

**OPEN UNIVERSITY OF CYPRUS**

**FACILITY OF ECONOMICS AND MANAGEMENT**

***MASTER IN BUSINSS ADMIDISTRATION***

**MASTER THESIS**



**SHIPPNG FINANCE**

**CONSTANTINA CHARALAMBOUS**

**SUPERVISION NAME: CHRISTOS BOURAS**

**JUNE, 2018**

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This postgraduate dissertation was submitted in part to meet the requirements for obtaining a postgraduate degree of Management Business Administration from the School Faculty of Economics and Management of the Open University of Cyprus

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## **Abstract**

By the term finance, it is meant the lending of money for starting, completing or improving a business or business with ease in reimbursing the amount. By the term shipping finance, we mean the process of borrowing money from shipping companies against an interest rate that is determined each time in relation to the interbank offer rate prevailing in the world's main financial markets, in particular London (LIBOR), in order to allow both the continued operation of the company by the purchase of a new or second-hand ship and its further development.

Shipping finance is a key factor in the development and expansion of shipping business. It is distinguished in short-term and long-term. In the short term, money demand is intended to cover the ship's operating costs (commissions, occasional or regular inspections, shipbuilding or repairs, etc.) and lasts for between 1 and 2 years. Long-term financing concerns the purchase or construction of a ship or ships and lasts 3-4 and 6-8 years at most.

Lack of stability and uncertainty about the future make shipping a risky one, which is not acceptable from sources of finance such as the stock market. The choice of the shipping method followed by a shipping company is one of the most important decisions that are called to get its experts. The form of shipping industry financing has been constantly changing over the years. This is due both to the situation of the prevailing economic conditions and to some factors that are directly related to and affect shipping and, consequently, maritime financing.

## **Introduction**

It is actually a fact that the signs of shipping growth were not quite optimistic during the previous years. Although the Baltic Dry Index (BDI) index is almost 100% increase in the last two months of 2018, the results of ships carrying dry loads are not encouraging. Ship prices, especially for dry cargo ships, are very low. Apart from the significant drop in the freight market, ship prices are significantly influenced by a number of factors, the most important of which is the availability of funding (Chryssos, 2009).

Financing in the shipping sector is still quite costly. Most shipping banks have already abandoned shipping or have sold portfolios related to it. Central banks and regulators demand high credit worthiness as a guarantee. This has the effect of pushing banks to participate only in highly secure investment projects. For their part, banks usually chose a condensed financial risk, especially when interest rates were low.

This has led banks to focus on specific, larger companies and so exclude the possibility of financing more companies. For the above reasons, shipping companies are increasingly trying to find alternative forms of financing. The export credit agencies are a solid source of funding for the shipping industry, particularly with regard to shipping companies which order new ships in Asian yards. Export credit agencies are related to government regulatory bodies (Grammenos, 2010).

The largest export credit agency in the world is Export Import Bank of China (CEXIM), which is controlled by the Chinese government. Before the financial crisis, export credit agencies accounted for around 10% of the debt financing of shipping. Until about the end of 2017, the share of export credit agencies has increased to more than 33%, which is US \$ 15 billion a year. In July 2015, CEXIM funded the French shipping CMA CGM, amounting to US \$ 1 billion (Grammenos, 2010).

The shipping industry gains an additional advantage from the capital markets, given that they are able to issue longer and fixed rate debt. Traditionally, Initial Public Offers (IPOs) have become popular among investors. However, as freight rates remain low, the attractiveness of IPOs is very low and private equity (PE) funds that focus on investment opportunities are gaining momentum. Some PE funds have created billions of funds specifically focused on the shipping industry. PE funds provide flexibility in credit expansion and can also lend to more risky investment projects in contrast to banks.

Although, in recent years, there has been increased collaboration between the majority of European banks and Asian financial institutions, aiming at their consolidation in the Asian market. These partnerships enable Asian companies to finance the purchase and construction of new vessels. For example, HSHN or dbank collaborated with Korean EximBank to finance Korean and international shipping companies and provided financing for exports, syndicated loans and refinancing. The attraction of funding will depend on the performance of the shipping industry. Together with the changes demanded by the banks, it is necessary for the shipping industry to further explore the alternative sources of finance in order to secure the financing of new ships and to remain at competitive levels.

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# Chapter 1

## Details and Characteristics of Shipping Finance

### 1.1 The Meaning and Characteristics of Shipping Finance

Upon the term *Finance*, it is meant the offering – lending of money for starting, completing or improving a business with ease in reimbursing the amount back (Grammenos, 2010). By the term *shipping finance*, it is meant the process of lending money to shipping companies against an interest rate that is determined each time in relation to the interbank offer rate prevailing in the world's main financial markets, in particular London (LIBOR), in order to allow both the continued operation of the company by the purchase of a new or second-hand ship and its further development (Stopford, 2013).

Shipping finance is the key factor in the development and expansion of shipping business. It is divided in short-term and long-term. In the short term, money demand is intended to cover the ship's operating costs (commissions, occasional or regular inspections, shipbuilding or repairs, etc.) and lasts for between 1 and 2 years.

The long-term financing concerns the purchase or construction of a ship or ships and lasts 3-4 and 6-8 years at a time respectively. Lack of stability and uncertainty about the future make shipping a risky one, which is not acceptable from sources of finance such as the stock market (Volk, 2004).

Shipping Finance is one of the most important factors for the creation and development of a shipping business. However, in cooperation with know - how (including management and chartering techniques), the same capital and good manpower, is the best



condition for the creation of a shipping company but above all for the development of its fleet in future years.

## **1.2 Methods of Finance for Ships**

The choice of the financing method to be followed by a shipping company, it is one of the most important decisions that its experts are called upon to receive (Volk, 2004). The form of shipping industry financing has been constantly changing over the years. This is due both to the situation of the prevailing economic conditions and to some factors that are directly related to and affect shipping and, consequently, maritime financing. These factors are (Stopford, 2013):

1. *Maritime circles*. Freight rates are fluctuating and so it is not possible to predict their course and thus to secure profits.

2. *Demand for maritime services is a derivative demand*. Changes in industrial production have an impact on shipping as a reduction, for example, in the demand for raw materials will lead to a reduction in the demand for shipping services for the transport of these raw materials. Therefore, funding in times of recession will be difficult to be ensured.

3. *Shipping is a capital intensive industry*. Considerable funds are required for the establishment of a shipping company to expand or renew its fleet. Also, shipping is a capital intensive industry with very large fluctuations. The prices of ships are degraded over time, so the depreciation is great. The cost of acquiring a ship is very high, so the need to finance the business is created. In the shipping financing process, shipowners want to protect their funds by participating in an investment project with as few capital as possible, while lenders want increased ownership of shipowners to reduce the financial risk they receive.

In particular, the form of shipping finance, ultimately depends on the following (Chryssos, 2009):

1. The form of the shipping business.
2. The existing capital infrastructure.
3. The availability of different forms of funding.
4. The current and future profitability of the business.
5. The size of the ships.
6. Technology integration.
7. Costs of shipbuilding countries.

Finally, it should be said that since 1997-2000, after two years of exceptional freight and dry freight fares, due to the growth of China and India, shipping finance has boomed to over 330 billion \$. Therefore someone could say, therefore, that the extent to which commercial banks have been involved in the loans of the shipping industry, it has fluctuated significantly over the last 20 years (Grammenos, 2010).

It should also be mentioned that the cost of acquiring a ship, whether new or a second hand one, it is extremely high, with the natural consequence that the shipowner is forced to borrow. Thus, it is in contact with a bank in which it analyzes its investment plan and when requesting funding for the purchase, repair or retrofitting of one or more ships, the competent part of the bank begins intensive preparation for its investigation (Stopford, 2013).

As to the ship finance, the bank examines the possibility of borrowing this investment plan and, if it meets the appropriate conditions, negotiates with the prospective client the terms of the loan. Before any decision is taken, they are checked by the relevant department and the financial details of the prospective client are analyzed in detail and whether he will be able to meet his obligations (Volk, 2004).

### 1.3 Dangers in Ship Finance

The greatest risk faced by a bank operating in the shipping industry is the credit risk, which is the inability of the borrower to meet its agreed obligations. In shipping, this risk can be assessed on the basis of certain criteria, which also function as collateral-conditions for the granting of a shipping loan, and are known as 5Cs95. These basic criteria are as follows (Chryssos, 2009):

1. *Excellent character*: It expresses the integrity of the borrower's character and the degree of his credibility in fulfilling his loan obligations, even when the maritime cycle is in recession. For each banking organization, it is a very important element whether the shipowner, during his stay in the area, has successfully and without loss of at least one maritime crisis. For this reason, the primary purpose of the banks is to gather information on the ship's history, space, character, reputation and honesty.

2. *Excellent manager-Capacity or competence*: The capability of a shipping company to manage situations, but also to successfully complete long-term business plans. The bank examines the capability of the shipowner to develop strategies, both in the short and long term, assessing positive successes in ship trading at the appropriate time, but also in the lowest possible price. It also examines the sources of cash flows and whether they are capable of securing the repayment of the loan, as well as the payment of interest. For this reason, an analysis of the management of the shipping company being lent, as well as of the group of companies belonging to the shipowner, is carried out. This analysis includes the following capabilities:

- Investing and financing
- Operation (hiring of ships)
- Limiting operating costs

- Collection of claims and payment of promises
- Minimizing risk

3. Satisfactory Equity - Capital and Capital: This refers to the low leverage and the ability to generate cash, the amount of which limits the probability of default of the company. More specifically, the existence of equity capital is indispensable in order to ensure the same participation in any shipowner's investment plan to be funded as well as working capital.

4. Adequate collateral and collateral: When a loan is made, the mortgaged ship is the primary guarantee for the bank granting the loan. Within this "contract" between the two parties, the obligations of the borrowing company to maintain the good condition of the ship are defined in order to maintain its value at a high level. In addition to these obligations, banks also impose a number of collateral, such as the guarantee from the holding company or the shipowner. Own ownership of a vessel as well as sufficient collateral play a very important role. Equity funds should be between 20% and 30%, always in line with current conditions. The level of own funds serves as evidence of the company's positive and upward trend, as well as its creditworthiness. Also, the provision of collateral is necessary as it is an alternative solution in case of failure of the funded investment (mortgage, cash flow, etc.).

5. State of the company - Financial conditions of the market: the global economy, shipping rates, ship values and political events determine the demand for maritime transport services and, in conjunction with the global fleet, determine the level of fares. However, fares are, in turn, the main means of repaying a loan, thus determining the value of funded ships. For this reason, banks should assess the point of the cycle in which the acquisition of a ship is financed, following a borrowing policy contrary to the maritime cycle, i.e. anti-cyclical policy (Stopford, 2013).

## 1.4 Key Banking Issues in Ships Finance

In order to ensure the orderly functioning of financial institutions in shipping, some general restrictions on bank financing are imposed. The central banks therefore, set

limits on the amount of the loan that a bank can grant to one of its clients. They also restrict a bank from lending to a customer or group of clients when the risk is high. The bank may refuse to save a loan in order not to exceed its limits for that particular customer, country or industry. In these cases syndicated loans are granted to shipping companies (Chryssos, 2009).

Banks should be careful when granting maritime loans and should pay great attention to the investment strategy and economic policy followed by shipowners. In times of shipping crises and more generally when the conditions prevailing in the shipping market are not favorable, banks should take the necessary measures. They should therefore gather information about the ship and the shipowner, ask for collateral reassessment and more generally contact their customers to discuss with them the repayment of the shipping loans they have given them (Ljungqvist, Jenkinson, Wilhelm, 2003).

The shipping company to which the loan is granted should set the borrowing limits for a ship. If there is a long-term charter for a ship to buy or most of the fleet is in time charter and will be a guarantee then the borrower has the possibility to negotiate a higher rate of funding. A shipowner interested in a shipping loan, he should be aware that if the investment is considered to be precarious, borrowing should be relatively low. Banks lent against a mortgage prefer the ship to be covered with some time charter or to take on other fleet ships as a guarantee. Thus, the bank is secured in times when the shipping company cannot meet its loan obligations. The distinction of ships to new and used one, it has importance to maritime financing. Banks generally prefer financing for young or old ships. Used ships could be delivered immediately and generate cash, but their market presents the risk of low marketability and resale value of the ship. Newcomer ships require a dead time for the shipping company until they are constructed and delivered. In the event that fares change suddenly, new ships may be sold (Grammenos, 2010).

A major goal of a bank in financing a ship's purchase is to increase the bank's profits by collecting high commissions and securing the repayment of the loan in the shortest possible time. The amount of maritime loans provided by a shipping bank and its credit policy depends on a number of factors such as the state of the shipping industry, the general economic climate, world trade conditions, liquidity and the shipping experience of the bank. Credit policy essentially includes the organizational and financial

rules followed by a financial institution in order to achieve the greatest possible economic outcomes for both the private and the social benefits (Ljungqvist, Jenkinson, Wilhelm, 2003).

The main banking risks associated with shipping finance, are those of credit risk, interest rate risk and currency risk. The issue of risks is presented in detail below. When a shipowner examines a financing proposal, it should take into account repayment time, interest rates and foreign exchange risk.

#### **1.4.1 Financing Based on the Future Net Income of the Ship**

The most common way to finance the purchase (or order) of a ship is called project financing (financing an investment project). Based on this method, the bank funds a shipping company on the basis of its future annual revenue program called the cash flow. This mode of funding was mainly implemented by the new generation of Greek shipowners (the era of Lemos, Livanos, Niarchos and Onassis) for the acquisition of affordable charter vessels (Grammenos, 2010).

This method was called cash flow financing. Banks have shown interest in this way of financing due to the stability of the receipts, although time charter is not an asset can be confiscated. Still, a fixed-rate charter has no fixed net return for the shipping business, because the operating cost of the ship varies during chartering due to inflationary and other pessimistic trends. The success of the cash flow program depends on the predictability of fares and rates operating costs of the ship. In the case of a coincidence of equal duration with the loan, it is possible to predict fares.

However, in the case of a charter on a trip, the bank will have to make a forecast on its own basis based on its experience and through the crossover. Regarding the operating costs of the ship, the shipowner can estimate the annual cost of the borrowing vessel with great accuracy, since its fleet may already have similar type and size ships with the funded. Also, some other key issues related to management cash flow is the frequency of installments at one time, the existence of equal or unequal installments, the existence of a grace period or the duration of the repayment of the loan. Advantages Leasing: The benefits for the company that will choose this form of funding are as follows:

1. Exploitation of hidden gains. If the values of fixed assets in the company's books fall far short of their current commercial value - something that is usually the case of the lease offers liquidity to the company and at the same time allows it to display the surplus value in its books as tax-free reserves, thus significantly improving its balance sheet image.
2. Rationalization of the company's balance sheet and capital structure. In the event that fixed assets are financed by short-term bank lending, sale and leaseback may repay short-term bank lending, thus improving liquidity and foreign-equity ratios.
3. The lessee appears to have fewer obligations. As the lessee is not required to display the item of fixed assets (i.e. the ships) in his accounts, nor the future payments of the lease payments on the liabilities side of his balance sheet, he appears as non-debtors and other financial obligations.
4. Process speed and cost / Flexibility of terms. Reducing the cost and timing of the investment is another advantage. Requests for funding are handled flexibly, without time-consuming procedures for the lessee. This makes it possible to adapt the contract to the particular requirements of each undertaking.
5. Creation of liquidity. The immediate need of the company in capital leads to the conclusion of a financing agreement. This form of financing provides immediate liquidity to the firm while at the same time allowing it to use its cash to cover other costs.
6. Tax relief. Another advantage is tax savings, due to the recognition of operating rents and their deduction from the taxable income of the enterprise.

The market leasing benefits, are concerned to be the following (Sherman, 2003):

1. High apparent cost - The cost of selling and re-leasing is higher than the interest rate on bank lending, and that's because the investor is taking a higher risk. However, tax relief mitigates the initial impression, creating an advantageous situation.
2. The leased fixed asset is not a guarantee for the company's lending. Despite its positive relationship to foreign capital, there is often a reluctance on the part of the bank for further financing when the equipment is based on the leasing method. In this way, lessees face greater difficulty for the loan agreement.

3. Predetermined rental time shipping of ships may not expire earlier than the pre-agreed time.

### **1.4.2 Intermediate Financing of Ships**

The intermediate financing is an interesting - if not very widespread, not only in Greece but also globally - way of financing businesses. The specific funding method is as follows (Sherman, 2003):

- Independent companies active in the field of investment undertake the financing an enterprise against the acquisition of the company's shares, that is, against the acquisition of partial ownership over the borrowing company.
- A major drawback of the mid-term funding is that it requires the transfer of part of the ownership of the existing business, which explains the reluctance of businesses - even so-called "family businesses" - to even consider using the interim financing.
- However, it should be emphasized that in fact the objective of the investor involved in the mezzanine fund is not to become a long-term strong shareholder but rather to ensure a satisfactory return on its shares for up to a certain period of time, leaving. Typically, the agreement is accompanied by clear and pre-defined terms for the repurchase of the interim debt at the appropriate time.
- Most interim funding is withdrawn either by reselling the original owner of the blocked capital or by re-capitalizing the firm. The usual duration of this transaction ranges from five to eight years, with the option of early exit.

### **1.4.3 Financing of Shipping through Bank Lending**

In general terms, it should be noted that for the granting of shipping loans, the shipowner's basic qualities are examined and five basic conditions (also known as 5Cs) which must be ensured (Ljungqvist, Jenkinson, Wilhelm, 2003):

- ❖ Excellent character
- ❖ Excellent manager (Capacity)
- ❖ Satisfactory equity (Capital)
- ❖ Sufficient collateral
- ❖ Favorable market conditions (Conditions)



Of course, some other factors may be added to the above one, which relate to specific characteristics of the owner of the loan. Besides, each shipping bank sets its own funding criteria according to the policy it follows. More in detail, the following are worth mentioning:

1. Character

In shipping finance, the character and reputation of the ship owner plays a major role, the so-called "name lending". Also, when granting shipping loans, other properties of the shipowner's nature are examined, such as its experience, its ability to predict the maritime cycles, its credibility and integrity. The importance of the shipowner's name is very important to maritime financing and affects the rate at which the loans are granted (Chryssos, 2009).

2. Capability or sufficiency of administration

The ability of the administration to generate revenue from its financing under finance ship is particularly important since it naturally affects the repayment of the loan.

3. Capital

This criterion concerns the percentage share of the shipping company's own participation in the financing of the investment but also more generally its economic potential as determined by indicators.

4. Securing

In order for a bank to secure the shipping loan it provides, it has three capabilities:

I. Through the cash scheme of the funded investment (ship)

II. Mortgage of the ship to be financed (direct collateral)

III. From the (indirect) collateral he has received.

The loan collateral is distinguished in the following categories (Sherman, 2003):

Naval mortgage

After signing the loan agreement, the bank draws up the mortgage contract on the ships insuring the loan. The signing of this contract and its registration in the land register of the country in which the ship is registered. Maritime law states that by registering a preferred naval mortgage, the bank has the right in principle to manage and operate the ship and, in addition, to sell it either by deliberate sale or by public auction (Sherman, 2003). Apart from the first mortgage, there is the possibility of registering second, third, etc. mortgage on a mortgage ship, provided that the first mortgagee agrees.

#### Assignment of revenue

Assignment of the proceeds of the mortgage can be either general or special. During the general assignment, the shipowner reserves the right to collect the ship's revenue. However, this right ceases to apply if an event makes the loan overdue. Special revenue assignment occurs when there is a time commitment agreement. The charterers commit themselves to channel the fares through a specific store of the lending bank in order to cover the loan installments and the operating costs of the ship.

#### Assignment of insurance policies

This form of collateral provides that insurance compensation in case of loss or loss of the ship will be made available by insurers in accordance with the instructions they will receive from the lending bank.

#### War Risks

This insurance covers the risk of loss and damage of the vessel or of the vessel's machine (War, Revolution, Terrorism, etc.).

#### Provision of personal guarantees

These guarantees are provided by the shipowner or the main shareholder of the company and is committed to cover the obligations of the borrower to the bank, up to the percentage or amount for which it guarantees, if the borrower cannot meet its obligations.

#### Provision of corporate guarantees

This type of guarantee is provided either by the holding company a group, or by company when the borrower is offshore, or the managers.

### Pledge

In this case, the bank either requires the customer to maintain a certain amount of deposits in it with the one-off deposit of an amount or requires it to feed this account on a monthly basis.

## **1.4.4 Three Alternative Ways of Financing**

### **I. Financing by issuing bonds**

Bond issue is an alternative form of financing that is not widespread in the shipping community. The company that wants to raise some funds issues bonds for this purpose. The conditions to be met for the issuance of bonds are very strict and difficult to achieve by shipping companies. Issuers of the bonds must have a satisfactory credit level that represents the credit standing of the firm. Debt securities are fixed income securities attesting to the amount lent by their holder to their issuer. Each title is numbered and shows the face value and interest rate of the loan. The duration of bonds is from 3 to 20 years (Sherman, 2003).

The key advantage of bond issuance is the fact that capital markets offer long-term funding that is almost identical to the economic life of a ship. The main disadvantage is the determination of the interest rate on the loan from the outset, which may prove dangerous due to interest rate fluctuations.

### **II. Ship financing based on the future annual revenue program.**

Financing the purchase of a ship on the basis of the future net income of the shipping company from it is the traditional, ordinary and simple way of financing ships. The future annual revenue program, also known as a cash-based investment plan, and the way of funding based on it was mainly implemented by the new generation of Greek shipowners to acquire affordable chartered time charters. Time charter is not the perfect guarantee because it is not an asset that can be seized by the bank. Time charter with a fixed fare does not have a net return for the shipping business because the operating cost

of the ship does not remain constant at the time of the charter due to inflation and other pessimistic trends (Chryssos, 2009).

### **III. Shipyard Loans**

The practice of state funding through shipbuilding has a dual purpose. The first is the strengthening of the yards of a country and the second offering of privileges to the shipowners of the country. This form of funding ensures employment of shipbuilding units by offering credit to shipowners. Usually 5-10% is paid with the signing of the contract and the payment is made in installments with the progress of the works and also after the completion of the construction.

In Greece for example, the amount of the loan must not exceed 80% of the total cost, and the duration of the loan will be 1 year for construction or for retrofitting. However, within the European Union, the duration of the loan should not exceed 8.5 years and the minimum interest rate should be 8.5%. These arrangements were made to ensure fair competition and not to distort the idea of a free market between the shipyards of the Member States (Ljungqvist, Jenkinson, Wilhelm, 2003).

#### **1.5 Procedures for Granting a Shipping Loan**

The offer of the Bank about the granting of a shipping loan, it is concerned to the fact that when the client's inquiry is completed, it is being prepared an appropriate response, positive or negative, is sent. If the Bank is willing to proceed with a loan, then it answers with a letter of offer, which contains the terms and conditions. The main terms of the offer are as follows:

##### Amount of offering a shipping loan:

It is usually determined as a percentage of the purchase price (or construction) of the ship or its commercial value as estimated at the time the loan is disbursed, whichever is the lower. Typically, banks grant 50-60% of the value of the ship, if it is used, and may grant up to 80% of its value if it is a newly built ship. An important role in determining the financing rate is the name of the client and the amount of borrowing that the bank seeks to have with it, the existence of the ship's time charter (positive factor), its age, the

collateral provided and the market conditions both in terms of the maritime cycle and in terms of competition with other banks (Sherman, 2003).

#### Currency-loan amount: Shipping loans are usually issued in US \$.

The reference currency is the principal currency in which the loan contract is signed and the repayment schedule of the loan is respected. Typically, the loan is issued in USD, and there is also the possibility of multi-currency loans where the borrower can convert part or all of the loan balance into one or more currencies other than the reference currency

#### Duration of the Loan

It is usually determined by its age and condition of funding the size of the loan and the policy of each bank. When it comes to buying a second-hand ship, the normal duration is between 2 and 7 years, while the new market is financed by loans ranging from 10 to 13 years. The higher the amount of the loan, the greater is usually the repayment term. There are no specific rules as others banks (more European) do not want to provide loans for a ship over 15 years old, while Greek usually appears more flexible and finances ships up to 20 years old.

#### Purpose of a Shipping Loan

This term includes the bank's commitment to grant the agreed loan to the borrower and, once again, contains typical bank terms.

#### Interest rate

The interest rate on the loan is the sum of the London Interbank Offered Rate (LIBOR), which is the London Interbank Offered Rate for Eurodollar Time deposits in the London market (and, more rarely, EURIBOR, as determined by the European Central Bank) and the spread or margin, ranging from 0.5% to 3.5%, and depends on the client's name, negotiating ability and the risk that the bank assumes. The LIBOR concerns the interest rate offered to top-ranking banks in the London market for 3 or 6-month deposits. The LIBOR is set 2 days before the start of the rollover period and remains stable during this period, which is usually a month or three months or six months. The US equivalent of LIBOR is the prime rate (Grammenos, 2010).

The client has the option of choosing what time he wants for his loan period based on the Libor rate, if it is less than a year, and if he wishes for more than one year he can close the fixed interest rate loan (Ljungqvist, Jenkinson, Wilhelm, 2003). Several customers, in order to hedge the interest rate risk, proceed to a Interest Rate Swap Agreement. Typically, interest periods have a duration of 3 or 6 months, but they always depend on market expectations for the movement of the interest rate curve and the customer's estimates, as well as any special clauses that may exist in the loan agreement. Usually, a penalty interest rate of 1-2% is higher than the conventional one.

### Charging

Interest is calculated for real days on a 360-day basis for euro-dollar loans rather than 365 days, thus favoring the bank with a small percentage.

### Supply

It usually varies between 1/4 - 1% one-off. Many banks also incur a commitment fee. The commitment fee is calculated on an annual basis and charged to the customer from the point of acceptance and offer of the bank, up to and including the loan.

### Repayment

As mentioned before, the loan repayment to buy secondhand ships is usually approximately 5-7 years, while for new-building it is 10 to 12. It can be divided into equal six-month or quarterly interest-rate installments or equal installments of capital, plus interest. In very exceptional cases, gradually increasing installments are agreed or even the last installment is disproportionately large (balloon payment). Special terms of the loan refer to the conditions that the borrower is obliged to observe at the time of disbursement and throughout the loan, as well and the actions the bank can take if they are not followed.

### Loan repayment

The bank usually sets a certain limited time, within which the procedure must be completed and the loan is paid Prepayment: Usually, one or more installments may be paid at the beginning of the interest periods under certain conditions. Collateral / securities for the granting of a loan, the bank requires certain collaterals, which are

distinguished in various forms, and assessing the borrower's ability to provide them. Typical examples are the first preferred mortgage, the corporate and personal guarantees, pledges of the income and insurance compensation of the ship, cash pledges, etc.

In effect, the borrower transfers its assets to the bank if it cannot repay the main guarantee for a shipping loan is to obtain a preferred mortgage on the ship to be financed. Unlike real estate, there is no mortgage on the ship, but mortgage is recorded directly. In accordance with maritime law, when the bank enters into a preferred naval mortgage, it has the right to:

(a) Manage and operate the ship; and

(b) Sell it either by deliberate divestment, which is in practice unusual - The bank is required to carefully monitor not only the fund being funded, but also the entire fleet of the operator.

Thus, it controls the type of ships, their situation and their age, and the form of the market they are occupied (eg dry or wet cargo, etc.). It is considered positive by the bank that there is a dispersion as to the type and age of the ship as the client's group of companies is less vulnerable to the fall of the freight market which does not always affect all the individual markets in the same manner and size.

When a bank grants a shipping loan, it has three main ways to ensure that the loan capital is returned to it: The first way, usually more widespread, is through the investment program (the ship's) cash flow program, the 2nd way is the direct guarantee provided by the mortgage of the ship financing, while the third way comes from the additional (indirect) collateral received. The collateral of shipping loans is Maritime Mortgage, Assignment of Assurance, Assignment of Insurance, Personal Guarantees, Corporate Guarantees, Cash Collateral Security, Securities Pledging / Marketable Security.

It is important for the bank to comply with international regulations and ensure the seaworthiness of its ships, thus maintaining their high resale value. Other collateral received by the bank in the loans is personal and corporate guarantees, where the importance of the shipowner's name and reputation in the market, the transfer of ship's income and insurance policies, the pledge of securities / shares or deposits, the chartering of a charter with the agreement and acceptance of a charterer, etc.

### **1.5.1 Criteria by Which Banks Assess the Granting of Shipping Loans**

Because the character of ship finance is quite complicated due to the unpredictability of fares, the economic analysis before funding is extremely important. Each banking organization uses its own variables to analyze and assess accordingly. But there are five basic parameters known as 5Cs used by all banking organizations when it comes to financing a shipping company. These five parameters are as follows:

Character - C1. The character of the shipowner is one of the most important factors affects the bank's decision to grant or not a loan. The integrity and honesty of the shipowner should be examined and confirmed with great care from the bank, since the granting of loans and their repayment by shipping companies depends to a large extent on the personality of the shipowner. However, in order for the Bank to investigate the client's identity, it should, if it is a new customer, request information from him, up to that moment, his banker. If he is an old customer, he should obtain information from records the bank about any previous cooperation with him / her and collect all the necessary information from the market he / she is active in. Finally, he / she must present to the Bank the certified, by international private accountants, balance sheets and account (and those companies) that will provide the corporate guarantee.

Capacity - C2. The borrowing of a shipping company is inextricably linked to the financing of the ship being funded as the basic instrument for repayment of the loan. Therefore, the ability of the administration to generate revenue and control costs plays an important role in protecting the risk of the bank. Shipowners' administrative capacity is of paramount importance for the smooth and successful outcome not only of trade but also of acceptance by the Bank of borrowing risk. If the shipping agent has some doubts about the effectiveness of the management of the shipping company, it should focus more on the shipping analysis of the shipping company. In particular, it should first examine whether the company is capable of repay the loan and what is its profitability, and secondly to define in this light the appropriate percentage of the value of the ship to be financed and the length of the loan. In addition, must be examined to determine the adequacy of management and ultimately the ability of the company to vary and are not limited to the company being funded but also to the analysis of the entire group of companies belonging to the shipowner.



It is possible that such a loan will not be given because it is certain that the inadequacy of the Management will lead the loan to a problem and a failure. Starting from the study of the company itself, the bank focuses on the structure of the shipowner. Usually, either the owner or holding company, which holds the majority of the shares of the ship, controls a management company, which manages the issues of the ship's operation and effectively manages the one-sided company to which it belongs the ship under finance.

It is also possible for the shipowner to act as a manager or to own the whole share capital, a structure that is considered bureaucratic and not flexible enough to face a volatile market such as shipping, but which, of course, can of course depend on the name and capacity of the shipowner to make easier decisions on a case-by-case basis. Often when the managing company is controlled by the owner, the legal structure prevents the bank from appealing to the management company unless it has assumed the role of a corporate guarantor of the loan. In addition to the company's structure, the bank also analyzes the capacity for the following parameters:

- 1) Investment and finance
- 2) Hire of ships
- 3) Control and limitation of ships' operational costs
- 4) Hedging and minimization of risk
- 5) Management of receivables and liabilities.

Analytical (1) Investments and financing: The bank examines the success or not of shipments of ships, emphasizing the timing of these transactions in relation to volatility, cyclicity and market condition (upward or downward).

2) Chartering of the vessels: The analysis focuses on charter choices (chartering, chartering, etc., diversification to reduce the risk of chartering, the quality, reliability and financial position of charterers, and flow of the charter party - if there are, for example, clauses on inflation or adjustment to market conditions (escalation clause). The importance of charters is that they, among other things, identify the profit of the board. Time charter gives the company more income than planned in the charter than the spot

market (charter travel), where the level of fares is not fixed and therefore the bank prefers to finance time charter customers as it is a stable source of income to cover the loan's capital and interest. The duration of charter flights can last as long as a trip or up to 25 years. In addition to the advantage of the stability of innovations the bank takes into account that if the shipowner fails to meet the obligations arising from the charter, then the fare will not be paid and charter time no longer guarantees the bank. In addition, when the charter market is poor, long-term chartering does not offer something to the shipowner or the bank.

3) Control and limitation of ship's operating costs: Costs are divided into: fixed, which are unchanged irrespective of the type of shipping service, which are usually travel expenses capital costs. Fixed costs include crew costs, which must be determined so that they remain at a relatively low level but not at the expense of service quality and travel security, the technical costs (maintenance, repair, inspection, insurance) and administrative expenses (management). Technical expenses ensure that the ship is safe, secure, highly resale and high value to secure the loan.

In addition, annual surveys, special surveys and dry-docking surveys are foreseen by the Hellenic Register of Shipping. The premiums are affected by factors such as the age of the ship, the number of ships of the same operator insured in a specific market, the owner's history of accidents and his name in the market and the prestige of insurers (underwriters - for example, Lloyds have higher premiums than other companies). The issue of premiums is particularly taken into account by the bank as it ensures the operation of the ship and, by extension, the loan service, but mainly because it is the primary guarantee of the loan. The administrative costs include the salaries of the administrative staff, agency and advertising costs. Variable costs are considered to be travel expenses, i.e. toll rates, port and freight charges, fuel and towing costs, while depreciation is regarded as capital expenditure.

4) Hedging and minimization of risk: Given that shipping is a volatile one to industry conditions and returns, it is important for the bank to see that the prospective client is taking care to hedge the risk it faces. There is a positive assessment of the existence of different types of charter so as to limit the risk posed by each charter and the use of hedging methods for interest rate and exchange rate risks by using forward, swap and options.

5) Management of Receivables and Liabilities: the bank checks whether the prospective client can meet its borrowing obligations, will examine the overall leverage of the group and the revenue from its operation. Even the case of a company that chooses a small amount of funding from the bank does not necessarily mean a lower risk, since if the company has other creditors and fails to pay them, then it is possible to arrest / detain its ships, their operation or delay for some time, with all the adverse consequences for the servicing of its loans, as well as its good reputation in the market. To this end, any litigation of the company will also work. Finally, for the study of the chapter criterion, the interpretation of indexes such as the gearing ratio, the leverage, the hull to debit ratio, the amortization coverage index, as well as the net worth as well as the cash flow.

Capital / Satisfactory Own Capital (C3) beyond the existence of external financing, banks require a shipowner (borrower) to secure his own participation in a ship's market. If there is such a possibility then the banks consider that the shipowner is also based on his own personal financial forces. 62 In the past, in 1940 – 1950, the minimum percentage of own participation was on average 50%, in 1967-1973 and 1980-1982 it fell to 20% even at 0% due to the credit policy prevailing at that time and with no restrictions on shipowners), and from the 1980s up to today ranges from 20% to 50%, depending on whether it is a new offshore ship, for used seafarers for the specialized type, for ferry or ferry boats. The share of capital contributed by the shipowner is important as it exudes confidence in its capabilities as well as in its investment and also shows the financial capacity of its business through the existence of cash available to be made available for investment. Therefore, when equity participation, and in particular whether the equity ratio is greater than or equal to the share of foreign capital, it guarantees that the shipowner will make every effort not to lose the investment because he appreciates the loss of equity.

Banks are therefore interested in participating in less-favored loans for the same opening, since they promote their relationship with the customer and deal with them lower credit risk. Another factor that the bank assesses is the number of shares of the shipowner companies controlled by the shipowner, since the larger the number, the more willing it is PEZA to finance it.

Except for the capital contributed by the institution for the realization of its investment (own participation), the bank also looks at some indicators. In summary, we can list indicators and sizes such as the hull to debt ratio, the Group's financial leverage,

the Times Interest earned (Tie) Ratio, the equity position of the company, The Bank's decision to grant a loan to a shipping company is based, in addition to its financial data and its creditworthiness, and more general conditions as prevailing market.

These refer to the state of the nautical market, the values of ships, the International Maritime Trade and other international and national events. The development of the international economy and trade as well as some economies such as China are important factors when banks are studying the course and development of maritime trade. Also, shipping operators should take into account both the technological conditions and innovations in shipbuilding as well as their effects during their economic life. Given that shipping is a complex and international industry it is world conditions are expected to strongly affect it.

As has already been mentioned in the paper, political events and crises (such as the oil crisis or the closure of the Suez Canal) shape fares and create opportunities for investment and speculation, which must be taken into account. In addition to the general economic conditions, the analyst must also take into account the conditions prevailing in the market for any goods moving by sea. This is because the demand for shipping services is a derivative demand and the level of supply and demand of these goods is determined by it. The four criteria of this chapter, namely: character, capital, abilities and favorable conditions are intended to determine the ability of the entrepreneur to ensure a proper cash flow - which will support the smooth repayment of the finance plus the interest (first exit). On the contrary, the adequacy assurance criterion aims to identify a way for lenders (bank) to enable them to repay through liquidation (Ljungqvist, Jenkinson, Wilhelm, 2003).

## **1.6 Repayment of a Shipping Loan**

Repayment of the loan differs from customer to client, based on the ship's financing, customer reputation, negotiating ability and, of course, the policy of the bank. The doses to be determined may be equal or unequal. If we have unequal doses, we can distinguish the following types (Chryssos, 2009):

- Fixed installments of payment
- Grace Period

These loans set a grace period in which the borrower does not pay capital but only interest. They are mainly used when it comes to the construction or purchase of a newly built ship or when a problem loan is settled.

### Balloon Repayment

Balloon repayable loans provide, in addition to the normal installments of the loan, the existence of a lump sum payment by the borrowing company, usually payable together with the last installment of the loan, representing a certain percentage of the loan, and is usually the amount of the liquidation (scrap value) of the ship or used to adjust the cash flow to a realistic servicing of the loan obligations.

### Bullet Repayment

In this case, the repayment is made on the maturity of the loan, without any other intermediary payments, except of interest. This practice is not often encountered in shipping loans because of their specific nature and the risk they pose in low-market periods, and when agreed with customers, besides the usual collateral and other guarantees, the bank introduces additional conditions that bind the balance sheet group.

### Back / front end

These are accelerated or decelerating payments. In the case where the last installment of the loan is larger than the backend, the company expects that future market growth will increase its revenue and therefore will be able to cope with larger payment installments in the future. This option requires additional collateral on the part of the bank due to increased risk and is not appropriate for older vessels with less employment opportunities as they grow older. On the contrary, on such ships it is preferable for the loan to become a front end, ie the largest installments are at the beginning of the loan.

## **1.7 Advantages and Disadvantages of Bank Shipping Loan**

The main advantages of bank shipping loan are the following (Sherman, 2003):

1. Potential Funding: Like all other forms of financing, obtaining a loan ensures that the companies concerned raise the necessary capital to finance its activities.

2. Low borrowing rate: Because the bank takes the risk of granting a loan to an enterprise, which is much lower than the corresponding risk of selling and re-leasing fixed assets, the borrowing rate is significantly lower. The borrowing rate is determined by two factors: the interbank market (such as LIBOR, the London market) from which the banks borrow to finance the client and the price at which it closes this day and the company itself (its portfolio, its size, the guarantees it provides, the type and amount of the loan it desires, its relationship with the bank, etc.). On the basis of this, the margin is determined by the bank, which together with the LIBOR price is the borrowing rate. (The level of the lending rate today ranges from 6% to 10%, with the margin taking from 0.7% to 2%, depending on the customer).

3. Flexibility in repayment of the loan: As mentioned earlier, repayment of loans of a certain duration can take place in a number of different ways, adapting to the needs and wishes of the particular business, which makes this type of financing particularly flexible and available. In particular, there is the possibility of repaying fixed-term loans, grace period, balloon payment, bullet payment, back end / front end payment, each of which is differentiated according to the borrowing business and its individual characteristics. The Company retains the flexibility of ownership: Unlike the case of the sale and lease back financing models and the stock exchange, the enterprise receiving the forest retains the direct ownership of all fixed assets and, therefore, the right to determine precisely how they are used and economically exploited, without being subject to any form of scrutiny.

4. The bank does not intervene in the investment: Just because the lender - that is, the bank - has no further financial involvement in the investment (in addition to receiving the financial installments at predetermined intervals), does not intervene, nor does it control the business whether and to what extent the investment it made was profitable.

The disadvantages of bank shipping loan are the following (Sherman, 2003).

1. Need to secure lending and guarantee: A major drawback of bank lending is the guarantees the applicant company must provide in order to obtain a loan. These guarantees are usually on board ship, prenotations, divestiture and collateral, stock pledges, personal or corporate guarantees, which are particularly binding.

2. Floating interest rate: In most cases, the borrowing rate is fluctuating, which poses risks to the borrower, as there is a possibility that it will increase during the repayment of the loan.
3. Speed of the procedure: The process of making a shipping loan is particularly time-consuming due to the guarantees and other documents required by the debtor.
4. Funding of a part and not the entire investment: Funding in most cases covers an 80% to 90% of the total value of the investment. So, if the company does not have the balance capital required for investment, should look for other ways for financing.
5. Non-tax relief: A major drawback of bank lending is that it does not provide tax relief to the borrower as opposed to other forms of financing.
6. The bank does not intervene in the investment: After completing the loan, the bank has no direct financial involvement with the investment, which in some cases could help the lending company by providing advice on organizational, financial and other issues.
7. Risk of difficulty repaying the loan: As the rate of the loan increases with respect to the required initial capital, the return of the reduced own capital tends to infinity and the Net Present Value gives positive results. Essentially the business is in the interest

# Chapter 2

## Methodology

### 2.1 Research and Methodology Part

Particular part of the research plan makes an attempt to provide a basic overview of the relevant literature on the subject under research, about the methods and techniques of the ships' finance.

This particular issue it is important to be under research, since it attempts to adequately investigate the reasons for the impact of the economic crisis on shipping industry and the methods and techniques of the ships' finance, but mainly to clarify the role of the indexes of shipbuilders in the crisis and how these indicators can help avoid mistakes and adverse economic investment in such cases.

The motive to carry out this research, it is mentioned to the fact that, according to the majority of research on this issue, it is reported that the financial crisis in shipping in recent years has favored investment about the methods and techniques of the ships' finance.

Particularly, during the last 10 years, there are about 200 ships, half of which are dry cargo transports, respectively, total orders are about 100 ships, with almost half being dry cargo, purchased by Greek shipowners and financed by Greek and foreign banks. It is also characteristic that as from 2012 onwards, the Greeks are the leading players in the markets of second-hand vessels of all types, 200 ships, by the Chinese, 80 ships, their dominant competitor and continue to build new ships.



## **2.2 Research Question**

The main research question finally identified in this research, it is concerned to the context of the investigation and analysis of the effects of the economic crisis on shipping in relation to the methods and techniques of the ships' finance, either for Greek or foreign shipowners in international shipping industry.

## **2.3 Research Analysis**

The questions that will be included in this questionnaire, their aim is to make a research on the perceptions of the experts who work as executives in shipping companies in Cyprus and within the framework of the investigation and analysis about the methods and techniques of the ships' finance.

The questions that will be asked will be to collect information on the under-exploration issue, so that these will refer to the influence of the economic crisis on shipping finance in relation to the numbers recorded and offered for study by the merchant market indicators. That is, in other words, how the economic crisis influences and will continue to do in this field, the formation of tariffs in conjunction with the other factors influencing these indicators in the shipping industry.

In conclusion, we would say that the number of people selected to respond to the research questionnaires which is about 40 persons and in order to have as complete a picture as possible of the under-exploration issue. Finally, through this research, it is expected to deliver significant results on the factors involved about the methods and techniques of the ships' finance, but also what are expected to be the protections of these individuals in order to address these factors and eliminating them in the near future.

# Chapter 3

## Results - Analysis of Questionnaires

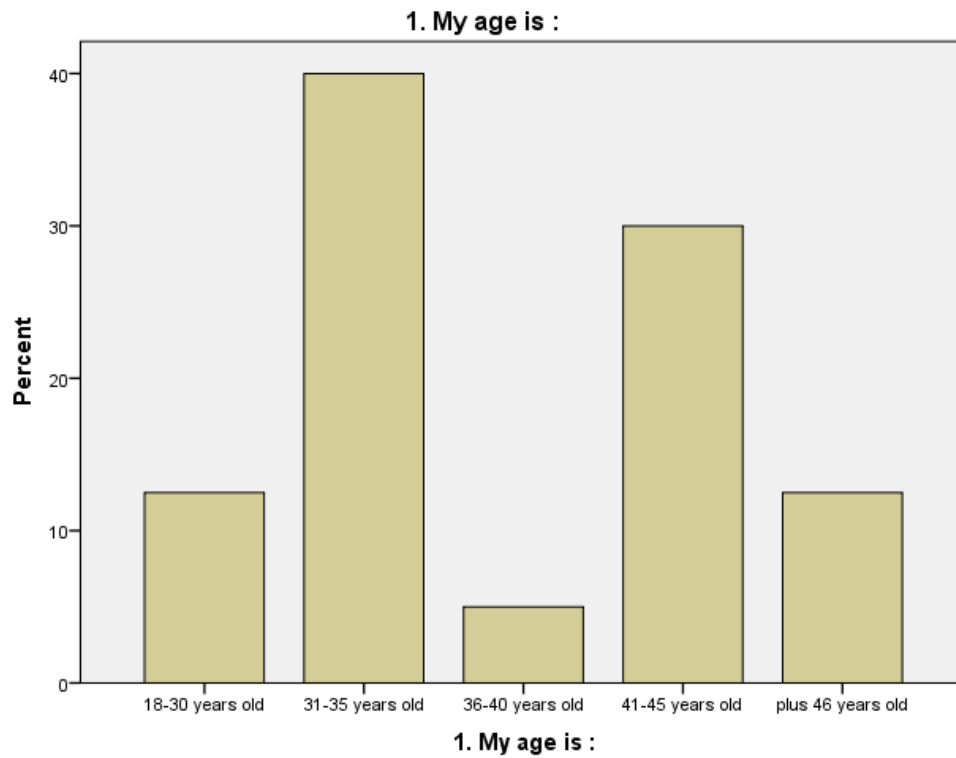
### 3.1 Demographical Characteristics of the Sample

#### Age

The 40% of the participants were from 31-35 years old, the 30% were from 41-45 years old, the 12.5% were from 18-30 years old, another 12.5% were over 46 years old and the rest 5% were from 36-40 years old. Follows the relevant table and bar chart.

#### 1. My age is :

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 18-30 years old	5	12,5	12,5	12,5
31-35 years old	16	40,0	40,0	52,5
36-40 years old	2	5,0	5,0	57,5
41-45 years old	12	30,0	30,0	87,5
plus 46 years old	5	12,5	12,5	100,0
Total	40	100,0	100,0	

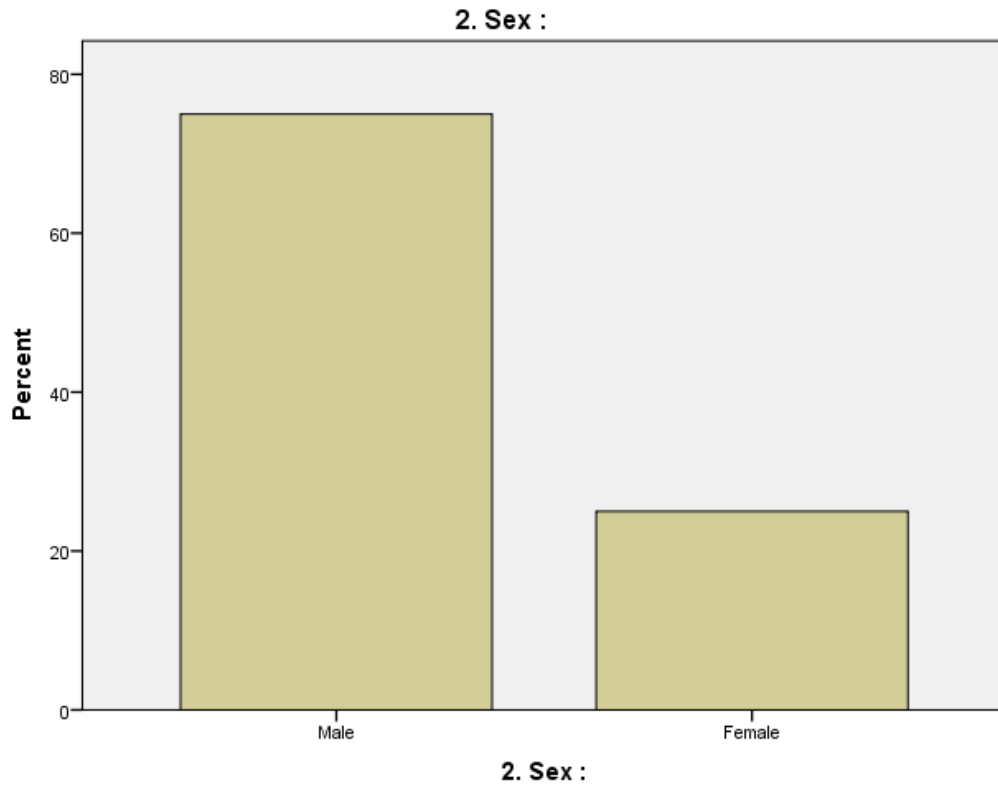


## Sex

The 75% of the participants were males and the rest 25% were females. Follows the relevant table and bar chart.

**2. Sex :**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Male	30	75,0	75,0	75,0
Female	10	25,0	25,0	100,0
Total	40	100,0	100,0	

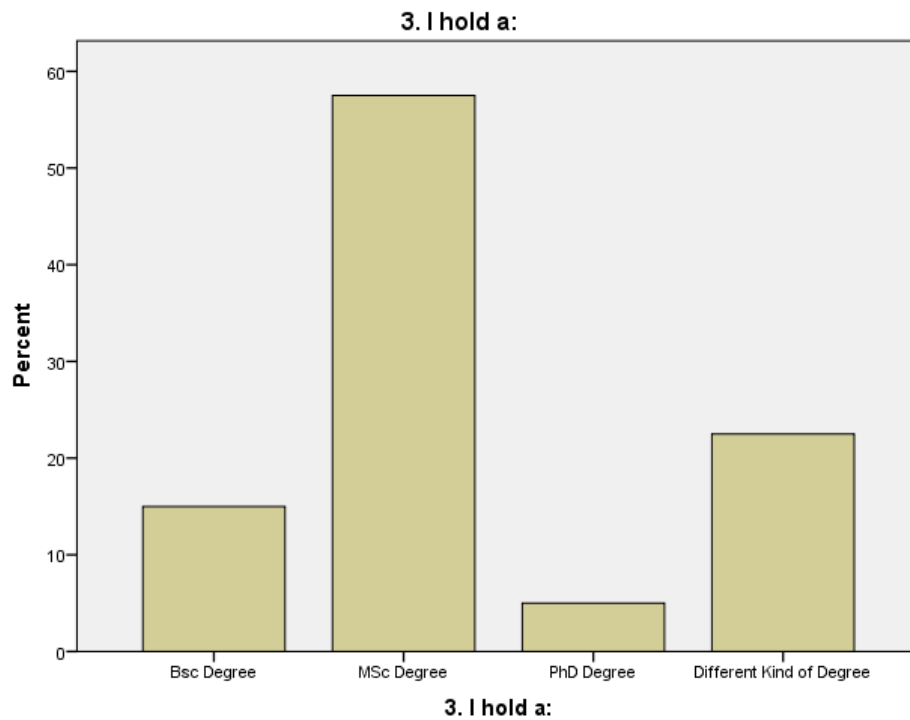


**Educational Level**

The 57,5% of the participants hold a Msc Degree, the 22,5% hold a different kind of degree, the 15% hold a Bsc Degree and the rest 5% hold a PhD Degree. Follows the relevant table and bar chart.

**3. I hold a:**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Bsc Degree	6	15,0	15,0	15,0
MSc Degree	23	57,5	57,5	72,5
PhD Degree	2	5,0	5,0	77,5
Different Kind of Degree	9	22,5	22,5	100,0
Total	40	100,0	100,0	



### Marital Status

The 67,5% of the participants are married, the 27,5% are single and the rest 5% are divorced. Follows the relevant table and bar chart.

#### **4.Marital Status**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Single	11	27,5	27,5	27,5
Married	27	67,5	67,5	95,0
Divorced	2	5,0	5,0	100,0
Total	40	100,0	100,0	

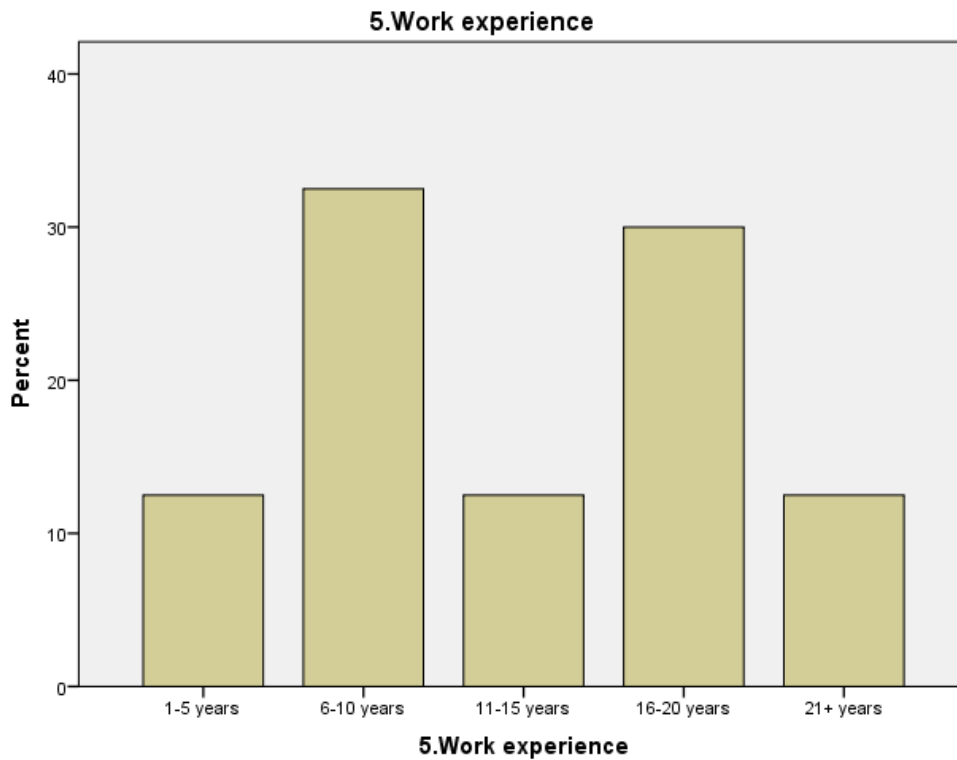


### Work Experience

The 32,5% of the participants said that they work in shipping companies for 6-10 years, the 30% work for 16-20 years, the 12,5% work for 1-5 years, another 12,5% for 11-15 years and the rest 12,5% work for over 21 years. Follows the relevant table and bar chart.

### **5.Work experience**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1-5 years	5	12,5	12,5	12,5
6-10 years	13	32,5	32,5	45,0
11-15 years	5	12,5	12,5	57,5
16-20 years	12	30,0	30,0	87,5
21+ years	5	12,5	12,5	100,0
Total	40	100,0	100,0	



**Number of Ships**

The 55% of the participants said that the shipping company they work for has 4-6 ships, the 30% has 7-10 ships, the 10% has 1-3 and the rest 5% has more than 10 ships. Follows the relevant table and bar chart.

**6.How many ships does your company have?**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1-3	4	10,0	10,0	10,0
4-6	22	55,0	55,0	65,0
7-10	12	30,0	30,0	95,0
10+	2	5,0	5,0	100,0
Total	40	100,0	100,0	



### **3.2 Analysis of the Main Questions of the Questionnaire**

#### **Question 1**

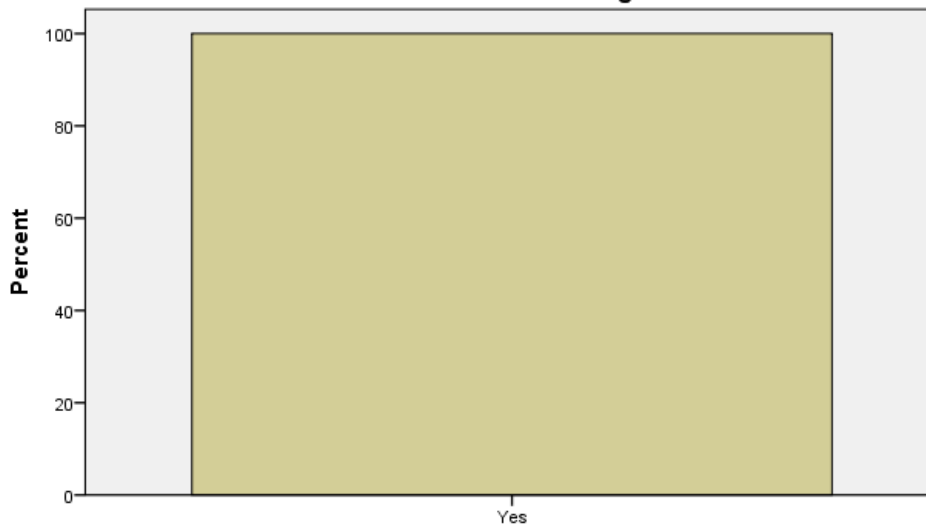
All the participants said that according to their experience as employees in maritime companies, is it important, in order to get a loan, their shipping company to comply with the standards of International Maritime Organization. Follows the relevant table and bar chart.



**1. According to your experience as an employee in a maritime company, is it important, in order to get a loan, your shipping company to comply with the standards of International Maritime Organization?**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	40	100,0	100,0	100,0

**1. According to your experience as an employee in a maritime company, is it important, in order to get a loan, your shipping company to comply with the standards of International Maritime Organisation?**



**1. According to your experience as an employee in a maritime company, is it important, in order to get a loan, your shipping company to comply with the standards of International Maritime Organisation?**

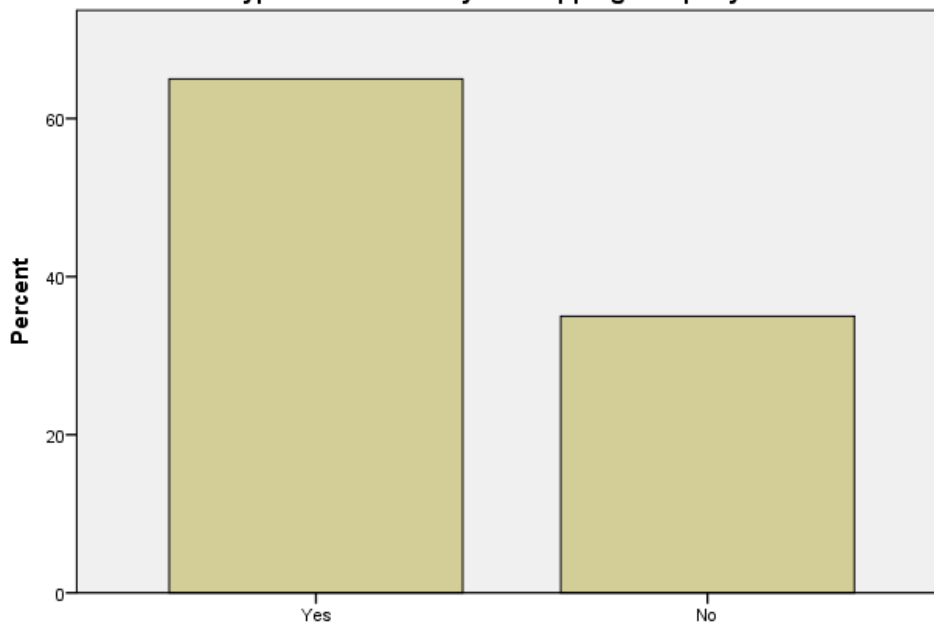
**Question 2**

The 65% of the participants said that according to their experience as employees in maritime companies, Leasing is one of the types of funds that their shipping company selects whereas the rest 35% said that they do not use this type of fund. Follows the relevant table and bar chart.

2. According to your experience as an employee in a maritime company, is Leasing one of the types of funds that your shipping company selects?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	26	65,0	65,0	65,0
No	14	35,0	35,0	100,0
Total	40	100,0	100,0	

2. According to your experience as an employee in a maritime company, is Leasing one of the types of funds that your shipping company select?



2. According to your experience as an employee in a maritime company, is Leasing one of the types of funds that your shipping company select?

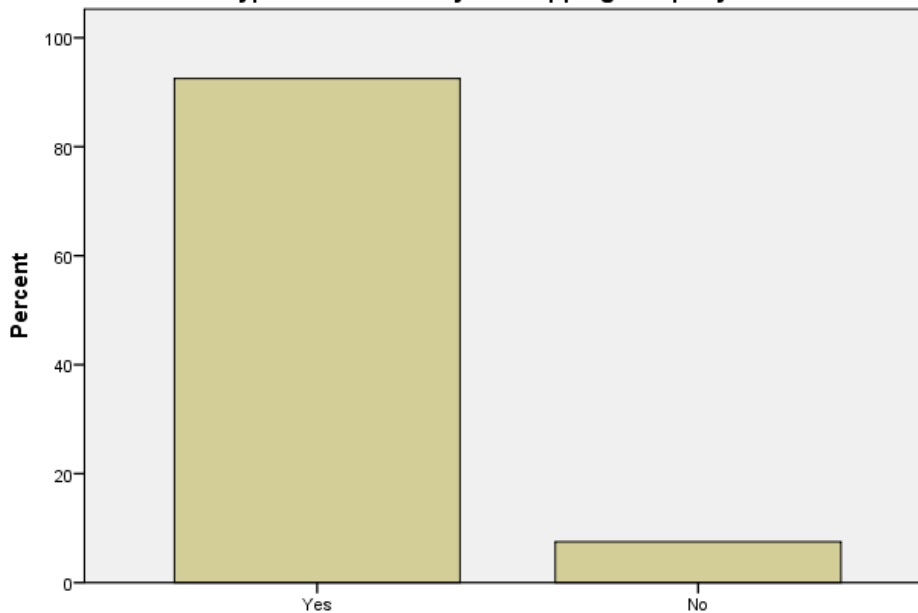
### Question 3

The 92,5% of the participants said that according to their experience as employees in maritime companies, Debt is one of the types of funds that their shipping company selects whereas the rest 7,5% said that they do not use this type of fund. Follows the relevant table and bar chart.

**3. According to your experience as an employee in a maritime company, is Debt one of the types of funds that your shipping company selects?**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	37	92,5	92,5	92,5
No	3	7,5	7,5	100,0
Total	40	100,0	100,0	

**3. According to your experience as an employee in a maritime company, is Debt one of the types of funds that your shipping company select?**



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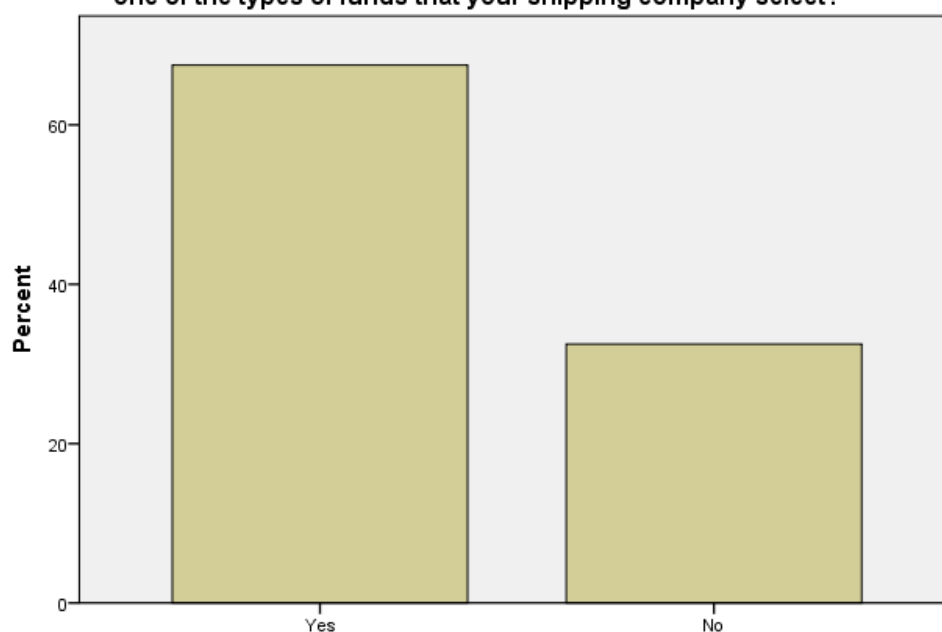
**Question 4**

The 67,5% of the participants said that according to their experience as employees in maritime companies, Equity is one of the types of funds that their shipping company selects whereas the rest 32,5% said that they do not use this type of fund. Follows the relevant table and bar chart.

**4 .According to your experience as an employee in a maritime company, is Equity one of the types of funds that your shipping company select?**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Yes	27	67,5	67,5	67,5
No	13	32,5	32,5	100,0
Total	40	100,0	100,0	

**4.According to your experiene as an employee in a maritime company, is Equity one of the types of funds that your shipping company select?**



**4.According to your experiene as an employee in a maritime company, is Equity one of the types of funds that your shipping company select?**

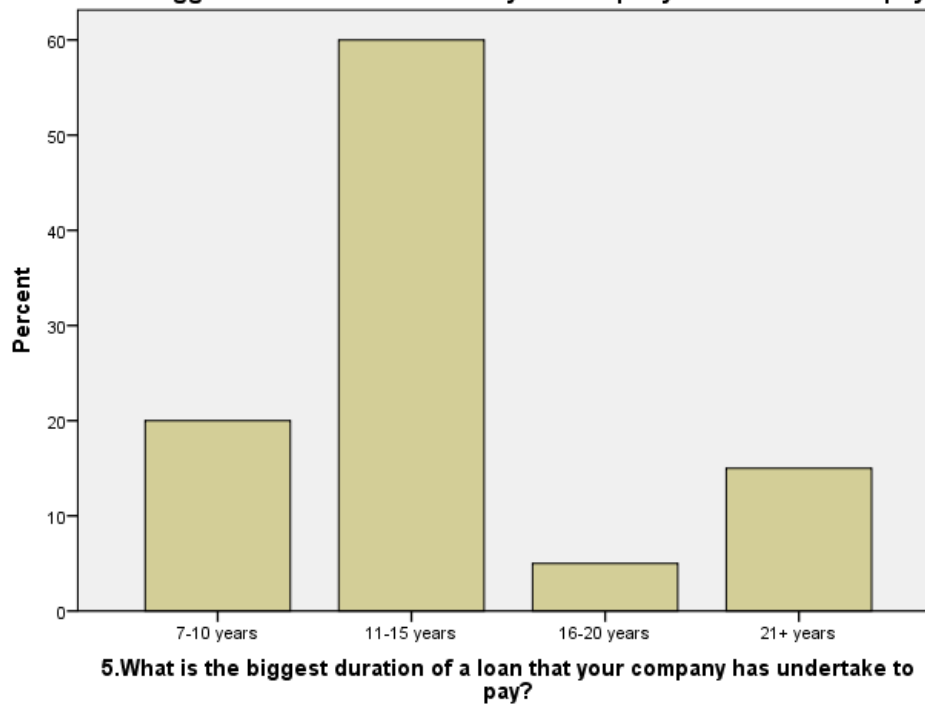
### **Question 5**

The 60% of the participants said that the biggest loan their shipping company has undertaken to pay is 11-15 years, the 20% 7-10 years, the 15% over 21 years and the rest 5% 16-20 years. Follows the relevant table and bar chart.

**5.What is the biggest duration of a loan that your company has undertake to pay?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	7-10 years	8	20,0	20,0	20,0
	11-15 years	24	60,0	60,0	80,0
	16-20 years	2	5,0	5,0	85,0
	21+ years	6	15,0	15,0	100,0
	Total	40	100,0	100,0	

**5.What is the biggest duration of a loan that your company has undertake to pay?**



**Question 6**

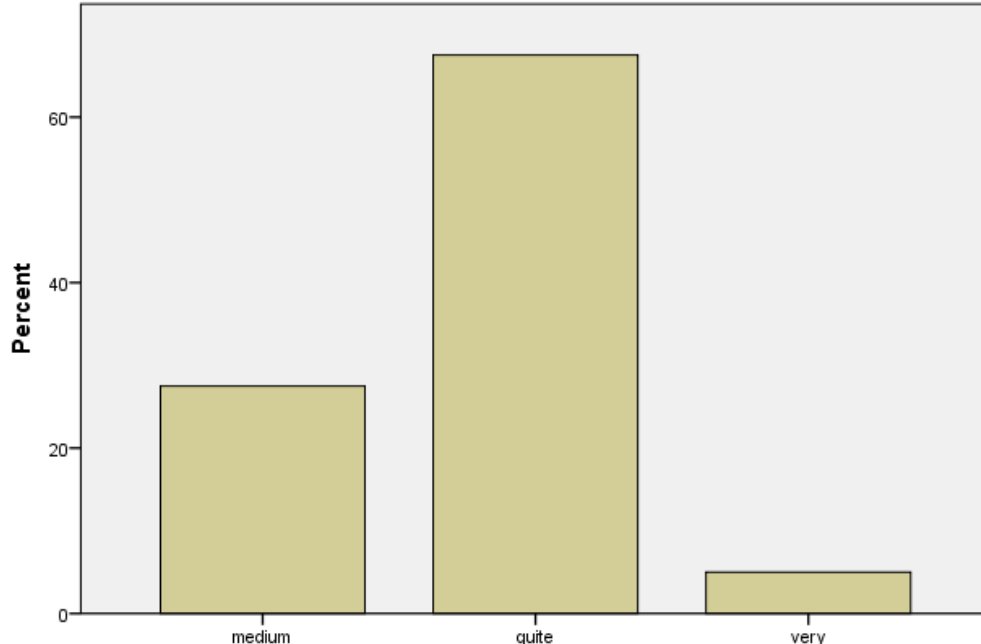
The 67,5% of the participants said that the Current Market evaluation is quite important for their company to be offered for a loan with good terms of provision, the 27,5% said

that it is of medium importance and the rest 5% said that it is very important. Follows the relevant table and bar chart.

**6.To what extent do you believe the Current Market evaluation is important for your company to be offered for a loan with good terms of provision?**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid medium	11	27,5	27,5	27,5
quite	27	67,5	67,5	95,0
very	2	5,0	5,0	100,0
Total	40	100,0	100,0	

**6.To what extent do you believe the Current Market evaluation is important for your company to be offered for a loan with good terms of provision?**



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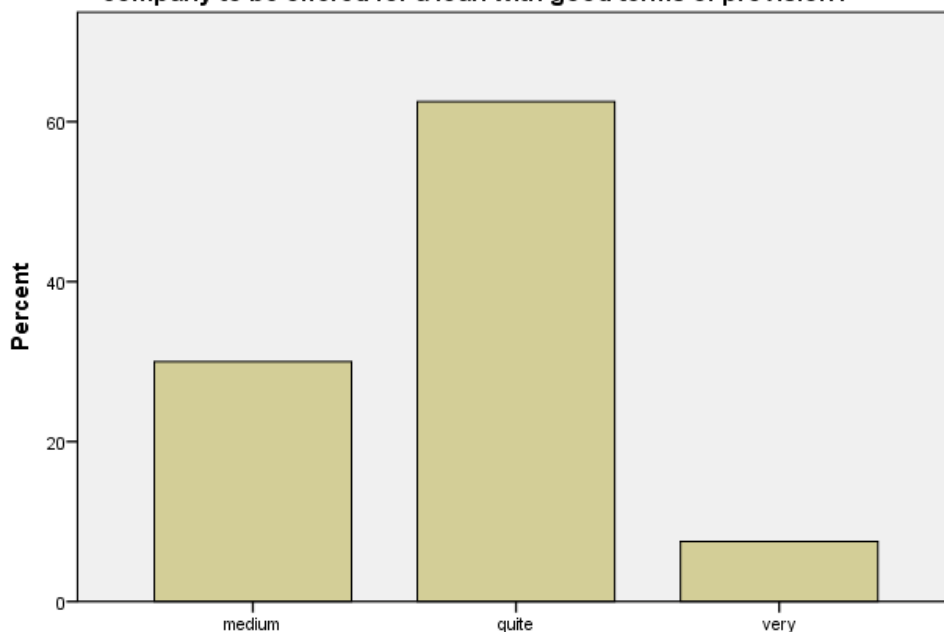
## **Question 7**

The 62,5% of the participants said that the Flag of operation is quite important for their company to be offered for a loan with good terms of provision, the 30% said that it is of medium importance and the rest 7,5% said that it is very important. Follows the relevant table and bar chart.

**7.To what extent do you believe the Flag of operation is important for your company to be offered for a loan with good terms of provision?**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid medium	12	30,0	30,0	30,0
quite	25	62,5	62,5	92,5
very	3	7,5	7,5	100,0
Total	40	100,0	100,0	

**7.To what extent do you believe the Flag of operation is important for your company to be offered for a loan with good terms of provision?**



**7.To what extent do you believe the Flag of operation is important for your company to be offered for a loan with good terms of provision?**

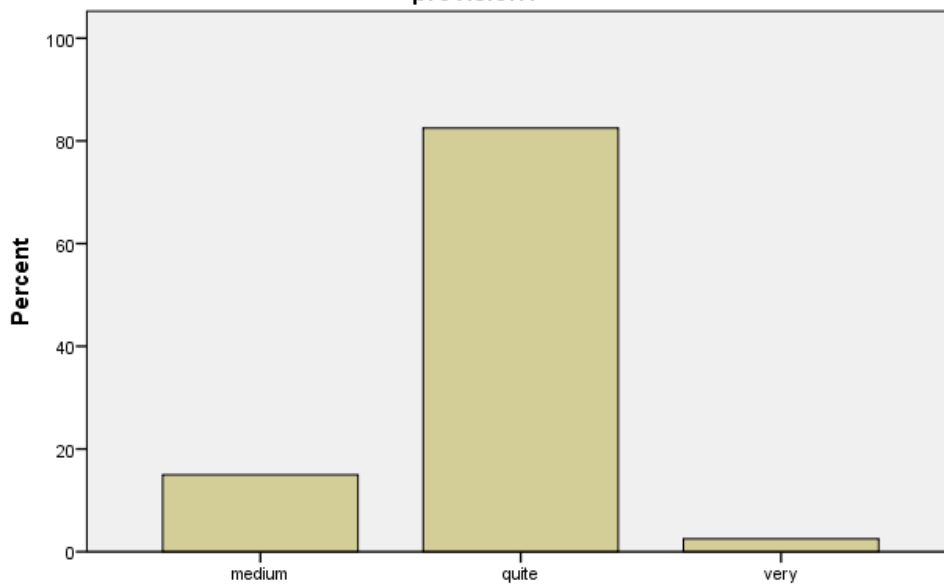
### **Question 8**

The 82,5% of the participants said that the Maintenance and accident record is quite important for their company to be offered for a loan with good terms of provision, the 15% said that it is of medium importance and the rest 2,5% said that it is very important. Follows the relevant table and bar chart.

**8.To what extent do you believe the Maintenance and accident record is important for your company to be offered for a loan with good terms of provision?**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid medium	6	15,0	15,0	15,0
quite	33	82,5	82,5	97,5
very	1	2,5	2,5	100,0
Total	40	100,0	100,0	

**8.To what extent do you believe the Maintenance and accident record is important for your company to be offered for a loan with good terms of provision?**



**8.To what extent do you believe the Maintenance and accident record is important for your company to be offered for a loan with good terms of provision?**

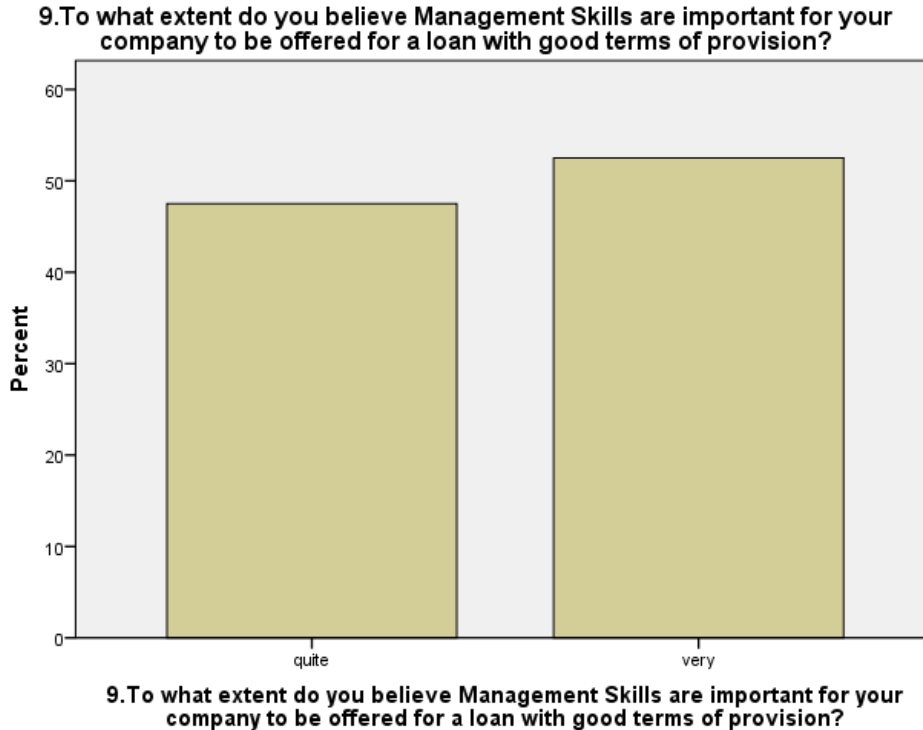


### **Question 9**

The 52,5% of the participants said that the Management Skills is very important for their company to be offered for a loan with good terms of provision and the rest 47,5% said that it is quite important. Follows the relevant table and bar chart.

**9.To what extent do you believe Management Skills are important for your company to be offered for a loan with good terms of provision?**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid quite	19	47,5	47,5	47,5
very	21	52,5	52,5	100,0
Total	40	100,0	100,0	



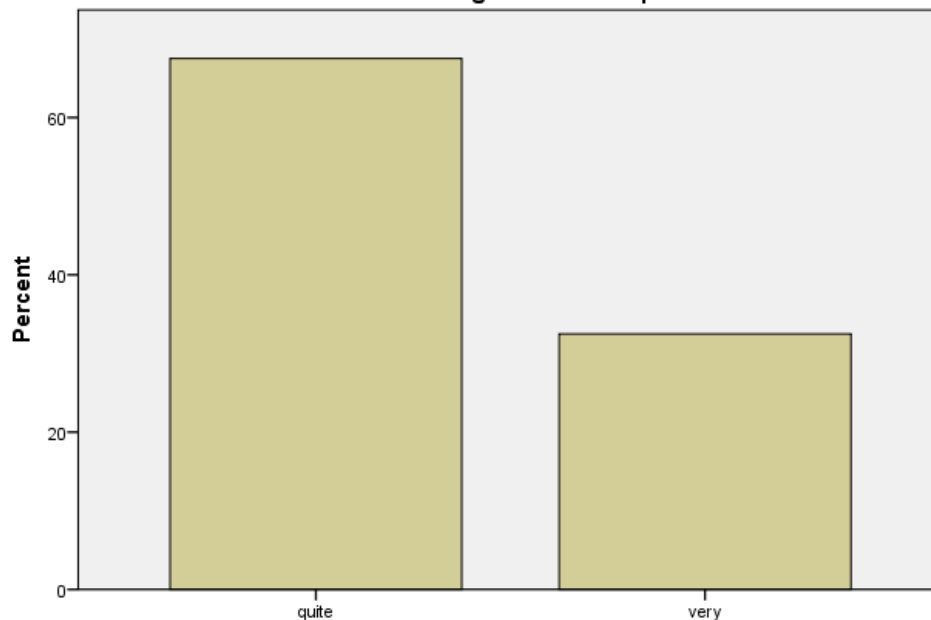
### **Question 10**

The 67,5% of the participants said that the Length of time is quite important for their company to be offered for a loan with good terms of provision and the rest 32,5% said that it is very important. Follows the relevant table and bar chart.

**10.To what extent do you believe Length of time is important for your company to be offered for a loan with good terms of provision?**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid quite	27	67,5	67,5	67,5
very	13	32,5	32,5	100,0
Total	40	100,0	100,0	

**10.To what extent do you believe Length of time is important for your company to be offered for a loan with good terms of provision?**



**10.To what extent do you believe Length of time is important for your company to be offered for a loan with good terms of provision?**

### 3.3 Synopsis of the Results

The 40% of the participants were from 31-35 years old, the 30% were from 41-45 years old, the 12.5% were from 18-30 years old, another 12.5% were over 46 years old and the rest 5% were from 36-40 years old. The 75% of the participants were males and the rest 25% were females. The 57,5% of the participants hold a Msc Degree, the 22,5% hold a different kind of degree, the 15% hold a Bsc Degree and the rest 5% hold a PhD Degree. The 67,5% of the participants are married, the 27,5% are single and the rest 5% are divorced.

The 32,5% of the participants said that they work in shipping companies for 6-10 years, the 30% work for 16-20 years, the 12,5% work for 1-5 years, another 12,5% for 11-15 years and the rest 12,5% work for over 21 years. The 55% of the participants said that the shipping company they work for has 4-6 ships, the 30% has 7-10 ships, the 10% has 1-3 and the rest 5% has more than 10 ships.

All the participants said that according to their experience as employees in maritime companies, is it important, in order to get a loan, their shipping company to comply with the standards of International Maritime Organization. The 65% of the participants said that according to their experience as employees in maritime companies, Leasing is one of the types of funds that their shipping company selects whereas the rest 35% said that they do not use this type of fund.

The 92,5% of the participants said that according to their experience as employees in maritime companies, Debt is one of the types of funds that their shipping company selects whereas the rest 7,5% said that they do not use this type of fund. The 67,5% of the participants said that according to their experience as employees in maritime companies, Equity is one of the types of funds that their shipping company selects whereas the rest 32,5% said that they do not use this type of fund.

The 60% of the participants said that the biggest loan their shipping company has undertaken to pay is 11-15 years, the 20% 7-10 years, the 15% over 21 years and the rest 5% 16-20 years. The 67,5% of the participants said that the Current Market evaluation is quite important for their company to be offered for a loan with good terms of provision, the 27,5% said that it is of medium importance and the rest 5% said that it is very important.

The 62,5% of the participants said that the Flag of operation is quite important for their company to be offered for a loan with good terms of provision, the 30% said that it is of medium importance and the rest 7,5% said that it is very important. The 82,5% of the participants said that the Maintenance and accident record is quite important for their company to be offered for a loan with good terms of provision, the 15% said that it is of medium importance and the rest 2,5% said that it is very important. The 52,5% of the participants said that the Management Skills is very important for their company to be offered for a loan with good terms of provision and the rest 47,5% said that it is quite important. Finally, the 67,5% of the participants said that the Length of time is quite important for their company to be offered for a loan with good terms of provision and the rest 32,5% said that it is very important.

## **Conclusion**

Shipowners, because they often fail to meet their obligations, are turning to different forms of borrowing. With regard to lending by the banking industry, a very good study of the client's request should be carried out. Let the bank look at whether the investment is realistic and deeply studying the market, both in the present and making long-term forecasts. It is also important to study the shipping cycles as well as the financial elements of the customer.

The bank is required to monitor the course of the loan annually and even more closely if a contract term is breached. At the same time, the course of the market and the stages of the maritime cycles should be considered, so that the right decisions can be made.

Given the fact that the shipping industry is active in an international and highly competitive market as well as due to its cyclicity, the banks involved in the financing of the above industry should take measures to avoid the conversion of "good" shipping loans into "failed" . These measures should include the precautionary management of the loan account, the management of a problem loan and finally the ways to solve a problem loan problem.

The deterioration in the financial situation of customers is due to the deterioration of the relevant shipping markets, which is common in a particularly circular industry. In this case, we have seen a loan with a high rate of ship financing, we refer to a middle-aged boat (15 years), but the existence of a three-year time charter functioned positively. If the customer is unable to meet his loan obligations, he / she asks for a restructuring of the loan. After the bank examines the data we mentioned in the theoretical part, if it accepts the customer's request most of the time requires additional collateral.

Improvement of the financial situation of shipping companies can be achieved either by restructuring their assets, such as by selling ships or by restructuring their debts. The difference in how to improve the financial situation of shipping companies is likely to indicate the different degree of deterioration in the financial situation and / or the difference in their administrative capabilities.

However, in the event of failed shipping loans, the bank, in conjunction with their legal services department, should decide carefully how the loan is managed. The bank aims at maintaining the loan relationship and attempting to resolve the problem or sell the ship without auction, should be the most preferred ways of both parties (bank - borrower). Conversely, litigation and the closure of the loan relationship with the exercise of the bank's rights, stemming from existing collateral, should be the ultimate means of resolving the problem. Because the final delay then causes damage to the bank.

Finally, it should be noted that the best way to solve a problematic loan relationship depends mainly on the relationship between the bank and the borrower. So that the smooth operation of both the repayment of the loan and the collection of interest on the part of the bank, as well as the good progress of the company from the point of view of the borrower, continue.

# **AMEX A:**

## PART 1

### Personal Information

1. Age: \*

- 18-30 years old
- 31-35 years old
- 36-40 years old
- 41-45 years old
- 36-40 years old
- 41-45 years old
- Plus 46 years old
- 

2. SEX: \*

- Male
- Female

3. Educational Level: \*

- Bsc Degree
- Msc Degree
- Phd Degree
- Different Kind of Degree

4. Marital Status\*

- Single
- Married
- Divorced

5. Work Experience: \*

- 1-5 years
- 6-10 years
- 11-15 years
- 16-20 years
- 21 + years
- 

6. How many ships does your company have?

- 1-3 ships
- 4-6 ships
- 7-10 ships
- 10+ ships



## **AMEX B**

### Part 2

#### Main Questions:

1. According to your experience as an employee in a maritime, is it important, in order to get a loan, your shipping company to comply with the standards of International Maritime Organization; \*

Yes

No

2. According to your experience as an employee in a maritime, is Leasing one of the types of funds that your shipping company selects; \*

Yes

No

3. According to your experience as an employee in a maritime, is Debt one of the types of funds that your shipping company select; \*

Yes

No

4. According to your experience as an employee in a maritime, is Equity one of the types of funds that your shipping company select; \*

Yes

No

5. What is the biggest duration of a loan that your company has undertake to pay; \*

7-10 years

11-15 years

16-20 years

21 + years

6. To what extent do you believe the Current Market evaluation is important for your company to be offered for a loan with good terms of provision; \*

Medium

Quite

Very

7. To what extent do you believe the Flag of operation is important for your company to be offered for a loan with good terms of provision; \*

Medium

Quite

Very

8. To what extent do you believe the Maintenance and accident record is important for your company to be offered for a loan with good terms of provision; \*

Medium

Quite

Very

9. To what extent do you believe Management Skills are important for your company to be offered for a loan with good terms of provision; \*

Quite

Very

**10.** To what extent do you believe Length of time is important for your company to be offered for a loan with good terms of provision; \*

Quite

Very

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