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## MASTER IN SHIPPING

# INITIAL PUBLIC OFFERING OF SHIPPING COMPANIES

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# Initial Public Offering of Shipping Companies


## Abstract

The present dissertation is a study of Initial Public Offerings (IPO) in the shipping industry. The shipping sector is a market that attracts a great deal of interest, and has a long history, since the economies of countries have been based on shipping, starting from ancient years. The study comprises a theoretical bibliographic review of the IPOs, with emphasis to the shipping sector. With an introduction to shipping business and its economics, the dissertation describes shipping financial cycles and its characteristics. Further, it is a review of the financing methods in the shipping industry. It utilizes theoretical perspectives in order to unfold the economic bases upon which IPOs are founded and explores IPO phenomena, such as underpricing and long - run performance. The study is a systematic analysis of all related parties in the shipping IPO process and describes the role and the interests of the company that goes public, the bank responsible for the IPO -underwriter- and the investors.



Keywords: Initial Public Offering, IPO, shipping, underpricing, shares, stock market

**Table of contents**

**Table of Contents**

**List of tables**



**List of figures**

# INTRODUCTION

Private companies are the ownership of an individual or a team of individuals that usually run and manage the business. Initial Public Offering (IPO), is the first offering of a private company's shares to the public. IPO process engage the issuing the first attempt of the company to sell stock to the public through the stock market (Jenkinson & Ljungqvist, 2001). Shipping companies have very special characteristics, since shipping is a rather capital intensive market sector, tends to be an industry where companies demonstrate a concentrated structure of ownership and strongly exposed to financial business cycles.

Shipping companies are obliged to adjust, in order to be in line with a dynamic and fast developing market. This makes financial methods and tools used to raise funding and materialize investments, also change. There is a shift of the strategic decisions and tactics of the core business of shipping firms in recent days from earnings maximization to an improvement of the firm market value, Syriopoulos (2007). In order to materialize their plans of company's value maximization, shipping companies need to pay attention to promoting investment plans which are growth promising, as well as achieve positive returns that perform better than focusing on cost cutting methods. Funding of shipping firms is done through bank loans, but more often through the issuance of securities. This issuance when it happens for first time is called as Initial Public Offering (IPO).

The present dissertation is organized in five chapters. The first chapter provides an overview of the shipping industry, describing the shipping market, giving a picture of the financial cycles of the shipping business with a reference to the financial performance of shipping companies.

The second chapter exploits funding methods for companies and especially shipping companies. There are two main funding methods described in this chapter: Debt financing, including loans from banks, leasing and corporate bonds. Next, in the second chapter equity financing is described, including the procedure of going public, for common stocks and preferred stocks. Additionally, the funding by business angels, individuals supporting new and promising firms is described, as well as funding by venture capitalists, who are usually interested in investing to small and often risky companies. This chapter includes an introductory sub – chapter in order to get the reader acquainted with Initial Public Offerings.

Chapter 3 is an exhaustive analysis of Initial Public Offerings, including background and the definitions needed to introduce the readers to the subject. The chapter continues with a description and literature references to IPOs of shipping companies. Then, advantages and disadvantages of going public are exploited and the depiction of what is needed for a firm, in order to go public, procedures and considerations.

The fourth chapter is devoted to IPO pricing with a description of the methods used in order to estimate share prices and the value of the listing company, as well as IPO pricing phenomena, such as underpricing and long time performance, with a special mention to underpricing of shipping companies. The chapter is concluded with description of the role in the pricing process of issuers and their managers, underwriters and investors.

The fifth chapter describes the interests of the three parties and their effects on short-term IPO phenomena. These interests are the influencing factors that formulate the pricing of an IPO and subsequent phenomena.

# CHAPTER 1.Background - Shipping industry

## 1.1. Shipping market

Shipping industry consists of four markets which serve different needs and trade different commodities, but are, at the same time, closely related to each other (Stopford, 2009). These markets are:

The *freight market*: Is the market that trades in the sea transport, consisting of three sectors: (a) the voyage market, dealing with transport of single voyages, (b) the time-charter market where the ships are hired for a fixed time period, and (c) the freight derivatives market, the trade of which involves forward contracts.

The *sale and purchase market*: Is the market that trades second-hand ships

The *newbuilding market*: Is the market that trades new ships

The *demolition market*: Is the market that trades old ships for scrapping.

These markets are operated in an environment where the same companies are trading in all four of them. At times when there is a fluctuation of the freight rates, there is an effect on the sale and purchase market, followed by influences in the newbuilding market. This is caused, since the connection among the markets is the economic situation of the shipping companies, depicted by their balance sheets. Martin Stopford, in his book 'Maritime Economics', illustrates a picture of the four markets, their functioning and integration (figure 1). He presents the main point of the system, to be the industry balance sheet, as a summary of the balance sheets of the several companies in the system. Among the balance sheets of the shipping companies operating in the four markets, there is in and out cash flow. The initial feeding of the market comes from the freight market supplying the chain with cash from freight revenue, and this is the in-flow to the system. The function of the sale and purchase market is understated, since the market of second-hand vessels engages a shipowner, an investor and the transaction between them, in such a way that revenue for the one is cost for the other, leaving the total balance sheet of the market

unchanged. The out-flow of the system is coming from the newbuilding market, as cost for the purchase of the new vessels.

The following shape (figure 1) shows how these four markets intergrade.

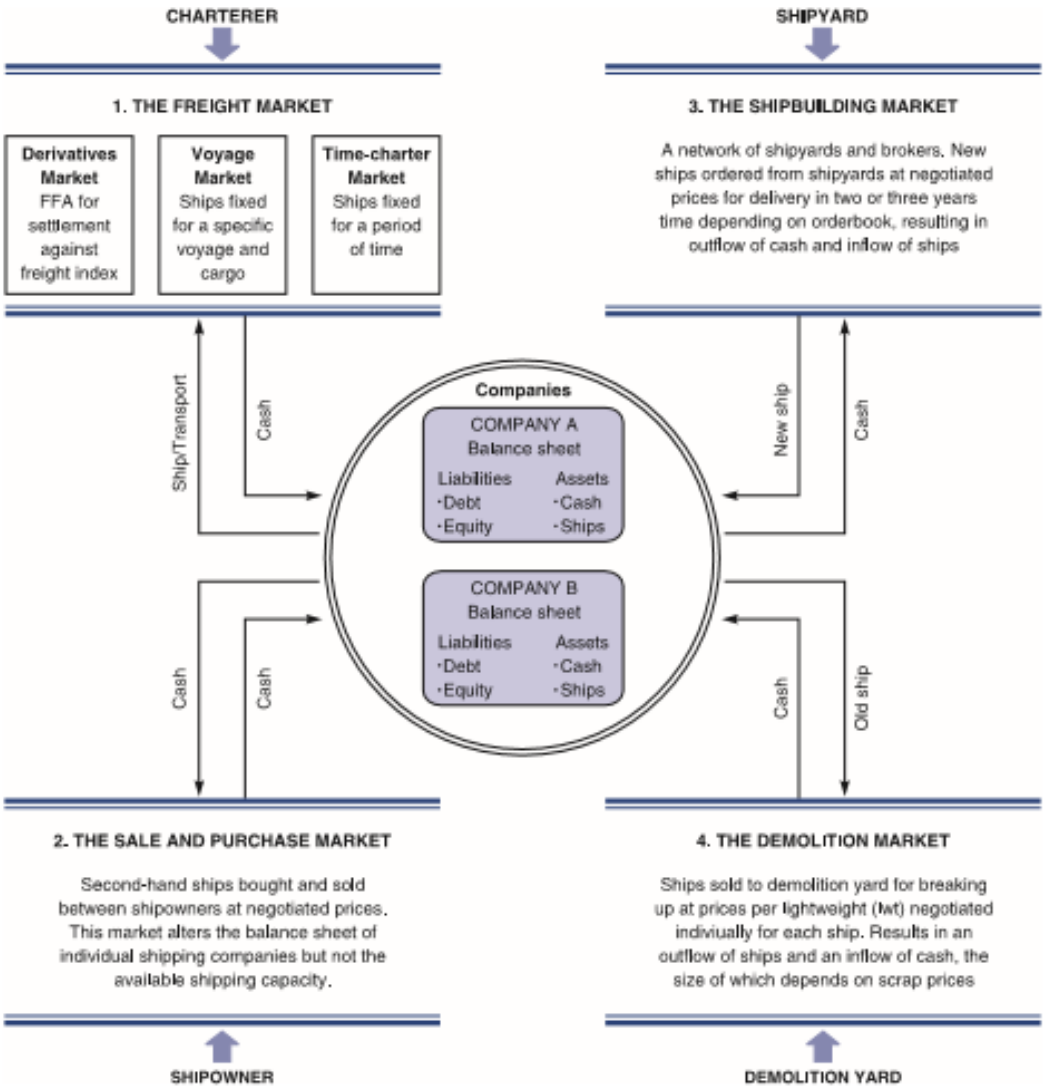


*Figure 1: The shipping four markets, (source: Stopford, 2009)*

## 1.2. Financial cycles in shipping market

One of the main characteristics of the shipping industry is 'the market cycles'. In finance, these cycles are unpredicted peaks in the shipping market, as described above mainly the freight market, which are followed by major declines with recession as a result of dropping rates. The cause of the financial cycles starts when freight rates raise, as a result of an increasing demand for see transport, combined with a depressed shipping environment within a growing economy (Hampton, 1986). This increase of freight rates fires a series of actions, since the shipping companies see their earnings increase and move towards new investments in new and second-hand ships. This process continues till the time when rates reach a peak. At this point freight rates start to fall and the growth of the economy to slow down. Enlarged fleet further pushes down rates. This process causes a negative environment in ship investment and discourages the purchase of new vessels, while enforces layup and demolition of them, reducing the supply, reaching an equilibrium with demand.

Shipping market is subject to this type of financial cycles, since it is an unpredictable and risky market, which is characterized by substantial time gaps between demand and supply. When at raising times, a new ship is ordered to the shipyard, it takes a long time to be delivered (between one to five years), and by this time demand levels may have declined, in a level that makes the operation of this ship non cost-effective.

Economists distinguish between long-term trends from short-term cycles (Cournot, 1838, as cited in Stopford, 2009). In this respect, there are three constituents of a cycle. The general picture contains the long-term cycle (Cournot called it 'secular trend'). The significance of the long-term trend relies on its alterations and an upward trend is a sign of successful business, while a downward trend is a sign of economic decline. This first type of cycle can be as long as 70 years. The second component is the short-term cycle, which is also called 'business cycle' and is the one that the majority of people and researchers refer to as the shipping cycle. The duration of the short-term cycle is usually between 3 to 12 years between two consecutive peaks. These financial cycles are the ones of most interest to the analysts that also drive the shipping market cycles. The third type of economic cycles are the seasonal cycles, which constitute seasonal fluctuations of the shipping market within the year.

### 1.3. Financial performance of shipping companies

In order to survive in the shipping market, a shipping company needs to establish a strategy based on key variables and follow it. The major variables are (a) the revenue from the freight operation, (b) the cost of operation and (c) the methods to finance the business. These three factors are inter-related and will be briefly analyzed in the next paragraphs.

The revenue is received by the shipping company from trading the ships. The maximization of the revenue is achieved by fully loading the ship with tons of cargo, increasing capacity of the ship, increasing productivity by planning, reduction of backhauls, shortening cargo-handling time.

Total costs of operation include running costs, such as voyage and cargo handling costs, and general operation of the ships, as well as capital repayments, which may include debt interests and ship maintenance. The costs are subtracted from the revenue, and what is left is the income before taxes, which is given as dividend to shareholders, or is invested or it is retained in the business.

The last component, methods to finance the business, involves the methods to acquire additional funds in order to cover costs, or to grow the business. This is the subject of the next chapter of the present work and serves as a preliminary analysis in order to introduce the equity finance method through Initial Public Offering in the third chapter.

# CHAPTER 2.Methods of funding

Shipping companies need to be fast and flexible in functioning in a dynamic and evolving environment. In this respect, they often need to raise funding in order to accomplish essential vital investments, run projects, or grow the business.

Funding of a company is an important and essential consideration of the management and the selection of the most appropriate source of funding is a crucial strategic decision. Especially for shipping, due to the characteristic of being a capital intensive industry, financing is a crucial business activity. Whether funds are needed to finance growth or liquidity of the business, or to run projects, there are distinct methods to acquire needed capital in order to finance these activities. These methods mainly refer to equity finance, debt finance and mezzanine finance (Grammenos & Papapostolou, 2012). When it is decided for a firm to raise funds through equity finance then the company must assume private equity of the owners, the retained earnings of the business, and public or private equity offerings. Debt financing in most cases refers to bank loans, bond issues and leasing, whereas, mezzanine finance refers to preference shares, warrants and convertibles.

In the present work, a brief description of financing methods is introduced, in order to explore thereafter, in more detail Initial Public Offering (IPO), as one of the most preferred methods for shipping companies to raise business funds.

## 2.1. Debt financing

Debt financing includes bank loans, leasing and corporate bonds. These are funding methods which generate settled obligations of the company to lenders who are entitled to priority claims.

Financing of the shipping companies is most usually performed through large international banks which have developed special offerings for the shipping business. The type of debt financing chosen by a company relies on specific needs and conditions which refer to the duration of the financing agreement, the type of rate which can be fixed or floating, the currency of the borrowing and what kind of guarantee should the borrower demonstrate the lenders (Myers & Brealey 2003).

### 2.1.1. Bank Loans

A loan is a type of financing, according to which, there are two sides, one is the borrower who receives the loan and the other one is the lender who grants the loan, which can be an amount of money or principal. Loans granted by banks to companies are the most common type of business financing, for many market sectors, included shipping.

The capital intensive nature of the shipping sector make ships regarded as long term assets, so that bank institutions have special term loans for shipping companies. This means that they have established tight legal agreements, according to which the parties (shipping firm and bank) agree that the bank is providing a loan to the firm under predefined conditions, including the amount, the interest rate and the duration time, with amortization which can be for the life of the loan or at the loan maturity. Duration of the loan is usually 2 to 10 years. Longer maturity requirements are usually connected with leasing or mortgage banks (Harwood, 1995). Shipping loans tend to have higher interest margins, due to business high risk. The repayment of the loan is scheduled on an agreed plan, according to company needs and it is usually in regular installments of the same amount.

Typical bank loans are referred to as “term facility”, meaning that the duration of the loan is a predefined term. Alternative types of loans are the “revolving facility”, according to which, the amounts that have been repaid by the borrower, can be re-borrowed. This practice is used by shipping companies considering the advantage that they can have additional funds without having to negotiate the terms once again, but continue the initial agreement with the bank.

The main advantage of financing based on bank loans is that the amount of the loan may vary, according to the needs of the borrower, so a company can acquire a small or a larger loan, without the effects of economies of scale, which normally affect issuing bond. Another advantage of bank loans is that the bank is providing the loan based on facts related to predictions for the future of the business and future projects, and not the reputation of the company, meaning that a small or not well known company can obtain a loan based on its business plans and facts. The reputation of the borrower, may, affect other types of financing, as it will be described in subsequent

paragraphs. In addition, the company does not need to undertake the process and related costs of being rated by a rating agency, as it is the case for other forms of financing.

### 2.1.2. Leasing

Leasing is used in market terminology to describe an agreement between the owner of a property and the person or company that is granted the right to use the property at an agreed rate and for a predefined time period. Leasing is usually a short to medium term agreement for 10 to 25 years. In this respect, leasing in shipping companies is a method to finance the use of a ship, as opposed to financing its ownership.

There are two sides taking part in a leasing agreement: the company that is hiring the property and is called the lessee and the company or institution who is the owner of the property and is granting the rights of use, the lessor (Watson & head, 2007).

In shipping, leasing has certain advantages for the company that uses the ship (the lessee) in comparison to high bank debt, such as low level of cost for operating the vessel, and tax benefits. The main disadvantage of leasing is that the lessee does not gain ownership of the ship. For the owner of the ship granting the leasing (lessor), there is a high risk, since the lessee gives limited guarantees, therefore, leasing agreements are usually made with trustful lessee companies.

There are certain advantages that make a company select leasing instead of bank loans in order to finance the business. These include flexibility, provided by the agreement where it is stated that the property can be replaced or returned to the owner during it life. There are also service reasons in case it is agreed that the lessor is providing service to the lessee.

There are some common characteristics between bank loans and leasing. First, they both are methods of lending company, usually by a bank, that provides money to lease real capital. There is a risk for both that the borrower will not fulfill the payments of the loan or lease so that banks need to cover this risk, and they do so by collateral, in order to be paid back the given money or capital.

### 2.1.3. Corporate bonds

Bonds is a type of debt financing according to which, the bond issuer (the company that is borrowing) makes an agreement to repay the principal (or par value) after a specified time period which is called the maturity period, while it is making regular interest payments (Gregoriou, 2009). In line with the above, corporate bonds constitute a medium used by the company – issuer and sold investors, often directly to the public (Bodie et al. 2009). It has a standard payment structure. Corporate bonds include call provisions, so that early payment is possible according to interest rate level.

There are some advantages of issuing bonds, both for the company and for the lenders. The company issuing the bonds can borrow the needed amount of money at better terms than receiving a bank loan. This is partly due to the fact that Investment risk is shared to many investors receiving the bonds, as compared to bank loan, where the total risk is taken over by a sole institution – the bank, who sets the terms and conditions of the loan agreement, according to the risk involved. Another positive point for the company, is that it can decide the bonds terms with regard to the type of interest rates (fixed or floating), the periodicity of the payments (if they are going to be annually, semesterly, quarterly, monthly) and the maturity of the bonds. In addition bonds can be transformed to equity, by being convertible to common stocks.

Issuing corporate bonds at a call price prior to the maturity date gives the company the flexibility to buy back the bonds at the call price when there are favorable interest rates in the market. Doing so the company has the chance to reduce the interest payments by issuing alternative bonds with lower coupon rate, or by calling the high debt bonds can substitute them with alternative type of debt (Bodie et al. 2009).

On the hand, issuing corporate bonds could require rating of the company by a rating agency like Standard & Poor's or Moody's. This was the case for the shipping companies issuing corporate bonds in the past. Since shipping is regarded as a high risk business, shipping corporate bonds were regarded as High Yield with coupon rate influenced by the company rating.

## 2.2. Equity financing

The meaning of the term equity refers to the value of owing a company and the interest of the shareholders. Ownership of the company is translated to possession of stocks by the shareholders and the company can raise equity by offering and selling its stocks to the investors. The stocks are, most of the times, common stocks, but they can be preferred stocks depending a number of factors, such as the growth of the company, risk involved and the type of business.

Equity is met in large, as well as small businesses. In small companies, the most common type is the owner's equity where it provides the basis for the enterprise starting and growth and where profit is re-funding the operation. These may be adequate for small businesses, but growing companies which need to extend their operations and invest in order to develop, need funding of a larger scale, where owner's equity is not sufficient. There comes the involvement of private owner investors, or venture capitals, who are interested to provide equity financing and receive (part of) the ownership of the company. In a larger scale, as the company grows and gains in profit and reputation, shareholders – investors drive it to a more structure enterprise, and it can seek funds in different sources, including the option of going public. The company can do so by selling a portion or all its shares to investors, individuals or institutions (Damodaran, 2010)

### 2.2.1. Going public

Going public for a company refers to the offering and selling of the company shares to the stock market. The decision to go public and enter the stock markets is made by a company in order to obtain required funds to finance activities like investments or expansions, or research projects, or even pay off older debts. Companies have also other reasons, apart from financing when they decide to go public. It is a way to enhance reputation and the image of the company, (Bancel & Mitoo, 2001).

### 2.2.2. Common stocks

Common stocks refer to equity securities and represent ownership of part of the company. They give voting rights to the investors so that they can vote on decision making regarding corporate matters. The voting rights are analogous to the number of stocks owned. Investors also are entitled to receiving dividend payments upon earnings of the company. Investors holding common stocks can be individuals, or institutional, such as banks and other companies like insurance or pension funds.

Buying and selling of the common stocks of a company are performed on one or several exchange stocks. The common stock price of a newly listed company is determined by the issuing company and is called offering price, while there is an obligation by law, to have a nominal value, which is the limit and stocks cannot be issued for less than this value. In the case the company is already traded in the stock market, the price of the common stock is determined by the market.

The main features of the common stocks are the residual claim and the limited liability. The former refers to the characteristic that places the stockholders at high risk, since they are set last at the order of creditors if there is liquidation of the traded company (Watson & Head, 2007). They are the ones to last make a claim from what is left from the liquidation, after the authorities, the employees, the suppliers and other creditors, such as corporate bond holders. Stakeholders receive an income of the company as dividend, either in cash, or they may reinvest this income to stocks of the company. The latter (limited liability) has the meaning that the shareholders are not liable with regard to their personal belongings, for the obligations of the company.

### 2.2.3. Preferred stocks

Preferred stocks are a combination of equity and debt, since they are a part of the company equity (like the common stocks), but in addition, the company pays an amount to the investors.

Preferred stocks financing is used in special cases, such as mergers and is a funding method that provides the company with limited amounts. The debt characteristic of the preferred stocks mean that the company, will pay the predefined amount to the investors, even if there is no profit or dividend to share. Because preferred stocks are not secured financial instruments, they have a high risk. In case of the company liquidation, debt lenders will be paid for interest payments before preference stockholders (Watson & Head, 2007) who lie at the bottom of the list.

### 2.2.4. Business angels

Business angels are individual investors who provide their capital to a newly established company, in return for part of the equity of the business. These new companies have usually innovative ideas and a creative team, in an attractive and new business sector. Funding of the first steps of the company may be based on family capital, or on business angels, who also support later growth and development of the company (Georgiou, 2009).Business angels are individuals who may have financed other small businesses in the past, and their intention is to invest in young, promising, high risk and rapid growth companies, by providing their experience together with the funds. Financing at the initial steps of small businesses is very crucial, since initial capital is needed, but difficult to acquire from banks in the form of loans or from other creditors. This makes funding of small starting companies extremely important for their future growth.

### 2.2.5. Venture capital

Very similar to business angels, venture capital is found from venture companies and individuals who are interested in investing to small and often risky companies. Usually, financing is accompanied with knowledge transfer from the venture company to the small starting business. This feature makes the investors important active players of the new company, since they participate to the hiring of the management and the business plan. The business plan may include the designed product / service and used technology, as well as the needed resources for the production and the marketing.

In this respect, there is a tight bond between the venture capital investors and the company and financing is usually performed in stages (very seldom investors provide all the funds at once), as the plan is realized.

### 2.2.6. Initial Public Offering (IPO)

Initial Public Offering (IPO), is the first offering of a private company's stocks to the public. It involves the procedure of issuing the first offer of the company to sell stock to the public through the stock market (Jenkinson & Ljungqvist, 2001). The company issues securities in order to obtain essential funds, and when this issuance of securities happens for the first time, this is actually the Initial Public Offering (IPO).

In the present paragraph, a brief description of IPO will be presented, as a type of business financing and in subsequent chapters it will be thoroughly analyzed.

IPO facilitates a company to attract a variety of investors with regard to the invested amount and the type of investor, i.e. individuals, funds, institutions. IPO may be considered as a means for a wide range of business types and growth to finance the company or branch companies (Pettit, 2007). The company can also decide to go public in order to create shares that will be used in future acquisitions (Brau & Fawcett, 2006). A special characteristic of IPO and generally going public, is that the company does not have to pay-back the collected capital to the investors, since a part of the equity is given in exchange. By going public, the initial owner / investor of the company and existing shareholders have the chance to turn their investment into cash (Zingales 1995, Ritter & Welch 2002) and expand their investments.

# CHAPTER 3. Initial Public Offering

## 3.1. Background – definitions and participants

During the last years, the strategy of the shipping companies, is shifting towards the company's market value maximization, rather than profit increase, which was the target in past decades (Syriopoulos, 2007). This is the case in several major industry sectors, including shipping. This is a strategic planning which requires that the firm is constantly aiming growth through investments and has positive results.

Going public is not an automatic process, the decision of a firm to go public is the conclusion of a prior process as of what is the most appropriate and advantageous way of funding and it is a means to obtain essential funds in order to grow the business. Going public can been seen as an acknowledgment of prior achievements of the company and an economical way of acquiring funds for further growth (Rock, 1986).

The main reason a firm chooses to go public is the increase of the liquidity of the company as a result of the increase of equity capital, referred to, in the literature, as primary market. The capital increase can be profitable for the company and the investors, who may further earn profit on return on stock. The IPO process is also connected to the secondary market (aftermarket), as of further trading the stocks of the company (Jenkinson & Ljungqvist, 2001).

According to Ellingsen and Rydqvist (1997) the most common reasons for a company to go public include capital acquisition, improvement of the company image, publicity upgrade and as a motivating factor for the employees.

In an IPO there are three parties involved: The firm that has made the decision to go public (issuer), an investment bank (the underwriter) and the investors. Each party has a potential target, aiming to reach through this process. The company going public has a double target of raising the biggest possible amount of funds, while keeping the investors satisfied, so to ensure future interest of the investors, in case the company would need to issue further shares in the future and wants the investors to buy those shares.

The buyers of the shares are private or public investors. The investors are interested in buying the shares if they expect that this is a worthy investment and that they will gain a profit, compared to the risk they take. In case their expectation is not positive, they would invest their funds in another stock or something more profitable. It is expected that because an IPO involves the ex-ante uncertainty of the company value, potential investors will demand a lower price to compensate for taking this risk. This process results in underpricing.

Usually, the underwriter is a bank that acts as the intermediate between the issuing company and the investors. In collaboration with the issuer, the underwriter participates to the promotion of the shares of the IPO and plays an active role to the determination of the offering price. A concern of the underwriter is to build and maintain a good reputation, thus the aim is to keep the other parties satisfied. In this respect, the bank is interested to set a price, acceptable and gainful for both sides: giving the investors a good compensation for the undertaken risk and also be profitable and accepted by the issuer.

### 3.2. IPO of shipping companies

By tradition, shipping used to be a family-owned business, mainly in Greece. As such, it was preferable to finance their business needs through shareholders equity. It has not been common practice in the past years to share the business and the information involved to the public, resulting to losing control of the company. In addition, the shipping industry was not particularly attractive to the market. Stocks of shipping companies were not preferred by the investors until 1990s when many shipping defaults took place. Market conditions and events like increasing freight rates, oil market instability due to political issues in the Middle East, growth of American and Chinese markets, have changed the attitude and preferences of the investors, who starting investing in shipping companies. This was enforced by the shipping IPO wave after 2000 and resulted to a super-cycle (2002-2008) for the shipping industry. This boost is based on a number of reasons, including reduced funding capabilities by the banks in the form of loans to the shipping companies, due to world financial crisis of 2008, which had a major effect on banks. Other reasons which contributed to this change were high vessel prices at the end of the 20th century and the beginning

of the 21st, the appearance of a new generation of ship-owners in the sector and the need to enlarge and expand shipping companies. Shipping companies use the funds acquired by an IPO for buying new vessels, repaying older bank loans or other liabilities like bonds, or use it as working capital for operational purposes.

According to Grammenos and Marcoulis (1996) the major reasons for shipping IPOs are acquisition of vessels, asset play, payments of past loans or other debt, and other trade activities. The assessment of a shipping company is usually connected to value of the owned ships and other assets, Syriopoulos (2007) making the major target the expansion of the fleet, and not being so directly connected to the starting purpose of the IPO.

Declining in shipping economic cycles during 1970s, 1980s and 2000s are connected with the gap between the supply of vessels and demand of shipping trade. Capital markets have appeared in the shipping sector as an alternative source of funding. Financing of shipping companies by capital markets started in Europe in 80' and 90' and later, during, a period 2003 to 2008 in the US, a number of shipping IPOS took place. In recent years, NYSE and NASDAQ are the stock markets with the majority of listed shipping companies, while some companies are listed in Hong Kong, Singapore and Kuala Lumpur.

Decisions related to investments in the shipping industry are a major activity of the process and comprise a risk factor. This is due to the fact that the shipping business is characterized by altering and continuous instability which is found across various shipping market segments. Driving factors for this nature of the business include the derived type of demand for shipping services, which appears to be responsive to economic growth, the fact that the freight rates and ship prices are subject to financial cycles, and the special characteristics of the shipping industry McGroarty (2006).

Unforeseen, or even opposite results may come up during an IPO of a shipping company, due to the capital intensive nature of the business, which connects the underlying real assets –ships- with high levels of risk. As a result, financing methods employed by shipping companies rely on the core of shipping business. A major component that plays an important role in the promotion of shipping business growth is the capital market. A series of main functions are performed by the

capital markets in order to add value to the listing companies and promote the company and the IPO.

Capital markets, due to their characteristic of being primary markets, have a role of agents that provide the necessary funds to financing new investment plans and support business growth of the listed companies. Additionally, as secondary markets, capital markets provide a competent way for trading well performing securities.

In this respect, capital markets can play an important role, contributing to future creation of value creation depicted on corporate security prices. Following a successful IPO, and following the evolving market, shipping companies seek funding in other sources in order to finance their business. An ongoing shift has been noted in shipping finance the previous decade, forced partly by the economic recessions and mainly by the crises in the world markets. This shift has been strengthened by several drivers, such as destruction of the capital reserves in many shipping firms, major contraction of banking finance, high capital requirements to replace the old vessels and internationalization and integration of world capital markets, Syriopoulos (2007).

The participation of stock markets in shipping funding is not extended, although they have a very important role in the shipping business. This is due to the nature of the shipping sector, dominated by family ownership and hesitation by the shipowners to loose company control by going out to the markets, as well as unwillingness to share of sensitive company information. This is accompanied by negative attitude towards shipping stocks by institutional and private investors, due to unstable cash flows (Grammenos & Marcoulis, 1996).

During the last years, shipping companies have started to realize the advantages of IPOs and have started moving towards public listing on international stock exchange markets. This movement of shipping IPO shave driven the investors' interest towards shipping business, as they have also started to see the benefits of exchange traded shipping companies. This development has been paired with very high freight rates and well-performing shipping company balance sheets at a timing of strong stock markets. This has driven to a peak of the shipping market at the end of 2007 and beginning of 2008, resulting to substantial earnings and cash flows for shipping industry.

### 3.3. Advantages and disadvantages of going public

A company may decide to go public for a number for reason, while there are quite a few reasons why the management of the company may, decide not to proceed in an IPO. There are pros and cons for going public and this mainly depends on the company, its structure and its environment.

#### 3.3.1. Advantages

Funding: Raising new capital is one of the most usual reasons that drive a firm to the decision to go public (Brealey et al., 2001).This new funds are required for a number of business activities, such as investments, growth, Research and Development. In comparison to the other types of financing the business, IPO has certain differences and positive characteristics, the main of which being that the issuer is not obliged to pay-back the amount collected through the IPO.

Future capital: For a public company, it is usually easier to have access to new capital, either in the form of bank loans or by equity offerings. This is mainly because a public company can build a good reputation, and has proven some positive results in order to go public. In addition, a public company is already priced, thus its value is known to any interested party, so investors and banks can evaluate the company and decide upon financing. While the Initial Offering of the company may be difficult, time consuming and costly, if the stock attracts market demand, the company can issue more stock, in an easier and fast procedure, given the fact that the issuer is already listed.

Publicity and image: A company that has gone public has already the approval of the market, and a stamp that it is successful. A public company is expected to follow the rules of the stock exchange and disclose company information, which should be known to the public. This information is observed by the media, investors and stock market analysts, driving the company to gain publicity and be more attractive to investors.

### 3.3.2. Disadvantages

Control and management: After a firm changes status from private to public, the control of the enterprise passes from a small team of shareholders to a wide team of more shareholders. The former owners of the company are therefore, obliged to share the management and their voting rights with the new team of owners-investors. This results to also sharing the control and strategic management of the company. Control loss can also be seen from the management perspective as an intense and continuous pressure to meet the pans and profit estimates posed to the company by analysts, which may create difficulties for the long-term management of the company, with regard to the growth and predictability.

Profit sharing: When the public company pays out dividends the old owners will have to share the profit of the enterprise with the new investors, nevertheless, the total profit is expected to have risen, as a result of the IPO process and the growth of the business following the IPO.

Reporting obligations and confidentiality loss: When a company has gone public, then it is subject to certain directives regarding transparency and clarity of information, and it needs to submit semi-annual and annual reports to the public. The disclosed information refers to all types of activities, such as of type of products or new services, plans, markets, marketing plans. This information is also available to competitors who may take advantage of ideas and plans that the company would prefer to keep secret. In addition to the loss of the competitive advantage that the company would have, keeping important information classified, there is also a certain cost of money and time associated with complex reporting.

Costs of going public: Going public involves several costs, which may be direct or indirect. Direct costs usually are related to third party services, like consultants, lawyers, auditors and underwriters. IPO materials such as prospectuses and other advertising types, is another direct cost element. Indirect costs are more difficult to estimate, and are related to reporting, time consumed for IPO preparation possible management restructuring.

There are long-term costs associated with becoming and acting as a publicly listed company. An example is complying with regular reporting obligations, as well as general investor relations, which is time-consuming and expensive. Direct costs include increased legal, accounting and

investor relations fees due to the fact that the company has other more complex type, thus, there is higher complexity of the company's legal and accounting functions. Especially many companies will need to upgrade the size and expertise of their internal finance staff to ensure that it can develop and maintain adequate internal controls for a public.

Negative publicity: In the case where a stock performs insufficiently after a company goes public, the Initial Public Offering can have the opposite than the expected results and could lead to negative publicity for the company.

### 3.3.3. Comparing advantages and disadvantages

In relation to advantages and disadvantages of going public, mainly for shipping companies in the US, PwC has published a useful list which appears in table 1 below:

| **Listing in the US Advantages** | **Key Challenges** |
|---|---|
| Provides access to the largest source of capital in the world | Requires a significant commitment of management time and resources |
| Can generate significant proceeds that may be used to accelerate company growth through increased investment | Results in the company being subject to the US regulatory environment |
| Establishes another currency to pursue acquisitions in the US | Requires compliance with the ongoing reporting requirements of the SEC |
| Gives investors the opportunity to realize and/or monetize their appreciation in the value of their investment | Requires the preparation of audited financial statements under IFRS as issued by the IASB ('IFRS') or US GAAP |
| Provides share-based compensation for US-based employees Improves timeliness and cost of capital of subsequent offerings | Results in the company being subject to additional US shareholder demands |
| Offers access to US commercial paper markets through the establishment of a US credit rating | |

| | |
|---|---|
| Provides greater exposure of the company's products and services in the US and abroad | |

*Table 1*

*Comparing advantages and disadvantages of going public (source: PwC)*

### 3.4. Preparation of a company for an IPO – procedure

Going public, for a number of companies is more than just getting out to the stock market and selling their stock. It is a clear indication that the company is on a successful route and it is accepted by the investment world. Going public is a goal that many companies may have set for years and is for them the signal that they are approved by the market, in addition to gaining capital to finance growth and liquidity of their business.

For this reason, an IPO is sometimes considered as one of the most significant events in the life of a company. The amount of capital raised via a public stock offering can enhance the growth and expansion of the business. It can give the ability to a company to attract competitive staff, by offering stock options and a number of similar equity awards, so to have a competitive advantage against competition. It may also give the ability to the company to offer rewards to the initial investors in the form of liquidity. As mentioned above, the significance of going public is also related to the increased prestige for the company which can be better placed for the collaboration with vendors and suppliers and potential business partners.

Consultants[1] tend to advise potential listed firms how to get prepared and what are the expected actions that the company needs to perform, not necessarily for always for legal purposes only, but also for market reputation purposes.

In this respect, these directives advise firms how to act like a public company, even before the IPO, and include actions referring the IPO story, financial results, information systems, internal control procedures, a competitive management team, corporate governance, and investor relations. IPO story: a persuasive equity story, supported across the organization and spread to all departments and staff members, robust and updated business track record, predictable growth trace and a clear understanding of how IPO earnings will be used to fund growth and further investments. Financial results: vivid operating performance, balance sheets and positive cash flow

[1]EY's guide to going public

over quite a few quarters, and growth with increasing profits for several years. Information systems, including accounts: access to sound financial information, appropriate information technology and accounting / financing / budgetary system installed, regular management information summaries / dashboards / reports, monthly and quarterly. Internal controls: Accounting and financial control department that guarantees precise financial results, puts controls in place and provides certification. Management team: Already in place for one year or more, having documented record of success and the expertise to undertake an IPO event and operate a public company. Corporate governance: A board of directors which has already been formed in advance and is composed by strong and talented directors, who can act as an independent team with a clear and transparent shareholder and corporate structure. Investor relations: A team or an expert who can lead effective communications strategy, run public attention and send effective messages to investors and market analysts.

### 3.4.1. Steps in IPO procedure

For such a significant step in the life of a company, special preparation is needed. An IPO is not a one off action, but there are several steps to be followed, when it is decided for a firm to go public (Jenkinson & Ljungqvist, 2001). Initially, the company should make a choice, as of which is the market they will go public in. Historically, the most common practice was that the company selected the domestic stock market for going public, but recently this is not always the case, many companies use to select foreign stock markets.

The second step refers to the selection by the issuing company of an investment bank, which will play the role of the underwriter in the Initial Public Offering and will act as an intermediary between the issuer and the investors.

For a company that is planning an IPO, the selection of managing underwriters is a compound task that incorporates both selling the features of the company to prospective underwriters, as well as evaluating the strengths of the prospective bankers who will act as underwriters. A major factor in this process is at what degree is the potential underwriters' interest in the company and whether

their understanding of the issuer is coherent with the one held by the board of directors and the senior management. The underwriter takes also into account any possible prior experience with analogous firms, which were at the same or similar stage of development.

Through the years, the reputation of the analysts in the prospective investment banker has become an important factor for companies picking an underwriter based on a well-respected individual or group of analysts, which may also be of high importance for keeping investor interest.

During the last years, however, this function of the market research analyst in relation with the selection of an underwriter and generally, with the IPO process has altered significantly and became rather limited. Thus, the role and the department of research have been separated from this of investment. Investment bankers have very limited or no role in determining which companies are investigated by the analysts and they are in principle, not authorized to perform control on the reports created by research analysts and research analysts are not allowed to join the road show or other marketing efforts during an IPO. There are restrictions on interaction between the investment bankers and researcher of investors, with very rare exceptions.

The truth is that, in spite of all the above, the reputation of the underwriter is the major factor influencing its selection by the issuers The issuing company is expected to evaluate the prospective manager's selling and distribution competences, and the underwriter's history and expertise, as well as previous participation in quality syndicates and acquired quality certificates. In other words, it is a must for the issuing company to evaluate if the potential underwriter is indeed driving the IPO to the desired investors, being the ones that the company is looking for.

As an example, it can be mentioned that some investment banks prefer to turn to large institutional investors, while others follow a different tactic by targeting more of a retail audience.

After the selection of the underwriter, the process is arranged by the issuing company in collaboration with the investment bank and includes the method according to which the offer will be made and the commitment, as well as the role of each party. This step also includes decisions regarding fixed price or bookbuilding and several other arrangements, like timing (date) of the IPO. The role of each party in an IPO, as well as the interests of them are discussed later in the present dissertation.

The third step involves designing and creating material in a form of a prospectus, including all necessary information regarding the issuing company. This information is necessary for the issuing

and will also be utilized as an advertisement, in order to attract the investors to acquire the offered shares of the firm.

The next step involves gathering information from the market and is undertaken by the underwriter who collects all necessary material and data, for example, potential investors. This step can be utilized to advertise the public offer of the firm to potential investors. At the end of this step, the creation of the prospectus material is completed and includes the price or price range for the shares and the dates of the offer. This is the starting point of the offer period.

The fifth and final step is at the end of the offer period, when the underwriter has obtained the bids from investors. According to the offer method chosen, there are found two different processes of this phase. If the offer involves a fixed price, a decision needs to be made about the allocation of shares. In case there is excess demand for the shares, they are allocated on a pro rata basis, or by random choice (lottery).

In the case the bookbuilding method is used, then the process includes analysis of the offers made by the investors, by the end of which, the final offer price is chosen. The common practice is that the allocation of shares divided into 2 groups, in advance, to private and public investors. If the shares are oversubscribed then a percentage of the required shares is allocated for the private sector and for the public group the number of shares are distributed individually for each investor.

### 3.4.2. IPO Considerations

Regulations which have been put in place, such as the Sarbanes-Oxley Act (SOX) of 2002, have modeled a new meaning for IPO. In this respect, an IPO goes beyond a simple public offering of stock, but it can be an extremely demanding and costly task. Thus, in order for a company to achieve capital raising through an IPO gaining greater liquidity, it is needed that it should pass through strict requirements, which have become even harder during the last years. These include strict regulatory requirement and related costs that may exceed $2 million for covering a number of fees together with legal, consulting, accounting, listing and filing costs, as well as commission to the underwriter.

There is a number of factors, including requirements, strategy, business goals, and market conditions that need to be taken into consideration, when a decision is made for a company to go public.

Initially, a company that is considering to go public, need to meet specific primary financial requirements, which are posed by the exchange where it plans to list. An example of such requirements is the New York Stock Exchange (NYSE), where it is generally required an amount of $10 million in pre-tax earnings over the last three years, and a minimum of $2 million per year for the last two years of operation of a company in order to be listed. Similarly, NASDAQ Global Select Market has a prerequisite of more than $11 million pre-tax earnings for the last three fiscal years and more than $2.2 million for each of the last fiscal years. There are alternative markets with less strict requirements as of company income, but there will certainly be a limit, which need to be met by the newly listed company (for example the NYSE's American Stock Exchange (AMEX) has a prerequisite of $750,000 pre-tax income in the latest fiscal year or in two of the three most recent fiscal years). Alternative standards maybe found, based on cash flow or market cap.

Additionally, according to SEC[2] regulations, a firm must have already three years of audited financial statements before it can register in order to go public. Sometimes, if the firm does not have these three years of audited statements, be possibility to create them 'after the fact', but this may prove to be costly and slow procedure.

An additional consideration for the firm that plans to go public is to examine if the market sector of its business has a market capitalization large enough, so to back-up enough trading in the stock that investors consider that stock to be "liquid". If a company goes public with a limited market cap, this may denote that buyers do not receive a really liquid public security.

Market Considerations: A very important factor that is progressively important for the decision whether a company can go public is the total economy situation, and more specifically, if there is demand from the public for IPOs. This is a very significant matter, as, according to Hoovers the market hit a 30-year low in 2008, with only 31 companies going public, due to very low demand, whereas, in 1999, 477 IPOs were materialized, with their majority being venture-backed, according to the National Venture Capital Association (NVCA).

[2] Securities and Exchange Commission (US)

Board of directors and management team: An additional consideration of the company that plans to go public is to have in place or to create a strong management team with superior strengths and capabilities that can cope with the demands of becoming a public company. It is often requested that a major part of the company's board of directors are independent, and also the audit, compensation, and nominating corporate governance committees are composed of independent directors.

Reporting systems and financial-operating procedures: Prior to going public, a company needs to install or ensure the functional operation of proper systems that will warrant accurate, timely and flawless information flow. It is compulsory that the company's information, especially financial reporting, after going public is properly recorded and reported in the public filings. Internal controls of the financial reporting make sure that the financial statements are correct and accurate.

According to Deloitte, the main considerations for going public are summarized in the following table:

| Area | Consideration |
|---|---|
| **Revenue** | • Recording revenue associated with incentive fees on a cash or accrual basis (EITF D-96)<br>• Nature of and accounting for multiple element arrangements under ASC605-25 (formerly EITF 00-21 and 08-1)<br>• Revenue recognition on the sale of products and services which include software (ASC 985-605, formerly SOP 97-2)<br>• Principal/agent considerations in determination of gross vs. net reporting |
| **Consolidation** | • Determining which entities are under common control<br>• Consolidation of investment funds and the retention of investment company accounting<br>• Consolidation of foreign subsidiaries<br>• Impact of structuring decisions and use of blocker entities on consolidation |

| | |
|---|---|
| | • The decision to include or exclude carved-out financial statements is often the subject of SEC inquiry |
| **Compensation** | • Deciding to amend partnership agreements pre-IPO<br>• Consideration of share based awards and payments (e.g., options and SARS), including:<br>– Documentation of issuance date of award<br>– Transfer restrictions, clawback provision/forfeitures, call provision on pre-IPO awarded shares, performance considerations<br>– Valuation considerations, inception accounting, service period, and triggering events<br>– Analysis of vesting periods and its negative impact on total enterprise value<br>• Appropriate analysis of share based awards is required as timing of issuance, terms and features have a significant impact on accounting application and financial statement disclosures, in addition to disclosures within MD&A.<br>• SEC review comments have addressed many of the aforementioned items; the SEC has also requested that companies disclose the basis for setting compensation and benefits for executives. |
| **Segment reporting** | • Determining how many segments exist and what level of transparency investors want (ASC 280, formerly FAS 131) |
| **Financial statement presentation** | • Regulation S-X requires a prescribed format for presentation of financial statements of registrants, including specific captions and thresholds for breaking out “other”. Note: certain industries have formats specific to the industry. |

| | |
|---|---|
| **Earnings per share** | • Consider the impact of convertible debt; stock based compensation, differences in dividend rights among classes on the earnings per share calculation<br>• Certain situations may require presentation of pro-forma EPS (e.g., distribution to owners paid from proceeds of offering and other changes in capitalization at or prior to closing of an IPO) |

*Table 2*

*IPO reporting considerations (source: Deloitte, IPO readiness: Common steps to becoming a public company)*

In addition to the above, IPO consultants list a number of tax considerations, that need to be taken into consideration by the company that intents to go public. These are presented in table 3, which is taken from Deloitte brochure.

| **Issues** | **Considerations** |
|---|---|
| **Capital structure** | • Will the company's capital structure facilitate an IPO?<br>• What are the direct and indirect tax consequences of the planned use of IPO proceeds? |
| **Effective tax rate and repatriation** | • Comparison and assessment of possible reorganization planning for the company and its affiliates for effective tax rate determination and tax-efficient repatriation policies.<br>• Practical tax aspects of implementing any selected global alignment strategy. |

| | |
|---|---|
| **Operational readiness** | • Have adequate governance practices within the Finance Department which impact the Tax Department been considered?<br>• Does the Tax Department have in place a transparent operational plan for implementing the company's strategy?<br>• Are internal control systems adequate? |
| **Data (tax) integrity** | • Scope of financial information available or prospectus purposes<br>• Availability and accuracy of financial information used for tax purposes |

*Table 3*

*IPO tax considerations ( Source : Deloitte )*

Time planning in an IPO is a main consideration. It takes approximately 7 to 12 months[3] to complete the whole IPO procedure. Some steps in the process can be in a parallel progress, some others, need nevertheless be in sequential, one after the other. Typically, there is a pre-filing period, a waiting period and a post-effective period. The pre-filing period usually takes 3 to 5,5 months for IPO feasibility study (1 month), assembling the team for the IPO ( 2 weeks), planning (2 to 4 weeks), capital and legal entity restructuring (2 to 4 months, partly in parallel with the previous step, that may take part of the waiting period), preparing financial statements , (2 to 4 months in parallel with the previous step) and investment banker due diligence step (2 to 4 months in parallel with the previous step). The waiting period takes 1 to 3 months and includes the SEC Review and S-1 revisions (1 to 3 months) and the road show (this is the pivotal portion of the IPO process, according to which the company conducts a series of one - on-one and group meetings with investors who will potentially purchase the shares being offered in the IPO - and lasts one week, which is the last week of the above period). The post effective period is a continuous time frame that starts with the offering period (2 weeks) and is then after ongoing, as of continued compliance.

[3]Source : Deloitte

### 3.5. Selling possibilities After an IPO

There is a variety of rules regarding the management of the sales of the company's stock after the offering are. These are rather technical and complex, with the bigger restrictions being placed on ''affiliates'' of the company. «SEC Rule 144 defines ''affiliate'' to mean ''a person that directly, or indirectly through one or more intermediaries, controls, or is controlled by, or is under common control with'' the company» (Bochner, Avin, & Cheng, 2016, p.68).. Affiliate status is based on a variety of factors, rather than a bright line test, and is difficult to give the definition of an affiliate. In order to have a common explanation and understanding, we admit that a common definition of what is *not* an affiliate, is an individual who is not a director or officer of the company, nor a stockholder having 10% or more of the shares.

With regard to the sales of shares made by affiliates, they are subject to tight agreements with the underwriters and insider trading laws and policies. Thus, affiliates have the ability to sell stock under SEC Rule 144 provided that: (a) the company is current in its Exchange Act reports; (b) the total number of shares to be sold plus all other shares of the company sold by the stockholder during the three months preceding the sale cannot count for more than the greater of a total 1% of the outstanding stock of the class, or differently, the average weekly trading volume of the stock during the last four weeks; (c) the shares need to be sold in a brokerage transaction or directly to a market maker; and (d) a Form 144 is filed at the same time with the placing with a broker of the order or the completion of the trade directly through a market maker.

Affiliates that have purchased their stock in private placements need also satisfy a period of six months, during which they need to keep the shares before they can resell. In special occasions there can be sales by more individuals, which need to be accumulated as a sum so that the volume is compliant with Rule 144 about volume limitations.

With regard to sales by non – affiliates, there are rules which are shaped based on the way and the timing that the potential seller acquired the shares to be sold. In this respect, non-affiliates who

acquired their shares in the offering or in the after-market have the possibility to freely resell their shares without restriction.

Non affiliates who have acquired their stocks through stock options, via an employee benefit plan, that is compliant with requirements of SEC Rules (precisely Rule 701) may sell their shares freely in the broker market, starting 90 days after the effectiveness of the registration statement.

For such cases, the firm usually files a separate registration statement which facilitates the employees who want to exercise their stock options after the IPO selling the received shares with no restrictions. Nevertheless, the most common practice is that the companies have put in place lockup agreements in order to restrict sales of shares before the expiration date of such agreements. Non affiliate stockholders that have received their shares from the firm in private placements before the public offering, as it is usually the case with most venture capital financings, do not have the freedom to resell into the public market for a period of six months since the moment that the shares were acquired from the company or an affiliate of the company. After six months, such stockholders can freely resell their stock without restriction, with the limitation that they have not become affiliates of the company at any time period during the three months prior to the sale and the company is current in its Exchange Act reports. After one year, the above limitations have no longer effect to resales by such stockholders.

## CHAPTER 4.IPO Pricing

Pricing an IPO involves three factors which need to be taken into account. The first one is market-adjusted net asset value (NAV) of the company, the second is the value based on the company's EBITDA with comparison to similar listed companies, and third if the offering involves income funds and retail investors, the profits of similar listed companies. These three factors are the main estimates of the value of the stock. An IPO, needs nevertheless, to be priced at a discount if the company aims to fully cover the offer.

The estimation of the shares' price is not a straight forward procedure. In the USA the preliminary prospectus, of the IPO is usually published, containing all relevant information and details, apart from the price of the shares. The price is regulated based on feedback of the market, and the final version of the prospectus is then issued. The next step of the company is to present the offer to the potential investors.

The process of presenting the offer to the investors is a factor influencing the success of the listing of the company. It is necessary that the shipping company will persuade the institutions and the investors that the investment will be profitable. To do so, they need to present a well-managed company, with a robust plan and explicitly explain the future strategy. This may need to come up with answers to the questions about the size and the value of the fleet, EBITDA levels, or plans in possible difficulties. This may be a time consuming part of the process, and last for 10-15 weeks. It is also a costly procedure, since in New York market it costs almost 9% of the funds raised and in London it is nearly 7%. The price of the share must be at an equilibrium, since a low price will have less profit (funds raised) for the company, whereas a high price may not attract sufficient investments, so that the offer will not be fulfilled, and may be withdrawn.

The task of raising equity in shipping companies, through the stock market, has a history with a variety of outcomes, since it is not easy to access the public. There are big public shipping companies which mainly consist of diversified corporates, while there are with only a few single-purpose companies. The small size of the company may constitute a barrier for the company to go public. Another difficulty is the volatility of earnings and asset values, as sometimes, shipping business is considered to have an opportunistic character.

There are three main methods of pricing and offering the initial stocks in the stock market (Ritter, 2003). These are (a) fixed – price offering, (b) auction and (c) book-building, those will be described in the next paragraph.

### 4.1. IPO price estimation methods

Fixed – price offering: The shares are offered at a fixed and unchanged price, during the offering period. The price is determined by the issuer and the underwriter. This method is not often used the last years.

Auction: According to this method, the issuer defines a minimum price at which the shares are offered. The investors are then bidding at prices not lower than the initial minimum price, and the final offering price is determined depending in the demand.

Book – building: In this case, the underwriter that is an investment bank, defines a price range and a time period during which investors can be pre listed by giving their offers in an order book. It is a method used widely for quite a few decades, mainly in the USA.

The share price is determined, jointly by the listing company and the underwriter, influenced by the analysts' valuations and the demand that the share had in the market. The final offer price is, in most cases, lower than the first equilibrium price. This is known in the literature and in the market with the term IPO underpricing, and will be discussed later in this dissertation. For all of the above methods of pricing and offering the stocks, the initial estimation of the price is based on one of several techniques that can be used.

The method used at most is the Discounted Cash Flow method (DCF). According to this method, the company's cash flows are discounted at the cost of capital, and then deducted by the market value of total debt to reach the equity value of the company. The main disadvantage of this method is that the forecasting of future cash flows can often prove unreliable, and the calculation of the cost of capital can also involve high uncertainty.

A second widely used method is the comparable firms approach. This method consists of calculating the price per share based on a price/earnings ratio of the stock of similar public companies. According to Kim & Ritter (1999), this method is not widely used based on previous earnings, but rather on forecasted measures for the earnings for calculating the price/earnings

ratios. In addition to price/earnings ratio, other estimates like market-to-book ratio, price-sales, price-operating earnings are used in this respect.

Another technique is the asset-based method, which calculates the value of the IPO based on the value of the assets of the firm. This method has weaknesses regarding evaluating possible synergy effects, as well as future growth possibilities and intangible assets.

In addition to the above techniques, there is another classification of IPO valuation methods proposed by Roosenboom (2007), for use by the underwriters. This classification groups the methods into models, namely: the peer group multiples model, the dividend discounted model, the discounted cash flow model, and the economic value added model and underwriter-specific valuation methods. Additionally, Deloof et al. (2009) in a similar study on IPO valuations in Belgium have proposed another view to the classification, as of: dividend discounted model (DDM), and the multiples approach to valuation.

### 4.2 Comparison of stock pricing methods

The information flow during the IPO procedures is a factor which is connected to the process of the pricing itself and the effectiveness of the whole process cycle (Lowry & Schwert, 2004). The two scholars noted that the underwriters do not always include all the public information in the first price range. It is often that the price of the shares is influenced by market returns and shares offer, in addition to issuing firm features. These two researchers have argued that new price levels can be described only at a limited level, by the amount of information which available to the public information during the filing. In the paragraphs to follow, different methods of share pricing are compared.

### 4.2.1 Bookbuilding versus Auctions

Bookbuilding and auctions have been comparatively examined by Sherman (2001). The researcher examines these different pricing methods in a market environment where the number of investors, as well as the exactness of the information by the investors are kept endogenous. The conclusions of the study is that the expected average proceeds of initial offers for both systems, have been recorded slightly over the information cost for investors.

In cases where the auctions had a relative uniformity and considerable number of bidders, investors have the motivation to offer very high bids even in lack of information about the company, due to their expectations that other investors would have made the necessary analyses and have made the bids, setting the auction price. Looking from the perspective of bookbuilding, it is most often that the underwriter has the main control of the information acquisition and undertakes the allocation of shares to investors. This is point that makes the underwriter gain more flexibility, which is translated to lower levels of risk for the issuer and the investors. It needs to me mentioned that the researcher showed that bookbuilding is expected to achieve selling, on average, a higher amount of shares, which leads to larger expected proceeds. On the other hand, at times when information about the company is broadly known, an auction may have higher chance to lead to a better pricing.

A study conducted in the U.S.A. by Pukthuangthon, Varaiya and Walker's (2007), has a perspective of bookbuilding offerings compared with auction IPOs in the period 1999 to 2004. The study showed that although the bookbuilding method seems to be the one mostly used in the IPO market, lately complaints regarding bookbuilding tactics have moved the interest towards auctions, which are considered to be on the more straightforward. Pukthuangthon et al., (2007), have not vividly suported, like Sherman (2005), that bookbuilding IPOs perform better than auction IPOs and auction IPOs have in their study less underpricing, smaller sponsor compensation, and larger trading turnover. On the other hand, they reported that bookbuilding shows bigger aftermarket support, shorter lockup periods and insiders holding less shares in the IPO.

In their working paper, Jovanovic and Szentes' (2007) have made a theoretical model on auctions compared to book building IPOs. Their results show that the auction mechanism is routed out of the market by book building, since this method involves more information. With auctions,

potential investors have no information for the value of the firm causing an opposing selection problem, where investors are not willing to pay.

### 4.2.2 Book building versus Fixed-price

Fixed price method was examined compared to book building from a theoretical point of view, by Benveniste and Busaba (1997), who made an evaluation of them in a situation where investors had correlating information and also have the opportunity to observe other investors' subscription decisions. They have concluded that the two methods can be ideal, based on a number of factors including the size and risk approach of the issuers and who will gain from the placement. In this respect, they have supported that regulation of the pricing method in an IPO market might bring ineffectiveness.

### 4.2.3 Fixed-Price versus Auctions

A comparison between fixed-price and auctions has been made by Bierbaum and Grimm (2006), who have compared the equilibria of uniform price auctions with the fixed price methods. They have reported that with a small variance and a high possibility of low demand, using a fixed price IPO can give larger expected proceeds than pricing the offer in an auction. In cases where there is no certainty for the demand, av antagonistic issuer will gain lower variance connected to a fixed price method. In cases of large demand, since potential investors aim to avoid rationing in, they push for higher demand, increasing cumulative demand in a low demand case. In this respect, expected minimum revenue in a fixed price is higher than in auction.

### 4.3. Pricing Phenomena

When the decision is made, for a company to go public, the assessment of the company value is the determinant of the price of the shares. The term underpricing is used to describe the difference between the price of the offered shares in the offer period and the price of them at the end of the first day of the trading. An underpricing could mean low price at the offer period.

It is a usual phenomenon for Initial Public Offerings to demonstrate significant initial gains for the first day in comparison with the overall market performance. Consequently, experience shows that investors participating in an IPO can gain substantially high returns in the short-run period. This situation has been named underpricing and happens since the securities are offered at a price which is lower than the first equilibrium price. Underpricing is a rather usual phenomenon to financial markets, however, there are different levels of underpricing among companies depending on factors such as the market sector, the size of the company, and the reputation of the underwriter in the market. This significant level of underpricing of the initial shares in the short term, as well as the total underperformance of IPOs in the long term are characteristic phenomena of an IPO that magnetize the interest of investors and researchers (Boehmer & Fishe, 2000, Field & Hanka, 2001, Ritter & Welch, 2002). Their significance lies to the fact that they play an important role to the earnings associated with the IPO.

Underpricing gives the opportunity to generate a substantial amount of wealth in only a short time period, since the prices in the secondary market are much higher than the initial prices, especially for those shares which have been sizably underpriced. This rapid in-flow of earnings signs a good timing for the investors to sell the shares at a high price, realizing the profits.

Underperformance of the shares is driving to the deterioration of their prices in the long term and this brings uncertainty to the shareholders who are not keen of keeping the shares for a long time period.

There is a wide range of bibliography regarding IPO underpricing, with different underlying theories. Jenkinson and Ljungqvist (2001) have classified IPO underpricing theories in: asymmetric information, ownership and control theories and institutional theories. Ljungqvist

(2005) has added behavioral theories of IPO underpricing. In addition, Ritter and Welch (2002) have made a classification as of asymmetric information and symmetric information theories.

### 4.3.1. Short-term IPO underpricing

IPO underpricing is a term used to define the situation where the short-term return from the initially traded shares, mostly the first day of trading, has a positive outcome (Ibbotson, 1975). This first day return of the shares is the change per cent between the first day closing price and the starting price is the measure mostly used to estimate the underpricing level (Loughran& McDonald, 2013). The first literature references regarding underpricing are found in 1970, when the phenomenon was systematic in new shares (Stoll & Curley, 1970). Later, noticeable underpricing examples were recorded, with a topmost point the internet bubble (1999-2000) with very high average first day return (Ritter & Welch, 2002). Sometimes investors may proceed immediately to the selling of the shares acquired before the IPO, which is referred to as flip or spin and this affects the shares and the issuing company. (Aggarwal, 2003). This causes high returns and happens when the shares prices record a rapid rise. Thus, this is a very good occasion for the initial investors to make a great deal of gains due to high first day return, making flipping an interesting and profitable action for the initial shareholders (DuCharme, et al., 2001).

In addition to this, the flipping of the shares can cause an upsurge of the trading volume in the secondary market, while at the same time enhance the liquidity of the shares, or further raise the price of the initial shares (Fishe, 2002). There is a side effect, as high flipping disproportionate flipping could cause supply exceed demand of shares in the secondary market (Aggarwal, 2003). An information cascade or herd behavior may also influence flipping and the shares price, mainly when there is not adequate information in the market. In the case of an information cascade, where there is a vast flow of information about the flipping, latterly investors can be influenced by the activities of the former (Bikhchandani, Hirshleifer, & Welch, 1992). Herd behavior is the situation when individual investors are influenced and make their decisions based on the general activities of the group (Shiller, 1995).

### 4.3.2. Long-term underperformance

The phenomenon of underperformance in the long-term denotes that the new shares of the IPO demonstrate a lower performance compared to non IPO shares (Schultz, 2003). There are records of low performance of shares between ’70 and 90’ that have an average annual return of 5%, five years after the initial offering, while shares of other comparative companies had a performance of 12% (Loughran & Ritter, 1995). In addition, Ritter(1991), has shown that for a three-year investments in IPO shares the investors gained 17% less than what they would have gained if invested for the same time in non IPO shares.

There are several descriptions that aim to explain underperformance. One of the views is that the underperformance is not a characteristic of IPOs only, but it is a phenomenon also present on seasoned equity offerings (SEOs) and secondary equity offerings (Brav & Gompers, 1997, Mola & Loughran, 2004, Spiess & Affleck-Graves, 1995). In the literature this is explained via the outcomes from asymmetric information and irrational investors. There are smaller companies of lower quality that misuse the circumstances in the market created by more qualified IPO companies (Ritter, 1991).

There are also empirical studies on IPOs which show that big IPOs that have been supported by venture capitalists had a smaller underperformance than smaller IPOs connected to smaller companies (Brav & Gompers, 1997). Brau et al., (2012) have mentioned repeated acquisitions that are related to long term underperformance. Another view is that the difference in shares performance lies on the different methods of calculation (Gompers & Lerner, 2003).

### 4.3.3. Research on underpricing and long run performance

The long-run underperformance is a measurement that shows that during an IPO, listed companies tend to underperform compared to a benchmark defined by similar companies. The calculation of the returns are over 1 to 3 year period, or even or more after the listing date. The long-run underperformance is a financial event that has occupied a number of studies and gains a great deal of interest by the analysts.

Several researchers have studied the performance of IPOs, including shipping and other companies, in countries with major shipping economies. In 2008, Loughranet. al. (2008) conducted a survey studying the level of underpricing for a sample of 15,490 US IPOs, estimating the underpricing level at 18%. Similarly, Ritter (1991), conducted a study on the long-term performance for 10 years (1975-1984) in a sample of 1,526 US IPOs in the USA. The findings of the study were that they underperformed at a level of 34, 5% for a period of three years. Additionally, Ritter and Welch (2002) reported their findings that show three-year holding-period gains for investors, buying at the initial price, would on average underperform the market substantially.

Relevant studies in Europe show underpricing: In Greece, Thomadakis et al (2008) surveyed the period 1994 to 2002 and found a 38.9% underpricing and -15,35% in the long term.

In UK, Levis (1993) has made analyses investigating a sample of 3,986 short-term and 483 long-term IPOs and reported that the British IPOs had 16,8% average initial return and -8.31% average 3 year. In Denmark, Jakobsen and Sorensen (2001) investigated 76 firms between 1984 and 1992 and found that there was a 8,1% average initial return and -30.4% average 3-year long term. Similarly, in Italy, Arosioet. al., (2000) found 18.2% average initial return and -11,53% in the long term 3-year average, in a sample of 108 IPOs. In a different direction, IPOs in Sweden have been found to present a long-run over performance (+1,2%) while they have similar results with the previous positive initial return (+27,3%) (Loughran et al., 2008).For most of the studies on underpricing, a strong correlation was found between initial and longtime returns and the shipping sector.

### 4.4. IPO valuation and underpricing in shipping companies

The valuation of shipping companies which go public is poor, so are the valuation metrics. However, there is a connection between the metrics mainly used to value the listed company and the firm characteristics such as the business model, the legal information of the firm and the kind of assets (Kavussanos & Visvikis, 2016). As a general rule, firms of limited liability and C corporations which function in subsectors of the shipping industry with liquid assets (such as the

crude oil and dry bulk) are primarily valued based on assets. On the other hand, companies of limited liability and C corporations for which the assets are less liquid, are typically valued based on earnings. Such companies are containerships, LPG, LNG (gas tankers), drill ships, platform suppliers. MLPs (Mobile Landing Platforms ) tend to be involved in long term charters to provide EBITDA visibility and are usually valued based on the potential dividend revenue.

According to this classification by Jeffrey Pribor and Cecille Skajem Lind as included in Kavussanos & Visvikis, (2016), the "Net Asset Value" (p. 183) (NAV) is the valuation method for enterprises that usually own or operate mostly liquid assets, using mainly two methods: The first of them calculates the sum of the values of the on-the-water fleet plus the newbuilding vessels, plus the charter earnings, plus cash, and subtracts the capital expenditures for the newbuilding ships, and debt. The second method sums up the on-the-water fleet plus the vessels on the construction process, plus the changes in the values of the already made contracts, plus charter earnings, plus cash, minus debt.

Another valuation measurement, according to the same researchers, is EBITDA (p. 183, 184), "forward Earnings". This is used by investors in shipping business and equities and is based on potential earnings of the company, named "Forward EBITDA", who value a firm based on the ratio EV/EBITDA multiple, (where EV is the enterprise value). This is compared to analogous companies. It is usual that higher multiples are connected to larger growth and the low multiples tend to demonstrate low or no growth.

Further, "Dividend Yield" (p. 184) is another measurement for valuing shipping firms that go public. As mentioned earlier, these are typically Mobile Landing Platform vessel companies (MLP) and the tool to value them is through the dividends. MLPs are interesting investments for the long run. This is due to the fact that the companies pay the investors quarterly and adopt management incentives on a target to bring managers' and investors' interests towards the same direction.

As described earlier in this dissertation, underpricing of IPO shares is a phenomenon which is often met when a company goes public. There is a wide range of studies regarding IPO underpricing in general. However, with regard to shipping IPOs, the literature is rather limited.

An analysis made by Grammenos and Marcoulis (1996), distinguishes the factors that influence share price performance in two categories: exogenous and endogenous. The former are these factors, like the stock market index, that have an influence on the shipping companies from a macroeconomic point of view. The endogenous factors, such as dividends and leverage, refer the ones that have an effect on the shipping companies from a microeconomic point of view.

Underpricing in shipping companies' IPOs has been studied by Merikas, Gounopoulos and Nounis (2009), who have applied tests to a sample of 143 companies in order to investigate how Global Shipping IPOs performed in the years between 1984 and 2007. The underpricing they have recorded based on the sample (average adjusted first day returns) was 17.7%. The researchers refer to a number of factors that are connected to the global shipping environment and have consequences on the shipping IPOs with regard to their short-run and long-run performance. The underlying factors include: (1) the history and the previous performance of the company [AGE] (2)the type of the market [MRK ](3) the status and reputation of the underwriting bank [UND] (4) the size of the company [SIZE] (5) the conditions that occur in the market at the time of the IPO (hot/cold – [H/C] ) and (6) the stock exchange market and its name and reputation [EXC]. Based on these factors they developed a regression model, in order to investigate the factors' significance level. The model is:

$$Pt = a + \beta 1\ Log(1+AGE) + \beta 2\ (MRK) + \beta 3\ (UND) + \beta 4\ Log(SIZE) + \beta 5\ (H/C) + \beta 6\ (EXC) + \varepsilon i$$

The analysis showed that AGE and SIZE are significant at across sectional level, with smaller companies to be related with higher levels of underpricing, while size alone has no significant effect. Additionally, market (MRK) did not present significance. Another finding was that listed shipping companies that cooperate with underwriters without a good reputation in the market, have recorded a high level of underpricing.

According to an analogous study, Merikas, Gounopoulos and Karli (2010), analyzed data from a sample of 61 US Shipping Initial Public Offerings in the time period between 1987 and 2007 and have reported that they had an average underpricing of 4.5% on the initial day of the offering.

The study of the shipping market is of increased interest to researchers and market analysts, since there are numerous distinctive characteristics. In addition, the global shipping industry has a share

of carrying 90% of international trade, thus making it a field of interest within the world's economy studies. The IPO underpricing with regard to the shipping companies seldom low, so that analyzing the role of the parties in the pricing process, as it is the subject of the next units, is of increased interest.

### 4.5. The role of the three parties in the pricing process

#### 4.5.1. Firm's Managers and their role in IPO Pricing

As described previously, the decision regarding the IPO pricing is a joint task carried out by the issuer and the underwriting investment bank. However, the whole process of the IPO decision making is a part of the issuing firm managers' responsibility. The role of the chief financial officers (CFOs) and the top managers of the issuing firm in this process is connected with their incentive to achieve the listing of their company, their decision regarding the timing of the IPO and the selection of the underwriting bank (Brau & Fawcett, 2006). In addition to this the survey of has shown that IPOs the companies can make use of the public shares as consideration for forthcoming mergers and / or acquisitions. The researchers claim that these findings are not in line with theory in economics which supports that IPOs are employed by the companies when public equity is expected to minimize their cost of capital

The same researchers support that there are factors that affect managers' decisions regarding the timing of the IPO, the most significant of which, is the global stock market conditions. There are also other factors that influence the offering timing decision, which include the relevant industry conditions, the initial performance of other IPOs at the same time, or just prior to the offering, possible listings of other analogous companies, and the urge of the need for capital raising, according to the assessment of those needs by the managers.

In their survey Brau& Fawcett, (2006) report that the task of deciding upon which will be the investment bank that will play the role of the underwriter is mainly influenced by the banker ability to provide the necessary know-how in order to issue a positive IPO. A second factor that influences the decision – making process by the issuer managers appeared to be the fee structure requested by the underwriter.

### 4.5.2. The Role of Underwriters in IPO Pricing

As it is described in the present thesis, it is prerequisite for a company before going public to make the necessary moves so as to have its stocks valued. Pricing the stocks involves decisions regarding a price range, within which the company's IPO will be made to the public. This valuation of the shares is the method through which the investment bankers made the decisions about the level of the IPO prices (Fernández, 2013). The usual process is that the managers of the issuer assign the responsibility of determining the IPO price to the investment bank / underwriter. The assignment of the pricing decision – making is due to the fact that bankers have the required expertise and even more because the bankers' certification of the IPO price is undeniably essential, so that the market will give the IPO the required desired significance (Roosenboom, 2007). This expertise formulates for the investment bankers their important role in the pricing procedure of the corporate IPOs. This role is empowered and imposed by the fact that the estimation of the initial price is a field of conflict for the issuing company in contrast with the market participants, including investors.

### 4.5.3. The Role of Investors in IPO Pricing

According to Jenkinson and Jones (2009), the role of the institutional investors has a considerable importance, mainly because they have the ability to produce and give out information related to the pricing of the IPO. This information distribution supports the investment bankers in the IPO's price estimation. In many countries institutional investors are involved in meetings related to pre-book building activities with the investment bankers. This brings the investors in a position, where they are communicated a great deal of information, which may then be disclosed to the market. The investors are frequently required to assemble research reports which are used for the estimation of a price range for the IPO shares. These reports are statements which give investors material for valuation models to be used for the IPO valuation (Jenkinson & Jones 2009). Another source of price information for the institutional investors is the bids process during the phase of book building, through which they have a picture of the price level and this can be revealed and

contribute to the pricing process. The information provided by the investors plays a role to the final allocation of the offered shares.

## CHAPTER 5.Interests of Parties and Their Effects on Short-Term IPO Phenomena

As it has been discussed in previous sections, the parties involved in an IPO are the issuers, the underwriters and the investors. The interest of the concerned parties may be different and often conflicting, during several stages of the IPO. In this section these interest will be analyzed from the perspective of the issuing company, the underwriting bankers and the investors. As an example, the underpricing phenomenon seen from the different perspective may be different, with the underwriters to purposely start with a lower initial price in order to reward the preferred institutional investors, while on the other hand this underpricing is disadvantageous for the issuers, since they could raise more capital at a higher price (Barry, 1989; DuCharme et al., 2001). As a second instance, one can refer to the flipping activities, which may be profitable for the investors that sell the shares soon after the starting date, but not beneficial to the issuing company, since massive flipping moves may cause constant price declines that are triggered by an information flow (Aggarwal, 2003; Bikhchandani et al., 1992).

### 5.1. Issuers' interests

The reasons for a shipping company to go public and raise public equity, may vary as the business structure and interests of the issuers differ. Those companies who aim to rearrange their capital structure the primary goal might be to sell the total amount of initial shares and raise the maximum amount of equity. On the other hand, if the target of the issuing company is to merge with or acquire other companies following the IPO, then it would not be a preferred choice to sell the entire amount of shares and lose control of the company (Chahine, 2008; Smart &Zutter, 2003). Under this perspective, there are diverse viewpoints from the parties involved which can drive to different moves and reactions to an IPO and related phenomena. In the present sub-chapter, the issuers' perspective will be discussed.

### 5.1.1. Issuers 'viewpoint to the underpricing

The evaluation of the underpricing phenomenon is regarded from the issuers as a condition where they "leave money on the table" (Loughran& Ritter, 2002, p. 413). The total volume of underpricing is usually substantial and can be seen as an additional indirect cost of the IPO (Ritter, 2014).Loughran & Ritter, (2002) have recorded that a variety of companies that have made public offerings between 1990 and 1998 spent $13 billion as fees to underwriters which was half then the capital of $27 billion of the underpriced shares.

Issuers of different firms have various financial interests (Alavi et al., 2008,Cheffins, 2008).The main interests of the issuers rest between raising the maximum possible capital of the offering and preventing their ownership from losing control of the company by giving out many shares .Since this is the expected behavior of the issuers, it would also be expected that they would prefer to cooperate with an underwriter that achieves the highest amount of capital, and it would also sound rational not to prefer to do business in the future with an underwriter that has realized an IPO with a significant initial amount of underpricing. Surprisingly, this is not always the case, and research has shown that issuers often approve a substantial underpricing (Krigman, Shaw, & Womack, 2001). It has been recorded that when the companies issue a seasoned equity offering (SEO) in a three years period after the initial offering, only a part of them switch underwriters, which show a degree of satisfaction from the underwriter and the total outcome. The method of calculating the first-day returns is the percentage change between the initial offering price and the closing price of the first day (Loughran & McDonald, 2013). This shows that higher underpricing is denoted by bigger percentage change.

Krigman et al. (2001) have logged that issuing companies that continued business with the same underwriters, recorded 14.2% average return of the first day. This is much higher than the return of issuers who changed underwriters. The findings of this research show that there is a positive relation between the amount of underpricing and the probability of continuing cooperation with the same underwriter. Krigman et al., (2001) have given a possible explanation for this behavior, based on prospect theory. According to this, decisions made at a certain level of risk, drive decision makers to demonstrate certain behaviors which are not defended by the conventional utility theory, one of them being the reference point effect (Shefrin & Statman, 1985; Tversky&Kahneman,

1991). This theory (reference point effect or certainty effect) support that the results that will happen with certainty are often overweighed. Thus, issuers based on prior occurrences of similar IPOs realize that a bigger underpricing may bring up bigger demand for shares and new issues. Subsequently, the initial low offering price is rather probable to assure that the new issue will be sold and needed capital will be effectively raised.

In this respect, selling of all the shares is considered by the issuers as a certain result of the IPO, while the underpricing amount is considered as the uncertain outcome, since this cannot be estimated accurately at the end of the first day. This is the reason, according to the certainty effect, why the issuers usually follow the certain outcome which is selling the total number of shares rather than the uncertain outcome, which is the level of underpricing. Prospect theory, upon which the above description is based, supports that there is a certain level of risk, under which, individuals are pursuing this risk (Tversky & Kahneman, 1991).

When an IPO takes place, the issuers communicate a price range within which the shares are offered, making the point of reference for the issuers a price in this range, often the median of the prices (Loughran & Ritter ,2002).

In the case a share is underpriced, which is translated to low initial price, then the price will increase after the initial date and will be over the reference point. For a share that has a negative first day return, the price will fell under the reference point. In relation to these phenomena, another perspective is recommended by Tversky and Kahneman (1992), based on the cumulative prospect theory, which gives some insight to issuers' view of underpricing and their reaction to profits and losses.

Shares' underpricing, in the case of IPO, with regard to shipping, as well as other type of business, has the characteristic that the two diverse results are combined by the issuers. This means that the undesirable consequence of IPO whereby a part of the control is lost and shared with the new investors, as a larger number of shares is issued because of the IPO, is combined with the advantageous outcome of the considerable increase of the net worth of the firm which as a result of the increased stock price. Combining these two consequences of the IPO, the underpricing effect is considered by the issuing company as a positive outcome (Loughran & Ritter, 2002). Separating these two outcomes can assist the issuers certify that there will be a reasonable underpricing.

From the above analysis it results that underpricing can endorse issuers considerably, especially, when the issuing firm holds a substantial number of initial shares. It is one of the main concerns of the company the way that the underpricing will be limited within a reasonable range, so to avoid setting the price to very low levels compared to the opening market one, while not being completely reluctant to a reasonable amount of underpricing (Krigman et al., 2001, Loughran& Ritter, 2002).

### 5.1.2. Issuers and Flipping

In previous paragraphs it has been explained that flipping activity, (or otherwise named spinning activity) is a phenomenon according to which the investors who buy the initial shares sell them after a very short time period after they get them. (Bayley, Lee, & Walter, 2006; Liu& Ritter, 2010; Maynard, 2001). The behavior of the investors varies with regard to the first day return of the IPO shares. The shares which have a high first day return are called favorable or hot shares and the ones with low first day return are called unfavorable or cold shares. There is a disagreement between the researches whether hot or cold shares are flipped more often. Some of them support that institutional investors tend to flip cold IPOs faster, since the stock price does not change considerably and stays at fairly high levels because the majority of the underwriters will be the market maker at the time that IPOs remain cold and will keep a high price by creating demand buying back the shares (Ellis, Michaely, & O'Hara, 2000; Schultz & Zaman, 1994). Some other studies argue that hot IPOs are the ones to be more often flipped, calculating the frequency of the flipping as the ratio of the flipped shares to the total amount of shares offered, while the calculation of cold flipping has as denominator the trading volume (Aggarwal, 2003; Krigman, et al., 1999).

The degree that issuers benefit from flipping activity is also seen from different researchers from a different perspective. Krigman et al., 1999 argue that cold shares with no flipping are considered unfavorable, since with no flipping and no shares available to the secondary market for trading, no underpricing would take place, while hot shares are considered favorable. On the other hand, some researchers argue that flipping has a negative effect on the market and create unstable prices in the market for IPOs, it is responsible for issuer deficiencies, (Stojkovic, 2015), or it is connected with low trading volume (Carter & Dark, 1993). Extremely high volume of flipping that is over the

market capacity has as an effect of low shares price and low performance in one year time after the initial date (Krigman et al., 1999, Stojkovic, 2015).

### 5.2. Underwriters' interests

The underwriter is an investment bank that assists the issuers to make the public offering and sell their shares to the stock market. Between the underwriter and the issuer there is a business contract agreed. This contract represents either a firm - commitment or a best – effort deal. According to the firm commitment deal the underwriter buys all of the offered IPO shares and then undertakes the responsibility to sell them to the public. According to a best – effort deal the underwriter agrees to make the best effort to sell the issuer's shares to the public. In the first case the unsold shares are left with the underwriter, while in the second they are left with the issuer (Baron, 1982, Jenkinson &Ljungqvist, 2001). This means that the underwriter that makes a firm – commitment deal takes considerably more risk and has increased motivation for promoting and selling the shares.

Underwriters, especially when they make a firm – commitment deal, are in favor of underpricing and selling the initial shares at a lower price because (a) this makes it more possible to sell all the shares without having undersubscribing, (b) it gives a bigger payout to institutional investors which usually are the bankers' clients (Ritter, 1987) and (c) underpricing gives the underwriters higher perspectives of cooperating in the future with the issuers, since as described earlier, by the prospect theory, underpricing is connected with issuers tendency to continue cooperation with the underwriters (Kahneman&Tversky, 1979; Loughran& Ritter, 2002).

### 5.3. Investors' interests

There are three main types of investors in an IPO, and subsequently in an IPO of a shipping company: The venture capitalists, the institutional investors and the individual investors. The first type refers to those investors who backup new companies, even before capital split by the underwriters into shares for the purposes of the IPO. The incentive of such venture capitalists is to

gain by investing in a new but promising company (Fairchild, 2011; Megginson & Weiss, 1991). The second type of investors refers to primary investors, who are mainly institutional investors or individual investors with a great deal of capital to invest. These investors are given by the underwriters initial shares, even before the initial date of the offering (Aggarwal, Prabhala, &Puri, 2002, Jenkinson & Jones, 2009). Lastly, the third type of investors, mainly individual investors (and sometimes institutional investors acquire their shares after the initial date of the IPO (Agarwal et al., 2002).

### 5.3.1. The interests of Venture capitalists

Venture capitalists offer capital to private companies, which are primarily new and promising enterprises going public, in order to generate profit from this investment (Lerner, 1994a). In this respect, venture capitalists act in a multiple way, since they not only act as the principals of the new firms, but also they play the role of the agent of other principals who also invest in their venture capital funds.

In previous years, the interests of venture capitalists have been, not only to provide newly listed companies with capital, but also to have a more active role of the IPO process supervision. Studies by Megginson & Weiss, (1991), show that in the 80' IPOs which were backed by venture capitalists noted lower underpricing and better IPO costs. It is found in the literature, that venture capitalists are likely to keep a part of the investment in the IPO companies where they have made their investments (Barry, Muscarella, Peavy, &Vetsuypens, 1990). New venture capitalists have a tendency - more than older ones - to advise newly listed firms in which they have invested to enter the stock market earlier and with larger underpricing volumes (Gompers, 1996).

In later years, requests for fast growth and capital increase enforced the role of venture capitalists as of IPO supervisors. Lee and Wahal (2004) have pointed out that the average initial day return changed at a substantial level and between 1980 and 2000 IPOs that were supported by venture capitalists noted higher underpricing. The fact that after 1996 the tendency that large amounts of

underpricing created more future capital (as explained in previous sections), pushed new venture capitalists to pay less attention to their reputation.

Another phenomenon of more modern times is that the cooperation between issuers and investors has become more short-lived, due to the fast issuing processes of IPOs, making venture capitalists create tighter business connections with underwriters (Arthurs et al., 2008). This enhanced connection between venture capitalists and underwriters is creates the grounds for even larger underpricing.

### 5.3.2. The interest of Institutional investors

Institutional investors are usually the primary investors, since the underwriting bank allocates to them most of the shares (Aggarwal et al., 2002). Such institutional investors may be insurance companies, pension funds, commercial or investment banks, possessing large amounts of capital (Black & Coffee, 1994).

One of the reasons for underwriters to do business with institutional investors is because the latter have historically shown that they are not keen of doing flipping activities, so that less flipping supports more stable prices in the secondary market for the shares (Carter et al., 1998). In this respect, underwriters prefer to cooperate with institutional investors that have also made business in the past. Aggarwal (2003) has shown that, in a sample of 193 IPOs, the vast majority of the shares were allocated by the underwriters to institutional investors.

It has been argued in the literature that institutional investors' interests make them be non-speculative investors, in the sense that they are involved in companies' boards and are much more willing to flip the shares (Black, 1991; Ryan & Schneider, 2002). Thus as far as underpricing is concerned, institutional investors tend to have similar interest with the issuers.

### 5.3.3. The interests of Individual investors

Individual investors are mainly the ones participating after the first day of the IPO, so acting in the secondary market, since it not an often phenomenon that they can take part in the primary allocation of the shares (Derrien, 2005). They are usually independent individual s and their interests do not tend to align with the rest of the parties discussed previously, but rather their particular interests each time.

Often, individual investors tend to demonstrate a biased behavior in a larger extent that the other investors (Lakonishok & Maberly, 1990). It is noted that individual investors use to present a more buying rather than selling activity, which is influenced by the attention-driven effect (Barber & Odean, 2008). According to this, they urge to purchase shares for which they receive positive news, or which have an unusual high trading volume, rather than trying to hunt stocks with potential, which may be a complex task for them. This makes the interests of individual investors lie around hot IPOs, since then include characteristics that make them attractive to individual investors, such as being often a subject in the news, be connected with high amounts of underpricing and demonstrate a large amount of trading volume, as well as high levels of first-day returns (Derrien, 2005). Darrien (2005) has also showed that increased demand by individual investors for IPO shares in the first trading day, causes high stock prices in the secondary market, increased underpricing and first day return, followed by long-term underperformance.

In this respect, although individual investors seem not to have excessive power (at least on an individual level) and are mainly buyers of the first day, they tend to drive the market conditions related to certain shares. Another characteristic of the individual investors which is indicative of their interests is that they are influenced by logical factors, to a different effect according to their type (professional or non-professional, with small or large amounts of capital). For example, the tendency to sell shares that demonstrate winning, while keeping losing shares for longer is noticed more in individual investors with smaller amounts of capital (Weber & Camerer, 1998).

## CONCLUSION

The present dissertation was a study on shipping firms IPOs, having looked at IPOs and IPO phenomena in a more general view. IPO is the instrument through with private shipping firms go public for the first time through the stock market (Jenkinson & Ljungqvist, 2001). Thus, an IPO is actually the sale of shares by the issuing company to a number of investors (the public). Although this is a relatively simple definition, the whole process, as well as preparation and decision to go public is a set of complex tasks that need a careful and timely preparation, as well as notion, expertise and market information. All these have been described in the chapters of the present dissertation.

An important factor that needs to be taken into consideration is uncertainty of the market, since this is a pervasive factor throughout the process, deteriorating substantially possible poor quality of public information. Investors usually do not have a broad knowledge of the issuing company before the offering. Similarly, issuers do not know the investors who may be interested or their degree of interest. The underwriters - investment banks function as intermediaries between issuers and investors, and one of their tasks is to solve some but not all of these information problems. There are critical decisions to be made and important questions that issuers, investment banks and market regulators, as well as issuer should deal with and these include the pricing and the timing of the IPO.

The best pricing and selling methods heavily depend on the specific group. For example, investment banks are interested in profit maximization, not only for the banks, but also for their clients – the investors. This has as a consequence, that investment banks may have conflicting interests compared to those of the issuers. However, a rational starting level of IPO evaluating methods is to assume that the primary goal is to maximize the expected earnings for the issuer, since this is the initial reason for the decision to go public.

This makes comparisons of the efficiency of different types of methods possible. All methods are defined by the rules that outline how the shares are priced and allocated to investors. These rules are set by regulators - the Securities and Exchange Commission (SEC) in the US - and is a way to limit issuers to only a small number of selling options.

The task of determining the best method is primarily necessary to comprehend the operation of actual IPOs. Specifically, this involves investigating the way shares are priced and allocated to investors, as well as what type of investors will be the primary ones. The most outstanding feature of the IPO data is the positive initial or first-day returns, computed as the percentage increase of the share price compared to the offer of the first trading day close. This determines the underpricing phenomenon of the shares.

Having studied the financing methods deployed by several market sectors, it seems that going public is the most suitable for the shipping firms. However, the last years, there are not major IPOs in the shipping sector.

Very recently, within the current financial crisis, Peterle, & Berk, (2016), conducted a study for IPO cycles in Central and Eastern Europe. The results of their work have shown that macroeconomic conditions and investor sentiment play an important role on IPO's dynamics and are linked to the risk aversion of institutional investors, growth of the pension funds' properties and the trading size of the market.

As it has also been argued by Kavussanos and Visvikis (2016).investors' demand for shipping shares is usually limited by market conditions and by limited understanding of the investors about market conditions and dynamics. Increased risk is another deterrent factor for investing in shipping.

After having studied the shipping, and general, IPO characteristics, in combination with the two above recent publications, drives the conclusion that the reduced volume of IPOs recently has a connection with the decline of the market and the condition of the shipping cycle, in the latest years.

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