyer's local expenses

The agencies in the different countries can be classified into two basic types:

(a) Official agencies and (b) Private agencies.

Official agencies are those in which governments participate with shares in the enterprise, and consequently credits for their financing do not need to be guaranteed by their governments.

Private agencies utilise government credit guarantees in their own country in respect of the loans they offer; they also require the normal guarantees from buyers, as with official agencies.

Among the government guarantee organisations are ECGD in the UK, COFACE in France, and HERMES in the Federal Republic of Germany.

These credit guarantee organisations, like any insurance enterprise, apply an interest rate, which varies according to the risk - i.e. according to the type of loan and the country requesting the financing.

It should be stressed that several official entities, such as EXIMBANK in the U.S.A. and Japan, usually grant loans not individually but through a consortium, with private commercial banks.

In both cases mentioned above, these agencies contribute with 50% of the loan amount, leaving the other 50% for the private commercial banks. In this case, the EXIMBANK of the U.S.A. usually covers that part of the loan awarded by the private banks with a credit guarantee.

Under the French financing system, it is always advisable for the buyer for a consortium to be set up between the private French banks and the Banque Française du Commerce Extérieur, which is an official entity and associates itself with the financing of a project and improves the general credit conditions, specially those related to terms of the amortisation and deferment.

German loans have special characteristics when compared with those of other countries, since the Federal Republic of Germany has an official body set up for supplying long-term export credits, known as the Kredit-anstalt für Wiederaufbau. This organization, however, grants financing only for equipment already fabricated and accepted by the buyer. For this reason, German financing is given in two clearly differentiated stages:

1. Financing during the manufacturing period plus an additional 6 months, considered as the minimum period needed for acceptance by the purchaser.
2. Financing after the first loan described above.

In the first stage the manufacturer himself or a commercial bank connected with him has to make the offer for financing, which, for the protection of the buyer, will also include a second loan offer which can replace the credit from the Kreditanstalt (second stage) in the event of this Bank not agreeing to finance the equipment.

Normally, Kreditanstalt does not make any difficulties about awarding the loan so long as the equipment is accepted by the buyer. As the official acceptance is made only at the moment the purchaser accepts the equipment, the purchaser does not run the risk of non-implementation of the credit operation; for this reason the manufacturer or his associated commercial bank is normally requested to make an offer for overall financing under similar conditions to those offered by the Kreditanstalt, with an undertaking not to refuse the transfer of his financing contract to the Kreditanstalt, since the financial conditions are at least the same as those guaranteed initially.

Finally, still on the subject of the operations of financing agencies in different countries, two types of credit that can be granted may be defined:

(i) Buyer's credits
(ii) Supplier's credits

There is no connexion between these two types of credit and the classification of financing agencies into official and private.

The great majority of countries offer both types of credit, and a choice can be made between buyer's or supplier's credit.

In Italy the existence of official specialized finance agencies for each sector (which means that each manufacturer can associate himself with only one official financing body, although several exist in the country) compels the buyer to obtain supplier's credit as well. This method is advisable when the purchases are limited to a few items, when it is not necessary for the buyer to negotiate with the financing agency but only with the seller.

In case of an operation involving a great number of items, buyer's credit is recommended, since it results in the simplification of negotiations and a rapid administrative process. It is understood that, as the credit system offers the buyer overall financing for all purchases to be made in the country, all the credit terms and conditions that are later applied in the individual contracts for parcelled purchases (as in the case of supplier's credit) will be established when the financing contract is signed.

3. The Brazilian Model

In 1970, Brasil planned the expansion of its iron and steel flat products sector in order to increase the installed annual capacity of 3,7 millions to 7,2 million tons. The programme provided, in this phase of expansion, for the installation of blast furnaces with a final annual capacity of 10,9 million.

These expansion projects, which were included in the National Iron and Steel Programme (Programa Siderúrgica Nacional), would be implemented by three iron and steel enterprises in which the Federal State is the major shareholder: Companhia Siderúrgica Nacional (CSN), Usinas Siderúrgicas de Minas Gerais (USIMINAS), and Companhia Siderúrgica Paulista (COSIPA).

Purchases of equipment costing US$ 617 million, together with local expenses for construction and installation amounting to US$ 711 millions, were planned.

Faced with the problem of covering these large sums, the Brazilian Government endeavoured to obtain a form of financing which would:

(a) Provide for international competition in equipment purchase, in order to obtain the best equipment at the lowest price in the shortest time.

(b) Make it possible to obtain external resources for financing the manufacture of equipment in Brazil.

(c) Put at the country's disposal the largest possible credit for equipment purchase.

As described in the previous section, there are several external agencies for financing the purchase of goods and service; for this reason a flexible financing mechanism began to be developed, which would correspond to the predetermined basic premises mentioned above. The study of the various alternatives was initiated; details were as follows:

(A) The first hypothesis considered, based on well tried experience in Brasil, was the choice of a supplier as the financing agent for a single country or a small group of countries. This alternative was shown to be incompatible with the declared aims, as it would exclude public international competition.

In fact, the credits offered in this case are available only for purchases in a single country or a small group of countries, which excludes alternative choices from the technical point of view or in terms of price; it also prevents the participation of local industries in the transactions.

It must be underlined that very often these enterprises propose equity participation in the social capital of the iron and steel enterprise, or even offer up to 15% of the credit value for financing local costs. Although these conditions may seem to be attractive at first sight, they imply the risk that these participations will result in an increase in equipment prices which, in the absence of international competition, cannot be properly evaluated.

(B) The second possibility would be financing through an international agency (World Bank) or a regional agency (Interamerican Development Bank).

These banks have the advantage of offering buyer's credits for the purchase of equipment in the member states or eligible countries. In the case of the two agencies mentioned, 100 countries are involved, including the great majority of the countries that supply equipment. Under the IBRD and BID practice, only international competition is required; however there is no restriction on financing manufacture locally, if the member states are technically qualified and can offer competitive prices.

Although this alternative would be in accordance with part of the declared aims, it would, however, not solve problems relating to the amount of the resources available. As is well known, both agencies do not have the flexibility to allow them to finance 100% or even 90% (as would be the case with the agencies indicated in alternative A) of the total value of the equipment included in the programme, estimated at 617 million dollars.

The maximum that could be obtained from these agencies was a participation of about 50% obtained by adding together the credits from the World Bank and from the BID in a proportion of 60/40, i.e. US$ 192 million for IBRD and US$ 128 million for BID.

(C) Owing to the impossibility of establishing a financing scheme which would meet the predetermined objectives by making use of one or other alternatives (A) and (B) a combination of both alternatives into a joint financing (IBRD/BID on the one hand and credit agencies of the main supplier countries on the other) was envisaged.

In this joint financing, the international and regional agencies would take the lead; the purchasing standards would have to be established in accordance with the rules of the two organizations, and so public international competition would be guaranteed. In order to bid, the credit agencies in the main supplier countries would have to modify their systems of bilateral financing, and convert them into stand-by credits, which would be offered without any limiting conditions, to be utilized only if the country's manufacturers should win the competition.

This scheme would in some ways meet the predetermined objectives, because it would make international public bids obligatory and would permit the use of the IBRD/BID loan to finance the manufacture in Brasil of 50% of the equipment.

However, it was not possible to realise this model because some of the credit agencies in the supplier countries were not prepared to participate in a financial scheme which would be under IBRD and BID leadership and whi would have to conform with the rules of these institutions.

In view of this deadlock, alternative (D) was adopted, since it was in every way the most suitable scheme.

(D) As already explained, the difficulties that emerged were related not to the credits to be made available by IBRD/BID or by any of the financing agencies, but to the method of combining the two systems into joint financing.

For this reason, the independent credit system was adopted; this consists in dividing the total volume of equipment to be purchased into two clearly defined packages. One would be financed with IBRD/BID resources and the other with loans from the resources supplied by finance organizations in the manufacturing countries through the stand-by credits. This is known as "parallel financing".

The terms and conditions of each financing operation were established between the Brazilian Government and the financing agencies by means of a "Memorandum of Understanding", signed by the Ministry of Industry and Commerce through the Executive Secretary of CONSIDER and by a director of the financing agency.

This new alternative has the advantage of making it possible to finance completely those purchases to be manufactured in Brazil by separating of the equipment into two groups:

(I) Those for which the national industry was technically qualified and for which it could offer competitive prices on the international scale or could compete favourably in manufacturing of a large proportion of an order remained with the IBRD/BID group.

(II) Those for which Brazilian manufacturers, owing to the manufacturing time available, to the sophistication, and/or to the specialized nature of the equipment, were less qualified, less capable of winning the order in the face of international competition, or less able to participate substantially in the manufacture of an order, have been left in the parallel financing package.

This emphasises the fact that the philosophy adopted was not one of examining the participation of the national industry only from the point of view of the technical capacity of Brazilian manufacturers who could in fact fabricate almost all the equipment involved. Owing to the magnitude of the plan, account was also taken of the interest of the iron and steel industry, which needed to obtain the best equipment at the lowest price and in the shortest possible period. It must be stressed that the benefits accruing to Brazilian manufacturers cannot be measured exclusively in terms of securing new orders but also in terms of the transfer of know-how. Indeed, as the competition is basically international, many foreign manufacturers tried to associate themselves with national enterprises in order to obtain price advantages, thus giving a great impulse to Brazilian technology.

This concern for the Brazilian manufacturers allowed the iron and steel enterprises to formulate an agreement with joint organisations representing the national steelplant manufacturing industry. This agreement was indispensable in view of Brazilian legislation which, through the Similarities Law, ensures that Brazilian manufacturers may participate in international competition, even if these are realised with credit financing of the parallel financing type. The legislation also requires that an additional duty of 15% must be added to the c.i.f. price of foreign equipment (margin of preference in favour of the national manufacturer); it requires also a comparison of this new price with the price of the f.o.b. proposal relating to the Brazilian products. If these requirements relating to participation of the national industry in the competition are not observed and the preferential duties are not applied, the purchase of equipment through parallel financing is considered to be a normal import of equipment and consequently is subject, inter alia, to the payment of normal customs duties.

Though the agreement signed between the joint organisations and the iron and steel enterprises, with the participation of the Ministry of Industry and Commerce through CONSIDER and CACEX (Carteira de Comércio Exterior), an Organisation of the Bank of Brazil, it was established that national industrialists would participate in the parallel financing competition only as sub-contractors of enterprises from countries in which the financial agencies would agree to extend the Brazilian manufacturers' credit.

It should also be noted that some financing organizations in the industrialized countries offer, within the parallel financing, credits to the Brazilian manufacturers in order to make it possible for them to be associated with the manufacture of equipment. In this case, even without applying the preference margin, the prices for some components fabricated in Brazil are so competitive that foreign industrialists, in order to win the competition, prefer to finance national manufacturers.

Obviously this type of offer is not general practice and such participation has not yet reached more than 20% of any order.

Alternative (D) was adopted and is the Brasilian model. However, today, it may be modified when new projects are undertaken, since a credit system has been established in Brazil for Brazilian manufacturers on the same lines as parallel financing, which will be implemented through the National Bank for Economic Development (BNDE - Banco Nacional de Desenvolvimento Economico).

With this added dimension, another financing programme can be applied, since such schemes always need to be updated. However, it should not be overlooked that the results obtained up to the present with the Brasilian model are most encouraging.

As Table I shows, the Brasilian model applied to international competition brought excellent results in terms of prices, better equipment from the technical point of view, and very short manufacturing times for the iron and steel production sectors. This table gives the value of the successful bid as 100%, the average of the proposals, and the value of higher bids. The total value of the successful bids shown in the table is Cr$ 878,9 million which, when compared with the total amount of medium-priced bids of Cr$ 1.009,6 million and with the total of value of the higher bids of Cr$ 1.399,6 million, shows that the total of the successful bids was 12.4% lower than that of the medium-priced bids and 59% lower than that of the higher bids.

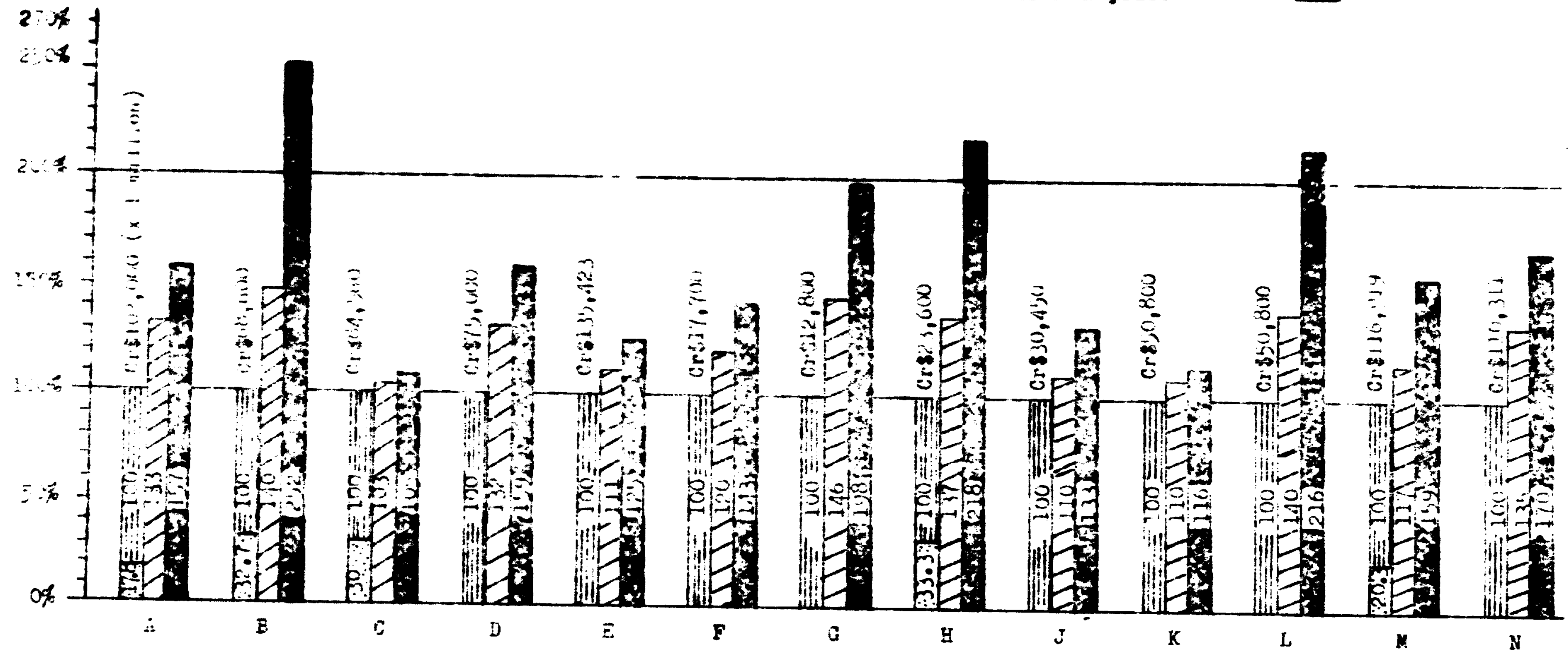
Finally, one of the important aspects of the financing mechanism should not be forgotten; this relates to international competitions, and more especially to the bidding procedure.

For this the Brasilian model adopted a flexible system, which made it possible to draw the maximum benefit from the price competition without any reduction in the technical standards.

TABLE I

A Blast furnace, CSN
B Blast furnace, USIMINAS
C Blast furnace, COSIPA
D Coke plant, CSN
E Coke plant, COSIPA
F Blowers, USIMINAS
G LD Converters, CSN
H Boilers, USIMINAS
J Gas-cleaning system, CSN
K Continuous casting, CSN
L Metallic constructions, CSN
M Melting shop, USIMINAS
N Continuous casting, USIMINAS

National participation
Sale price
Average price
Maximum price



In carrying out this project, the following criteria were adopted:

1. Wide invitation to tender through publication of notices and sending of circulars to embassies, inviting the iron and steel equipment manufacturers to apply. These notices were published not only in Brazilian newspapers, but also in the press in New York, London, Paris, Rome, Berlin, and Tokyo.

2. A selection of competitors was made from the firms that applied, and two optional procedures were adopted:

(a) System of pre-selection, by means of which, based on the technical specifications of each bid, the companies that could meet the basic technical conditions and having experience and financial capacity, were qualified.

(b) System of post-selection, in which the procedure used is to accept the bids without initial selection, considering only whether bidders tendering the lowest prices have technical capacity, experience, and financial capacity. This system is used only when a small number of enterprises apply for the competition.

3. Attached to the invitation letters, specifications and drawings were sent in the fullest possible detail, but without linking the specifications to a single manufacturer. Minimal technical standards were required but the bidders were given considerable freedom, including the suggestion of alternatives. The proposals were received in two envelopes, one containing the technical proposal and the other the price bid, with an interval between the two to permit the technical specifications to be made comparable. For this purpose, the bidders submitted a third envelope, containing the variations in price relating to the costs submitted previously in the price envelope.

4. The price comparison is made in two basic forms:

(a) For the parallel financing packages, in which the Brazilian manufacturers did not participate, the proposals are selected not only by price but also by the financial conditions using the net present value calculation method, utilizing a discount of 10%. In this way, the total present values of the following items are calculated according to their time distribution:

(1) Down payment

(2) Amortization

(3) Interest

(4) Commitment fee, guarantee fee, and other charges

(b) For IBRD/BID packages, in which Brazilian manufacturers participated, the following method was adopted, after receipt of the third envelope described in the last item:

I. A manufacturer of equipment is considered to be Brazilian if he manufactures more than 50% of its value in Brazil;

II. A preference margin of 15% is awarded to the Brazilian manufacturers;

III. Components totally manufactured abroad and only assembled at site, no matter what the percentage of their value in the total calculation, are considered to be foreign equipment;

IV. The final comparison is made in cruzeiros (the Brazilian currency) and the bidder presenting the lowest price is declared to be successful.

5. Conclusion

In conclusion it is appropriate to stress the following aspects of the Brazilian model:

(a) The participation of the national industry is possible in conformity with the high specification standards required by the iron and steel programme, irrespective of the price level, since the purchases are made by means of a public international competition.

(b) The securing of stand-by credits in the nine countries that made up the parallel financing ensured international competition in the purchase of equipment.

(c) The good results obtained through the effective participation of high-level experts of IBRD and BID in all the phases of the iron and steel development programme lead to the conclusion that in any model selected priority should be given to co-operation from these banks.

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