Project Financing Applied to the Ok Tedi Mine
A Government Perspective

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This case-study of the financing of the Ok Tedi project illustrates the nature of project financing and outlines the arrangements made in the case of this project; it also demonstrates that the limitation of financial exposure is an important goal for Governments involved in developing the resources sector. The account includes a chronological description of the process by which the sponsors prepared for the financing of the project and the lenders became involved in it. The type of security and loan documentation required for such financing is described, together with broad analysis of their content and the manner in which the various risks involved in the development are apportioned among the sponsors and lenders. The ability to apportion and limit financial liability is an important development for the owners of capital and resources.

Cet article présente une étude spécifique du financement du projet Ok Tedi afin d'illustrer la nature du financement de projets, de décrire les arrangements entrepris dans le cas de ce projet et de faire ressortir que l'un des principaux buts des gouvernements qui favorisent la mise en valeur des ressources de leurs pays consiste à restreindre leurs engagements financiers. Cet exposé comprend une description chronologique de la méthode adoptée par les initiateurs du projet pour son financement et de la manière dont les organismes de prêt s'y sont trouvés associés. L'article décrit et analyse le type de garanties et les formalités nécessaires à un tel financement ainsi que 1a manière dont les différents risques sont distribués entre promoteurs et prêteurs. Il démontre que l'art de partager et de limiter les engagements financiers représente un fait nouveau important pour les détenteurs de capitaux et de ressources.

1. INTRODUCTION

This paper provides a chronological analysis of the process by which the Ok Tedi gold-copper -project was financed, and comments upon the framework and content of the many agreements which link the entire financing deal together. A chronological format has been chosen in order to provide the reader with an overall perspective on the issues that arise and the sequence of events that occur in project financing.

The discovery of the Ok Tedi by Kennecott Copper Corporation in 1968 led to negotiations between it and the independent State of Papua New Guinea, hereafter called the State. These broke down in 1975. Negotiations then immediately began with an Australian company, Broken Hill Proprietary Ltd. (BHP), leading to the enactment of the Mining (Ok Tedi Agreement) Act 1976, (hereinafter referred to as the Principal Agreement). This agreement was conditional upon BHP forming a consortium to carry out a feasibility study during the following three years. A consortium of BHP, Amoco Minerals Company (a subsidiary of the Standard Oil Company of Indiana), and a West German group of companies was successfully formed and, on the basis of a feasibility study, proposals for development of the Ok Tedi deposits were presented to Government in November 1979. The sequence of events and decisions required by the Principal Agreement are summarized in Table I.

TABLE I
Sequence of events required by Principal Agreement

Time Period	*Process*
1976 to 1979	Feasibility study and presentation of proposals by consortium
December 1979 to February 1980	Consideration of proposals and their approval by the Government.
October 1980	Submission of financing and marketing strategy.
October 1980 to January 1981	Negotiation and approval of such strategies by Government
December 1980	State elects to take a 20% equity.
February 1981	Nomination of OTML as project company
August 1981	Initial grants of land
November 1981 to July 1984	Financing and construction of project.

TABLE II Production of plant and project cost		
	Production Plan	*Project cost (million US$)*
Stage I (1984-86)	15-20 tons gold produced per year 22 500 tons of gold ore mined per day	702
Stage II (1986-89)	15-20 tons gold produced per year 22 500 tons of copper and ore mined per day	410
Stage III (1990-on)	45 000 tons of copper and gold ore mined per day	139

Three months after the submission of the proposals for development (and following detailed and arduous negotiations), the Government issued an Approval of Proposals for the development of Ok Tedi in three stages. The approved production plan and cost of stage are set out in Table II. Both the State and the consortium began to address the financing issue during the approval of proposals negotiations in February 1980. The consortium retained the services of the Bank of America to advise it on the likely availability of finance and the issues that would impact on it. The bank's work was the basis of the project’s financing strategy which was to be submitted to the state for approval by 30 0ctober 1980. At the same time, the State engaged the financial services of N. M. Rothschild and Sons Ltd. To assist it to evaluate the consortium's proposals for development, with particular emphasis on the project's financing. The sequence of the financing process is summarized in Table III.

2. DEVELOPMENTS PRIOR TO FINANCING ARRANGEMENTS

2.1 BACKGROUND ON THE CONCEPT OF PROJECT FINANCING

Before discussing the developments outlined in Table II it is useful to define the concept of project financing :

“. . the expression ... cover(s) those transactions which involve the provision of non-equity funds for the development of mining and energy projects on the basis that, relying on the financier's assessment of the mining, technical, commercial and financial viability of the economic unit which constitutes the project, the financier is willing to look initially to the cash flow, if necessary, assets of the project for his timely repayment” (Ladbury, 1981a).

Adamson (1979) cites three main reasons for choosing project financing. First, the project’s developers desire to match the cash flows required for and generated by the project with loan draw downs and repayments so that it is “self financing”. This allows the sponsors of a large project to protect their own credit standing without being unduly affected by the financial standing of
the other sponsors or the project. Secondly, project financing allows sponsors to achieve off-balance-sheet financing, that is, it does not show as a direct liability on the balance sheet. This protects corporate gearings and other commercial ratings. Thirdly, project financing allows sponsors to transfer some of the project risks, especially the political risk, onto the lenders.

With respect to risk exposure, it is worth noting that in a study of 29 project financings conducted by Chemical Bank, 82% were found to have experienced problems either during construction or operation. For instance, 71% had cost overruns, 59% experienced completion delays, and 35% had lower than anticipated cash flows (Castle, 1975 p. 16). It follows that all parties in a project financing are concerned about limiting the risks to which they are exposed. When assessing risks, bankers usually approach the problem by identifying a number of specific risks which they then classify as either acceptable, (in their terms 'bankable), or those which they require the project or project sponsors to assume. Such risks include: completion risk, political risk, reserve and production risk and market risk. It is usual for the project to accept completion risk and for the bankers to accept at least some political risk, while the acceptance of the others varies according to the type of project.

TABLE III **Sequence of Ok Tedi financing process**	
Time Period	*Process*
February 1980	Negotiation and settlement of State's limited loan support obligations for Stage I
March 1980	Decision by project's Finance Committec to use export credit financing.
March 1980 to October 1980	Negotiation of shareholder agreement among sponsors.
October 1980	Submission of financing strategy by sponsors to State. Submission of financial brochure to potential lenders.
November 1980	Verbal presentations to export credit agencies and invitations for a lead bank.
January 1981	Negotiation and approval of financing strategy (including limitation of State's loan support obligations for Stages II and III. Lead bank selected.
February 1981 to Match 1981	Sponsors agree on financing terms to bc offered to lenders.
May 1981	General financial terms submitted to lenders.
May 1981 to January 1982	Negotiation of security and loan documentation.
February 1982	Loans executed and drawdown procedures commence.

Before proceeding, there is one more term with which the reader should be familiar. I any discussion of project financing, the term 'non-recourse' and 'limited-recourse' will be encountered. These refer to the extent to which the lenders can have recourse to the sponsors if the project meets financial difficulties. Although a sponsor's objective in project financing is to achieve non-recourse financing, such financing is rare as the project must be extremely attractive in all respects to achieve this. The typical case of project financing is that of a limited recourse financing where the sponsors undertake to the lenders that they will complete the construction of the project and achieve a certain rate of production. At that point the completion guarantee usually terminates and the lenders must rely on the project itself to satisfy the loan repayments. This type of financing should also be distinguished from what might be called "full-recourse" financing, where the lenders can have resort to the sponsors during the entire life of the financing. This situation might be expected where the financing is on concessional terms such as at a less-than-market interest rate.

2.2 FIRST FINANCING ISSUES

It was during the negotiations leading to the approval of proposals that the financing of the project became an issue between the State and the consortium. The first question was wether the consortium's proposals made optimal use of the gold ore. Behre Dolbear, a mining engineering firm appointed as the State's technical consultants, advised that the gold ore cut-off grade should be lowered to enable the processing of additional gold ore.

The issue made the State aware of the dual impact of the financing process on its bargaining ability. On the one hand, the State found that one of the formidable arguments again changing the proposals for development was threat of losing the engineering endorsement of the construction firm Bechtel which had prepared the proposals for the consortium. The financing of the project could not proceed without their endorsement that the project was technically feasible. The delays would be costly and woul defer revenue flows to the State if the State was to reject the proposals until the additional work was done. The issue was resolved by the amendment of the principal agreement to require the consortium to carry out a work programme to assess the feasibility of the optimisation that the State required (Mining Agreement, 1980).

Another aspect of the financing process which came to the State's attention had a positive effect on its bargaining position. As much as the project needed an engineering endorsement for the purposes of financing, the consortium needed the State's approval for all aspects of the project's development before any financiers would lend. The strength of this potential sanction became fully apparent as the project slowly assembled all its various approvals from the government for submission to and approval by the financiers prior to the first draw down of loans.

The second question was the issue of the extent of loan support or financial guarantees to be provided by the State to the project. On the assumption that the State would elect to exercise the option, contained in the principal agreement (Mining Act, 1976, clause 11), to take a 20% share in the project company, the State would be required to provide not only its share of equity capital but also its share of loan guarantees or such other loan support as the financing package would require. Following a study by Rothschilds of the debt-servicing capacity of Papua New Guinea and the effect of accepting loan support contingent liabilities, the State decided that it should attempt to avoid accepting such obligations. Its strategy was to bargain for such an exemption in return for other concessions which the consortium wanted. It should be noted that this financial risk issue is often overlooked when the ideological attractions of equity participation are being considered.

The deal that was struck with the consortium had three parts (Mining Agreement, 1980 Note 9, Clause 5). First, on the basis that the State was providing a loan to the project of up to A$50 million for the construction of an access road from the Fly River to the project, it was agreed that the State would not be required to provide any loan support for the first US$200 million (escalated to US$280 million) of borrowings by the project. Secondly, borrowings above that amount up to the level of initially committed finance (anticipated to be US$650 million) was to be provided proportionately by all shareholders, with a maximum level of State participation set at US$42 million (to be escalated). Thirdly, loan support for financial overruns above the initially committed finance was, unless the State elected to participate, to be provided by the corporate shareholders with the project company paying them an annual 5% guarantee fee. Such arrangements allowed the State to limit its risk exposure and those became the starting point for later discussions of loan security both among the Project’s shareholders and with the lenders.

2. 3 DEVELOPMENTS IN 1980

During the 12 month period prior to the nomination of Ok Tedi Mining Limited (OTML) as the project company in February 1981, the project's financing was the responsibility of a Finance Committee composed of representatives of the consortium and the State. After an initial survey of the financial market by the Bank of America, the decision of the Finance Committee was to proceed with a plan to utilise export credit financing to the maximum extent.
As export credits are available at less-than-market interest rates, they represent an attractive form of financing providing that the goods which best suit the project are available in the countries offering such financing. However, it should be noted that more competitive prices in countries where export credits are not available can often offset the initial interest rate advantage.

Although in the Ok Tedi case competitive bidding has led to less use of export credit finance than was originally anticipated, the Finance Committee in 1980 had the entire procurement of goods for the project categorised into those countries from which they might be obtained. This work provided the basis for approaches to the export credit institutions of Australia, Austria, Canada, Japan, United Kingdom, France and the USA.

At the same time that the Finance Committee was meeting, a group of the sponsors’ legal and financial personnel were discussing the structure of a shareholder's agreement. Although such an agreement is quite normal, these negotiations assumed increasing importance due to the financial obligations involved and the complex nature of security undertakings. It was at this stage that the German group, being the smallest member of the group of sponsors, raised the issue of financial exposure.

The private sponsors reached an agreement that above a certain level of financial overruns for Stage I, a sponsor could elect not to proceed and to be correspondingly diluted. Other provisions of the shareholders agreement dealt with the creation of the project company, the obligation to provide finance in accordance with the financing plan, the guarantees by the corporate sponsor's parent companies, the occasions when shareholder approval of changes to the project was required, and the manner in which financial defaults by sponsors would be handled.

In the latter months of 1980, the formal submission of the consortium's financing and marketing strategies set the scene for the next negotiation between the State and the consortium. The marketing strategy outlined the broad marketing prospects for the project, noting that it was not necessary to enter into long-term contracts for the sale of gold bullion produced during Stage I and that it was too early to enter into sales contracts for the copper to be produced from Stages II and III. The development of the project by stages varied with the usual requirement that sales contracts be concluded prior to the arrangement of financing in order to provide security to the lenders. The only agreement which existed in relation to the marketing was a provision requested by the German group in the original Consortium Agreement whereby they were given an option (subject to normal transfer pricing safeguards) to purchase up to 50% of all products produced by the mine.

Initial objections by the State to the proposed marketing strategies led to the formulation of a more precise financing strategy and the resolution of several ancillary issues. The real gain for the State, however, was that its financial obligations were limited not only for Stage I but for Stages II and III as well. Accordingly, it was agreed to limit the State's liability to contribute equity with the provision that the state's share would be diluted without penalty (Ok Tedi Second Supplemental Agreement, Clause J). in addition, the Stage II loan support obligation of the State was limited, if it so elected, to the then estimated support requirement, with the corporate sponsors being required to contribute any overrun support in return for a 2.5% guarantee fee paid by the Ok Tedi Mining Ltd. The outcome of these negotiations meant that the State's total financial obligations for financing the project were limited to those set out in Table IV.

3. THE SECURITY DOCUMENTS

3.1 DELINEATION OF THE LENDERS

1981 represented the start of a new era in Ok Tedi financing in that the major negotiations between all the sponsors were completed. The focus of negotiations was now between the sponsors and their new project company OTML on the one hand and the various potential lenders to the project on the other. The first significant contact with lenders occurred in late 1980 after the circulation to them of the project's financial brochure-. This document consisted of three volumes. The first provided a financial summary of the project and included two computer financial models of the project under differing assumptions. The second consisted of copies of project documents such as the principal agreement, together with annual reports of and statistics on the corporate sponsors. And the third outlined the project's benefits to and impact on the Papua New Guinean economy.

TABLE IV
Financial obligations of State and private sponsors
(reflecting State's limited obligations)
(all figures in US$ million)

Project cost (assuming 70:30 debt : equity)	*Support for loan finance*		*Equity*	
	Private sponsors	*State*	*Private sponsors*	*State*
Stage I				
up to 400	280	-	96	24 (a)
400-700	168	42	72	18
700-928	160	-	58/65	3/10 (b)
over 928	State has option to participate or not in loan support; if it docs not participate 5% guarantee fee is paid by OTML to the Private sponsor guarantors.			
Stage II				
Up to 493/ 528(c)	296	74 (d)	97/132	25/32 (e)
Over this figure	State has option to participate or not in loan support; if it does not participate 2 ½ percent guarantee fee is paid by OTML to the Private sponsor guarantors.			
Stage III	Private sponsors and State contribute in proportion to shareholding			

Source : Report to the State by N. M. Rothschild and Sons, Lt .

(a) Some $19 million of this amount will be by way of equity credits.
(b) The State can decline to contribute equity above $45 million but is diluted accordingly.
(c) Figure is $493 million on basis of 75:25 debt; equity ratio allowed by the second supplemental agreement or $528 million if lenders insist on 70:30.
(d) This assumes that State bas met full equity calls in Stage I and has not been diluted; if it has been diluted these figures will reflect the new shareholding percentages.
(e) State can decline to contribute equity above $26 million (either in form of new funds or capitalisation of retained earnings), but is diluted accordingly.

Owing to the Finance Committee's decision to utilise export credits, contacts were made with both lenders that were in the export credit group and with lenders that were in the commercial banking group. This approach proved extremely useful at a later stage of the negotiations, when the Export Finance and Insurance Corporation of Australia, being the largest export credit lender, co-ordinated the negotiation with all export credit agencies. The main commercial lending contact was initiated when bids were invited from several large commercial banks for a so-called "lead bank". This bank would be responsible for forming and co-ordinating a syndicate of approximately 15 banks which would each lend an amount to the project under the umbrella of one syndicate loan agreement between the project company and the lead bank. The Australian Citibank subsidiary, Citicorp, became the lead bank.

The first discussions with the export credit lenders occurred when a group of sponsor representatives made a tour of such institutions in order to obtain an outline of the terms such lenders would offer (including the security they would require). From these discussions it became apparent to the sponsors that each of the major export credit agencies were in contact with each other upon the terms that they were offering and thus there was little opportunity for the project to bargain between the lenders.

It was about this time that the possibility of a third type of major lender to the project began to be discussed. by the sponsors. The German sponsors proposed that a large borrowing should be made from the Kreditanstalt für Wiederaufbau (KfW). The German sponsors had come to an arrangement with the German government whereby if the German sponsors provided loan support for the KfW loan, the German government, in order to assist its own corporations in securing long-term supplies of raw materials, would provide a proportion of the loan support to the KfW loan in place of the German sponsors, on payment of a guarantee fee by such sponsors.

From the project's point of view the potential disadvantage of such a loan was that the project might be required to accept onerous terms and conditions which did not compete with those obtainable elsewhere. In addition, the other shareholders were concerned that the KfW arrangement would split the responsibility of the shareholders for loan support in a potentially uneven manner. Nevertheless, the American and the Australian sponsors were prepared to accept the arrangement provided that the terms were acceptable, while the State actually saw an advantage for itself in the deal. It was aware that the Second Lomé Convention of 1979 allowed the development bank of the European Community, called the European Investment Bank (EIB), to make low-interest risk capital loans for the purpose of equity investment by certain developing countries in the Asia, Pacific and Caribbean regions. In the current circumstances, if the EIB was to make such a loan to the State then the EIB must also be able to make a substantial commercial loan to the project. Consequently, it was arranged that the EIB would be a part of the KfW loan syndicate, that KfW would in fact lend to the project and that the EIB would make a concessional loan to the State. After taking into account the equity credits the State obtained under the principal agreement in recognition of bonds issued to the Kennecott Copper Corporation for exploration expenditures before Kennecott withdrew from the project, obtaining the EIB loan meant that the State had to contribute very little cash to OTML to purchase its equity share in Stage I of the project.

3.2 THE SECURITY PACKAGE TAKES SHAPE

Deed of charge

During the first half of 1981, with the various proposed loans beginning to take shape as letters of commitment to lend were exchanged between OTML and the lenders, work also began to devise the form and content of the loan documentation, especially that of the loan security package. OTML engaged both an Australian and an American legal firm to advise it an the sponsors nominated some of their representatives from the Finance Committee to form a negotiating team. The team's first task was to circulate to lenders a paper entitled 'general financing terms' which included the passages:

“... The borrower and its shareholders believe strongly that the financings must be done on a coordinated and consistent basis. The overall structure of the entire financing must permit both the various loans for Stage 1 as well as the financing required for Stages Il and 111. To the greatest extent possible terms of each loan agreement covering common issues must be identical so that the borrower is not subject to inconsistent or overlapping requirements. . . . Also because of the need to achieve consistency, the borrower has assumed responsibility for drafting the Deed of Charge and shareholder undertakings referred to herein, realizing of course that each lender must be satisfied with the final document before proceeding to make its loan”.

The first part of the loan security was to be a General Deed of Charge which would create a fixed and floating charge over the great majority of the property and other assets of 0l'ML. A floating charge may be defined in these terms:

"A floating charge is shifting in its nature and is not initially attracted to any specific property. It hovers over and floats with the category of property which it is intended to affect until some event occurs or some act is done which causes it to settle and fasten on specific property within its reach . . ." (Ford. 1974).

The Deed of Charge was to be executed between OTML and a representative of the lenders. It was always assumed that the representative would be the lead bank of the main commercial syndicate. Hence the Australian Citibank subsidiary, Citicorp, became the Representative and the other lenders became parties to the General Deed of Charge by executing Supplemental Deeds. Needless less to say, the General Deed of charge is a complex document. The object of the deed is, in the event of OTML's default, to put all its assets into a common pool which is available for the equal and proportionate benefit of all lenders. In addition, there are provisions to ensure that a minority of lenders cannot unilaterally declare a default and 'collapse the house of cards', without good reason. It should also be noted that the General Deed of Charge obliges OTML to enter into a proceeds agreement with Citicorp. Under this agreement, all of OTML's future sales proceeds are assigned., and the Proceeds Account there specified is established as a trust account as collateral security for the amounts secured by the Deed of Charge.

Completion and cash deficiency agreement.

The second type of loan security document is called the completion and cash deficiency agreement. As its name indicates, such an agreement consists of two basic obligations, that of completion guarantee on the one hand and that of an arrangement to meet OTML cash deficiencies the other. The general requirements of completion guarantees have been described in these terms:

“In broad terms a completion guarantee is an undertaking by the project sponsor that the project will be completed and by a specified time …”

“There are four main aspects which must be considered for completion; firstly, that the anticipated maximum production levels can be met over a given period; secondly, that the project is capable of achieving a rather lower but constant rate of output over a considerably longer period so as to ensure the reliability of the project; thirdly, that the product is of thee required quality and finally, that the production expense involved are not so high was to prevent the proper servicing of the project" (Ditvies, 1979).

The Ok Tedi completion test proceeds broadly along these lines and completion will be considered achieved when similar conditions are satisfied. The cash deficiency agreement was drawn up by the project's American lawyers, at the instigation of the Standard Oil group of shareholders for whom it had certain advantages within the USA. The Agreement became necessary because neither the export credit agencies nor the commercial banks were prepared to accept non-recourse financing. Thereafter, the issue centred around the extent to which each lender would have its recourse to the sponsors limited. The initial obligation in the agreement is that the sponsors will support OTML if there is a cash deficiency in the process of achieving completion. The underlying arrangement, however, is that if one of the sponsors or OTML meets financial difficulties, the sponsors each elect to proceed according to one of three options. They may, to the extent of their proportionate share of the total loan support obligations, either contribute in cash, or provide a guarantee, or substitute their own promissory notes.

Given the unconditional nature of these obligations, the critical question is the duration of each deficiency obligation. The answer, of course, determines the extent to which the recourse of the lenders is limited. It is here that there is a crucial distinction between the export credit agency loans and the commercial bank loans. Due to the lower than commercial interest rates offered by the export credit agencies, they were able to maintain that, subject to the acceptance of political risk in some cases and notwithstanding that completion had been achieved, the cash deficiency obligation remained in force for the entire life of the loan.

The commercial lenders, however, accepted that once completion had been achieved, provided that there was a commitment to stage Il of the project which assured them of ongoing revenue flows, the cash deficiency obligation dropped away and the lenders had no further recourse to the sponsors. The project was, however, required to pay a slightly higher interest rate after this point. Due to this distinction between the commercial and export credit loans, and because loan support obligations among the sponsors had already been partly divided up as a consequence of the German sponsor's KfW arrangements, it was decided that only the two larger sponsors, namely BHP and Amoco, would be parties to the cash deficiency agreement with the commercial banks.

A final measure of protection is afforded to the lenders by the completion and cash deficiency guarantees in that these document contractually subordinate the project's debts to the sponsors to the repayment of all monies dues to the lenders. They further require that the sponsors not prove in any liquidation of the project company until the lenders, (being senior debtors), are repaid in full (Ladbury, 1981, p. 157).

Political risk agreement

A central concern of the sponsors throughout the evolution of the security package was the extent to which they could avoid accepting the risk that political factors might interfere in the construction or operation of the project. This risk was perceived by the private sponsors to be of particular importance due to the location of the mine only 18 kilometres from the border between Indonesia and Papua New Guinea and due to the fact that the copper ore concentrates were transported along the Fly River, which itself marks part of the international boundary.

The concern of the private sponsors surfaced during their negotiations with the State over the financing strategy. Their initial suggestion was that the State should bear the project’s political risk. This suggestion was no doubt based on an offer made by the State during the approval of the proposals negotiations, that it would assume some contractual responsibility for risks which were under its control such as expropriation and currency convertibility. However, the consortium at that time did not accept the State’s offer and the State was now not inclined to re-open the issue. Hence the State refused to accept political risk although it did offer to provided the lenders with a so-called letter of awareness, in which it would simply assure the lenders that it was aware of the lenders' reliance on the undertakings of the State in the Principal Agreement (Castle, 1975, p 22). This letter of awareness afforded some comfort in respect of political risks such as expropriation and foreign exchange availability, although it could not help with other political risks such as war and inability to transport goods on the Fly River due to disagreements with Indonesia.

The sponsors' first attempt was to have the lenders bear the entire burden of a very widely defined political risk. It was partly over this issue that discussions broke down with the Export-Import Bank of the United States (EXIM) which indicated that it was not prepared to bear any political risk at all.

After further negotiations with the lenders, political risk provisions were incorporated into the completion and cash deficiency agreements. Three types of political events were defined: the inability to transport goods along the Fly River due to disagreements between the State and Indonesia; the act of war, insurrection or similar disturbances; and the actions of the State such as expropriation and refusal of currency convertibility. The effect of a political event, provided it occurred after completion, was to either immediately terminate the loan support obligations if there was no potential for re-instating the project, or in any other case to suspend such obligations for up to two years, after which the support obligations were terminated.

Naturally, a sponsor could not benefit from the occurrence of a political event if such a sponsor had contributed to its occurrence by instigation, provocation, inefficiency, or failure to take reasonable remedial action. Because the State could not enter into an agreement where it benefited from its own acts such as expropriation and refusal to convert currency, and because it did not wish to compromise itself by being party to an agreement which contemplated such actions, the State decided to enter into its own political risk agreement with the lenders. This agreement, between the State and the export credit agencies, deals with only transportation problems and war-like actions. The other sponsors also entered into political risk agreements with the export credit agencies and these contained references to all three political events. Meanwhile, Amoco and BHP, being the sponsors who provided the entire loan support to the commercial lenders, also had similar provisions in the completion and cash deficiency agreement between themselves and the commercial lenders.

In 1976, due to the importance placed by the sponsors upon friendly relations between the State and Indonesia, BHP obtained an undertaking in the principal agreement that the State would use its best endeavours to negotiate a border agreement with Indonesia which recognised the project's right 'to use ... the Fly River ... without undue interference' (Mining Act, 1976, clause 45). Such an agreement was concluded in December 1979, containing general provisions on navigation and navigational aids, development of natural resources and protection of the environment. However, during the approval of proposals negotiations, the consortium requested the State to make additional ‘arrangements’ with Indonesia, containing more detailed provisions on the use of the river. It should be pointed out that the lenders also considered the successful conclusion of such border arrangements to be an important aspect of their loan security.

Fortunately, after one round of discussions such arrangements were concluded in November 1981, thus allowing the financing to be completed in early 1982. The border arrangements confirm and regulate the right of free navigation of the Fly River without the normal incidents attendant upon entering another's territory, as wall as allowing mooring and dredging, salvage operations, placement and servicing of navigational aids and emergency landing rights for aircraft. In return, the State accepted the responsibility for compensating for pollution by the project. The principal agreement was subsequently amended by a third supplemental agreement which required the project to reimburse the State for such compensation.

Export credit support agreement.

With the security documentation virtually agreed between the sponsors and the lenders, the old issue of the apportionment of the loan support obligations among the sponsors arose once again. This led to the negotiation of an agreement known as the export credit support agreement. Its object was to apportion among the lenders the extent of loan support each was required to offer under the completion and cash deficiency agreement with the export credit agencies.

Such an agreement was necessary due to the manner in which the sponsors had agreed to offer loan support, and to the necessity for both sponsors and lenders to be aware at all times of the exact extent of their loan support obligations. This knowledge was especially important if at any time the sponsors had to elect to follow one of the three options specified in the completion and cash deficiency agreement. Unfortunately, calculating each sponsor's level of loan support was not simply a matter of computing that proportion of total debt outstanding which corresponded with each sponsor's shareholding. The first problem was that the State's support obligation was nil for the first US$280 million, and then was limited to US$42 million until a level of debt of US$650 million was reached. The second problem was the differing nature of the loans. For instance, the German shareholders were obligated to support the KfW loan, which meant, as it had a longer term than the other loans, that at some time in the future they might be left bearing a disproportionate share of the loan support.

The solution devised was contained in four formulae incorporated in the Export Credit Support Agreement which calculated each sponsor's level of support at any one time. The results for various levels of debt are set out in the Table V.

4. THE LOANS

4.1 PROJECT LOANS

Although the drafting of all security documents was done by the project's negotiating team, the actual loan agreements were, in conformity with general practice, drafted by the respective lending institutions. Much of the content of such documents was not, of course, of direct relevance to the State as a sovereign entity, and therefore it was prepared to conserve its relatively scarce resources and leave OTML and the private sponsors with the task of attempting to obtain the best deal for the project that they could negotiate with the lenders. Nevertheless, there were some matters, such as the extent to which the loan documents impinged on the project's ability to optimise production from the ore-body, which were of particular concern to the State.

The terms and conditions of project financing documentation are the most extensive and detailed of any corporate loan document. Such documentation is necessary because, with the lenders relying on cash flows from the project for repayment of the loans, they have an interest in ensuring that all information on a project is correct, that all technical proposals are feasible, that all financial estimates are realistic, that all titles and approvals are obtained, and that all other matters necessary for the success of the project are in hand.

Table VI shows the final breakdown of the project's borrowing as it emerged in the latter part of 1981. With the total cost of Stage I US$855 million, and a ratio of project debt to sponsor’s equity of 70:30, the amount of equity required of the sponsors was US$256 million. The remaining US$599 million was to be raised from the three banks and four export credit agencies shown in Table VI.

TABLE V
Division of debt support among sponsors
(US$ million)

OTML debt - Stage 1	250	600	400
Export loans	100	300	250
Commercial loans	100	200	100
KfW	50	100	50
Total	**250**	**600**	**400**
Percentage of Export debt support by sponsors			
State	0	14	10
Germans	0	13	11
Amoco and BHP	100	73	79

TABLE VI Loans to the project US$ Million	
Citibank N.A.	150
Overseas Private Investment Corporation (OPIC)	50
Kreditanstalt fur Wiederaufbau (KfW)	100
Exports Finance and Investment Corporation of Australia (EFIC)	250
Exports Credits Guarantee Department of the United Kingdom (ECGD)	100
Export Development Corporation of Canada (EDC)	88
OKB of Austria (OKB)	50
Total of credit facilities	**US$ 788**

The lenders have made available to the project potential borrowings amounting to US$788 million. This includes a commitment for US$189 million which may not be required. This leeway was necessary to allow for the uncertainty arising from the use of export credit financing. Because it is not possible to know exactly what goods will be procured from which countries until the project is actually constructed, the additional commitments are necessary to allow for purchasing flexibility. If all export credits can be utilised, then less commercial finance will be required. Unfortunately, the corollary is also true.

The manner in which the development of the project is staged led to particular problems in financing it. Although the overall benefit of the staging mechanism is to allow an early cash-flow and maximum use of internally generated funds for its financing, there is also the problem that lenders, for several reasons, will be reluctant to relinquish sponsor loan support until most of the project is built and completed. At one level, these concerns relate to the fact that repayment only comes from cash flow. For instance, Citibank required that unless stage Il had been completed by a particular date, or at least been 'committed to', then its 12 years repayment terms would be reduced to 5 years. It considered that in such circumstances, it must obtain maximum access to Stage I cash-flow, as Stage Il cash-flow might not ever materialise. KfW also had similar requirements, although its main concern was to ensure that Stage Il copper production occurred in order to obtain raw materials for West Germany. If it did not, then it was not interested in financing the project and wanted its money back.

This eagerness of some lenders to ensure that Stage Il was completed led to a particular problem for the State. This arose because the optimisation of gold ore production which the State had required in earlier negotiations meant that Stage 1 may be extended from 1984-86 to 1987 or later. It also could entail alterations to the production plan for Stage II. Thus, the State had to ensure not only that there was no early cut-off date for Stage 1 but also that changes to the approved proposals for mine development were not prohibited.

Another issue of ongoing concern for the State is the lender's request for guarantees of foreign currency convertibility. This was resolved in the Ok Tedi case by relying on what is effectively a foreign currency availability undertaking in Clause 26 of the Principal Agreement. However, the issue will not be so easily resolved in the future, as the State's current policy, based on the strength of its stable financial and monetary history, is to offer only a guarantee of foreign currency sufficient to meet current payments, together with a non discrimination undertaking.

4.2 INFRASTRUCTURE LOAN FROM THE STATE

The State was requested by the consortium to provide considerable infrastructure, notwithstanding that the principal agreement provided that such expenditure was the responsibility of the project. The access road from the Fly River was the only item which the state, did agree to fund, on the basis that the project repaid the loan at a commercial interest rate and that the loan was secured by the deed of charge. However, some concession was made as to when repayment could commence. The terms are set out in schedule C to the approved proposals and were subsequently embodied in the Infrastructure Agreement. The main benefit perceived by the State of such an arrangement was to allow construction of the road to commence earlier than planned so as to enhance communication with the people of the extremely under-developed area where the project is located. As mentioned earlier, it was also the reason advanced by the State for being exempted from its share of the first US$280 million worth of loan support for the project.

Under the infrastructure agreement , the State's obligation is to provide up to US$72 million (as escalated) for the purpose of constructing the road. In order to raise such monies, the State first approached concessionary finance agencies and was able to obtain one such loan from KfW. It then approached export credit agencies, on the basis that about A$12 million worth of imported goods were required for the road. EFIC agreed to lend such an amount to the State.

5. CONCLUDING REMARKS

The basic objective of project finance is to limit one's financial exposure. This leads to extremely complex security and loan documentation in respect of which the borrowers, particularly governments, should have access to the best expertise available.
In the case of the Ok Tedi project, the state's financial liabilities for equity contribution, loan support and infrastructure funds have been limited and obtained on the best available terms. In the case of equity, the concessional loan from the EIB, together with the issuing of bonds to the Kennecott Copper Corporation, largely meet this obligation With respect to loan support, the state has a maximum loan support obligation for stage I of US$42 million, thereby avoiding the usual situation where it would be necessary to support another US$80 million in addition to overruns. Infrastructure funding is also limited, making maximum use of low-interest funds and ensuring a commercial return to the state. Such arrangements for the financing of a major project are as important to a country as the actual returns it obtains from a project.

Countries should resist the suggestion that they bear any risks associated with a project, particularly political risk. The Ok Tedi case demonstrates that the corporate sponsors of and the lenders to a major project are prepared to accommodate such limitations on the financial liability of a participating country. At the same time, this project is a good example of how sponsors and lenders apportion the risks of project financing among themselves, with the sponsors in this case realistically accommodating the requirements of the State. The sponsor also obtained a maximum of low-interest finance, retained maximum flexibility for itself and the project company while transferring the political risk onto the lenders.

Finally, project financing is believed to be viewed a logical innovation necessary to cope with the deployment of finance as more and more capital accumulates and concentrates. But it is also important for the holders of capital as well as the countries desiring resources development to introduce further refinements into such risk sharing arrangements.

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Mining Agreement 1980a. See the schedule to the Mining (Ok Tedi Supplemental Agreement) Act, clause 15, and Note 9 and clause 5.

Supplemental Agreement 1981. See schedule to the Mining (Ok Tedi Second Supplemental Agreement) Act, clause 5.

APPENDIX

Figure A1 provides a complete picture by summarizing the relationship of all the corporate units involved in sponsoring and financing the project, together with most of the agreements among those organizations. When studying the tables the reader should start in the top left hand corner. The first two rectangles represent the principal agreement between the State and Damco, a subsidiary of BHP. Damco then assigned part of its rights to the other members of the consortium, MFD (a Standard Oil (Indiana) subsidiary) and Kupferexlorations-gesellschaft (KE, representing the German Group). Both of these companies then made further assignments until the State, BHP Minerals, Amoco PNG and Star Mountians Holdings took equity in OTML. The seven lenders to OTML are listed on the far right. These loans were supported by the two completion and cash deficiency agreements and the two German support agreements. Other major agreements, such as the shareholders' agreement, are shown in oval diagrams. The connecting lines indicate the organizations that are parties to the various agreements.

Key to Fig. A1 and A2

Names of Organizations

1. Independent State of Papua New Guinea.
2. Dampier Mining Company Limited (BHP subsidiary).
3. Mt. Fubilan Development Company (formerly a Standard Oil group subsidiary).
4. Kupferexplorationsgesellschaft MBH.
5. BHP Minerals Holdings Pty. Limited.
6. Amoco Minerals Company.
7. Metallgesellschaft AG.
8. Deutsche Gesellschaft für Wirtschaftliche Zusammenarbeit (Entwicklungsfeseilschaft) MBH.
9. Degussa AG.
10. Amoco Minerals (PNG) Company.
11. Star Mountains Holding Company Pty. Limited.
12. Ok Tedi Mining Limited.
13. North Fly Highway Development Company Pty. Ltd.
14. Export Finance and Insurance Corporation (Australia).
15. Export Development Corporation (Canada).
16. Export Credits Guarantee Department (U.K.)
17. Oesterreichische Kontrollbank Aktiengesellschaft (Austria).
18. Citicorp N.A.
19. Overseas Private Investment Corporation.
20. Kreditanstalt für Weideraufbau.
21. Broken Hill Proprietary Company Limited.
22. Standard Oil Company (Indiana).
23. Federal Republic of Germany.

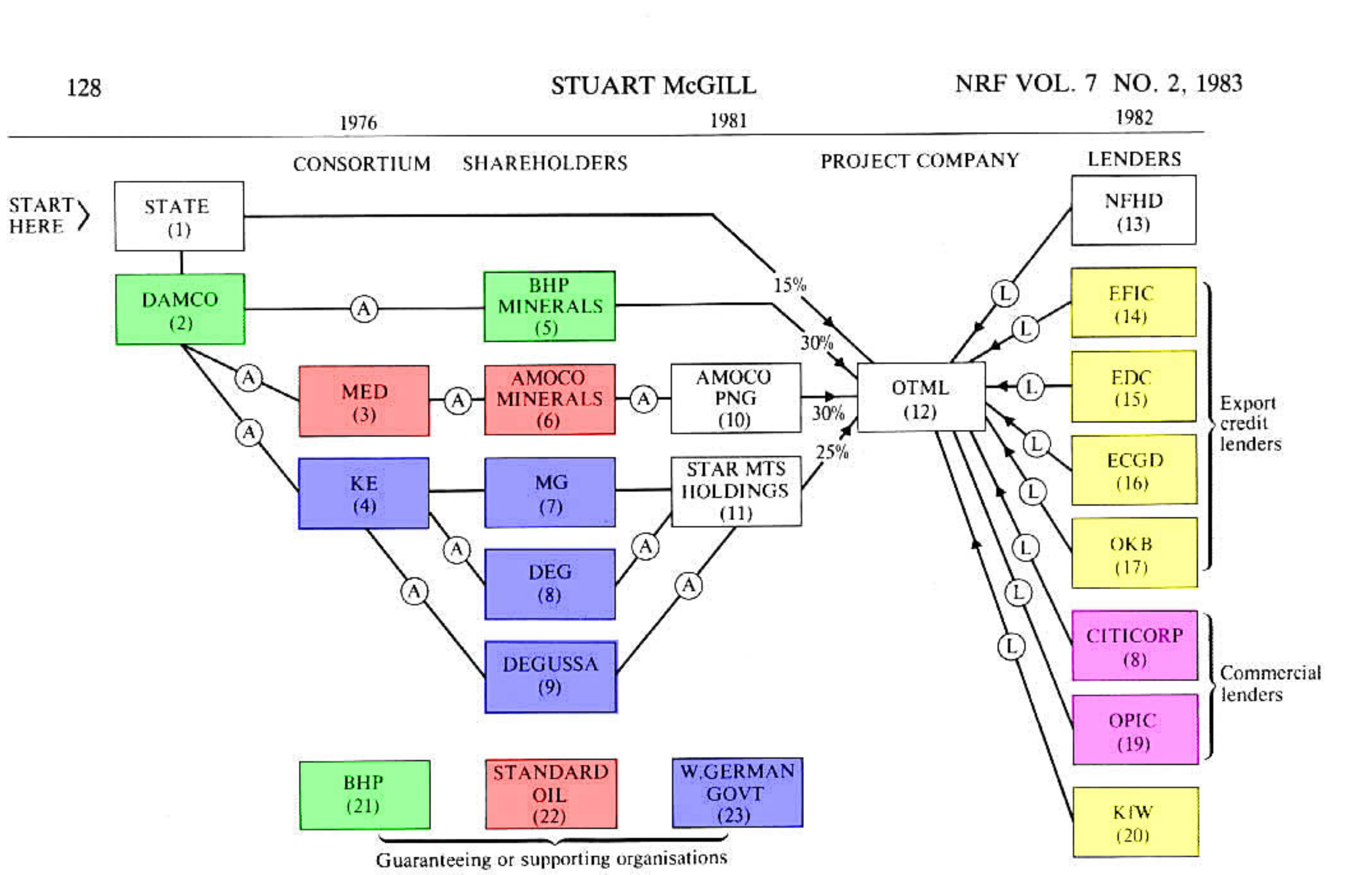

Figure A1 – OK Tedi Project financing structure

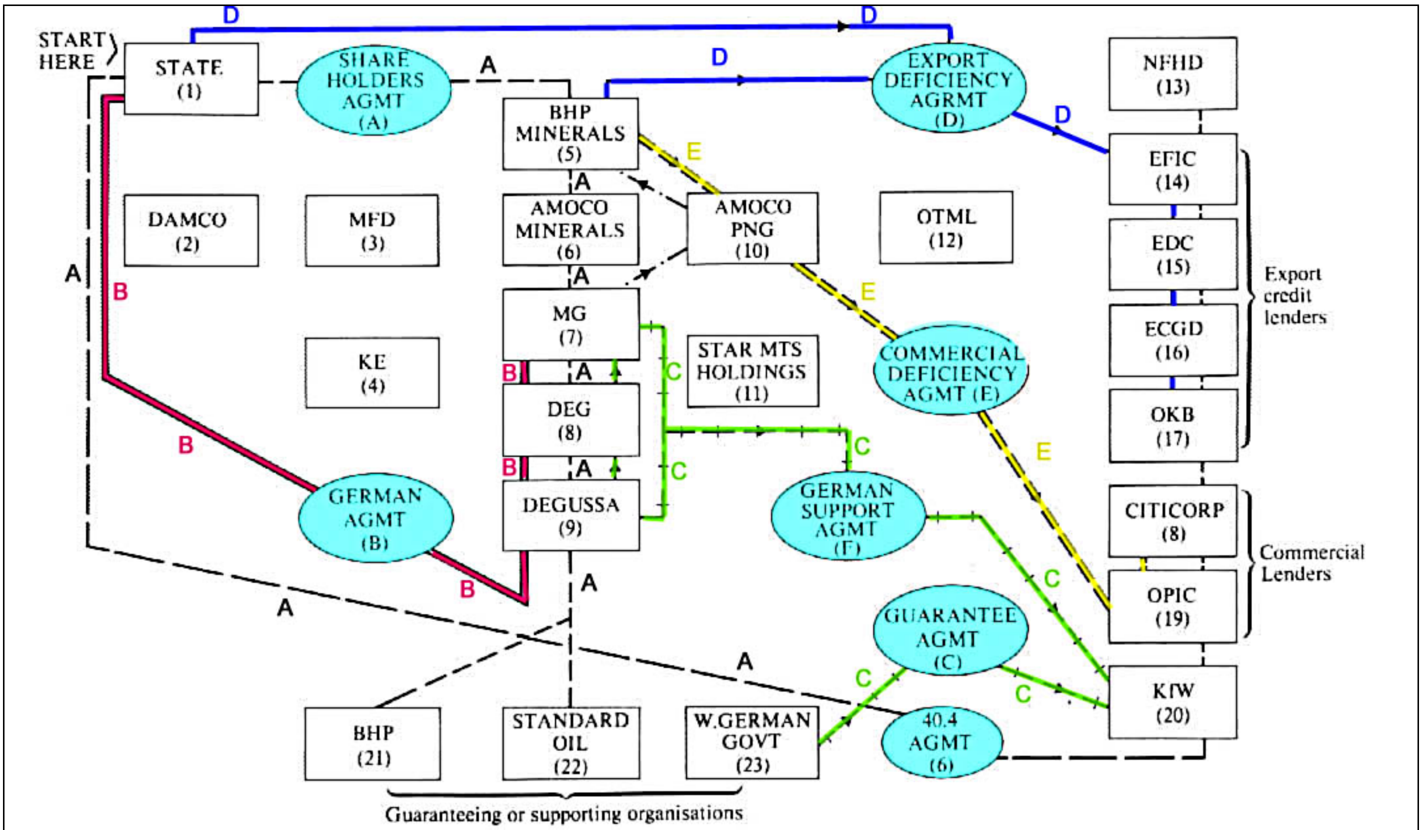

Figure A2 – OK Tedi Project financing structure

Description of Agreement

A. Main Shareholder Agreement between all sponsors together with the parent companies of BHP Minerals and Amoco Minerals.
B. German Group Shareholder Agreement (whereby State holds 5% of its OTML holding through Star Mountains Holding).
C. Guarantee Agreement (whereby W. German Government meets some of German Group's support obligations) and loan support agreement among MG, Degussa and KfW.
D. Completion and Cash Deficiency Agreement among all sponsors and all export credit agencies.
E. Completion and Cash Deficiency Agreement among commercial binders (Citicorp and OPIC) and Amoco PNG and BHP Minerals.
F. 40.4 Agreement among the State and all lenders (on rights of lenders on termination of Principal Agreement).