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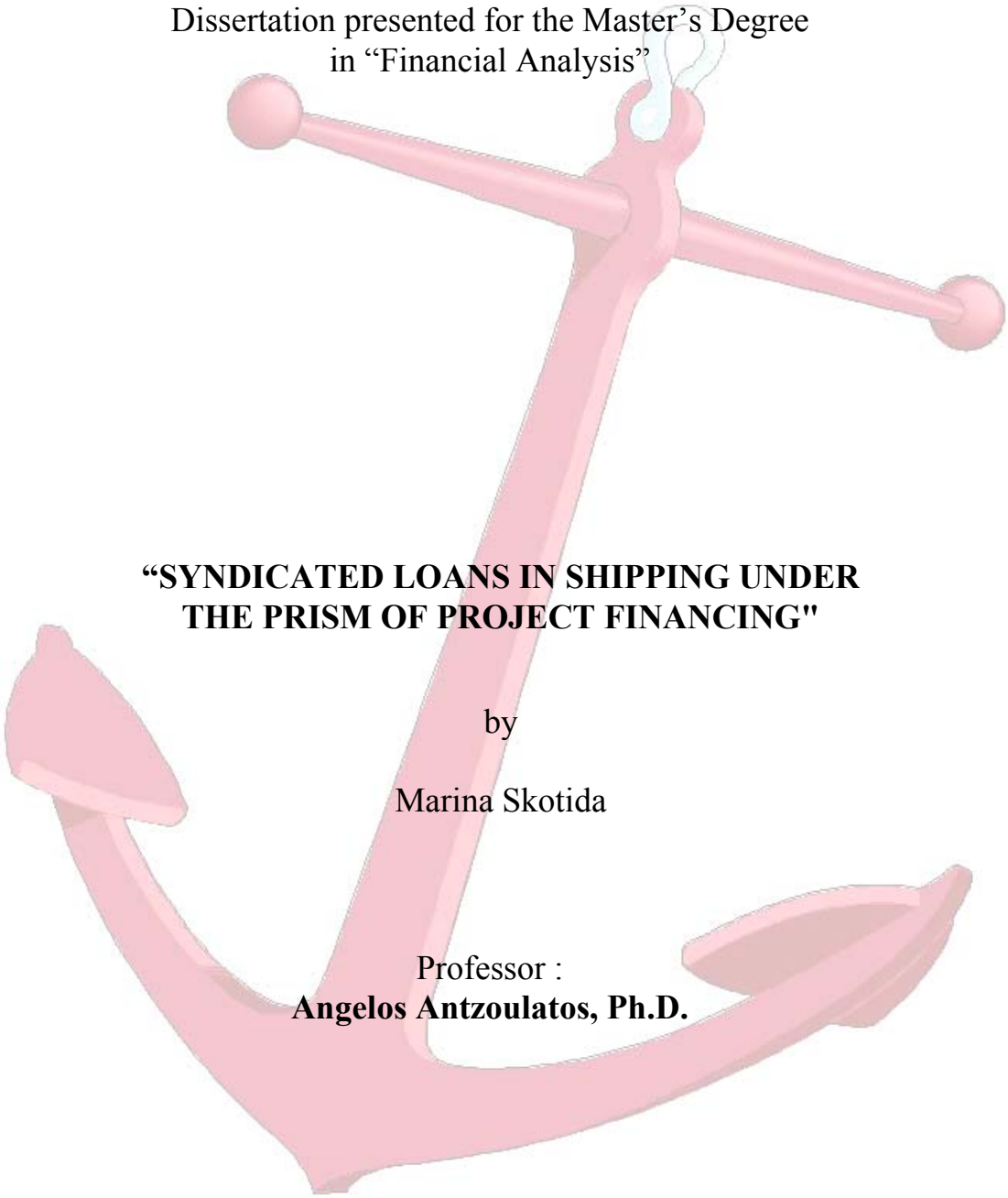

"SYNDICATED LOANS IN SHIPPING UNDER THE PRISM OF PROJECT FINANCING"

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1 INTRODUCTION

Shipping departments of a sizeable number of commercial banks, or banks specialized in shipping, have seen their profitability fluctuating substantially over the years. During periods of shipping recession or depression heavy losses have been realized to financial institutions committed to shipping.

The usual practice is to spread the risk by sharing the loan among a syndication of several banks. Loan syndication is thus used to split loans into small packages which can be distributed around to many banks. However, the objective of lending function is to create value for the bank, through granting sound loans; and sound loans are the ones which are paid off. In assuring the soundness of a particular loan the financial institution must thoroughly examine all related risks, which through syndication would be allocated among participating financial institutions.

Financial institutions have a package of general and specific guidelines that refer to important factors for providing shipping loans, which allocates responsibilities and creates a mechanism of control. It takes the form of an internal framework for the bank, within which the loans are initiated, analyzed, approved, granted and monitored.

What we attempt in this thesis is to draw a parallel between the above mentioned framework that exists in syndicated loans in shipping with the equivalent existing in another financing instrument, project finance.

We begin by describing the basic characteristics of syndicated loans in order to document the rationale for syndication both from the lenders and borrower's side. In the next section we refer to project finance and we extensively discuss matters concerning financial structure and risk management. Special characteristics of syndicated loans in shipping and generally shipping business are covered in section 4. In section 5, by combining the previously described characteristics, we attempt a comparison between the two separate financing instruments that lead us to conclusions which are presented in the last section.

2 SYNDICATED LOANS

The syndicated credit market (this term, rather than "loan", is used because the syndicated banking market offers products other than loans) is one of the largest and most flexible sources of capital in the international financial marketplace.

A syndicated credit involves the combined activities of two or more banks, in the assembly of a relatively large loan to a single borrower under the direction of one or several banks serving as lead managers. Banks in a syndicated transaction agree to participate in the credit facility on common terms and conditions, each funding a certain proportion of the loan which is normally medium term.

Many of the borrowers and projects being financed are taking place across Europe, Africa and the Middle East. Hence the syndicated credit is international by nature. Furthermore, in order to place these large loans (up to several billion dollars) in the market, some times several banks are needed to participate.

Syndicated loans are accordingly managed, underwritten and sold by groups of banks collectively known as syndicates. In international markets, syndicated lending is dominated by the London, Swiss, American, German and Japanese banks which have access to large client bases.

2.1 BACKGROUND

The development of the syndicated lending markets can be traced to the international development of the Eurodollar, the currency used in the embryonic phase of the international syndicated loan market. The Eurodollar market (dollars with non-US ownership or domicile) developed and grew in the 1950s, mainly to finance foreign trade. Loan documentation during this period was by today's standard, relatively succinct.

The syndicated lending market received a major boost in 1973 when the Organization of Petroleum Exporting Countries (OPEC) instigated an oil price increase which led to huge amounts of "petrodollars" becoming available for recycling. OPEC states found themselves with large financial surpluses for investment overseas. Due to the small size of the domestic markets of OPEC states, they were obliged to place and invest these funds with major international banks that, in turn, needed to find suitable lending opportunities. This surplus in funds led to the development of the syndicated lending market.

Eurodollar availability, however, was only one side of the coin – a use had to be found for the funds and this manifested itself in areas known as "sovereign lending" – principally infrastructure development projects in developing markets.

The birth of the Eurodollar and the development of the cross-border interbank market gave rise to an opportunity to bring together lenders from different geographical origins into syndicates to participate in loans with common funding basis and on common terms and conditions.

2.2 MEMBERS OF A SYNDICATION

In a syndicated loan, two or more banks agree jointly to make a loan to a borrower. Every syndicate member has a separate claim on the debtor, although there is a single loan agreement contract. The creditors can be divided into two groups. The first group consists of senior syndicate members and is led by one or several lenders, typically acting as lead managers, agent or arrangers. The lead manager(s) is the bank with the primary responsibility for organizing a syndicated loan, agrees on terms and conditions of the loan with the borrower and evaluates the market conditions. The agent bank is appointed to oversee the loan, often is one of the lead managers, and is responsible for collecting payments on the loan from the borrower disbursing them to all parts of loan syndicate. Arrangers are a group of mandated banks sharing roles and underwriting commitments. These senior banks are appointed by the borrower to bring together the syndicate of banks prepared to lend money at the terms specified by the loan. The syndicate is formed around the senior banks that retain a portion of the loan and look for junior participants.

The junior banks, typically bearing participant or manager titles, form the second group of creditors. Their number and identity may vary according to size, complexity and pricing of the loan as well as the willingness of the borrower to increase the range of its banking relationships.

2.3 THE SYNDICATION PROCESS

The entire syndication process, which will be briefly described, normally takes anywhere from two weeks to three months, depending on the borrower, the complexity of the deal, market conditions, competence of the managers, size of the loan and similar factors.

Deal origination occurs in several different ways which will vary depending upon the type of borrower and nature of the transaction. A transaction may arise

because a borrower has maturing instruments that need refinancing or because it has to finance new investments, projects or acquisitions. Whatever the reason, the borrower will need to choose from the bids submitted before any transaction can commence.

The approach adopted by borrowers in seeking bids also varies widely: some borrowers are prepared to consider bids from any bank prepared to make one "open bidding", whereas others choose to receive bids only from a small group of banks "selective bidding" which either have a track record of successful activity in the syndicated market or are key relationship banks. It is rare that a borrower solicits bids on the basis of open competitive bidding; it is more usual to rely on the syndication skills of a smaller core group of relationship banks.

The prospective lead banks before drawing up a proposal to arrange the loan, thereby seeking a syndication mandate, should obtain key information about the transaction. In nearly all bidding situations the borrower stipulates several conditions, such as amount and timing, a range of acceptable rates, terms and conditions. The borrower may request a fully committed offer or partially committed offer or an offer on a best efforts basis. Bids required on a committed basis assure that the bank will undertake to provide the full amount of the loan to the borrower, according to the terms of the mandate, whether or not it is successful in its efforts to interest other banks in participating in the loan. In bids sought on a partially committed basis the bank should guarantee to deliver part of the loan and in a best efforts basis the borrower will only obtain the funds needed if sufficient interest and participation can be generated among potential participating lenders by the good faith efforts of the bank seeking the mandate.

The lender should identify the borrower's needs for several reasons. First, in order to understand the risks in the loan, so that the loan can be properly structured and presented to the market to ensure favorable reception. Secondly, to ensure that proper covenants and safeguards can be incorporated into the loan agreement. Thirdly, in order to justify the granting of the facility with a well-reasoned credit proposal, not only to the management but also to the potential participants in the syndicated loan.

The prospective lead bank must strike a balance between what the borrower wants and what the market can live with, that is, what will result in a successful syndication. It must be prepared for extensive discussions and negotiations with the

borrower about the terms of the formal letter, which has to be carefully tailored to its needs and to market conditions.

By this time, the lead bank will begin to assemble a small group of managing banks or co-lead managers to help with the syndication and to share the underwriting commitment. This step seems mandatory especially if the amount to be raised is very large or if the deal is rather complex.

Knowing the borrower's needs, the lead bank must now seek for credit approval from its credit committee. Financial analyses, forecasts, incorporating a host of economic and financial variables should communicate to the credit committee that an effort has been made to understand and quantify variables which can impact on the loan facility repayment. A clear link between this and the protective mechanisms in the loan agreement should also be made. Moreover, with capital adequacy requirements affecting the amount of loan a bank can carry on its balance sheet, estimates of the market's "appetite" for the facility in question (and ability to make up the difference in the case of under-subscription) should be made, and the rationale for entering into this particular transaction should be defined.

Once analysts and relationship managers have quantified the various aspects of the loan in terms of risk / payoff and secured credit approval to act as agent, a competitive bid has to be submitted to the borrower. To assist the borrower making comparisons, a common language and format for setting out an offer have been developed over the years, which make the task relatively easy. The proposal will specify pricing, maturity and other pertinent aspects of the loan, it will indicate whether or not the syndication will be fully committed and will repeatedly note the leading roles the mandated bank is to perform in the syndication.

No matter if the bank will finally be awarded the mandate, by this time the lead bank has to present the loan as a committed one, in it's off balance sheet accounts.

Once the bidding bank has been told it has been successful in its bid and has received a written mandate from a borrower, the bidding bank specifies the amount that it wishes to keep in its own portfolio. Generally the lead bank is expected to take a share in the loan that is at least as large as that of any other lender.

The lead manager develops a syndication strategy that will successfully raise the required funds, yet necessitate both minimum sharing of the management fee that will be paid and visibility for putting the loan together. Deciding which banks to invite into the syndicate is a major part of a lead bank's task and will help determine

its strategy. Some of the criteria for its decision are the invitee's country and industry exposure, past clients' relationships, degree of sophistication in syndicated lending and its own relationships with invitees. In some cases the borrower may also have some preferences as to which banks should, and should not be invited to participate.

An invitation for participation will be sent to the potential participating banks usually by e-mail. Meanwhile the lead manager will carefully check the accuracy and completeness of the Placement Memorandum. The Placement Memorandum, which is prepared by the lead bank in conjunction with the borrower, describes the borrower and the borrower's financial condition based on facts pertinent to current and projected creditworthiness and contains information on all principal credit issues of the transaction.

Banks invited to participate will decline, accept or request further information on the basis of the offering communication. The lead bank must be ready to follow up quickly with elaborate written documentation and personal discussions, meanwhile keeping careful track of the responses.

Sending the placement memorandum together with a term sheet restating the conditions of the loan, to the interested potential participant banks, is of vital importance in the process of their evaluation of the credit. The content of this information pack is an area where possible disagreement may arise. Inevitably the arrangers wish to distribute the fullest and most comprehensive view of the borrower's current financial position and future plans and budgets, about the wide circulation of which the borrower might reasonably feel quite reluctant. Admittedly, all documentation will be circulated under a confidentiality undertaking but this rarely serves to calm the unease.

The various banks are now contacted and invited to participate in the transaction. Meanwhile the documentation of the loan contract is also being prepared. The arrangers are duty bound to ensure that all points from the initial term sheet are included; the borrowers may well have useful views on how some parts of the document will work in practice and these should be firmly expressed. Both sides should be aiming for an equitable and efficient agreement.

Amongst the arrangers, there will be discussion as to who is bookrunner, agent, which bank handles documentation and so on. The arrangers may be contacting the invited banks with a view of persuading them to join the deal; they will be discussing the deal and the main terms as well as fielding questions on the information pack. They will feed back queries to the borrowers for them to answer. It

is important to ensure that the arrangers share any new information disclosed as a result of questioning with the remaining invitees. Eventually bids will start to be received and arrangers should commit themselves in daily updates as to the current position and likely final outcome.

Two things can happen here – the loan can either be "undersubscribed", meaning that not enough banks or not enough commitments have been made to provide the full amount of the loan and the lead manager bank to make up the shortfall; or the loan is "oversubscribed", which means that the various banks' participations have to be scaled down. If things go well the loan will be fully subscribed.

Along the way, a loan agreement will be drawn up, which spells out the rights and obligations of all parties to the deal, governing law and related matters. Even after the successful completion of syndication, work on the loan agreement may well continue until all points are agreeable by both sides. Even after the successful completion of syndication, work on the loan agreement may well continue until all points are agreeable to both sides.

No bank is finally committed in loan syndication until it has accepted the terms of the loan agreement, and, if no consensus can be reached on a point it has identified as being vital, it can gracefully withdraw from the syndicate.

Once the participants have committed to the lead manager, the facility is fully subscribed and the lead manager, the agent, the participants and the borrower have all agreed on the terms and conditions which are enumerated in the loan documentation, the arrangement for the closing of the transaction and signing ceremony can then be made. This typically means defining the venue and date and inviting the authorized signatories.

2.4 RISK MANAGEMENT

It is inevitable that in many aspects of the corporate debt and syndication process the interests of corporate borrowers are not those of the arrangers/lenders. In practice the borrower is usually looking for the lowest margin, fee, number of banks and cost, where as the lender wants the best return on its own balance sheet capacity whilst also needing an attractive deal to ensure a successful syndication.

Of course, it is also true that both sides have a vested interest in ensuring a successful deal. For the whole process of syndication to be successful the arranging bank must agree a basic set of commercial terms that fulfill both borrowers' and

lenders' needs. These terms concerning crucial parameters such as pricing, specifications of the drawdown schedule, undertakings and covenants must then be properly documented in the loan agreement. They define the rules of the game each side expects the other to live up to.

2.4.1 PRICING

Pricing loans for a borrower and syndication is a highly subjective process, is both an art and science. While banks know what sort of return they want, or need, on their lending activities, accomplishing that return in the light of prevailing market conditions is another matter. Pricing a loan can be a combination of borrowings, deposit balances maintained, other services sold to the customer, the cost of the delivery mechanism to the customer and, other tangible and intangible aspects of the relationship.

The income for the lender might be either of interest or of fee nature. Syndicated loans in international banking are generally priced on an agreed-upon floating base rate of interest. All banking lending which bears a variable rate of interest requires what is known as a "marker rate" to which the interest rate on the loan is linked. In medium term lending, this is usually the London interbank offered rate (Libor) which reflects the lender's cost of funding the loan. A margin (or "spread") is then added which will depend on the strength of the borrower and the general level of spreads in the market. The loan agreements have to spell out the manner in which the "marker or reference rate" is calculated.

The process of assessing the probability of credit risk, or default, is also linked with the pricing of syndicated loans. In general companies which are closer to risk-free business, should compensate the banks with lower returns on loans, while the ones with an increased probability of default should reimburse the banks with a higher return. The difference between the risk-free loan and the risky one is the default risk premium, the compensation of the bank for the additional risk involved. The margin earned by the bank must compensate it for various costs and the risk it is taking on. In other words, the bank must recover the operating cost of obtaining the funds, lending them out, recording and accounting for them, making and receiving payments, and the cost of providing capital to maintain capital adequacy ratios. In addition, the spread must generally compensate for potential portfolio loan losses, and there is also and opportunity risk to consider.

The concept of rollover pricing was created so that banks could avoid the problem of funding long-term loans with short-term liabilities. While such provisions shield the bank from interest risk due to maturity transformation, they do not shield the bank from all consequences of interest rate changes. In the early 1980s, it became apparent that some banks, by using rollover pricing, had simply transformed interest rate risk into credit risk. To see why, consider a situation where a borrower had borrowed when LIBOR was at 2 percent and LIBOR subsequently rose to 5 percent. If the price of the company's product did not rise commensurately, then the real borrowing rate for the borrower had risen. Faced with higher real borrowing costs, the borrower might then be a higher credit risk, in other words there might be a higher probability that the borrower could not repay the loan.

The amount of fees negotiated will depend on the circumstances surrounding the proposed syndicated loan facility: how large, how difficult, whether a borrower's name adds to the probability of successful syndication or not. The arranger and other members of the lead management team generally earn some form of upfront fee in exchange for putting the deal together. This is called an arrangement fee. An upfront fee is occasionally payable which relates to the entire facility regardless of whether it is fully drawn, cancelled or prepaid. The underwriters similarly earn an underwriting fee for guaranteeing the availability of funds. Other participants may expect to receive a participation fee, this is expressed as a percentage of each bank's participation in the loan. It can be paid by the managers out of the overall management fee, but it may be levied in addition to the management fee.

The most junior syndicate members typically only earn the spread over the reference yield. Once the credit is established and as long as it is not drawn, the syndicate members often receive an annual commitment fee proportional to their commitment. The agent bank typically earns an agency fee, usually payable annually, to cover the costs of administering the loan.

Clearly, management or arrangement fees have a valuable discounted cash flow effect on the yield from the loan as a whole. Occasionally, therefore, it may be preferable to agree to the reduction in the interest margin in return for an arrangement fee payment. This may be preferable for lenders either due to tax sheltering profits of current year or because they expect that margins will be increasing in the future.

Spreads and fees are not the only compensation that lenders can demand in return for assuming risk. Loan covenants, guarantees and collateral offer the possibility of explicitly linking pricing to corporate events (rating changes, debt

servicing). While covenants are much more likely used for borrowers in industrialized countries, possibly because such terms are easier to enforce them, collateralization and guarantees are more often used for emerging market borrowers.

2.4.2 COVENATNS AND UNDERTAKINGS

Loan agreements will be based on information about the financial state of the borrower at the time the loan is made as well as an understanding about how the borrower will conduct its financial affairs over the life of the loan. Statements made by a borrower about its financial state at the time the credit is being sought are referred to as representations or warranties. Promises the borrower makes about its future behavior are referred to as covenants or undertakings. The primary objective of covenants and undertakings is to ensure the continued soundness of the credit facility being advanced and to give the bank certain inside information and limited control over the borrower's business.

For the lending banks covenants and undertakings are very important, as they enable banks to monitor their loans and to undertake corrective action to protect them before it is too late. While they may be perceived as a constraint on a borrower as well as an inconvenience in having to prepare reports and inform the lending banks at periodic intervals, they also imply reciprocity of commitments, and can protect the borrower from the banks calling in the loan on an unfair basis. In other words, as long as the covenants are respected by the borrower, the banks are committed to providing funds for the entire duration of the facility.

Financial covenants require the borrower to adhere to certain financial conditions which can be specified in absolute terms (amounts) or in calculated amounts (ratios, cash flow). A company, for example may promise to maintain a certain asset to liability ratio over the life of the loan or to limit total debt service and dividends in some stipulated way.

The most important non financial covenants are negative pledge and pari passu covenant. The negative pledge clause may forbid the borrower from giving any security, or giving any further security other than that already known to the bank, or giving security without simultaneously offering the bank equal security. It is vital to unsecured lenders that on liquidation they do not find that assets and cash flows are pledged to other lenders that rank ahead of them. Pari passu is a companion of the negative pledge clause but only covers unsecured indebtedness. This covenant is

normally worded so that the borrower warrants that its obligations under the loan will not be subordinated to any unsecured creditor.

It is important when drafting covenants to have undertaken a financial analysis of the borrower beforehand so that the ratios and clauses incorporated have some relevance and effectiveness with respect to the borrower's particular circumstances. Hence, covenants and undertakings take the form of provisions related to borrower credit risk.

2.5 RATIONALE FOR THE SYNDICATED LENDING MARKET

While the syndicated loan has experienced rises and falls in demand over the past 25 years, there are several reasons why the market exists, and why this particular mode of financing continues to be a mainstay in the commercial and merchant banking environment.

Some of the main reasons why the syndicated lending market exists and its advantages and drawbacks vis-à-vis other mode of financing are summarized below.

From the borrower's viewpoint, the syndicated lending vehicle enables larger amounts to be raised quickly than any single bank would be willing to lend, at substantially lower cost and more efficiently than the same amount of borrowing from multiple sources on its own.

Essentially, international syndicated loan facilities represent a cross between debt underwriting and traditional commercial bank lending. They open medium-term financing opportunities to many borrowers who might not otherwise be able to obtain credit on comparable terms through the international or domestic securities markets, private placements, and other financial vehicles.

Multinational companies may want a lead manager to arrange a syndicated loan and invite particular banks in order to develop their market image with these banks, in an effort to develop and foster banking relationships for the future. This building of relationships can be seen as a vehicle to enhance the borrower's power in the market place.

Dealing with a syndicate involves one set of documents and one set of negotiations, rather than many different rounds with individual lenders. This means that the facility cannot only put into place more quickly, but that the associated banking and legal costs can be lower.

Another important aspect is that by entering into a syndication, the borrower is putting his name in the market only once. Hence by this strategic decision the borrower avoids compromising his ability to borrow again if necessary.

Before examining syndicated loans from the bank's viewpoint, it is perhaps useful to consider the advantages it has over equity. Firstly, are the flexible drawdowns linked to business cycles. The syndicated loan is not only relatively easy to set in place compared to an equity issue, it offers additional flexibility in that funds can be drawn upon as needed. Secondly, with debt, the borrower also has the additional advantage of being able to deduct interest expense from taxes, and the flexibility of being able to cap and hedge interest costs. Thirdly, the borrower can also choose to prepay the debt at no additional cost. Finally equity issues can also increase a company's vulnerability to hostile takeovers while increasing debt can be a dissuasive measure.

From the banks' viewpoint, the incentives for a syndicated loan differ according to whether one is speaking of the lead bank (who arranges the syndicate) or the other banks (who participate in the syndicate at the lead bank's invitation).

Let's first consider the lead or arranging bank(s). The lead bank will probably have the most direct relationship with the borrower and have the closest knowledge of the borrower's business, but may not wish to be exposed to the borrower for the entire amount of the loan. Syndication enables the bank to diffuse the risk. This may not be merely a matter of business preference because most banks have lending ceilings relating to particular borrowers, industries or jurisdictions, and syndication may accordingly be required in order to prevent such ceilings from being exceeded. There are also the problems arising from capitalization ratios and the need to minimize assets (loans) held on the books. It is also worth noting that the desire or necessity to reduce the lead bank's exposure to the borrower may occur at any time before and/or after the loan is made and therefore, the timing of the loan has a crucial effect on the type of syndication available.

For banks that join the syndication at the invitation of the lead bank, the motivations for participating in syndicated loans are several and can be summarized as follows.

The bank needs to provide a return on assets to remunerate its depositors and creditors. In other words, the bank needs to provide a return on assets, in order to cover liabilities, as well as a return on equity. While some banks are able to do this by providing fee based services, banks that do not have the market network or clout to do

this are reduced to obtaining Return on Assets or Return on Equity through lending activities.

Diversification is another very important motive. While portfolios concentrated in niche sectors can be highly remunerative, they also have associated concentration of risk. Therefore, participating in syndicated loans (according to predefined criteria) is a way of diversifying risk. Other characteristics included in diversifying aside from industry of geographic risk are currency risk and maturity profiles.

Moreover most banks consider their participation in a given syndication as a way to form relationships with new borrowers, as well as reciprocity between banks. Indeed, reciprocity, from a bank it has supported by joining a transaction, can result in invitations into highly visible or prestigious transactions which they might not have received if they were not an established participant in the syndicated transactions; they will not be considered a player in the market and will accordingly not receive invitations into syndicated loans.

An important factor in generating business is the income versus costs argument. Participating in syndicated loans offers a quick way of obtaining income as opposed to direct marketing of clients. Moreover, it is a simple method of obtaining marketing results. A bank known to want invitations will usually receive them as arrangers want to place the loan. However, it is worthwhile indicating to arranging banks the preferences in their appetite for loan. Finally, it is an effective use of marketing resources because participation in a syndicated loan can give access to (and experience of) new borrowers without the need to increase marketing staff.

3 PROJECT FINANCING

Project Financing may be defined as the raising of funds to finance an investment project which will benefit the sponsor and at the same time will have limited or even no recourse to the sponsor. In order to manage a credit appraisal to a project which will in no way affect its sponsor's credit standing or balance sheet, the project constitutes a separate economic unit. Project's assets, contracts, inherent economics and cash flows are segregated from its promoters or sponsors.

Hence, lenders look principally to the cash flows and earnings streams of the project as the source of funds for repayment and to the assets of the project as collateral for the loan. The word principally implies that the lender must also feel comfortable that the loan will in fact be paid on a worst case basis. Lenders want to feel secure that they are going to be repaid either by the project, the sponsor or an interested third party. This may involve that at the same time sponsors should provide sufficient credit support through guarantees or undertakings.

Project financing is sometimes called off balance sheet financing for its sponsor. The project debt may not be on the sponsor's balance sheet, avoiding in this way any credit impact for the sponsor. However the project debt will appear either in the footnotes or in the off balance sheet items as a contingent liability. The purpose is to segregate the credit risk of the project in order that the credit risk can be clearly and fairly appraised on its respective merits and not to hide or conceal a liability of the sponsor from creditors, rating services or stockholders.

3.1 BACKGROUND

Project financing is not a new financing technique. Venture-by-venture financing of finite-life projects has a long history; it was, in fact, the rule in commerce until the 17th century. For example, in 1299 the English Crown negotiated a loan from the Frescobaldi (a leading Italian merchant bank of the period) to develop the Devon silver mines. The loan contract provided that the lender would be entitled to control the operation of the mines for one year. The lender could take as much unrefined ore as it could extract during that year, but it had to pay all costs of operating the mines. There was no provision for interest. The English Crown did not provide any guarantees (nor did anyone else) concerning the quantity or quality of silver that could be extracted during that period.

However, by the late 1990s, project financing had become a global activity. The business can be traced to bank financing of independent oil companies, particularly in Oklahoma and Texas. Few of the "wildcatters" who dominated the oil business at the time had either the financial resources to bring new discoveries into production or strong-enough balance sheets for ordinary unsecured bank borrowing on anything but a very limited scale. Its geographical and sectoral reach has grown considerably, following widespread privatization and deregulation of key industrial sectors around the world.

Secured borrowing was likewise precluded, since the principal "assets" to be financed were usually a hole in the ground and some associated equipment and supplies with questionable resale value. Yet it was clear that the resources in the ground themselves represented a prospective value as a future revenue stream that could become the basis for attractive bank lending opportunities. Loans could be serviced from the proceeds of the future sale of the recourse without necessarily looking exclusively to either the operating company's balance sheet or to capital equipment for credit support.

Called "production payment financing" this early approach in effect mortgaged the resource in the ground, with financial institutions betting that it was actually present in sufficient quantity, that it could be extracted economically, and that it could be sold at a price that lived up to a set of initial expectations, all within reasonable margins of error. Given the nature of large-scale projects, such as offshore oil and natural gas ventures, the development of project financing eventually grew in volume and international scope. The concepts underlying project financing were later extended from energy to other ventures such as power plants and cogeneration facilities, tunnels, bridges, pipelines, office buildings and telecommunication facilities where the future cash receipts from the project are regarded as the primary means for the underlying loans.

3.2 STRUCTURAL ASPECTS

In connection with conventional direct financing, lenders to the firm look to the firm's entire asset portfolio to generate the cash flow to service the loans. The assets and their financing are integrated into the firm's asset and liability portfolios. Free cash flow from the project augments the company's cash resources. The free cash flow is retained or distributed to the company's shareholders at the discretion of the company's board of directors.

3.2.1 DIFFERENT LEGAL ENTITY

The critical distinguishing feature of a project financing is that the project is a distinct legal entity; project assets, project-related contracts, and project cash flow are segregated to a substantial degree from the sponsoring entity. Segregating the project assets from the sponsor's other assets, project financing can give investors control over the free cash flow from the project. Typically, all free cash flow is distributed to the project's equity investors. Moreover, the project financing documents that govern the terms of the equity investment in the project typically spell out in writing the entity's "dividend policy" over the life of the project.

Project financing can be beneficial because direct ownership of assets places investors in control when the time comes to make reinvestment decisions. Giving investors control resolves potential conflicts of interest that can arise when management has discretion over reinvestment. With project financing, funding for the new project is negotiated with outside investors. As the project evolves, the capital is returned to the investors, who decide for themselves how to reinvest it.

One of the most critical questions project sponsors need to address is how a legally distinct "project financing entity" should be organized. The appropriate legal structure for a project depends on a variety of business, legal, accounting, tax and regulatory factors including: (1) the number of participants and the business objectives of each; (2) the project's capital cost and the anticipated earnings pattern of the project; (3) the requirements of regulatory bodies; (4) the existing debt instruments and the tax positions of participants; and (5) the political jurisdiction(s) in which the project will operate.

The choice of legal structure can have important tax implications. It can also affect the availability of funds to a project and the cost of raising project financing. Project financing requires that the economic rewards be allocated in a manner commensurate with the project risks. The choice of a project's legal structure affects both allocations. Project sponsors need to work closely with the project's financial advisers to evaluate alternative legal structures and determine the structure that is most advantageous.

The separate entity may take the form of undivided joint interest, corporate, partnership or limited liability organization with degrees of ownership and control on the part of sponsor ranging from none to full control.

In each case the vehicle company tends to have relatively thin capitalization in relation to the financial needs of the project. Each sponsor holds a sufficiently small

share of the equity in the joint venture that the vehicle company cannot be structured for legal and accounting purposes as a subsidiary. Funding the project is then routed through the vehicle company. Ideally, a record of such financing does not appear on the sponsors' balance sheet at all. If it does, it is only as a footnoted contingent liability. Similarly, the assets acquired in the course of undertaking the project appear on the financial statement of the vehicle company alone. One purpose of project financing is thus to preserve the sponsors' own credit standing and future access to financial markets.

3.2.2 THE NEED FOR CONTRACTS

From the following described process one theme is clear; project financing arrangements invariably involve strong contractual relationships among multiple parties. Project financing can only work for those projects that can establish such relationships and maintain them at a tolerable cost. To arrange a project financing, there must be a genuine "community of interest" among the parties involved in the project. Only if it is in each party's best interest for project financing to succeed will all parties do everything they can to make sure that it does. For experienced practitioners, the acid test of soundness for a proposed project financing is whether all parties can reasonably expect to benefit under the proposed financing arrangement. To achieve a successful project financing arrangement, therefore, the financial engineer must design a financing structure that will enable each of the parties to gain from the arrangement.

3.3 FINANCIAL DESIGN

Once the vehicle company has been established, the financing of a project must be "engineered". The financial design process must take into account the risks involved; the various prospective sources of financing, accounting and tax regulations; and the possibility of recourse to the various parties, the different entities having an interest in the project, and similar factors. Financial design may be assigned to a financial adviser, possibly an investment of merchant bank. The adviser must have the necessary technical expertise, contacts, track record, and innovative thinking necessary to help stitch together the highly complex financial undertakings required, each of which might have one or more unique characteristics.

Working closely with sponsors' financial staffs, the adviser must pay careful attention to potential sources of finance worldwide, understand opportunities for

laying off risks and achieving leverage targets, and be able to aid in identifying project risks and support arrangements, contingencies, foreign exchange aspects, and related aspects of the deal. The objective is to minimize the cost and exposure to risk of the sponsor, while making the loan attractive to prospective lenders and investors. Individual lenders, including local banks in host countries and smaller banks in third countries, may be receptive to particular deals at various times. Attractive "windows" for parts of a financing package are often open only for brief periods of time. Supplementary financial advisers may be brought in for their special expertise and contacts to help arrange official export credits, determine the legal tax issues involved in accessing national capital markets, and provide coordination with multilateral development agencies.

Having assisted in the preparation of feasibility studies, and in planning the best method for financing the project, the financial consultant is in a position to prepare and present information regarding the proposed project financing to prospective lenders. Typically, an information memorandum is prepared, which fully describes the project and outlines management's policies and plans.

The purpose of this document is to provide lenders with the information needed to make a preliminary credit decision. It is the most important selling tool in seeking financing from lenders and investors. Since in many project financings the company will be newly established and have no past operating history, heavy emphasis on the projected financial statements and rationale for the financial outlook is essential. In such instances background information and the operating history of the key sponsor or guarantor is appropriate.

3.4 CHOOSING A BANK

Once the information memorandum is ready, the sponsor(s) or its adviser should develop a list of potentially interested lenders and contact them. Sponsors should consider a number of factors when selecting a bank for a major banking relationship, either for conventional financing or for project financing.

Pricing is an important criterion for most borrowers when choosing a bank. However, competition is so intense that differences in pricing are small.

A bank experienced in financing the particular kind of project involved, should always be preferable since it would already be familiar with any potential problems. A bank with a little experience is unaware of the kinds of problems that may arise and will run for cover at the first sign of trouble.

When the project is a large one, the size of the chosen bank should be related to the size of the project. Since the bank should have sufficient lending capacity.

Since the borrower and the lender are going to cooperate, good working relationships are of vital importance. The borrower must feel comfortable that the lender will be realistic, flexible and positive in finding solutions to problems, should some difficulty arise under the agreement.

Another factor that borrowers should consider is how confident they feel that the bank will support the project in any undesirable event.

Additionally a lender, who interferes in the management, or day to day operations of the project, does not necessarily possess special skills in managing enterprises and is very likely to become an impediment in the sponsor's tasks.

Finally the borrowers should take into consideration the parameter of country exposure, as banks usually limit their credit exposure to loans in a particular country. The borrower should make sure that the lender has adequate exposure capacity.

3.5 LENDER'S VIEWPOINT

Lenders are concerned about all the risks a project involves, who will bear each of them, and whether their returns will be adequate to compensate them for the risks they are being asked to bear. Evaluation of risk is critical in project financing because of the heavy reliance on the project itself to provide effective debt service.

In a no recourse or limited recourse project financing, the risks for a financier are great. Since the loan can only be repaid when the project is operational, if a major part of the project fails, the financiers are likely to lose a substantial amount of money. The assets that remain are usually highly specialized and possibly in a remote location. If saleable, they may have little value outside the project. Therefore, it is not surprising that financiers, and their advisers, go to substantial efforts to ensure that the risks associated with the project are reduced or eliminated as far as possible. It is also not surprising that because of the risks involved, the cost of such finance is generally higher and it is more time consuming for such finance to be provided.

Financiers are concerned with minimizing the dangers of any events which could have a negative impact on the financial performance of the project, in particular, events which could result in: (1) the project not being completed on time, on budget, or at all; (2) the project not operating at its full capacity; (3) the project failing to generate sufficient revenue to service the debt; or (4) the project prematurely coming to an end.

To arrange financing for a stand alone project, prospective lenders must be convinced that the project is technically feasible, economically viable and that the project will be sufficiently creditworthy if financed on the basis of project sponsors credit standing.

Establishing technical feasibility requires demonstrating, to lender's satisfaction, that the construction can be completed on schedule and within budget and that the project will be able to operate at its design capacity following completion. Lenders must be satisfied that the technological processes to be used in the project are feasible for commercial application on the scale contemplated. In brief, providers of funds need assurance that the project will generate output at its design capacity. Lenders often retain outside engineering consultants to provide an independent opinion concerning the project's technological feasibility particularly if the project will involve unproven technology, unusual environmental conditions, or very large scale. It is not unusual for long-term lenders to require confirming opinions from independent experts that (1) the project facilities can be constructed within the time schedule proposed; (2) upon completion of construction, the facilities will be capable of operating as planned; (3) the construction cost estimates, together with appropriate contingencies for cost escalation, will prove adequate for completion of the project.

Establishing economic viability requires demonstrating that the project will be able to generate sufficient cash flow so as to cover its overall cost of capital. The ability of a project to operate successfully and generate a cash flow is of paramount concern to prospective lenders. These providers of funds must be satisfied that the project will generate sufficient cash flow to service project debt and pay an acceptable rate of return to equity investors. All the factors that can affect project cash flows are important in making this determination. There must be a clear, long-term need for the project's output, and the project must be able to deliver its products to the marketplace profitably. Therefore, the project must be able to produce at a cost-to-market price that will generate funds sufficient to cover all operating costs and debt service while still providing an acceptable return on the equity invested in the project. Project economics must be sufficiently robust to keep the project profitable in the face of adverse developments.

Establishing creditworthiness requires demonstrating that even under reasonably pessimistic circumstances; the project will be able to generate sufficient revenue both to cover all operating costs and to service project debt in a timely manner. A project has no operating history at the time of its initial debt financing.

Consequently, the amount of debt the project can raise is a function of the project's expected capacity to service debt from project cash flow or, more simply, its credit strength. In general, a project's credit strength derives from (1) the inherent value of assets included in the project, (2) the expected profitability of the project, (3) the amount of equity project sponsors have at risk and indirectly, (4) the pledges of creditworthy third parties or sponsors involved in the project.

The minimization of such risks involves a three step process. The first step requires the identification and analysis of all the risks that may bear upon the project. The second step is the allocation of those risks among the parties. The last step involves the creation of mechanisms to manage the risks.

3.5.1 RISK IDENTIFICATION AND ANALYSIS

As a rule, lenders will not agree to provide funds to a project unless they are convinced, from the above described process, that it will be a viable going concern. A critical aspect of financial engineering for a project involves identifying all significant project risks and in a next stage crafting contractual agreements to allocate those risks.

Of course every project is different and it is not possible to compile an exhaustive list of risks or to rank them in order of priority. What is a major risk for one project may be quite minor for another. However, it is helpful to categorize the risks according to the phases of the project within which they may arise: (1) the design and construction phase; (2) the operation phase; (3) or either phase. It is useful to divide the project in this way when looking at risks because the nature and the allocation of risks usually change between the construction phase and the operation phase.

3.5.1.1 CONSTRUCTION PHASE RISK

Construction carries the danger that the project will not be completed on time, on budget or at all because of technical, labor and other construction difficulties. This phase carries the greatest risk for the financier and has both a monetary and a technical aspect. The monetary element of completion risk concerns the risks either (1) that a higher-than-anticipated rate of inflation, shortages of critical supplies, unexpected delays that slow down construction schedules, or merely an underestimation of construction costs might cause such an increase in the capital expenditures required to get the project operational that the project would no longer be profitable; or (2) that a lower-than-expected price for the project's output or a

higher-than-expected cost of critical input might reduce the expected rate of return to such an extent that the sponsors no longer find the project profitable.

The other element of completion risk relates to the technical processes incorporated in the project. In spite of all expert assurances provided to lenders prior to the financing, the project may prove to be technically infeasible or environmentally objectionable. Alternatively, it may require such large expenditures, in order to become technically feasible, that the project becomes uneconomic to complete.

In practice, the lenders have traditionally been willing to rely on cash flows from projects only after they have become operational.

3.5.1.2 OPERATION PHASE RISK

Input or throughput risk is the risk that for a mining project, rail project or toll road there are inadequate inputs that can be processed or serviced to produce an adequate return. Input or throughput risk exists when the basic viability of the project depends one the availability and price of energy or raw materials. Where a project is dependent on its ability to purchase raw materials or energy at a certain price in order to produce its products at a competitive price, lenders may be willing to assume, on the basis of their knowledge of the markets, that such raw materials or energy will in fact be available at the projected costs.

Operating risk focuses on the long period of time that projects and their financing generally involves, over which costs may change or during which labor, transportation, or other critical elements may be disrupted by external sources or management incompetence. Operating problems also include inability to meet output targets or quality specifications, poor engineering or design work, unexpectedly high maintenance costs, price increases on energy equipment and materials, and other factors.

Obviously, the loan can only be repaid if the product that is generated can be turned into cash. Market risk concerns future demand for the product or service supplied by a given product. Prices for many raw materials are naturally volatile, and they also may be subject to significant long-term shifts over the extensive period of time that faces the financing. What happens, for example, when demand for the customer's own output undergoes a severe and prolonged decline? In addition, some products and services such as natural gas or transportation are highly dependent on local or regional market developments and may easily encounter a demand shortfall.

In assessing market risk, demand forecasts clearly hinge on such factors as price and income elasticities, competition and availability of substitutes.

3.5.1.3 RISKS COMMON TO BOTH CONSTRUCTION AND OPERATION PHASES.

Credit risk is associated with the sponsors or the borrowers themselves. The question is whether they have sufficient resources to manage the construction and operation of the project and to efficiently resolve any problems which may arise. Of course, credit risk is also important for the sponsors' guarantees.

Technological risk exists when the technology, on the scale proposed for the project, will not perform according to specifications or will become prematurely obsolete. If the technological deficiency causes the project to fail its completion test, the risk element properly belongs in the category of completion risk. However, the project may meet its completion requirement but nevertheless not perform to its technical specifications.

Financial risk exists when a significant portion of the debt financing consists of floating-rate debt, and a rise in interest rates could jeopardize the project's ability to serve its debt.

Currency risk arises when the project's revenue stream or its cost stream is denominated in more than one currency. In such cases, a change in the exchange rate between the currencies involved will affect the availability of cash flow to service project debt. For example, if the project's revenues are denominated in U.S. dollars and its costs must be paid in a currency other than U.S. dollars there is foreign currency risk exposure.

Political risk involves the possibility that political authorities in the host political jurisdiction might interfere with the timely development or long-term economic viability of the project. Terrorists acts, labor disruptions, tax changes, expropriation, newly imposed environmental controls, invasions from abroad, and similar events arising from the political environment fall under this general heading.

Environmental risk is present when the environmental effects of a project might cause a delay in the project's development or necessitate a costly redesign. To the extent environmental objections are voiced through the political process, they give rise to political risk.

Force majeure risk concerns the risk that some discrete event might impair, or prevent altogether, the operation of the project for a prolonged period of time after the project has been completed and placed in operation. Such an event might be specific to the project, such as a catastrophic technical failure, a strike, or a fire. Alternatively, it might be an externally imposed interruption, such as an earthquake that damages the project's facilities or that hampers the project's operation.

3.5.2 ALLOCATION OF RISKS - SECURITY ARRANGEMENTS.

Sources of risk to lenders and investors in project financing sometimes relate only to completion of project, or they may be longer term and concern the project's operation over many years. Evaluating and reducing both completion and operating risk requires expertise and ingenuity. Financial management of these risks generally relies on various instruments which control them.

Most of the above mentioned risks represent business risks (as opposed to credit risks). Lenders are usually prepared to bear certain credit risks but extremely reluctant to bear significant business risks. However by means of guarantees, contractual arrangements and derivatives the project's risks can be minimized or allocated among various parties involved in the project, thus providing the indirect credit support the project needs to attract financing.

3.5.2.1 SECURITIES

Securities provide a basis for shifting certain risks inherent in a project financing transaction to interested parties who have no desire either to become directly involved in the operation of the project or to directly provide the capital for the project. By assuming the commercial risk of a project financing through a guarantee rather than a loan or contribution to capital, a guarantor keeps the guaranteed liability off balance sheet as a direct liability, while achieving its objective of getting the project built.

While guarantees are essential to project financing, they can give lenders a false sense of security. Lenders cannot assume that guarantees will not be easy to enforce. A guarantor seeking to avoid payment has many defenses and a lender must make special effort to preserve its rights against guarantor.

Consequently, project financing entails developing a network of security arrangements to insulate the passive lenders from all noncredit risks associated with the project. The security arrangements provide that creditworthy entities will undertake to advance funds to the project if needed to ensure completion. They also

usually provide for some sort of undertaking on the part of creditworthy entities to supplement the project's cash flow after completion, to the extent required to enable the project entity to meet its debt service requirements.

The obvious guarantor of a project financing transaction is the owner of the project. Where a parent company guarantees the debt of a controlled subsidiary, the debt will appear on its consolidated balance sheet. However, there are contingent and indirect guarantees that the owner may assume with less impact on its financial statements.

Guarantees provided by third parties are attractive to owners, who in this way do not have to be guarantors and keep a liability off balance sheet. Third party guarantors nearly always receive direct or indirect benefits from a transaction of project financing as motivation for their undertakings.

Interested parties may include the suppliers of raw materials, the purchasers of project output and the host political government. A supplier may be motivated to provide a guarantee to the operator of the project. If the supplier may foresee that due to competition on the market his product needs drastic modification or remodeling, he will be motivated to provide a guarantee in order to get a processing plant constructed and operating. The user of a product or potential project in order to get the project built and ensure a needed supply may act as a guarantor.

The willingness and ability of the various parties to assume risks associated with the project depend on the benefits each expects to derive from the project, the financial strength and business objectives of each party, and the perceived likelihood that those bearing project risks will be compensated fully for doing so.

Apart from the third party guarantors who receive benefits from a transaction there are also the commercial guarantors. A commercial guarantor may be a bank, an insurance company or an investment company and provide guarantee for a fee.

Security arrangements covering completion

The greatest period of risk in a project financing is during the construction and start-up phases of the project. Many projects are supported during these phases by a special kind of guarantee agreement called a completion guarantee, which is supplied by the sponsor or sponsors of the project. The completion guarantors undertake to complete the project within a certain time period and to provide funds to pay all cost over-runs.

The security arrangements covering completion require that the sponsors stand by to furnish any funds needed to complete the project in accordance with the design

specifications and place it into service by a specified date. The strength of this obligation, which the lenders will require, will depend on a number of factors, including the amount of equity the project sponsors have contributed and the perceived risk of completion. The completion undertaking typically represents an open-ended liability. Depending on the size of the project, the potential liability could be so great that the sponsors would be unable to discharge it on their own. Lenders will then require other creditworthy entities to stand behind the sponsors and shore up the completion undertaking. Lenders must be satisfied that the sponsors and any other designated obligors have adequate credit capacity, severally and aggregate, to advance funds to the extent necessary to complete the project or else repay project debt.

Security arrangements covering debt service

Arrangements covering debt service are intended to ensure that the project will receive revenues that are sufficient to cover operating costs fully and meet debt service obligations in a timely manner. An assured resale of the product or service of a project, after it is produced, may be essential to the economics of a project. This risk can be covered by contracts for the purchase and sale of the project's output or utilization of the project's services and normally constitute the principal security arrangements for project debt. Lenders almost always insist that these contractual obligations be in place, valid and binding before any portion of the loan can be drawn down.

The factors that determine what type of purchase and sale contract is most appropriate in connection with any particular project financing include: (1) the type of facilities involved (2) the nature of the purchase transaction (3) the parties to the contract (4) the project's inherent risks. The most widely used types of purchase and sale contracts are the following.

A take-if-offered contract obligates the purchaser of the project's output to accept delivery and pay for the output and services that the project is able to deliver. The contact is does not require the purchaser to pay if the project is unable to deliver the product.

A take-or-pay contract is similar to take-if-offered contract. It obligates the purchaser of the project's output to pay for the output whether or not the purchaser takes delivery. It gives the buyer the option to make a cash payment in lieu of taking delivery, whereas the take-if-offered contract requires the buyer to accept deliveries.

Both take-if-offered and take-or-pay contracts protect lenders only if the project is operating at a level that enables it to service its debt. Consequently, if a project's performance might be subject to serious risk of prolonged curtailment or interruption, lenders will normally require supplemental credit support to provide adequate protection.

A hell-or-high-water contract is similar to take-or-pay contract except that the purchaser must pay in all events, regardless of whether any output is delivered. This type of obligation therefore provides lenders with tighter security than either a take-if-offered contract or take-or-pay contract.

Raw material supply and energy arrangements

The economics of a particular project are often largely dependent on its ability to obtain some product or service at a certain price. Purchase and sale contracts obligate the purchasers of the project's output to lend credit support to the project. Raw material supply agreements obligate the providers of the project's input to lend credit support. A raw material supply agreement represents a contract to fulfill the project's raw material requirements. The contract specifies certain remedies when deliveries are not made. A supply-or-pay contract obligates the raw material supplier to furnish the requisite amounts of raw material specified in the contract or else make payments to the project entity that are sufficient to cover the project's debt service.

Supplemental credit support

Depending on the structure of a project's completion agreement and the purchase and sale contract(s), it may be necessary to provide supplemental credit support through additional security arrangements. These arrangements will operate in the event the completion undertaking or the purchase and sale contracts fail to provide the cash to enable the project entity to meet its debt obligations. Such mechanisms, also referred to as "ultimate backstops", accomplish the same purpose: They provide a commitment from one or more creditworthy parties to supply any cash that may be necessary for the project to meet its cash obligations. Such a supplemental arrangement may take various forms but let us have a look to the most commonly used.

A financial support arrangement can take the form of bank guarantee provided by the project's sponsors. Bank guarantees usually take the form of letters of credit.

They may be used to guarantee the loan of an under-capitalized project company, where a responsible sponsor guarantees the bank against loss on its letter of credit.

A cash deficiency agreement, as the name implies, is designed to cover any cash shortfalls that would impair the project company's ability to meet its debt service requirements. It is a guarantee limited in amount to the deficiency suffered by the creditor in the event of default.

Escrow funds. Under this arrangement, the sponsors provide an escrow account containing sufficient funds to complete the project. An escrow account is, in effect, a trust fund established and funded by the sponsors. Funds are paid out from the escrow account for some specific purpose on the occurrence of some event.

Insurance

Lenders typically require that insurance to be taken out to protect against certain risks of force majeure. The insurances will provide funds to restore the project in the event of force majeure, thereby ensuring that the project remains a viable operating entity. To the extent available, the project sponsors normally purchase commercial insurance to cover the cost of damage caused by natural disasters. They may also secure business interruption insurance to cover certain other risks. In addition, lenders may require the sponsors to agree contractually to provide additional funds to the project to the extent insurance proceeds are insufficient to restore operations.

3.5.2.2 DERIVATIVES

The existence of derivative instruments provides opportunities for reducing risk exposure associated with a project. The risks that can be reduced or mitigated are those associated with funding costs currency fluctuations when cash flows are not in the home currency, and commodity price fluctuations. Such contracts give the contract holder either the obligation or the choice to buy or sell a financial asset, currency or commodity. They derive their value from the price of the underlying. Examples of derivative instruments include options contracts, futures contracts, forward contracts, cap and floor agreements, and swap agreements.

Derivatives have been used successfully in project financing either to control input or output prices, funding costs and currency values. By being able to control risk using derivatives, there have been projects that have gone from marginal or unprofitable without the use of derivatives to profitable. Similarly, there have been

projects that have been able to achieve lower funding costs from lenders because of the risk reduction resulting from the prudent use of derivatives.

Futures Contracts

A futures contract is a legal agreement between the buyer (seller) and an established exchange or it's clearing house, in which the buyer (seller) agrees to take (make) delivery of something at a specified price at the end of a designated period of time. In fact, the majority of outstanding futures contracts are settled by cash, referred to as cash settlement contracts, and not by delivery.

A party to a futures contract has two choices on liquidation of the position. First, the position can be liquidated prior to the settlement date; the alternative is to wait until the settlement date. Associated with every futures exchange is a clearing house, because of which the investor need not to worry about the financial strength and integrity of the party taking the opposite side of the trade (no counter party risk).

The major function of futures market is to transfer price risk from hedgers to speculators. In this way risk is transferred from those willing to pay to avoid risk. As long as cash and futures value move together, any loss realized on one position can be offset by a profit on the other position. When the loss and profit are equal, the hedging is called a perfect hedge. The effectiveness of a futures hedge will be determined by two factors:

In practice the amount of total loss or profit is determined by the relationship between the cash price (spot) and the futures price when a hedge is placed and when it is lifted or else the basis. The risk that the hedgers take is that the basis will change at the time the hedge is removed. Therefore hedging involves the substitution of basis risk for price risk.

When a futures contract is used to hedge a position where the asset, currency or commodity whose risk is to be hedged is not identical to the instrument underlying the futures, is called cross hedging. Cross hedging introduces another risk; the risk that the price movement of the underlying of the futures contract may not accurately track the price movement of the asset, currency or commodity whose risk is to be hedged. This is called cross-hedging risk.

Interest Rate futures can be used to protect against funding costs and currency futures can be used to protect against foreign exchange rate fluctuations. Currency futures have a longest maturity of one year; consequently these contracts are limited

with respect to hedging long dated foreign exchange risk exposure by a project company.

Forward Contracts

A forward contract, like a futures contract, is an agreement for the future delivery of something at a specified price at the end of a designated period of time. A forward contract differs in that it is usually non-standardized; the terms of each contract are negotiated individually between buyer and seller. There is no clearing house, and secondary markets are often non-existent. Due to the fact that a forward is an over- the-counter instrument, the parties are exposed to credit risk. Another point in which a forward contract differs from a futures contract is that it is intended to be settled by delivery.

Project companies can use Forward Rate Agreements (FRA) to hedge against adverse interest-rate risk by locking in a rate. A Forward Rate Agreement is a customized agreement between two parties where the two parties agree at a specified future date to exchange an amount of money based on a reference rate and a notional principal amount.

The market of forward contracts on foreign exchange is more frequently used than futures contracts for hedging currency exposures. They are available in most major currencies for terms up to five years or even longer. Long term forward foreign exchange agreements can be used to decrease or eliminate currency risk.

Forwards and futures enable project sponsors to sell their output or purchase their input for future delivery. They are, at least, guaranteed quantity and price for items that can be sold in this basis. Forwards and futures are available for most commodities and all major currencies.

Options

An option is a contract in which the writer (seller) of the option grants the buyer the right, but not the obligation to purchase (call) from or sell (put) to the writer something at a specified price within a period of time. Specifically, in an option contract: the option buyer has the right but not the obligation to transact, the option writer (seller) has the obligation to perform. The maximum amount that an option buyer can lose is the option price; the maximum profit that the option writer can realize is the option price. The ability of lenders to buy options gives them greater

flexibility in structuring loans for projects. Like other financial instruments, options may be traded either on an organized exchange or in the over-the-counter market.

Swaps

A swap is an agreement whereby two parties (called counterparties) agree to exchange periodic payments. There are four types of swaps: currency swaps, interest rate swaps, commodity swaps, and equity swaps. All but equity swaps have been used in project financing. A swap can be decomposed into a package of forward contracts. While a swap may be nothing more than a package of forward contacts, it is not a redundant contract for several reasons. First, in many markets where there are forward and future contracts, the longest maturity does not extend out as far as that of a typical swap. Second, a swap is a more transactionally efficient instrument. By this we mean that in one transaction a project company can effectively establish a pay-off equivalent to a package of forward contracts, the forward contracts would each have to be negotiated separately. Third, the swap market is more liquid than many forward contracts, particularly long-dated forward contracts.

Companies engaged in project financing should be interested in currency swaps because changes in exchange rates can erode or eliminate profit margins. While short-term hedging techniques can be used for short-term exposure, that strategy does not provide protection to long-term currency exposure problems encountered in project financing.

A project that borrows funds from a commercial bank on a floating-rate basis could enter into an agreement with a financial institution under which it agrees to pay a fixed rate on interest and receive a floating rate of interest. The floating rate receivable under the swap agreement is designed to cancel out the floating-rate payable under the bank loan agreement.

In a commodity swap, the exchange of payments by the counterparties is based on the value of a particular commodity such as petroleum. The commodity swap market can be used to hedge the long-term price risk of the outputs or inputs for a project, and is expanding in recent years.

3.5.3 RISK MANAGEMENT

Risks must be also managed in order to minimize the possibility of the risk event occurring and to minimize its consequences if it does occur. Financiers need to ensure that the greater the risks that they bear, the more informed they are and the

greater their control over the project. Since they take security over the entire project and must be prepared to step in and take it over if the borrower defaults. This requires the financiers to be involved in and monitor the project closely. Such risk management is facilitated by covenants. Such measures may lead to tension between the flexibility desired by borrower and risk management mechanisms required by the financier.

3.5.3.1 COVENANTS

A loan covenant is an agreement by a borrower to perform certain acts, such as the timely providing of financial statements, or to refrain from certain acts such as incurring further indebtedness beyond an agreed level. Lenders view covenants as a means of monitoring the financial health of borrowers and consequently they constitute a mean of restricting risks.

The financial covenants describe how the loan will be repaid under normal circumstances or may be repaid under special circumstances. The borrower argues for flexibility and the lender seeks to protect its yield in any accommodation. Affirmative covenants are promises by the borrower to perform certain actions such as to provide the lender with all releases to shareholders, consolidated income statements and balance sheets. The protective or negative covenants are among the most important provisions in the loan agreement and must be tailored to a project company's particular needs.

3.6 CONCLUSIONS AND INTERNATIONAL DIMENSION OF RISK

In the previously described process of minimizing risks of project financing, we referred firstly to identification of risks relevant to the specific project and secondly to signing complex contractual agreements with multiple parties as a mean of allocating those risks. Implicitly we presumed that information is costless and that lenders can write credible contracts guaranteed by a costless legal system which covers all contingencies.

During the various parts of the lending function, banks may face problems between the bank as principal, and the borrower as agent, which could jeopardize the repayment of the loan capital and the payment of interest. Asymmetry of information, moral hazard and adverse selection are the areas where conflicts often arise.

Frictions emerge due to the asymmetry of information which may exist either at the initial or the monitoring phase of the loan. Borrowers typically have better information about repayment prospects than do lenders, and they try to use this to their advantage. But lenders are aware of this risk and act accordingly, limiting their exposure and charging a premium for bearing this risk. Asymmetric information can lead both to an increase in interest rates and to misallocation of funds. As previously explained, due to imperfect information the lender will have to charge a higher interest rate. But higher interest rates exclude financing to low risk borrowers, since the expected rate of return of investments is in proportion to the risk acquired. Recognizing that low risk borrowers will exit the market the lender will end up financing high risk borrowers increasing in this way undertaken risk.

The problem of asymmetric information and high cost of monitoring the borrower is still there after the decision of lending to specific borrowers. The fact that the lender absorbs some of the risk essentially provides partial insurance to the borrower and the incentive of the former can be dampened. Borrower's incentive to work for good outcomes is reduced because what he receives is only a portion of his projects return. But such moral hazard problems are difficult for lenders to trace.

Another area of friction is called moral hazard. Here the borrower may deceive the banker, or change his behavior by false items in the running expenses, untrue statements regarding overall net worth and liquidity of the company or transferring income from vehicle entity to other companies, could fall into this category.

The problem of the adverse selection, that is to say, the approval and granting of unsound loans, may arise due to a number of reasons. Insufficient expertise of the banker in the specific economic sector, lack of judgment or hurried loan decisions due to the need for quick responses to the borrower's proposals are some of these reasons.

Another fundamental imperfection is that law imposes restrictions on the set of loan contracts that can be written, ending up with problems in enforcing contracts. Moreover even within the set of legally enforceable contracts the costs of using the legal system are high and uncertain. Of these legal restrictions the most important is the right to declare bankruptcy, which limits the debtor's liability.

Both of the fundamental risks are augmented when we consider international lending. As far as the asymmetric information is concerned, local intermediaries are likely to have better information about local investment opportunities and risks than

foreign intermediaries. They are also more likely to know how to squeeze payments from local borrowers.

This information advantage which is transformed in a cost advantage for the local intermediaries has two consequences. First, as domestic intermediaries enjoy a cost advantage, they can be tougher competitors squeezing the foreign intermediaries' profits. Second, as domestic intermediaries offer better rates; foreign intermediaries will be second-choice lenders for domestic borrowers and will face an adverse selection of borrowers who have been denied credit by the better informed domestic borrowers. This adverse selection means that foreign lenders are exposed to greater risk.

As far as enforcement risk is concerned things are harder across international borders. First an alien legal system means that a foreign lender's domestic expertise on enforcement is of lower value; the foreign lender may, therefore, need to make expensive investments in acquiring the necessary expertise or become reliant on expensive local expertise. Second, in countries where the law does not always function well, such as some developing countries, enforcement can be hampered by the borrower's ability to employ to extralegal methods to deter enforcement. Third the legal system could exhibit a nationalistic bias, making enforcement by a foreign lender more difficult than it would be for a domestic lender.

A further problem with international lending is that international banking policy is less well developed than domestic banking policy. Many of the policy institutions that serve to reduce the risks in the domestic financial sector do not exist at the international level. Government-imposed reserve requirements and bank supervision are largely absent at the international level, and requirements in capital adequacy and asset riskiness are much more difficult to monitor. This gives intermediaries greater flexibility, which in theory, should allow them to make greater profits. The U.S. experience with savings and loan regulation, however suggests that greater flexibility may not be associated with greater profits in practice.

Macroeconomic Aspects of International Lending

Additionally international capital flows are associated with two additional macroeconomic risks that are essentially absent in the domestic context.

Sovereign Risk

First is the sovereign risk: governments can choose to default on their international obligations. In any society firms and individuals occasionally find themselves unable or unwilling to meet their financial obligations often for reasons beyond their control. A declaration of bankruptcy typically then gives creditors the right to seize the assets of the debtor. Sovereign risk differs from ordinary bankruptcy risk because enforcing this right beyond the jurisdiction of the creditor's government requires the cooperation of another government. If the defaulting agent is itself a government, it is unlikely to hand over domestic assets to foreign creditors, and those creditors will have little or no legal recourse.

Although arrears due to sovereign risk are very high in the recent past we must admit that the reasons for governments not to default are very important (trade can be cut off, boycotts begin, reputation effect).

Monetary Spillovers

Second is the risk that international capital flows create macroeconomic instability through monetary spillovers. While foreign capital can provide a healthy tonic for domestic financial markets, it also compromises the ability of the central bank to conduct monetary policy from a purely domestic perspective. We have to look closely to two fundamental relationships in order to interpret the relationship between international lending and macroeconomic instability.

First the balance of payments accounting identity links international flows of goods, services and capital to changes in international reserves. Countries with net capital inflows that more than compensate for any current account deficit are in "balance-of-payments surplus" and experience rising levels of international reserves. The critical point is that capital inflows we are talking about, are not these ones deliberately counteracted by the monetary authorities (defending the country's currency) bur other caused by exogenous reasons (foreign shocks).

Second the domestic monetary base – the most important component of the aggregate money supply – is composed of domestic credit and international reserves. So any fluctuation of the two components will have an impact on the domestic money supply and consequently on the macroeconomy.

Combining these two valid relations we conclude that foreign shocks result in capital flows that lead to shifts in reserves and corresponding movements in the domestic money supply and macroeconomy.

In such cases of unwanted capital inflows, the policy of the country might be either to loosen domestic monetary policy or tighten fiscal policy. But consider that neither policy may be desirable from a purely domestic perspective. Increase exposure to foreign capital means that the ability of the authorities to conduct independent policy oriented toward domestic objectives become more limited.

Above mentioned risks is an issue of concern for both lending and borrowing countries. Imperfect information compromises the ability of lenders to monitor the behavior of borrowers but borrowers are affected because of the resulting high interest rates. The inability to sign enforceable all-encompassing contracts at low cost also affects both sides of lending activity. Similarly sovereign risk; net creditors face the risk of expropriation and default, but borrowers are affected because of the resulting loan limits and higher interest rates. The monetary regimes of both lending and borrowing countries are fundamentally affected by openness to international capital flows; unwanted capital flows create macroeconomic instability.

Although those that take part in international lending (from either side) should take into account the above mentioned risk parameters, the recent experience in international lending is not so comforting. This indicates that we need to think more carefully about risk. The existing process must be reinforced in three specific aspects that all happen to begin with P.

First is Perception: Markets and others need to grasp the true dimensions of risk. There is unwillingness on the parts of market to contemplate the potential scale of a disruption they might subsequently face. It is also not fully appreciated how destabilizing dynamics can accentuate market reactions. Moreover it is often underestimated how much time it takes to reestablish confidence and therefore extreme values of interest rates or exchange rates can persist for longer than is anticipated. Last when conditions are calm policy makers in individual countries usually do not take account of how difficulties in a similarly placed country can affect them.

Second is Pricing: An observer might expect that the greater depth and range of markets that exists nowadays, would make risks more quantifiable more traceable and better priced than they were before. But for a number of reasons markets are not pricing risks adequately in precrisis periods. One such reason may be that each one that takes part in international lending believes that he can get out quickly, with only small losses, the liquidity illusion. A second reason may be the expectation of markets that authorities will somehow do “something” to prevent adverse developments

without having clear in their minds exactly what that "something" is. But if there is such an expectation the risks are seen as being less than they would be in the absence of expectation of official support.

Third is Precautions: Lenders and borrowers, in particular borrowers, can take precautions to improve or to effectively contain the risks that are involved. Crises are often preceded by earlier periods of monetary slackness. A prudent monetary policy should react to danger signals, which vary. Another element of precautions has to be in the strengthening of financial systems, especially the banking system. Virtually all recent crises have been made worse by weak and overextended banking systems.

4 SYNDICATED LOANS IN SHIPPING

Shipping is one of the world's most capital intensive industries. Container ships and tankers cost up to $125 million each, about the same as a Jumbo Jet. LNG tankers, the most expensive ships, cost $250 million each. The tankers carrying the oil imported by the United States alone have a replacement cost of $150 billion. In 2003 the bulk shipping industry invested about $11 billion on new and second-hand ships (Review of Maritime Economics, 2004). Capital payments dominate shipping companies' cash flow and decisions about financial strategy are among the most important that their executives have to make.

Unfortunately some of the characteristics of the shipping business do not fit easily with the financial community's requirements. Prudent bankers like predictable earnings, clearly defined financial structures, high levels of disclosure and well-defined ownership. Shipping companies do not always satisfy these criteria. Revenues are volatile, the assets are mobile, financial structures often lack transparency and audited financial information is not always available. Ship values change as much as 60 per cent in a few months. The owner can make, or lose, millions of dollars and so can his bankers if things go badly wrong. The history of volatility is not likely to inspire confidence in potential lenders while the return on capital can hardly be attractive to investors.

By far the most important source of raising capital in the shipping industry is the commercial bank loan. Since lenders like to diversify their risk and are generally unwilling to keep a large (proportionally to their own capital) loan on their books, the usual practice is to spread the risk by sharing the loan among a syndication of several banks. Asset "distribution", as this is known, is thus used to split large loans into small packages which can be distributed around many banks.

4.1 BACKGROUND

A review of the history of ship finance reveals that the type of finance available to the shipping industry has gone through distinct phases. As the world economy grew in the 1950s and 1960s there was a long phase of charter-backed investment, mainly initiated by the shippers. This was followed by new forms of asset-backed finance during the very volatile markets of the 1980s, notably ship funds. Finally, in the 1990s, shipping companies have shown more interest in corporate structures, with public offering and corporate lending. Debt has been the

favored way of financing shipping in the last 30 years. It is attractive to borrowers as a flexible way of financing a shipping company, while retaining full ownership of the business.

4.2 PROCESS

Syndication is a common method nowadays for bank shipping finance, when a loan is made by two or more financial institutions, on similar terms and conditions, using common documentation and administered by a common agent (Horn, S.1990). It can be very large with more than 60 participating banks but, in shipping, it is mostly the smaller form, four to eight banks, with all of them having shipping expertise and portfolio, which is called "club syndication".

Setting up a syndication for a large shipping loan of, say, $20 million is a complex task. In addition to the normal credit appraisal process, the lead bank must manage the relationship with the borrower, whilst organizing a syndicate of banks to provide the loan.

Although we can divide the process of syndication in shipping in stages that are more or less alike the ones we have already identified in general syndication business, the fundamentals of shipping industry compel different approach methodologies. In order to interprete the specifics of the syndicated lending in the shipping industry we are going to mention briefly the basic stages of syndication process in general and then we are going to analyze the implementation of these stages in the shipping industry financing.

Getting a mandate. First the lead bank meets the client to discuss his financing needs. For example, a loan of $500 million might be required to finance a newbuilding programme. The bank's syndication department will be consulted about the terms on which the loan could be syndicated to other banks and unofficial enquires will be made to discover how difficult the loan will be to place and what particular features in terms of pricing, etc. will be necessary. Before the loan can be made it must be approved by the bank's credit system. For a client known to the bank, this will only take a few days, but obtaining credit approval for difficult or risky loans can be a lengthy process.

Preparation for syndication. Next, documentation is prepared and the whole package is agreed with the client. Again this is a complex exercise involving the Syndications Department, the Shipping Department and the bank's Credit Control officers. It also requires skills in drafting documentation and preparing an Information

Memorandum designed to answer the questions likely to be raised by participating banks.

Syndicating the loan. When the preparations are complete the terms will be circulated to those banks which the Syndication Department believes may be interested in participating. For a specialized business like shipping the list may extend to 8 or 10 banks who will be asked to respond by a given date. Those banks who are prepared to participate will indicate the sum they are willing to take and when sufficient commitments have been obtained a closing is arranged at which all banks and the owner sign the necessary documents.

Administration and fees. The loan documentation sets out the procedures for administering the loan. As a rule the lead bank acts as agent and charges a fee for doing so. For large syndications a management group may be set up. Their task is to handle ongoing problems without the necessity for approaching every participant. The pricing of the loan and the split of fee between the lead bank and participants will form a key part of the offer documentation.

4.3 STRUCTURAL ASPECTS

The financial institutions provide loans of varying forms to shipping companies, the core of them being the term loan under which the banks lend a certain amount to the shipping company for vessel acquisition over a specific period (above one year), to be repaid normally from the income generated by the vessel to be financed and, possibly, by its residual value. The loan is tailor-made to suit the needs of the borrower and the lender, in the particular circumstances (Grammenos, C.Th.1979). Thus, equal or unequal installments can be arranged; and a moratorium for one or two years can be granted, whereby capital installments are temporally not paid, to allow for poor shipping market conditions. Furthermore, a balloon can be approved, for a loan – that is to say, large amount of the loan, which reflects the residual value of the vessel (between 25 to 30% of the vessel's current market value), should be paid with the last installment. In reality, the payment of the balloon is usually extended for one year or longer – provided the borrower has met his commitment and depending upon the amount of the balloon and the freight income of the vessels – and, in this way, the loan repayment period can be stretched further without the bank committing itself to doing so from the beginning, because the repayment period of the loan would be longer and this would increase further the uncertainty.

When structuring the loan, the usual practice for an owner is to establish a one vessel[1] company for each vessel financed and assign the first mortgage on the ship to the lender as security. This structure, which has been standard practice over the last 20 or 30 years, lies at the heart of ship finance as a specialist sector of banking. One vessel companies registered in an open registry country, such as Panama, Liberia, Cyprus, and Malta, are established and their vessels may be managed by a management company controlled by the ship-owner, or owned by a holding company. In the first case, the banker deals with an entity where there is no or limited recourse to the management company and the loan is paid by the income and secured by the mortgaged vessel, or some other form of security; while, in the second, he deals with a coherent structure that owns a fleet and the repayment of the loan may be only based on the cash flow of the company. By creating a stand-alone company in an acceptable legal jurisdiction, legal access to the ship's earnings and insurances is assured and the sheep becomes immune from arrest for claims against other ships in the borrower's fleet.

The use of open registers in shipping has given rise to a distinctive structure of company organization designed to protect the "beneficial owner". A typical company has four active components:

The beneficial owner. The ultimate controlling owner who benefits from any profits the ship makes. He may be located in his home country or an international centre such as Geneva or Monaco.

One vessel company. A company, usually incorporated in an open registry country, set up for the sole purpose of owning a single ship. It has no other traceable assets. This protects the other assets of the beneficial owner from claims involving the one ship company.

Holding company. Holding companies are often incorporated in a favorable tax jurisdiction for the purpose of owning and operating ships. The only assets of this company are the shares in each one vessel company. The shares in this company are held by the beneficial owner, which could be a company or an individual.

Management Company. Day-to-day management of the ships is carried out by another company established for this purpose. Usually this company is located in a convenient shipping centre as London or Piraeus.

[1] An important reason for the establishment of such companies is the "sister ship" principle, which is found in many jurisdictions, according to which a claim in object can be transferred to any other vessel, which belongs to the same beneficial owner.

This corporate structure helps to insulate the beneficial owner of the ships from authorities seeking to establish liabilities.

This is important because ship-owners are often secretive and the banker may not feel confident that he can keep track of his business activities. It also means that the bank is lending to a company with no assets other than the ship and its earnings, so security becomes a crucial issue in structuring the loan.

A single vessel company, or "shipping project", is an activity which can be considered separately from the activities of the sponsor (owner) of the project. In this case, the repayment of the loan is based primarily on the cash flow of the venture, with security cover in the assets of the venture, and with no (or limited) recourse to the sponsor.

4.4 LENDER'S VIEWPOINT

4.4.1 RISK IDENTIFICATION AND ANALYSIS

Risk management in an industry which is riddled with intense cycles in its rates and prices and which has made and destroyed millionaires over the years is extremely important. The importance and effectiveness of risk management techniques and strategies in shipping operations has been appreciated by shipping market agents for a long time, as indicated by the development of physical hedging methods such as period time-charter contracts and Contracts of Affreightment (COA).

Shipping departments of a many commercial banks, or banks specialized in shipping, have seen their profitability fluctuating substantially over the years. Increased profits strengthened the presence of commercial banks committed to shipping, and attracted newcomers. The early 1970s, late 1980s and late 1990s, are good examples of positive bank shipping profitability. However, heavy losses over periods of shipping recession or depression have also been realized and led a number of banks to the decision of abandon shipping finance.

The risk of an investment is usually measured by the standard deviation of the year-on-year return, since this gives an indication of the variability of the return (Brealey, R. and Myers, S.1988). In these terms shipping is a high risk industry with a standard deviation of bulk shipping revenues roughly twice as high as the US stock market. Consequently the loan losses for the banks may be severe, reducing the return on assets (ROA) of a bank and, therefore destroy value of the bank, or loan profits may increase the ROA and create value for the bank.

A financial institution that lends to shipping companies for acquisitions of secondhand vessels or placements on newbuilding orders may face a number of risks that may adversely affect the bank's profit margin. As we have already discussed, in project financing, one of the most important things for the bank to do is to identify the related risks and specify their dimension.

4.4.1.1 CONSTRUCTION PHASE RISK

When the venture is related with newbuildings the bank must precisely analyze the risks related to the construction phase of the vessel. This phase takes time, usually one to one and a half years, but sometimes up to four years, from ordering the vessel until the vessel is delivered and starts operating in the market. Since freight markets are volatile this implies that vessels often are delivered into markets with freight rate levels that differ much from the market conditions prevailing when the vessel was ordered. A decision to order a vessel should reflect the expected future freight rates or correspondingly the future income level over the economic life of the vessel.

Similarly to our analysis for project financing, the bank that takes part in a syndicated shipping loan should consider the technical aspect of completion risk. The shipbuilding production is heavily dependent upon management and organization skills. The selected shipyard must have effective systems for generating information, developing production plans, controlling materials and achieving high standards of accuracy in the production. The bank must assure the above prerequisites.

Banks should also examine the regulatory system which has played a vital role in the shipping industry over the last 30 years. Matters such as safe ship design and certificates of competency are some of the basic regulations which the shipping company should abide by both in the completion and in the operating phase. New regulations such as ISM (International Safety Management) and STWC may cause to the venture increased costs and so establish it no longer profitable.

4.4.1.2 OPERATION PHASE RISK

As far as risks related to the operation phase are concerned, they can be summarized in the categories we have already mentioned in project financing. The crucial differentiating aspect is that shipping is a separate market that has its own characteristics.

Shipping Market Risk

Shipping is a lucrative and risky business. The shipping market is perhaps the purest form of a perfectly competitive market, barriers to entry being smaller than in any other big business and government regulation being extremely difficult to reinforce. The near perfect market character coupled with the long lead time required for newbuildings makes it subject to particular violent dynamic effects. As supply of shipping services can only sluggishly adapt to fast changes in demand, the market is plagued by violent rate fluctuations, long periods of depressions followed by booms called "shipping market cycles".

Shipping cycles create endless problems for shipping analysts, investors and bankers alike. All markets whether of goods or services, can present fluctuations. However, most markets tent to present fluctuations more in terms of volume of sales than in terms of price levels. Fluctuations in asset prices in any market are not comparable to those found in the shipping sector. Competitive shipping markets such as the traditional bulk markets which constitute well over half of the world's tonnage (Lloyd's Register 2001), are affected by large downward volume changes resulting in rapidly declining prices in times of shipping recessions.

Decisions of bankers related to financing a purchase or a newbuiding should be made after observing the shipping market. In the space of a few months the market value of a vessel may change by millions of dollars. The cycles are not regular, appearing as fluctuations in revenue of variable length. A cycle can be defined as an interval of time during which one sequence of a regularly recurring sequence of events is completed. Banks should comprehend what causes these cycles; and the usual to analyze this process is the supply – demand model. Starting with the demand side of the model, by far the most important cause of shipping cycles is the business cycle in the world economy. This injects a cyclical pattern into the demand for ships which works through into sea trade. Examining historical data, one can observe that the correlation between cycles in world economy, as measured by industrial production, and cycles in seaborne trade, although is far from perfect, it certainly exists, especially during extreme fluctuations in the world economy (Stopford, 1997). On the supply side of the market, the outstanding influence is the investment cycle, as shipowners struggle to match investment to the essentially unpredictable demand cycles.

Operating Risk

Shipping companies are faced with substantial operational business risks which emanate from fluctuations in freight rates, voyage and operating costs. All these factors are determinants of the venture's cash flow, more specific such fluctuations have a profound impact on the company's operating profitability and consequently on its survival. Special attention should be given to these risks, since they will determine profitability of the shipping operation.

The fluctuations of the freight rates are higher compared to rates and prices in other sectors of the global economy. The freight rate market may be considered as the mechanism linking supply and demand. The way it operates is simple enough. Shipowners and shippers negotiate to establish a freight rate which reflects the balance of ships and cargoes available in the market. If there are too many ships the freight rate is low while if there are too few ships it will be high. Once the freight rate is established, shippers and shipowners adjust to it and eventually this brings supply and demand into balance. The volatility of the freight rates can influence the revenue side of the venture's cash flow, therefore has always been an issue of great importance for all the parties involved in shipping industry.

Voyage costs are those costs incurred in a particular voyage in which the ship is involved. These are mainly fuel costs, port charges and canal dues. They depend not only on the specific voyage undertaken but also on the size of the vessel. Bunker fuel costs account for almost 50% of the total voyage costs (Stopford, 1997) and as a result fluctuations in bunker prices have a major impact on the operating profits of the shipping industry. Fuel oil is a low derivative of petroleum and its price is closely related to that of oil. Since oil prices are very volatile and depend upon many factors, including political and economic events around the world, it is possible that disturbances and shocks to the world oil market are transmitted to the bunker market causing large fluctuations in bunker prices. Such fluctuations are undesirable both to the shipping companies and to the banks related to the shipping sector as they directly affect their operating profits.

4.4.1.3 RISKS COMMON TO BOTH CONSTRUCTION AND OPERATION PHASES

Technological Risk. Ships not only become obsolete by wear and tear they can also become obsolete through the introduction of a new type of vessel which would be

deemed superior in terms of service quality or indeed in terms of cost for providing shipping services. Although rarely taken into account or appropriately discussed, this factor can reverse completely estimation of investment returns and shorten the economic life of a vessel dramatically. Developments in recent years, in both the specialized shipping markets and most in liner shipping, require that the impact of what could be termed broadly technological obsolescence is taken into account. The successive generations of container vessels have rendered redundant a large part of the existing tonnage.

As in any international industry, exchange risk is significant. It affects the owner's cash flow through a number of channels, including payment of freight rates, voyage expenses, purchasing of the asset and other. Banks willing to participate in lending shipping companies must take under consideration exchange risk in a dual perspective. The first one is how an exposure in US dollars, as most shipping loans are denominated in USD, will affect its own balance sheet. A funding in US dollars which will create a long spot position in this currency, without a similarly sized short position in the same currency, may incur a capital loss in the bank in case of depreciation. Moreover, expected income from commissions, which are substantial amounts in syndication lending, create a long forward position which is possible to have the same impact on the bank's Profit and Loss Statement. The second one is the exchange risk that the shipping company is exposed, affecting his own income and by extension the bank's in case it is unable to repay the loan.

4.4.2 ALLOCATION OF RISKS - SECURITY ARRANGEMENTS.

4.4.2.1 SECURITIES

In granting a shipping loan, the bank has three possible areas from which to recoup its funds. The first, or "intended" way, is from the cash flow generated by the financed acquisition; the second, from the mortgage on the financed vessel; and the third, form additional securities or "indirect". It must be stressed that a bank, by taking securities, does so in the expectation that a problematic loan will not develop and that sufficient cash flow will be generated by the project to service the outstanding debt without requiring to enforce its rights on the securities of the loan. The decision to be taken by the financial institution, on the appropriate security of securities, depends upon the individual case or the loan and shipping company to be financed. Among the securities are the mortgage, the assignment of revenue, the ship

charters, the assignment of insurance, the mortgagee's interest insurance, the guarantees or the comfort letters, cash collateral security and share equity.

Mortgage

A mortgage duly registered in the country whose flag the vessel flies, and carrying conditional ownership of the acquired vessel that becomes void when the debt is repaid, is the normal method of providing bank security for vessel acquisitions. The convenience of a mortgage lies in the fact that the shipowner can run the business as a going concern, at the same time giving the mortgagee the following basic rights: take possession of the vessel and operate it or proceed to a jurisdiction for arrest; arrest the vessel; sell the vessel at auction or privately; appoint a receiver to handle the affairs of the vessel; and to assume absolute title of the vessel. All these measures aim at protecting the bank and represent an agreement between the borrower and the lender with respect to vessel maintenance, insurance and operation.

Assignment of Revenue

General assignment of revenue allows present and future revenue to be paid directly to the shipowner until an event of default occurs, and reflects the degree of confidence by the lender as to the likelihood of the debt service. A very common intermediate format is the Retention account, which provides that all assigned revenue is paid into such an account held by the lender, that accumulate the necessary monthly freight revenue to meet the next interest and principal payments. All the specific rights of the borrower arising from a charterparty are assigned to the bank, provided the charterer's consent has been given. Consequently, all charterparty payments are made directly to the bank, which will normally allow the shipowner to withdraw the necessary funds ensuring that the vessel remains operative in order to service the debt.

Ship Charters

As we have already examined in project financing, an assured resale of the product or service after it is produced may be essential to the economics of the project. In shipping financing, the role of contracts for the purchase and sale of products that we have seen in project financing is taken by ship charters. A long-term bare boat charter to a very strong credit with hell-or-high water clause which provides sufficient cash flow to service debt and pay operating costs, will provide credit support for possible 100 per cent financing. Such a long-term ship charter, in which

charter party is obliged to pay "come hell or high water", is the equivalent of a guarantee as far as lenders are concerned.

The shipping company obtains a bare boat charter for the ship from a very strong credit with hell-or-high water obligations for 15 years, which provides adequate cash flows to service the debt, pay any operating expenses and provide a contingency fund. The charter must contain adequate safeguards again rising operating costs and taxes, including possible withholding taxes. The obligation to pay is unconditional and not excused by failure of the ship to operate, or labor dispute or the owner to perform.

Assignment of Insurance

Insurance coverage is required as an additional security should the vessel be damaged, lost or subject to claim for third parties. Insurance protection in shipping finance primarily involves the assignment of all insurance payments due to the borrower, to be paid either directly to the bank or requiring the bank's express consent before being paid to the borrower. Prepayment of insurance fees, to the bank is another way to ensure both intention of payment and payment to the insurance company.

Mortgagee's Interest Insurance

Mortgagee's interest insurance (M.I.I.) is an additional insurance that protects the bank in the event of a policy becoming void if certain warranties are broken, for example, it covers the interest of the mortgagee in the case of a disputed claim by the underwriters on the grounds of fraud. The mortgagee's interest claim will usually be withheld, pending the conclusion of litigation.

Guarantees

As we have already presented in project financing, a guarantee is an undertaking, given to the bank by the guarantor, to be answerable for the loan and interest granted by the syndication of banks to a shipping company, upon the loan becoming defaulted. In accepting guarantees, the bank should also investigate the legal authority of the guarantor to give guarantees. Guarantees are normally personal or corporate.

Under a personal guarantee agreement, the guarantor is liable – on demand - for the discharge of all liabilities to the bank up to the stated amount or proportion, in the event of default on the part of the borrower. Personal guarantee is based on the guarantor's personal assets. Corporate guarantees are usually given by the group holding company in conventional structures, or by related management shipping companies in single vessel structures.

Comfort letters are a form of intermediate, less strict, guarantees usually containing assurances and intent.

Cash Collateral Security

Cash security works as an escrow fund that we have already presented in project financing. Usually it comprises a special cash collateral account, blocked by the bank, which may be established on an initial lump sum or monthly payment basis. The reason for their existence is that the bank lowers its loan exposure and also holds cash, which can be used for the payment of interest and repayment of loan installments should the shipping company be unable to cover them in a falling freight market, during which the vessel may face temporary employment problems. Cash collateral accounts are normally interest-bearing, subject to negotiation.

Share Security

The share security, which is normally taken in addition to the mortgage, consists of an owner depositing shares of the borrowing shipping company that he controls, with the banks, for a specific period or up to the final amortization of the loan. This enables the lending banks, when a shipping company is in default for the loan repayment, to assume ownership of the vessel-owning company as opposed to the vessel itself, resulting in the bank becoming the new owner as opposed to a mortgagee.

4.4.2.2 DERIVATIVES

Derivatives are being used widely in shipping industry both by the bankers and the shipping companies for limiting risk exposures. Many other industries have used derivative contracts to manage risks. In syndicated shipping finance there is a common place during the last years of incorporating clauses in the syndicated loan agreement, which obliges borrower to take a position in the derivatives market in order to reduce certain risk exposures.

In the framework of project financing we have presented in detail the way in which derivatives can provide opportunities of reducing or mitigating risks associated with funding costs – interest rate risk-, currency fluctuations when cash flows are not in the home currency – exchange risk- and commodity price fluctuation. In this part we will extensively discuss about derivatives in commodities and their special application to controlling risk in a syndicated loan in shipping.

Freight Rate Risk

The volatility of shipping freight rates has always been an issue of great importance for shipowners and banks interfered in shipping finance. Different methods have been developed and used by the agents to manage freight market risk. There are mainly hedging using physical contracts, such as period time charters and CoA's, and hedging using derivatives.

Trading in derivative contracts dated back to mid 1860's with the introduction of commodity future contracts at the Chicago Board of Trade in the US. Since then the trading volume as well as the variety of futures contracts available for trading has increased dramatically. This growth in futures trading activity is a reflection of the economic benefits that futures markets provide to market agents. These benefits are price discovery and risk management through hedging. Price discovery is the process of revealing information about current and expected spot prices through the futures markets. Risk management, which is more relevant to banks scope, refers to hedgers using futures contracts to control their spot price risk.

The benefits of providing a futures market in freight rates had been recognized by shipping market practitioners as early as the 1960's (Gray, J.1990). However, such a market was eventually established only in 1985. The reason is that the underlying asset of the market, the service of seaborne transportation, is not a physical commodity that can be delivered at the expiry of the futures contract. This obstacle was overcome with the introduction of the cash settlement procedure in 1982.

The Baltic Exchange commenced publication of a daily freight index, Baltic Freight Index (BFI), in January 1985. This index[2] was developed as a settlement mechanism for the newly established BIFFEX futures contract. It quickly won worldwide acceptance as the most reliable general indicator of movements in the dry

[2] BFI initially consisted of 13 voyage routes covering a variety of cargoes ranging from 14.000 metric tons of fertilizer up to 120.000 metric tones of coal and no time-charter routes.

cargo freight market. Over the years, the constituent routes of that original index have been refined to meet the ever increasing and changing needs of the derivatives market. Since their introduction the shipping indices produced by the Baltic Exchange have been widely recognized by market practitioners as the most reliable indicators of market conditions in the shipping industry.

Parts of a syndication lending in shipping industry are confronted with risks that arise for the ordinary conduct of their businesses. Derivative markets provide a way in which these risks may be transferred to other individuals who are willing to bear them, through hedging.

A Forward Freight Agreement (FFA) is a contract between two counterparties to settle a freight rate or hire rate, for a specified quantity of cargo or type of vessel, for one of the major shipping routes in the dry-bulk or the tanker markets at a certain date in the future. The underlying asset of the FFA contracts can be any of the routes that constitute the indices produced by the Baltic Exchange. As in the case of futures contract, FFA's are settled in cash on the difference between the contract price and an appropriate settlement price. Therefore, shipowners are obliged by the clauses of a loan agreement to take a short position in FFA's, since when freight rates fall, the reduction in the freight income will be compensated through a gain in the forward position.

Option contracts as means of risk management have been established for a long time in the financial commodity markets for hedging interest rates, foreign exchange, equities and commodities. Options in the shipping industry were introduced in 1990 when trading on options on BIFFEX started. Options are a flexible hedging instrument since they enable the shipping company to lock in a specific rate when freight rates decrease and fix his vessels at the prevailing spot rate, when freight rates increase.

Additionally, market participants occasionally use instruments such as caplets, floorlets and collars on freight rates.

Voyage Costs Risk

The volatile nature of the world oil and bunker markets leaves shipowners and consequently the financing banks in a very difficult position as their operating profit may be wiped off very quickly due to sudden changes in these markets. Instruments used to reduce such risks include Petroleum and Petroleum product futures contracts, Forward bunker agreements, Bunker Swaps, Options on bunker prices and other tailor

made derivative contracts which are designed especially to eliminate or control bunker price risk.

With the exception of some financial institutions, such as Morgan Stanley or Barclays Capital, offering tailor made derivatives products such as swaps and options, there is no tradable futures contract for the product. In the absence of bunker futures contracts, hedging against bunker price fluctuations using futures contracts involves a cross-hedge against an existing crude or petroleum futures product.

As far as the OTC products are concerned, in recent years especially following the wake of development of a variety of OTC derivatives products for commodities in the late 1980s and 1990s, OTC derivatives have become quite popular in bunker price risk management too. A forward bunker contract is defined as an agreement between a seller and a buyer to exchange a specified quantity of bunker of certain quality, at an agreed price, at a certain delivery location and time in the future. Forward contracts are usually paper contracts in the sense that settlement is made on the difference between the contracted price and the price for bunker at the delivery point, although physical deliveries are also possible. Swap contracts are perhaps the most popular instruments for bunker price risk management and many banks and commodity trading houses nowadays offer bunker swaps as part of their derivative products. Swaps involve no transfer of physical commodity, and are settled in cash at the maturity date. Using a swap contract the shipowner aims at securing his bunker costs which in turn ensures a steady level of operating expenses and a guaranteed profit margin in order to repay his loan obligations.

Although option contracts had been used extensively for risk management in energy markets since the early 1980s, it was not until 1990s that options were first used as a means of hedging bunker fuel risk in shipping. The parties involved in shipping financing have a wide range of other derivative instruments for controlling voyage costs including caps and floors which give its holders the opportunity to limit any possible future losses due to the increase in the price of the asset; collars are very effective risk management instruments designed to confine the gains and losses of the holder of the instrument within certain limits.

4.4.3 RISK MANAGEMENT

4.4.3.1 Covenants

Covenants is a contractual instrument used in shipping syndicated loans as exactly in project financing. The prime objective behind covenants is the protection of the assets value of the borrower. Consequently, in a sector like shipping where, as we have already discussed, assets value are affected by large downward volume changes resulting in rapidly declining prices in times of shipping recessions, such a security instrument is of vital importance in order to reduce risk exposure.

Thus, the financial institutions want to maintain the market value of assets higher that the market value of the liabilities. In such case, when a positive net worth exists, the shipping company has a value for the borrower and serves as a security for the lender. The problems are created when the market value of the assets (vessels) decreases and, when substracting the liabilities from the assets, the net worth becomes negative. This is the reason that the hull to debt ratio is imposed and regular valuation of the market value of the vessels, by international firms or shipbrokers, has to take place.

There is a wide variety of other covenants imposed by the loan agreement or the mortgage which is, of course, to be expected as protective measures in the lenders' interest. This is because shipping companies operate in a very complex international business and legal environment and may be incorporated in one country; vessel may fly the flag of another country; sail in various parts of the globe, often under dangerous conditions; financing may take place by a syndication in a different country and the loan agreement may be governed by the law of another country; and the crew may be nationals of other countries. Many of these diverse conditions and factors, which may have an effect on the repayment of the loan, should be dealt with through the covenants section.

Shipping banks when imposing covenants, should maintain a balance between their need to secure the shipping company's net worth and its operating flexibility and investment expansion. This is because high restrictions may prevent a company's growth, whereas a too relaxed approach may occasionally lead to moral hazard.

5 SYNDICATED LOANS IN SHIPPING: PRESPECTIVES FROM PROJECT FINANCING

We have so far described two instruments of debt finance that have long been used to fund large-scale projects, syndicated lending and project financing. By concentrating our analysis on the special characteristics of syndicated loans in the shipping sector we observed that, in spite of their unique characteristics they have common features with project financing. Both of them involve raising funds to finance an economically separable capital investment project by incurring bank borrowing that is designed to be serviced and redeemed exclusively out of project cash flow. The terms of the debt are tailored to the characteristics of the project. For their security, the project debt securities depend, at least partly, on the profitability of the project and on the collateral value of the project's assets. Depending on the project's profitability and on the proportion of debt financing desired, additional sources of credit support may be required. They require careful financial engineering to achieve a mutually acceptable allocation of risks and rewards among the various parties.

Considering the detailed characteristics of each one of them one can point out the differences or similarities between them. The following Table compares syndicated loans in shipping and project financing, on the basis of the criteria identified in the preceding sections.

Syndicated Loans in Shipping	Project Financing
ORGANIZATIONAL STRUCTURE	
* Syndication is a common method for bank shipping finance, when a loan is made by two or more financial institutions on similar terms and conditions, using common documentation and administered by a common agent.	* Project Finance is defined as financing of a newly to be developed project through the establishment of a legally independent project company.
* One-vessel company structure is used. A company usually incorporated in an open registry country, set up for the sole purpose of owning a single ship. It has no other traceable assets and is controlled by the management company.	*Special Purpose Vehicle or Special Purpose Entity is created to share this feature of separate incorporation in which sponsors are the principal shareholders.
* Project-related assets and cash flows are segregated from the sponsor's other activities.	* Project-related assets and cash flows are segregated from the sponsor's other activities.
* Moreover this organization structure helps to insulate the beneficial owners of the ships from authorities seeking to establish tax and other liabilities.	* The project can be organized as a partnership or limited liability company to utilize more efficiently tax benefits of ownership.
* The syndication deals with an entity where there is no - or limited recourse to the management company.	* The financing is with limited or even with no recourse to the sponsors. Funding is obtained strictly for the project itself without an expectation that the sponsor will co-insure the project's debt, at least not fully.
* Creation of different shipping companies of limited liability, each one of which owns one vessel and all of these still controlled by the same owner, assures that claims which arise against a particular vessel of this fleet by the syndicated loan cannot be transferred to any other vessel of the fleet.	* Each sponsor holds a sufficiently small share of the equity in the joint venture, that the vehicle company cannot be considered for legal or accounting purposes as a subsidiary, preserving in this way the sponsor's credit standing.

Syndicated Loans in Shipping	Project Financing

LENDER'S VIEWPOINT

* The syndication deals with an entity where there is no - or limited recourse to the management company and the loan's repayment **depends primarily on the vessel's income.**	*Non-recourse nature of debt in Project Financing indicates that the repayment of debt is **totally dependent upon the profitability of the project.** Since creditors are exposed to project specific risks, they must initially look to the project itself.
Industry's Review * Shipping market is perhaps the purest form of perfectly competitive market, therefore is subject to particular violent dynamic effects. Default risk in shipping finance is primarily **due to the high volatility** of the shipping business. **Scenario analysis** of demand and supply of shipping markets, with **sensitivity analysis** is required for the discussion of their current and future conditions. It is important for the lenders to figure out the stage of the shipping cycle during which they provide finance.	**Industry's Review** * The financial success of the project depends on the future existence of a market for the product, commodity or service produced. **Current and future market conditions** play a vital role in the project's success and therefore should be thoroughly analyzed.
Management Company * The management company is assessed for its managerial quality and its performance versus plan on strategies over a long period, for instance the last ten years, a period that covers at least one shipping cycle. Its expertise accumulated over years, its resource fullness during the lower parts of the shipping cycle and its integrity are areas of investigation.	
Economic Viability * Shipping is a capital-intensive industry. The bank syndication must conduct **analysis of financial statements** and a **cash flow analysis.**	**Economic Viability** * The viability of the project is based on the **expected cash flows** generated by the project rather than on the strength of the company's balance sheet.

Syndicated Loans in Shipping	Project Financing
* As long as the creditors know that the real economic net worth - the difference between the market value of assets and the market value of liabilities, as opposed to book value - is positive, then they also know that the loan is relatively secure. * Cash flow is the main source for the loan repayment so it is essential to **construct a discounted cash flow analysis.**	* It is essential to construct a discounted cash flow analysis from the equity point of view and estimate the annual returns to the equity holder. **Discounted cash flow analysis** plays a crucial role in determining a project's expected profitability and in estimating its borrowing capacity.
Regulatory Regime * Investments and their overall cost, sale and purchase market, vessels' operating expenses and their revenue may be seriously affected by the official and regulatory environment. As the parameters for the developments in the shipping regulatory environment are **numerous** and, as time passes, **become tighter**, special attention is demanded from the creditors' side. Within the regulatory shipping framework :	**Regulatory Regime** * Host governments provide a critical input, namely the legal system and the protection of property rights. When corporate law does not exist or when property rights are not strictly enforced, the project is vulnerable to expropriation by host government.
International Maritime Organization safeguards, the international standards, safety and marine pollution of the shipping industry; flag states, where vessels are registered, impose the regulations of IMO when they have ratified its regulations; port authorities inspect vessels; the classification societies supervise the construction, safety and seaworthiness of the vessels during their life.	Referred to as "sovereign" or "political" risk, the end result of either direct expropriation in the form of asset seizure or creeping expropriation in the form of increased tax or royalty rates is a decrease in project cash flows. * Regulatory issues related with supervisory authorities of the industry or the country must be confined and taken into account.
Risk Management * Syndication business by nature allows the sharing of risk among various financial institutions. Although syndication enables each single participant to diffuse the risk the importance of efficiently monitoring and controlling risk is as vital as in bilateral lending.	**Risk Management** Project Finance aims to strike a balance between the importance of effectively monitoring managerial actions and need for sharing the risk of sizeable investments among multiple parties.

Syndicated Loans in Shipping	Project Financing
Mortgage. Lenders require direct security interest in project facilities and assets in the form of a first mortgage lien. One of the major problems encountered in the area of mortgages is in establishing the vessel's market value, which represents the value of creditors' security.	**Mortgage.** Lenders require direct security interest in project facilities and assets in the form of a first mortgage lien. This security interest is often of limited value prior to project completion.
Control and Monitoring. * Management remains in control but contractual arrangements governing the debt contain **provisions and covenants** that facilitate monitoring.	**Control and Monitoring.** * Management remains in control but contractual arrangements governing the debt contain **provisions and covenants** that facilitate monitoring.
* **General assignment of revenue** provides that all assigned revenue is paid into a Retention account, held by the mortgagee, who accumulates the necessary monthly freight revenue to meet the next interest and principal payments.	* In order to **tie project revenues** to debt repayments, lenders incorporate clauses in the contract that prioritize claims in cash flows and allocate cash flow accordingly.
Consequently, all payments are made directly to the bank which will normally allow the shipowner to withdraw the necessary funds ensuring that the vessel remains operative in order to operate the debt.	
Assignment of income to the creditors may also concern other one vessel companies that belong to the management company's fleet.	
	Separate legal incorporation reduces the difficulty of monitoring. Rather than monitoring co-mingled cash flows from numerous assets, creditors monitor relatively simple and transparent cash flow from a single asset.

Syndicated Loans in Shipping	Project Financing
* **Affirmative Covenants** : These clauses outline the ongoing responsibilities of the borrower beyond the timely payment of principal and interest. * **Protective Covenants** : These provisions place limitations on the actions and operations of the borrower.	* **Affirmative Covenants** : These clauses outline the ongoing responsibilities of the borrower beyond the timely payment of principal and interest. * **Protective Covenants** : These provisions place limitations on the actions and operations of the borrower.
Risk Allocation * Apart from the vessel's expected revenues and the mortgage on it, other form of securities also strengthen the position of creditors.	**Risk Allocation** * Project Finance by employing several and **far more detailed contracts** than will conventional-financed projects, it allows the allocation of specific project risks to those parties best suited to appraise and control them.
* The perfectly competitive character of shipping industry is the main reason that **not many participants**, apart from ones related to the specific shipping company, **are willing to lend credit support**. Common guarantors in shipping finance are other family members or "offshore" companies belonging to the same holding company or related shipping companies in single vessel structures.	* Sometimes is referred to as "contract finance" because a typical transaction can involve as many as 15 parties, united in a vertical chain from input suppliers to output buyers through 40 or more contractual agreements. * **Several identifiable parties** will normally have an interest in a project. Interested parties may include the sponsors, the suppliers of raw materials, the purchasers of project output, host political jurisdiction's government or other individuals who are willing to bare certain
Guarantees. * Under a guarantee agreement, the guarantor is liable for the discharge of all liabilities to the bank up to the stated amount. The guarantee is based on the guarantor's assets. However, assets may sometimes by registered in the names of other family members or "offshore" companies. **Legal recourse,** when necessary, against the borrower and the guarantor, who is usually the owner or major shareholder of the management company is **often questionable.**	**Guarantees.** * Guarantors may undertake to provide funds to pay costs or to act in a specified way. * Direct unconditional guarantees by a guarantor under which it assumes the responsibility to perform all the obligations of the guaranteed party, is the only type of guarantee which will suffice to support the transaction.

Syndicated Loans in Shipping	Project Financing
	* A combination of limited in amount, in time or in both guarantees is commonly accepted as credit support.
* **Ship charters** assure sufficient cash flow to service the loan. Therefore, the quality, reputation and financial condition of the charterer in terms of honoring are particularly important. They are contracts by which the charterer is committed into doing business under pre-specified terms.	*__Purchase and sale contracts__ are used to ensure that the project will receive revenues that are sufficient to cover operating costs fully and meet debt service obligations in a timely manner. They are used to obligate the purchasers of the project's output or service to pay for the output that the project is able to deliver or moreover in some instances even if the delivery is not made. Ending up, purchasers lending credit support to the project.
	* Under the same structure **raw material supply agreements** obligate the providers of the project's inputs to lend credit support.
* **Undertakings**. Management companies sometimes agree to undertakings which are not guarantees, yet giving to lenders sufficient comfort to proceed with the loan.	* **Undertakings**. Sponsors sometimes agree to undertakings which are not guarantees, yet give a lender sufficient comfort to proceed with the loan.
Undertakings may take the form of : Short term advances might be channeled through the management company's bank account in order to provide to sufficient cash flow. Comfort letters are a form of intermediate, less strict, guarantees usually containing assurances and intent.	Undertakings may take the form of : Short term advances of a sponsor might be channeled through the sponsor's bank account in order to provide to the project sufficient cash flow. Comfort letters are a form of intermediate, less strict, guarantees usually containing assurances and intent.
* Due to the fact that regulatory regime in shipping is not defined by specific parameters, apart from closer monitoring, **little can bone against related risks.**	* An **undertaking by the host government** against expropriation may provide sufficient credit support against "sovereign" or "political" risk.

Syndicated Loans in Shipping	Project Financing
	Foreign governments can also provide support to a project by affirmations and acknowledgements of policies on such matters as permissible methods of operating a business within a country, allocation of the country's resources to the project, providing infrastructure support or taxation.
* **Derivative Instruments.** The existence of derivative instruments provides opportunities for reducing the risk exposure. The risks can be reduced or mitigated only when understanding the risk-return characteristics of derivatives and using them for the sole purpose of controlling risk.	* **Derivative Instruments.**The existence of derivative instruments provides opportunities for reducing the risk exposure associated with a project. The risks can be reduced or mitigated only when understanding the risk-return characteristics of derivatives and using them for the sole purpose of controlling risk.
Risks that can be reduced are those associated with freight rates, voyage costs, funding costs and currency fluctuations when cash flows are not in the home currency.	Risks that can be reduced are those associated with output prices, funding costs and currency fluctuations when cash flows are not in the home currency.
* **Cash collateral** is a form of cash security usually comprise a special cash collateral account, blocked by the bank, which may be established on an initial lump sum or monthly payment basis.	* **Escrow fund** is a blocked account where a dedicated party is obliged to deposit and keep usually between 12 and 18 months debt service.
* **Insurances.** Insurance coverage is required as an additional security should the vessel be damaged, lost or subject to claim from third parties. Insurance protection in shipping finance primarily involves the assignment of all insurance payments due to the borrower, to be paid either directly to the bank or requiring the bank's consent before being paid to the borrower.	* **Insurances.** Typically lenders require that insurance to be taken out to protect against certain risks and provide funds that will ensure that the project will remain viable under all circumstances.

6 CONCLUSION

Getting a borrower to sign a legal document will never turn a bad credit into a good one. There are various parameters that lenders should take into account before lending money, which have been accurately described in the academic and practitioner literature. A crucial point however, is how to best manage the special characteristics, inherent to each investment, in the structuring of the financial package in order to be of high potential both for the financial institution and the entity financed.

The idea here is that lenders can look at the insights of other financing instruments and try to make use of the appropriate ones in their financing structure. But this must be a two way process. Lenders should not only trace for the specific instrument that its intrinsic characteristics resemble to the ones under consideration but should also ensure that this instrument entails significant benefits to related counterparties.

In the specific context banks who participate into syndication business in shipping take advantage of spreading the risk; increasing banking return, which includes spread and additional fees charged on the borrowers; and gaining of experience and international reputation and opportunity to banks, which they do not have otherwise, to participate in the financing of leading shipping companies, who are the target clients for syndication.

The intrinsic characteristics of financing a one-vessel company with limited or even no recourse to the management company resemble to those of project finance. In project finance the financing is granted to a newly to be developed project through the establishment of a legally independent company and the financing is with limited or even with no recourse to the usually several parties who act as sponsors.

In Project Finance the combination of structural features provides an opportunity to create a new, asset-specific governance system to address the conflicts and reduce agency costs. Because the repayment of project debt is totally dependent upon project cash flows it has a much stronger effect on project managers than corporate debt, whose repayment occurs through corporate cash flows. In essence, the corporate balance sheet provides a safety net even when the debt is allocated internally against specific assets, projects or divisions. The incentives to generate cash are more acute in the absence of this safety net.

The combination of high leverage and extensive contracting severely restricts managerial discretion. Eliminating in this way conflicts around the distribution and re-investment of cash flow. Long term contracts and joint ownership with related parties, that supply critical inputs or buy primary outputs and host nations that supply the legal system and contractual enforcement, prevent problems arising from opportunistic behavior. Reducing in this way agency costs between owners and related parties.

Project finance helps firms avoid the cost of underinvestment. In contrast to firms that generate significant amounts of free cash flow, which can finance investment opportunities internally, highly leveraged firms have more trouble financing attractive investment opportunities. It helps highly leveraged firms avoid this opportunity cost of underinvestment. It also allows firms with moderate leverage to raise funds and invest without becoming highly leveraged.

By isolating the asset in a standalone project company, project finance reduces the possibility of risk contamination, the phenomenon whereby a failing asset drags an otherwise healthy sponsoring firm into distress. It also reduces the potential collateral damage that a high-risk project can impose on a sponsoring firm. It exposes a sponsoring firm to losses only as large as its equity commitment. Through the project structure, sponsors are able to share project risk with other sponsors, with related participants and with creditors.

These significant benefits related either with the project company or with the sponsors, consequently benefit and the related financial institution. By mitigating some of the structural features of project financing in syndicated lending in shipping companies financial institutions can take advantage of the above mentioned benefits.

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