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ΤΜΗΜΑ ΝΑΥΤΙΛΙΑΚΩΝ ΣΠΟΥΔΩΝ

ΠΡΟΓΡΑΜΜΑ ΜΕΤΑΠΤΥΧΙΑΚΩΝ ΣΠΟΥΔΩΝ
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ΕΤΑΙΡΙΚΗΣ ΔΙΑΚΥΒΕΡΝΗΣΗΣ ΚΑΙ INITIAL
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Η έγκριση της Διπλωματικής Εργασίας από το Τμήμα Ναυτιλιακών Σπουδών του Πανεπιστημίου Πειραιώς δεν υποδηλώνει αποδοχή των γνώμων του συγγραφέα.»

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ABSTRACT

The purpose of this study is to review the existing literature on Initial Public Offerings (IPOs), while offering an overview of the “going public” process and highlighting certain aspects of this type of equity financing, such as underpricing, and to investigate for interrelations between corporate governance, firm value and performance upon the IPO completion. Firms undertaking an IPO have to adhere to a standardized process, which obliges them to reassess and enhance their management, and to develop corporate governance practices in alignment with the legislation and regulations of the State and the Stock Exchange, respectively. Changes on corporate governance level are of great importance for the post-IPO performance of the firm. Therefore, this study encompasses an empirical approach in an attempt to present findings that reveal significant effects of corporate governance characteristics over firm value and performance. This study employs a sample comprising 66 companies of the transportation sector listed on American stock exchanges.

Keywords: management; corporate governance; IPO

ΠΕΡΙΛΗΨΗ

Ο στόχος αυτής της εργασίας είναι η ανασκόπηση της υπάρχουσας βιβλιογραφίας αναφορικά με τις Αρχικές Δημόσιες Εγγραφές (ΑΔΕ), προσφέροντας συγχρόνως μια συνολική εικόνα της διαδικασίας εισόδου στο χρηματιστήριο και τονίζοντας ορισμένες πτυχές αυτής της μορφής χρηματοδότησης, όπως είναι η υποτιμολόγηση, καθώς και η αναζήτηση συσχετίσεων μεταξύ της εταιρικής διακυβέρνησης, της αξίας της εταιρείας και της απόδοσης της κατά την ολοκλήρωση της ΑΔΕ. Οι εταιρείες που προχωρούν σε μια ΑΔΕ οφείλουν να τηρήσουν μια τυποποιημένη διαδικασία, η οποία τους υποχρεώνει να αναθεωρήσουν και να βελτιώσουν την διοίκησης (μάνατζμεντ) τους, όπως και αναπτύξουν πρακτικές εταιρικής διακυβέρνησης σύμφωνα με την νομοθεσία του

κράτους και τους κανόνες του χρηματιστηρίου. Οι αλλαγές σε επίπεδο εταιρικής διακυβέρνησης θεωρούνται εξαιρετικής σημασίας για την απόδοση της εταιρίας μετά την είσοδο της στο χρηματιστήριο. Συνεπώς, αυτή η εργασία ενσωματώνει μια εμπειρική προσέγγιση του θέματος σε μια προσπάθεια να παρουσιάσει ευρήματα που καταδεικνύουν σημαντικές επιδράσεις των χαρακτηριστικών εταιρικής διακυβέρνησης στην αξία και απόδοση της εταιρείας. Η παρούσα εργασία χρησιμοποιεί ένα δείγμα 66 εταιρειών από τον μεταφορικό τομέα εισηγμένων στα αμερικάνικα χρηματιστήρια.

Λέξεις Κλειδιά: μάντζιμεντ, εταιρική διακυβέρνηση, ΑΔΕ

INTRODUCTION

There are many different types of financing, which individual investors, firms and institutions can utilize in order to bring their investment plans into effect. Equity financing and, its most prevalent form, initial public offerings (IPOs) have become an increasingly popular way of raising capital. Companies that decide to “go public” can tap markets more effectively, cheaply and easily than private companies. Nevertheless, the process of going public has a number of implications for the issuers, which are related to the changes that private firms have to undertake in order to fulfill their entry requirements. Private companies have to develop or adapt their corporate governance practices in accordance with the listing’s authority and stock exchange’s rules. Such actions can influence the structure and the post-IPO operation of the firm. In addition, the form of the firm after the IPO can be altered by the way that the issuance was promoted, because the amount of shares as well as their allocation will form the latter ownership structure of the firm, which will affect further the management operation and the firm’s long-run performance. It is, therefore, obvious that IPOs are interrelated with the corporate governance characteristics.

Despite the fact that previous studies on IPOs (see, e.g. Beatty and Ritter, 1986; Loughran et al., 1994; Booth and Chua, 1996; Mello and Parsons, 1998; Ritter, 1998; Certo, 2003; Burton et al., 2004; Hill, 2006; Alavi et al., 2008; Bruton et al., 2010) and corporate governance (see, e.g. Jensen and Meckling, 1976; Shleifer and Vishny, 1997; Baysinger and Butler, 1985; Griffith, 1999; Burton, 2000; Filatotchev and Bishop, 2002; Chahine, 2004; Chen et al., 2005; Ho, 2005; Setia-Atmaja, 2009; Giovannini, 2010) have researched and attested various associations between corporate governance characteristics and the performance of the IPO firms, questions regarding their interrelations continue to arise due to the diverging and often low significance evidence. Further, there is little attention drawn to the role of management throughout the IPO process.

This study’s argues that the general lineaments of the firms as well as their governance practices impact on the value and the performance of firms after the IPO. In

particular, it argues that aspects of corporate governance such as the board size, the percentage of independent directors on the board, the existence of duality in firm's structure, the percentage of ownership that insiders and blockholders have, influence either negatively or positively the firm value and performance shortly after the IPO. Moreover, it considers management as an important element of the IPO process; hence it reviews relevant literature on management and IPO planning.

By employing a comprehensive approach, both theoretical and empirical, this study endeavors to extend IPO literature even a little by presenting evidence from a relatively small sample and hopes that will encourage further research on the subject. The remainder of this study is organized and developed in four chapters. The first chapter, titled "theoretical approach of Initial Public Offerings", is an introduction on the types of financing, elaborating on public equity financing, and on the IPO process. In the paragraphs of this chapter are presented the motivation, the benefits and implications arising from an IPO as well as the steps and requirements for a public offering. Further, it offers a review of the academic literature on the "underpricing" phenomenon and presents a brief view of the U.S. IPO market activity.

The second chapter under the title "management and the IPO process", examines the role of corporate planning and management in connection with the decision to go public. In addition, it underlines the relationship between the management's quality and the firm's IPO performance. Another interesting matter examined in this chapter is the management posture regarding the development of antitakeover defenses shortly after going public, where firms are in an "easy to acquire form" (Easterbrook and Fischel, 1991).

The third chapter refers to the relationships between corporate governance and the value and performance of IPO firms, offering a review of the existing literature. Further, it examines the association of corporate governance with dividend policy and underpricing. The last paragraph of this chapter views how corporate governance characteristics are related with the survivability of post-IPO firms.

Finally, fourth chapter deals with an empirical approach of the relations reviewed by the previous chapter. In this chapter, five central hypotheses are formed and tested by employing methodology from previous studies. Descriptive statistics and results are presented in the last paragraph of this chapter, which is followed by the conclusions.

Πανεπιστήμιο Πειραιώς

CHAPTER 1

Theoretical Approach of Initial Public Offerings

1.1 FINANCIAL INSTRUMENTS.

In the developed economies, worldwide, business firms, individual investors and governments have often an urge to raise capital for a number of reasons related to their welfare. Therefore, financial markets offer the institutional framework for raising funds by enabling them to trade financial instruments.

A financial instrument –often called financial asset or financial security¹– is a “legal claim to a future cash flow”². A holder of such claim is entitled to a future cash payment from the issuer. For example, if the Greek treasury issues €200 million government bond of 10-years, the holder of such is entitled to a payment upon completion of the bond by the Greek treasury. Financial instruments differ considerably and can be identified by the type of claim the holder has on the issuer, leading to different type of financing and liabilities. Consequently, a distinction between them is of fundamental importance. The type of claim that the holder has, can be either a debt or an equity (or residual) claim. The former is referred to a pre-determined cash claim via the rate of interest charged which may be fixed or variable. Whereas the latter obligates the issuer to pay the holder an amount based on dividends once holders of debt instruments have been paid³. Further, there are financial claims that involve both debt and equity,

¹ These two terms shall be used interchangeably.

² See Johnson, N. F., Jefferies, P., and P. M. Hui, 2003, *Financial Market Complexity: What physics can tell us about market behavior*, Oxford: Oxford University Press, p. 5.

³ The difference between debt and equity claims lies in the levels of risk undertaken from the investors. An equity claimholder has no guarantee that any cash flow will be paid, while debt instruments face lower risk levels, because will be secured against the assets of the issuer and repayment is definite. See Fabozzi, F., Modigliani, F., and F. J. Jones, 1996, *Capital markets and institutions and instruments*, 2nd Ed., International Edition, Upper Saddle Valley, N.J.: Prentice Hall International, p. 3, and Johnson, N. F., Jefferies, P., and P. M. Hui, 2003, op. cit., pp. 5-6.

which are called fixed-income instruments⁴. Among the three of them, "debt is the most frequently used source of outside capital"⁵.

The markets, where these financial instruments are exchanged with other assets, money, commodities, goods and services, are known as financial markets. Before approaching financial markets, it is necessary to identify the most common used financial product types⁶. Equity instruments are the common stocks, the preferred stocks and the warrants. While, debt obligations, such as bonds and money market instruments along with some preferred stocks, are fixed-income securities or debt instruments⁷. Depending on the need that may serve, markets are classified accordingly. By the way of obtaining funds, markets can be sorted to debt and equity markets. The latter is more commonly referred as the stock market. Another market distinction goes by the maturity of the claim. The market for short-term assets is called money market and the one for longer maturity⁸ is the capital market. A third way of looking financial markets can be financial claims perspective, whether are newly issued or not⁹. Primary market deals with issues of new financial assets. On the other hand, secondary market deals with assets that have been previously issued and can be resold.

Financial instruments are very important part of finance, because they carry out two major functions, facilitating the markets. The first is transferring funds from those who have surplus funds to invest to those who need them to invest. The second function is related with the way this process takes place. The transfer must "redistribute the unavoidable the risk that is associated with the cash flow of the assets among those who seek and provide the funds"¹⁰. In other words, the financial instruments are facilitating the investments and increase the consumption, while transferring risk and money.

⁴ Fix-income instruments are the preferred stocks and the convertible bonds.

⁵ See Grinblatt, M., and S. Titman, 1998, *Financial Markets and corporate Strategy*, 2nd Ed., Irwin/McGraw-Hill, p. 5.

⁶ See McNish, T. H., 2000, *Capital Markets a global perspective*, Blackwell publishing, pp. 10-12.

⁷ The other financial product types are derivatives such as options, futures and forwards, swaps and warrants, and money (currency and deposits), see *idem*.

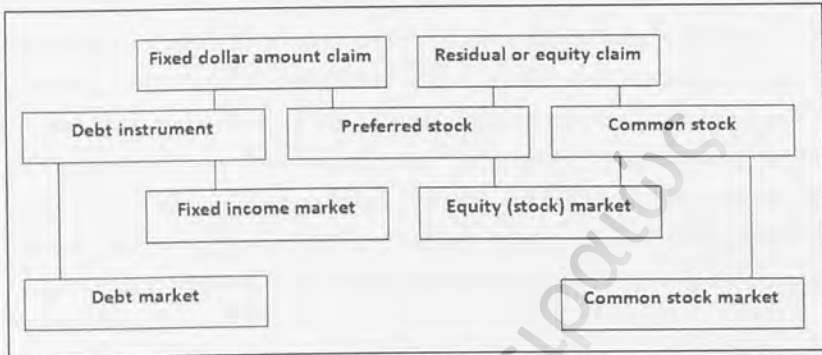
⁸ The maturity date must exceed at least one year.

⁹ See Fabozzi, F., Modigliani, F., and F. J. Jones, 1996, *op. cit.*, p. 11.

¹⁰ See *Ibid.*, p. 6.

Figure 1.1

Claims and financial markets



Source: Fabozzi, F., Modigliani, F., and F. J. Jones, 1996, *Capital markets and institutions and instruments*, 2nd Ed., International Edition, Upper Saddle Valley, N.J.: Prentice Hall International, p. 12.

By issuing securities in the primary and/or secondary market firms manage to draw the desirable investment funds from public sources. This process represents a crucial turning point for any private firm, allowing them to prosper even more. It is a tough decision and not always “a stage in growth”¹¹ that a company should take realizing the opportunities and threats, and weighing the benefits and the cost it may reflect upon it. Moreover, raising funds from the stock market requires the consideration of a variety of factors both internal and external, such as the company’s corporate governance practices, structure, management, the engagement of firm’s resources for a long period, the fulfillment of the legal and financial requirements, and the support of financial market participants¹².

¹¹ See Pagano, M., Panetta, F., and L. Zingales, 1998, Why Do Companies Go Public? An Empirical Analysis, *Journal of Finance*, Vol. 53, No. 1, p. 27.

¹² As financial market participants are considered investment banks, financial institutions, investment companies, brokers, regulators and others.

1.2 INITIAL PUBLIC OFFERING DEFINITION.

When a private company wants to raise capital on favorable terms through either debt or equity and chooses to “go public”, then an initial public offering (IPO)¹³ occurs. An IPO signifies the first sale of a company’s common shares to the stock exchange market, with the expectation that a liquid market will develop¹⁴. In other words, the company converts a portion of its ownership into shares of stock and then shares the business with public, allowing investors to purchase that percentage¹⁵. The number of shares sold in the IPO market incurs major changes, altering radically the company’s management, the corporate governance practices and the ownership structure of the company, albeit the company retains a large degree of control. Hence, the public flotation of the company influences the firm’s value¹⁶.

An IPO, as pointed out above, helps firms fund their investments and other expenditures in an efficient way. A successful IPO undeniably leads to great rewards like the IPO of VoIP provider Vonage (NYSE: VG) in 2006 that raised \$2.6 billion. Nonetheless, there are other ways raising external financing rather than going public. Chemmanur and Fulghieri (1999) focus their research on the type of external equity (private or public) that a company should be pursuing. They form a model in which the choice of equity depends on the evaluation cost that a company bears and on the level of diversification offered in each case. Relatively young small firms choose private funding such as venture capital, because the benefit from minimizing the outsider’s aggregated evaluation cost outweighs the greater rate of compensation (return) to the venture capitalist. On contrary, large established firms seek for a public equity funding, because they deal with smaller evaluation cost. The decision for a company to seek money through public equity depends to a number of reasons related to the market, the incurred

¹³ Or “firm commitment offering” according to Rock, K., 1986, Why New Issues Are Underpriced, *Journal of Financial Economics*, Vol. 15, No. 1-2, p. 188.

¹⁴ See Ritter, J. R., 1998, Initial Public Offerings, *Contemporary Finance Digest*, Vol. 2, No. 1, p. 6.

¹⁵ See Arkebauer, J. B., and R. Schultz, 1998, *Going Public: Everything You Need to Know to Take Your Company Public, Including Internet Direct Public Offerings*, 3rd Ed., Dearborn Financial Publishing, p. 5.

¹⁶ See Mello, A. S., and J. E. Parsons, 1998, Going Public and the Ownership Structure of the Firm, *Journal of Financial Economics*, Vol. 49, No. 1, pp. 80-82.

cost and the general lineaments of the firm. The following table 1.2 presents alternative funding to IPOs.

Table 1.1
Alternatives to IPOs

Type	IPO Alternative	Pro	Cons
Debt	Commercial bank/lender	No sharing of profits	Dependent on sufficient net worth, income, or cash flow
Debt	Asset-based lending	No sharing of profits	Dependent on sufficient assets or cash flow – has higher borrowing costs
Other	R&D/Investment partnership or joint venture	Can result in favorably priced financing; could result in synergy and industry clout	Dependent on a viable technology or other intangibles; could result in a demanding partner
Debt/Equity	Institutional	Can be simple – few parties involved	More sophisticated investors– may negotiate a lower price
Debt/Equity	Leverage ESOPs	An exit strategy or financing device with certain tax preferences	Company must have adequate security for lender (assets, income, or cash flow)
Other	Selling the company	Can permit a complete and certain exit by existing shareholders	May result in lower pricing than an IPO, loss of future upside tax considerations

Convertible Debt/Equity	Venture capital	Can be simpler; added experience and reputation is brought to the company; focus is more on future potential than on current security	More sophisticated investor—may result in lower pricing for the company, plus there is an expected 5- to 7-year exit
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Source: PricewaterhouseCoopers, 2004, *Roadmap for an IPO A Guide to Going Public*, p.15.

1.3 MOTIVATION FOR "GOING PUBLIC".

Jenkinson (1990) refers to three main incentives which lead a company to go public. The first and most common, is raising new equity finance to facilitate future investment. In consistence with the previous, the second is the realization of an investment from the IPO or its role as an "exit route" for the entrepreneurs¹⁷, who will be able to liquidate their shares. The third incentive is attributed to the role of the stock exchange, which will give access to additional equity finance and via secondary issues and direct exposure to acquisitions and mergers process. Zingales (1995) in his theory of the going public decision also draws attention to the fact that going public helps facilitate the acquisition of a company in a higher value by raising the bargaining power of the owners. Furthermore, Jenkinson (1990) notes that the proportion of equity issued is a variable choice in order corporate control to be traded off against a larger amount of finance. Similar motivations for a public issuance reiterate Ritter and Welch (2002). They imply, as well, that a firm goes public in order to raise equity capital, create a public market in which the founders and other shareholders can convert some of their wealth into cash at future date, while they consider as a minor reason that firms go public to increase its publicity. Another interesting motivation theory for an IPO form Chemmanur and Fulghieri (1999) that focus on the diversification offered by the raise of public equity finance, because funds are obtained from a large number of investors. This way, an IPO

¹⁷ Or venture capitalists (VCs), see Black, B. S., and R. J. Gilson, 1998, Venture Capital and the Structure of Capital Markets Banks versus Stock Markets, *Journal of Financial Economics*, Vol. 47, No.3, pp. 244-245.

broadens the ownership base serving as a strategic move. From strategic, also, perspective Maksimovic and Pichler (2001) find that a firm should take into account the amount of disclosure information and the public perception before going public. Chemmanur and Fulghieri (1999) conclude that firms "go public in response to favorable market conditions, but only if they are beyond a certain stage in their life cycle".

Additional motivation theories are related to the cost that an IPO inflicts upon the firm and the time that a firm should go public. Drawing from the cost of capital theories Aggarwal and Rivoli (1991) argue that an informed decision requires an analysis of the financial costs associated with the IPO, while considering advantages and disadvantages. Subrahmanyam and Titman (1999) also agree that the choice of an entrepreneur between private and public funding is determined by the cost of initial capital. The cost of capital literature suggests that a company "conduct a public offering when external equity will minimize their cost of capital (thereby maximizing the value of the company)"¹⁸. Pagano, Panetta and Zingales (1998) in their profound research argue that the cost of going public acts as a hindrance under certain circumstances¹⁹. When there is "informational asymmetry" about the company's value between investors and issuers, it adversely affects the issuance causing price misvaluation²⁰. Companies are also reluctant to follow the disclosure rules of the stock exchange, which will unveil crucial information for their competitive advantage. As Campbell (1979) points out, losing confidentiality is a "deterrent" for public funding. A further case in which the cost of an IPO prevents the companies from going public can be found by considering the total amount of fees²¹. Small firms cannot fill the bill of the fixed costs. Estimation made from Ritter (1987) shows that the fixed costs in the United States during that time period were \$250,000 and the variable costs were about 7% of the gross proceeds of the IPO. In addition Arkebauer (1994) estimated the total cost of an IPO for a company that makes \$2 million in gross revenues and has 3 to 5 year operating history approximately \$1,123, 000. Of course, it

¹⁸ See Brau, J. C., and S. E. Fawcett, 2006, Initial Public Offerings: An Analysis of Theory and Practice, *The Journal of Finance*, Vol. 61, No. 1, p. 406.

¹⁹ See Pagano, M., Panetta, F., and L. Zingales, 1998, loc. cit, pp. 36-38.

²⁰ That can be either under- or over- pricing of the issuing stock.

²¹ Underwriting fees, registration fees, stock exchange fees and other minor fees can be an important reason for postponing the going public decision.

must be kept in mind that costs vary based upon the complexity and the size of the IPO. In their study Pagano, Panetta and Zingales (1998) add a few more reasons to the likelihood of an IPO. They consider that taping public markets overcomes borrowing constraints imposed by banks or venture capitalists providing an alternative funding. Thus, through the stock market the company creates outside competition for the banks or other lenders, because it circulates information to possible investors.

To further explore IPO motivation, the fact that time is an essential element for a company to go public is worthy of remark. Loughran and Ritter (1995) argue that “firms time IPOs to take advantage of favorable windows that allow them to get the most attractive offering prices”²². Firms may postpone an IPO, if the conditions in the stock market are not favorable. Lowry (2003) found that IPO activity seems to increase, when the economy is strong and the possibility for real investment is greater, and when there is high investor demand. The time periods in which initial returns rise and IPOs increase are described as hot-issue markets. In contrast, Choe, Masulis and Nanda (1993) argue that firms avoid issuing when other good-quality firms issue. Additionally, Grinblatt and Titman (1998) argue that from demand side explanation firms would avoid going public in hot issue periods, because of the high competition, while the supply side explanation suggest that the greater supply of available funding will help achieving better deals.

The motives, that drive a firm to go public, do not have the same gravity in each one. Depending on the size, the age, the ownership structure and other factors (e.g. management officers' position) the primary motive changes considerably. Notably, Brau and Fawcett (2006) in their survey regarding the importance of certain motives to conduct an IPO find out that the five most important motives commonly acknowledged are:

- ❖ To create public shares for use in future acquisitions,
- ❖ To establish a market price/value for their firm,
- ❖ To enhance the reputation of their firm,
- ❖ To minimize their cost of capital, and

²² See Loughran, T., and J. R. Ritter, 1995, The New Issues Puzzle, *Journal of Finance*, Vol. 50, No. 1, pp. 23-52. Cited by Brau, J. C., and S. E. Fawcett, 2006, loc.cit., p. 406.

- ❖ To broaden the base of ownership.

From this survey, it is also noteworthy that the minimization of the cost of capital is considered less important than the need to create public shares for use in future acquisitions. This outcome suggests that firms see IPOs as “potential acquisition posturing”²³.

To conclude, the likelihood of an IPO is in conjunction of the goals of each company with the benefits emanating from the public offering. Nevertheless, it is strongly recommended that the company should weigh benefits and costs, before going public, because selling equity means forfeiting a portion of returns and undertaking certain liabilities.

1.4 IPOs IN CONCEPT OF ADVANTAGES AND DISADVANTAGES.

Approaching the motivation theories for conducting an IPO, provides us with the knowledge of the beneficial side of the procedure, while leaving behind the risky and sorely consequences for the company. It is, therefore, essential to review the advantages and disadvantages in total before approaching the IPO procedure. Each firm equilibrates the procedure consequences and the benefits arising from it with a unique orientation to their competitive advantage and resources.

Schneider, Manko and Kant (1981) have thoroughly laid down the common advantages and disadvantages of an IPO. Among the first are the following:

1. Firms obtain funds from the securities sale in the primary market. While, in secondary offering, proceeds go to shareholders affecting the firm's market value.
2. By going public the net worth of the company is improved (above net asset and book value). Thus, a company's valuation and debt-to-equity ratio will improve after going public²⁴. That allows companies to borrow money in more favorable terms. Further, in sense of good performance in the short- or long-run period, the

²³ See Brau, J. C., and S. E. Fawcett, 2006, loc. cit., pp. 405-409.

²⁴ See <http://www.ipoinitialpublicofferings.com/ipo-pros-and-cons>.

firm can seek capital through other offerings or private funding from institutional investors with favorable terms.

3. The creation of a public market allows investors to buy securities with liquidity and ascertain market value.
4. In public traded companies, expansion comes in form of acquisition using company's stock.
5. A public company can use its stocks for managerial reasons (e.g. attract and retain personnel).
6. Through public ownership, a company can gain prestige, publicity, and improve its business.
7. The cost of capital is reduced due to the liquidity of the company's stock.

On the other hand, public traded companies bring on liabilities and costs such as the following:

1. Public companies must disclose information such as sales, profits, competitive position and mode of operation, and related parties, which can place them to competitive disadvantage. In addition, the company bears constant scrutiny from investors and analysts.
2. When a company becomes public, it loses some flexibility in management. The reason is that the company is now responsible to the public. Furthermore, the company loses its ability to act quickly, because the approval of shareholders or outside directors might be needed.
3. The decisions of a public traded company have an impact on the market price. Therefore, every management decision should have a rationale, before taking action.
4. There are many fixed expenses for public companies, which occur from legal and accounting fees, recurring expenses like the preparation and distribution of proxy material and annual reports to shareholders, the preparation and filing with the

Securities and Exchange Commission (S.E.C.)²⁵ of reports, and the expenditure of fees for a transfer agent, a registrar and a public relations consultant.

5. An IPO is also time-consuming. The management devotes a lot of time to public company's operations.
6. Insiders can easily lose control of the company, if a sufficiently large proportion of shares are sold. The owners, who are aiming in retaining the management control, are confronted with the underwriters, who are trying to assure a large floating supply of the stock after the initial offering, diluting the control over management.²⁶
7. For companies that go public and belong in certain industries such as transportation, it is difficult to change strategy or even to conduct asset play.
8. A public company might face tax issues, because the state tax valuation is determined partly by reference to the public market valuation and can be considerably higher than in a private company.

Among the disadvantages of the IPO procedure it is of great importance to consider the defense ability against bad market conditions that Brau and Fawcett (2006) denote in their research. They find out that the decisive reason, why private companies do not want to be public, lies with the ability to avoid the consequences of poor market/economic conditions. Such conditions coupled with a low stock price acts as an incentive to withdraw. Another disadvantage for a public company, which is rather implicit and it is considered as direct cost, is the high initial expense that it is incurred. Moreover, these expenses are expressed as "a reduction of additional paid-in-capital"²⁷, but if the IPO is withdrawn these costs must be expensed. The main costs are

²⁵ The U.S. Security and Exchange Commission or S.E.C. is an agency which mission is to protect investors, maintain fair, orderly, and efficient markets and facilitate capital formation, by enforcing the federal securities laws and legislation. S.E.C.'s role is to oversee and regulate the key participants in the world of securities such as securities exchanges, securities brokers and dealers, investment advisors and mutual funds, to promote the disclosure of important market-related information, maintain fair dealing and protect against fraud. For more information, see <http://www.sec.gov/about/whatwedo.shtml>.

²⁶ Of course, management control can be retained by creating classes of stock (e.g. class A or class B) which have different voting power. See Schneider, C. W., Manko, J. M., and R. S. Kant, 1981, *Going Public Practice: Procedure and Consequences*, *Villanova Law review*, Vol. 27, No. 1, p. 5.

²⁷ See PricewaterhouseCoopers, 2004, *Roadmap for an IPO A Guide to Going Public*, p. 11.

underwriter's expense, legal expense, audit fees, printing costs and miscellaneous expenses (e.g. S.E.C. filing fee, NASDAQ or NYSE fee). Table 1.2 shows the typical range of expenses. Additionally, every IPO bears the risk of being misvalued. In other words an IPO is possible to be underpriced, which is another indirect component of the total cost²⁸. Last but not least, a very important disadvantage is that there is no turning back point. Once the company becomes public, it is very difficult and costly to return to private form again.

Table 1.2
IPO Expenses

Cost	Range
Legal	\$600,000 – \$800,000
Accounting	\$400,000 – \$600,000
Printing	\$150,000 – \$200,000
Blue sky	\$10,000
Transfer agent/registrar	\$5,000
Miscellaneous	\$60,000
Underwriters' discount and commission	Typically 7% of the aggregate offering proceeds
SEC filing fee	\$278 per \$1 million of the aggregate offering amount
NYSE entry fee	Up to \$250,000
NYSE listing fees	Maximum \$500,000

Source: NYSE and PricewaterhouseCoopers, 2004, *Roadmap for an IPO A Guide to Going Public*, p. 11.

²⁸ See Ritter, J. R., 1987, The Costs of Going Public, *Journal of Financial Economics*, Vol. 19, No. 2, p. 5. For more information on underpricing see paragraph 1.7.

1.5 THE STEPS TO AN IPO.

In the event that a private company makes the big decision to go public, a hurdle race begins. The IPO process is a complex, intense and high stress period for the entrepreneurs, which involves a large number of parties (i.e. the issuer, the lead underwriter, the syndicate, lawyers, the registrant, the accountants, the S.E.C., the financial printer and others). The company's IPO preparation starts at least 90 days before the public offering, though for some it starts even on the day that they were incorporated²⁹. However, the eligibility of a company to go public depends highly on the business plan it forms, the adequacy of its working capital and cash flow position, the quality of its management, the compliance of its corporate governance and practices with the necessary (legal) requirements of a public company, the professional relations that it has with clients and banks, and its competitive advantage³⁰. Companies that fill these requirements and have better chances to succeed in public markets, are those that outpace their industry average growth rate with annual revenues and profits at least \$50 million and \$1 million or more respectively, are usually venture capital backed, sustain an increasing annual growth rate, have an established position in their industry, and have developed financial processes and a corporate reporting system. The issuing company should be prepared in a way that will convince the investors that it is an attractive investment opportunity. First, the company must expand its management capabilities. Second, it should prepare budgets and try measure its performance by projections and market share. Third, according to all major stock exchanges, a company/registrant should appoint at least two independent directors³¹. Fourth, the company should create an auditing committee to ensure the integrity and transparency of corporate reporting³². Fifth, the company should reexamine its corporate governance principles and practices. Lastly, it is important from cost view the company to perform audits of financial

²⁹ See PricewaterhouseCoopers, 2004, loc. cit., p. 39.

³⁰ See Schneider, C. W., Manko, J. M., and R. S. Kant, 1981, loc. cit., pp. 6-9.

³¹ After the enactment of the Sarbanes-Oxley Act in 2002, one of the independent directors should have previous financial experience, qualified as financial expert. See PricewaterhouseCoopers, 2003, *The Sarbanes-Oxley Act of 2002 and current Proposals by NYSE, AMEX and NASDAQ*, p. 5. Also see at <http://uscode.house.gov/download/pls/15C98.txt>

³² It is also imposed by Sarbanes-Oxley Act. See idem.

statements long before going public. Once the company completes the necessary “internal adjustments”, it is ready to set the process in motion.

Every company wishing to make a public offering must first select an investment bank, which is going to provide the essential guidance and perform the underwriting functions. This selection is very crucial for the firm, because investment banking firms or underwriters vary widely in prestige, financial strength and ability to provide services expected by the issuing company³³. In order to make the right choice, the company should seek the underwriter(s) relied on few criteria. First, the issuing firm should investigate the aftermarket performance of underwriter’s prior offerings³⁴. Second, the investment’s bank reputation, its expertise and the research quality in conjunction with the company’s industry field should be taken into account. Third, the selection can be based on the investment bank’s distribution expertise³⁵. Table 1.4, presents the top ten managing and prestigious underwriters based on proceeds for the year 2010. In spite of these selection factors, it is likely that the underwriter choice be influenced by the prior relationships of the issuers or its board members, who retain ties with certain investment banking firms. However, it is not necessary for a firm to choose one underwriter. An IPO can be managed by one or many underwriters. In that case one of them is the lead underwriter/manager, playing the major role in the procedure.

Table 1.3

Biggest Underwriters based on proceeds

Rank	Underwriter	Proceeds
1	Goldman, Sachs & Co.	\$5,156.1 mil
2	BofA Merrill Lynch	\$5,023.7 mil
3	Morgan Stanley	\$4,272.6 mil

³³ See Schneider, C. W., Manko, J. M., and R. S. Kant, 1981, loc. cit., p. 7.

³⁴ See Ibid., pp. 7-8.

³⁵ “Whether the issuer would like to see its securities held by individuals or by institutional investors”, see Ellis, K., Michaely, R., and M. O’Hara, 1999, A Guide to the Initial Public Offering Process, *Corporate Finance Review*, Vol. 3, No. 5, p. 2.

4	Santander Investment	\$4,024.9 mil
5	Credit Suisse	\$2,526.4 mil
6	J.P. Morgan	\$1,887.8 mil
7	Citi	\$1,203.2 mil
8	Goldman Sachs (Asia) L.L.C.	\$1,151.6 mil
9	Deutsche Bank Securities	\$1,123.3 mil
10	Barclays Capital	\$647.0 mil

Source: Renaissance capital IPO home.³⁶ (Date: August 2010)

The next step concerns a consultation and an underwriting agreement between the issuer and the underwriter. Once the underwriter selection is made, the issuer discusses and determines with the underwriter the class of the offered shares, the offered volume and the offering price. Then, the company agrees on a "letter of intent" with the underwriter, which outlines the proposed terms of the offering and the underwriting compensation³⁷. The purpose of this agreement is to protect the underwriter from any uncovered expenses, if the offer is withdrawn either during the due diligence and registration stage or during the marketing stage³⁸. The "letter of intent" includes: a) a commitment from the underwriter for a "firm commitment" or "best efforts" agreement, b) an agreement by the issuing company to cooperate in all due diligence efforts, making available all relevant information to the underwriter and its counsel, and c) a commitment by the issuing company to grant a 15% overallotment option³⁹ to the underwriter⁴⁰. In the "firm commitment" agreement, the underwriter agrees that will purchase the total of the shares being issued and then resell them to the public. The underwriter benefits from the difference between the price the shares are bought from the issuer and the price they were sold to the public⁴¹. Nevertheless, the underwriter takes a great deal of risk, if he fails to

³⁶ See <http://www.renaissancecapital.com/IPOHome/Underwriter/uMain.aspx>.

³⁷ See Schneider, C. W., Manko, J. M., and R. S. Kant, 1981, loc.cit. p. 24.

³⁸ See Ellis, K., Michaely, R., and M. O'Hara, 1999, loc. cit., p. 4.

³⁹ An overallotment option refers to the allowance that "underwriters have from SEC to offer and sell to the public more shares than the underwriters are obligated to purchase under the underwriting agreement". This practice is also known as "green shoe option". See Schneider, C. W., Manko, J. M., and R. S. Kant, 1981, loc. cit., p. 25.

⁴⁰ See Ellis, K., Michaely, R., and M. O'Hara, 1999, loc. cit., p. 3.

⁴¹ "The fee earned from underwriting a security is the difference between the price paid to the issuer and the price at which the investment bank reoffers the security to the public". This

find public purchasers. Hence, in large IPOs, where the risk is greater, a group of underwriters is preferred. The compensation of those underwriters is related to the gross spread. The lead underwriter "receives a fee for its efforts that is 20% of the gross spread"⁴². While, from the "selling concession"⁴³ the underwriter and the syndicate members receive each one a part based on the amount of the issue they sold to its customers. The last portion of the gross spread is used to cover underwriting expenses. In case of anything remaining after the deduction of the expenses, it is divided proportionally among the underwriter and syndicate members according to the amount of shares each underwrote⁴⁴. On the other hand, in "best efforts" agreement the underwriter agrees "to use his best efforts to sell the issue as the company's agent. If purchasers cannot be found, the issue is not sold"⁴⁵. The underwriting agreement is executed in pricing, until then the letter of intent will remain in force. In a risky issuing the underwriter may choose this type of agreement in attempt to shift the risk to issuer.

The following step for the issuing company is to assure a clearance to sell securities to the public from the Securities and Exchange Commission (S.E.C.) by filing a registration statement in accordance with legislation. Offering securities to the public, without first having them registered, it is illegal. The registration process governed by Securities Act of 1933 has two main purposes: a) requires that investors receive financial and other significant information concerning securities being offered for public sale, and b) prohibits deceit, misrepresentations, and other fraud in the sale of securities⁴⁶. The S.E.C. has no authority relating to the prohibition of a public offering judged from the quality of the securities and also cannot determine, whether a security is fairly priced or not⁴⁷. It only has the authority to require from issuers to disclose all the necessary

difference is called gross spread, see Fabozzi, F., Modigliani, F., and F. J. Jones, 1996, *op. cit.*, p. 101.

⁴² See Ellis, K., Michaely, R., and M. O'Hara, 1999, *loc. cit.*, p. 2.

⁴³ It is the second portion of the gross spread, which is equal to 60% of the total gross spread, and it is the compensation that the underwriter receives for selling the securities. See, *idem*.

⁴⁴ See *idem*.

⁴⁵ See Schneider, C. W., Manko, J. M., and R. S. Kant, 1981, *loc. cit.*, p. 25.

⁴⁶ See S.E.C.'s website about laws at <http://sec.gov/about/laws.shtml>.

⁴⁷ States in U.S. attempted to provide investors an ascertainment whether a security is fairly priced in order to protect them from fraud. These provisions were known as "Blue Sky Laws". However, the National Securities markets Improvement Act of 1996, "gave blanket approval for

information. Hence, the registration is the disclosure of important financial information, which enables investors to make informed judgments about purchasing or not a company's securities. Moreover, investors, who suffer losses from purchasing securities, assert recovery rights by proving that the disclosure of important information was incomplete or inaccurate⁴⁸. In order to avoid unpleasant situations where purchasers of the securities are damaged and seek compensation, the underwriter exercise his "due diligence" requirement to the issuer to investigate and verify the information that the latter provides to the investors.

The registration statement is considered as a two-part disclosure document. The first part is the prospectus, which should be delivered to every perspective purchaser of the offering shares; it is the legal offering document⁴⁹. It is a brochure, which describes the company and the offering securities. On the other hand, the second part of the statement contains supplemental information that will be available for public inspection by the S.E.C.

Additionally, the registration forms used in the statement and the detail level required, as well, depend upon the size of the company, the amount of money being raised, and the age of the company⁵⁰. In short, the most common form used for large offerings is Form S-1⁵¹. For companies with revenues less than \$25 million Form SB-2 is used. Whereas, for the small offerings those up to \$5 million Form S-18 is required.

Before filing the registration statement to the S.E.C., the issuing company prepares a draft one. The preparation of it is done by the company's attorney, while its counsel is responsible for the non-financial parts of the statement. There are several revisions of the statement before its final form. In the mean time, meetings of the company's management, counsel and auditors with the underwriter and the underwriter's

all IPOs that list on the AMEX, NYSE and NASDAQ". See Ritter, J. R., 1998, Initial Public Offerings, *Contemporary Finance Digest*, Vol. 2, No. 1, p. 2.

⁴⁸ See also S.E.C.'s website at <http://sec.gov/about/laws.shtml>.

⁴⁹ See Schneider, C. W., Manko, J. M., and R. S. Kant, 1981, loc. cit., p. 10.

⁵⁰ See Ritter, J. R., 1998, loc. cit., p. 8.

⁵¹ For foreign companies the form required is the F-1 form.

counsel and accountants are taking place in regard to the draft statement, causing additional delay, expense and sometimes irritation.

Once the registration statement is completed and filed with the S.E.C., it is now considered as preliminary prospectus or "Red Herring"⁵². The S.E.C. will respond to the initial filing, by approving it and declaring the issue effective in a 20-day period. During this period, known as "waiting period", the Commission's Division of Corporate Finance reviews the registration statement and communicates with the issuer's counsel for deficiencies in the statement needed to be corrected for the Commission's approval. In case that the changes required are minor, they will be included in the "price amendment". Otherwise, a new prospectus should be prepared and circulated to all concerned. It is important to note that prior to the initial filing of the registration statement, no public offering, either orally or in writing is permitted⁵³. Though, during the "waiting period" oral selling efforts, the "red herring" and the tombstone advertisements are only permitted. Consequently, the lead underwriter will start promoting the IPO through a "road show" or also known as "dog and pony show" for 3-4 weeks in which the company officers will make presentations to salespeople and institutional investors. The main purpose of the "road show" is to receive indications of interest from individual and institutional investors, which will raise the demand of the offering and affect the pricing. These indications made by individual investors and institutions differ in several ways. The former express their interest early for a specific quantity, while the latter submit orders that limit the demanded quantity in regard to a maximum price. Furthermore, the institutions' orders involve a commitment to buy more securities in the open market if their order is fulfilled⁵⁴.

The final step to the public offering starts after the registration statement has been approved and deemed effective. Judging from the market conditions, the issuer makes a

⁵² The term "Red Herring" comes from the legend "required to be printed in red ink on the cover of any prospectus which is distributed before the effective date of the registration statement". This legend connotes that the registration filed has not yet become effective and that securities cannot be sold or bought prior to the effective date. See Schneider, C. W., Manko, J. M., and R. S. Kant, 1981, loc. cit., p. 22. The preliminary prospectus does not contain information about the price and the effective date, because they are not yet specified.

⁵³ According to the Securities Act of 1933 §5(c).

⁵⁴ See Ellis, K., Michaely, R., and M. O'Hara, 1999, loc. cit., p. 6.

“request for acceleration” in which asks the S.E.C. to exercise its discretion and waive the 20-day period⁵⁵. The issuer depends on the approval of this request, otherwise must wait for the waiting period to elapse, and makes changes to the registration statement, that would assure also the cooperation of the Commission.

The day before the effective date and after the market closing, takes place the most important meeting of the issuer and the (lead) underwriter. They will assess the orders made during the “road show” and they will conclude on the price and the number of the selling shares. Regarding the latter, typically the issuing companies sell 20-40% of its stock to the public. Next, they execute the underwriting agreement; print the final prospectus and file on the morning of the effective date a price amendment. Once the amendment is approved, the company stock is traded for the first time.

Three to five business days after the effective date comes the closing of the transaction. The closing is a formal meeting, where the issuing company delivers the registered securities and the underwriter deposits the IPO proceeds into the company’s account. For the next 25 days after the IPO the S.E.C. mandates that underwriters cannot make comment on the valuation or provide, because the “quiet period”⁵⁶ has still not ended. During the “quiet period”, the S.E.C. restricts publicity about the company or its offering, outside the prospectus. At the closing process, a “lock up” agreement that the issuing company signed as a provision in the underwriting agreement, comes also into force. The “lock up” agreement provides that the highly visible employees and shareholders of the company cannot sell their shares for a period of time after the IPO is completed. The period’s duration is typically 180 days, but can range from 90 days to one year⁵⁷. That way, the underwriter can decrease the “flipping”⁵⁸ and its effects.

⁵⁵ See Ellis, K., Michaely, R., and M. O'Hara, 1999, loc. cit., p. 7.

⁵⁶ The quiet period commences once the issuing company and the underwriter reach an understanding and ends 90 days following the effective date of the registration statement, if the firm is not listed on a stock market. See PricewaterhouseCoopers, 2004, loc. cit., p. 99.

⁵⁷ See Deloitte, 2010, Strategies for Going Public, 3rd Ed., February 2010, p. 41.

⁵⁸ Flipping is the practice of buying shares of issuing firms at the IPO and then reselling them for a substantial profit once the trading has begun. Flipping can be most profitable in a hot IPO market, where the underpricing reaches high levels.

After the IPO, the underwriter continues to play an important role as the principal market maker. To this end, it undertakes the task to stabilize the price of the stock in the aftermarket. The underwriter can support the stock price, if it falls at or below the offering price, for a short time period. Additionally, the underwriter's goal is to develop an orderly trading market without additional shares to be dumped into the market⁵⁹.

In this post IPO period, the company will enjoy the benefits of this transition to the public markets. Nevertheless, this new environment is demanding and high competitive, signifying that the company in order to attain its long term goals, must maintain both its market position and investors' interest.

Even though there was a broad presentation of the IPO process, has become clear, that an IPO requires an extensive and multiple planning from the issuing company's side, and the guidance and cooperation of experienced underwriters and other contributing parties (especially the S.E.C.). To conclude, table 1.5 presents the IPO procedure in respect to the time needed to its fulfillment.

Table 1.4

The IPO steps

	2 Years	4-5 Months	3 Months (100 Days)	20 Days	1-10 Days	Offering Day
Company	Act like a public company	Select the team; Hold organizational "all hands" meeting	"Quiet period" begins; Hold "all hands" meeting; Execute letter of intent; Select printer & transfer agent; "Clean up" financial statements and ensure their compliance with Regulation S-X	"Cooling off" period begins; Executives perform "road show"		Execute underwriting agreement; Issue press release

⁵⁹ See idem.

Company Council	Perform "housekeeping" of company records; Draft S-1; File w/the SEC; File NYSE or NASDAQ listing application	Clear S.E.C. comments	Pricing amendment filed; Acceleration requested; File final registration statement	
Independent Counsel	Complete audit of annual and review of interim financial statements; Review registration statement	Audit/review updated financial statements, if necessary; Respond to S.E.C. comment letter	Deliver Draft "comfort letter"	Deliver Final "comfort letter"
Investment Banker	Assess market; Make presentation to board; Continue due diligence	Distribute "red herring"; Orchestrate "road show"; Solicit expressions of interest	Form syndicate; Place "tombstone ad"	Execute underwriting agreement; Run tombstone ad
Investment Banker's Counsel	Begin due diligence; Prepare NASD Regulation filing; Undertake "Blue Sky" filings	Clear NASD Regulation comments	Continue "due diligence"	
Financial Printer		Print preliminary registration statement/prospectus (red herring); Produce SEC		Print final registration statement/prospectus

& NASD
Regulation
"filing
packages"

S.E.C.	Conference regarding "problems", if necessary	Review preliminary registration statement; Issue comment letter	Declare offering effective
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Source: PricewaterhouseCoopers, 2004, *Roadmap for an IPO A Guide to Going Public*, p. 35.

1.6 NEW YORK STOCK EXCHANGE (NYSE) LISTING REQUIREMENTS.

A very important aspect of the going public process, that should not be overlooked, is related to the registration filed to the preferred stock market. Even though, it is compulsory for a company to be registered at S.E.C., the commission's role is to protect investors, maintain fair, orderly and efficient markets, and facilitate capital formation by overseeing and regulating the U.S. securities markets⁶⁰. Consequently, the company needs a stock exchange in which the company's securities can be traded in public. The stock exchange is a self regulated organization, which has additional listing requirements and fees. The New York Stock Exchange (NYSE) "listing standards" are among the highest, signifying that companies meeting these requirements are in leading position in their industry and enjoy the investors' interest and acceptance.

The NYSE listing process commences shortly after filing the registration statement with the commission. The issuing company contacts the stock exchange and requests a confidential review of eligibility. Once, the exchange provides the company with a letter notifying it of its eligibility clearance and conditions of listing, the issuing company is ready to file the listing application. For the approval of the NYSE, the minimum financial and qualitative requirements must be met by the issuing company.

⁶⁰ See S.E.C.'s website at <http://sec.gov/about/whatwedo.shtml>.

The financial standards involve the distribution of shares, the stock price and certain other financial requirements such as cash flow, earning, and others which depend on the company's origin (domestic or foreign). The qualitative criteria concern the corporate structure, governance and practices, corporate responsibility and disclosure issues. The following table 1.5 presents broadly the minimum financial requirements.

The fulfillment of the stock exchange requirements is a process incorporated to the whole IPO procedure. The "restructuring" of the issuing company during the preparation stage is orientated in enhancing the management and bringing the necessary transparency.

Πανεπιστήμιο Πειραιώς

Table 1.5

NYSE listing requirements

Distribution criteria	U.S. standards	Non-U.S. standards	
		Domestic	Worldwide
Round lot holders or	400	400 (U.S.)	5,000
Total shareholders ...together with	N/A	2,200	N/A
Average monthly trading volume (for the most recent six months) or	N/A	100,000 shares	N/A
Total shareholders ...together with	N/A	500	N/A
Average monthly trading volume (for the most recent 12 months)	N/A	1,000,000 shares	N/A
Public shares outstanding ¹	1,100,000	1,100,000	2,500,000
Market value of public shares ²	\$ 40 million	\$ 40 million	\$ 100 million
IPOs, spin-offs, carve-outs, and affiliated companies			
Minimum bid price	\$ 4	\$ 4	\$ 4
Earnings			
Aggregate pretax earnings for the last three years and	10 million	10 million	100 million
Minimum in each of the two preceding year pretax earnings, or	2 million ³	2 million ³	25 million
Aggregate pretax earnings for the last three years and	12 million	12 million	N/A
Minimum in the most recent year and	5 million	5 million	N/A
Minimum in the next most recent year and	2 million	2 million	N/A
Cash flow			
For companies with not less than \$500 million ¹ in global market capitalization and \$100 million in revenues in the most recent 12 months:			
Aggregate for the last three years operating cash flow (each year must report a positive amount for Domestic) and	25 million	25 million	100 million
Minimum cash flow in each of 2 preceding years or	N/A	N/A	25 million
Pure valuation			
Revenues for the most recent fiscal year and	75 million	75 million	75 million
Global market capitalization ¹	750 million	750 million	750 million
Asset and equity			
Global market capitalization ¹	150 million	N/A	N/A
Total Assets	75 million	N/A	N/A
Shareholders' equity	50 million	N/A	N/A

Source: Deloitte, 2010, *Strategies for Going Public*, 3rd Ed., February 2010, p. 57.

1.7 UNDERPRICING:

In IPOs theory a very common phenomenon, which have been rigorously analyzed by the literature, is underpricing. The underpricing exists in every country with a stock market; it refers to “the difference between the offer price and the closing price on

the first day” of the IPO trade⁶¹. In other words, underpricing refers to the “incidence of large initial returns⁶² accruing to investors in IPOs”⁶³. Ibbotson et al. (1994) and Loughran and Ritter (2004) note that underpricing level for the U.S. market in the period 1980-1989 was 7% and from 1990-1998 increased to 15%, whereas, in the “bubble period” 1999-2000 exploded to more than 65% only to fall back to 12% in 2001-2008⁶⁴. Table 1.5 presents the average initial return of IPOs in 33 countries. The average initial return varies considerably from country to country.

Table 1.6

Average initial returns for 45 countries

Country	Author(s) of Article(s)	Sample Size	Time Period	Average Initial Return
Argentina	Eijgenhuijsen & van der Valk	20	1991-94	4.4%
Australia	Lee, Taylor & Walter; Woo; Pham; Ritter	1,103	1976-06	19.8%
Austria	Aussenegg	96	1971-06	6.5%
Belgium	Rogiers, Manigart & Ooghe; Manigart DuMortier; Ritter	114	1984-06	13.5%
Brazil	Aggarwal, Leal & Hernandez; Saito	180	1979-06	48.7%
Bulgaria	Nikolov	9	2004-07	36.5%
Canada	Jog & Riding; Jog & Srivastava; Kryzanowski; Lazrak & Rakita; Ritter	635	1971-06	7.1%
Chile	Aggarwal, Leal & Hernandez; Celis & Maturana; Ritter	65	1982-06	8.4%
China	Chen, Choi, and Jiang (A Shares)	1,934	1990-05	164.5%

⁶¹ See Doeswijk, R.Q., Hemmes, H. S. K., and R. H. Venekamp, 2006, 25 Years of Dutch IPOs: An Examination of Frequently Cited IPO Anomalies within Main Sectors and during Hot- and Cold-Issue Periods, *De Economist*, Vol. 154, No. 3, p. 407.

⁶² Initial returns and underpricing would be used interchangeably.

⁶³ See Ritter, J. R., 1998, Initial Public Offerings, loc. cit., p. 4.

⁶⁴ See also Figure 1.3 with the underpricing rates in the U.S.

Cyprus	Gounopoulos, Nounis, and Stylianides	55	1999-02	23.7%
Denmark	Jakobsen & Sorensen; Ritter	145	1984-06	8.1%
Finland	Keloharju	162	1971-06	17.2%
France	Husson & Jacquillat; Leleux & Muzyka; Paliard & Belletante; Derrien & Womack; Chahine; Ritter	686	1983-06	10.7%
Germany	Ljungqvist; Rocholl; Ritter; Vismara	700	1978-08	25.3%
Greece	Nounis, Kazantzis & Thomas	363	1976-05	25.1%
Hong Kong	McGuinness; Zhao and Wu; Ljungqvist & Yu; Fung, Gul, and Radhakrishnan; Ritter	1,008	1980-06	15.9%
India	Marisetty and Subrah	2,811	1990-07	92.7%
Indonesia	Hannafi; Danny; Suherman	339	1989-08	21.5%
Iran	Bagherzadeh	279	1991-04	22.4%
Ireland	Ritter	31	1999-06	23.7%
Israel	Kandel, Sarig & Wohl; Amihud & Hauser; Ritter	348	1990-06	13.8%
Italy	Arosio, Giudici & Paleari; Cassia, Paleari & Redondi; Vismara	268	1985-08	16.4%
Japan	Fukuda; Dawson & Hiraki; Hebner & Hiraki; Pettway & Kaneko; Hamao, Packer, & Ritter; Kaneko & Pettway; Ritter; TokyoIPO.com	2,628	1970-08	40.1%
Korea	Dhatt, Kim & Lim; Ihm; Choi & Heo; Mosharian & Ng; Cho; Ritter	1,490	1980-08	55.2%
Malaysia	Isa; Isa & Yong; Yong	350	1980-06	69.6%
Mexico	Aggarwal, Leal & Hernandez; Eijgenhuijsen & van der Valk	88	1987-94	15.9%
Netherlands	Wessels; Eijgenhuijsen & Buijs; Jenkinson, Ljungqvist, & Wilhelm; Ritter	181	1982-06	10.2%
New Zealand	Vos & Cheung; Camp & Munro; Ritter	214	1979-06	20.3%
Nigeria	Ikoku; Achua	114	1989-06	12.7%
Norway	Emilsen, Pedersen & Saettern; Liden; Ritter	153	1984-06	9.6%
Philippines	Sullivan & Unite; Ritter	123	1987-06	21.2%
Poland	Jelic & Briston; Ritter	224	1991-06	22.9%

Portugal	Almeida & Duque; Ritter	28	1992-06	11.6%
Russia	Ritter	40	1999-06	4.2%
Singapore	Lee, Taylor & Walter; Dawson; Ritter	519	1973-08	27.4%
South Africa	Page & Reyneke	118	1980-91	32.7%
Spain	Ansotegui & Fabregat; Alvarez Otera	128	1986-06	10.9%
Sri Lanka	Samarakoon	115	1987-07	48.9%
Sweden	Rydqvist; Schuster; Simonov; Ritter	406	1980-06	27.3%
Switzerland	Kunz, Drobetz, Kammermann & Walchli; Ritter	159	1983-08	28.0%
Taiwan	Chen	1,312	1980-06	37.2%
Thailand	Wethyavivorn & Koo-smith; Lonkani & Tirapat; Ekkayokkaya and Pengniti	459	1987-07	36.6%
Turkey	Kiyamaz; Durukan; Ince; Kucukkocaoglu	315	1990-08	10.6%
United Kingdom	Dimson; Levis	4,198	1959-08	16.3%
United States	Ibbotson, Sindelar & Ritter; Ritter	12,028	1960-08	16.9%

Source: Loughran, T., Ritter, J. R., and K. Rydqvist, 1994, Initial public offerings: International insights, *Pacific-Basin Finance Journal*, Vol. 2, No. 2-3, pp.165-199. (Updated July 27, 2009)

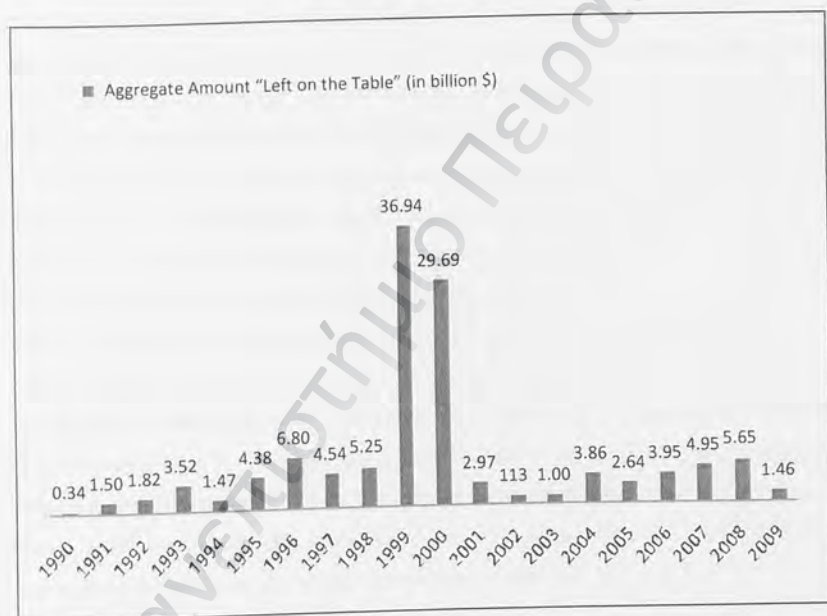
In real terms, the underpricing signifies an indirect cost to the IPO issuers. It is a form of compensation to the underwriters. It means that a large amount of money was "left on the table". This phrase refers to the proceeds that were lost in the first day sale of shares, because the offering price was not close to the demand and could have been higher. The amount of money left on the table is "defined as the first day price gain multiplied by the number of shares sold"⁶⁵. A broad example of such underpricing is the Netscape's IPO in 1995 with Morgan Stanley as the lead underwriter. The opening share price was \$28.00 and the volume was 4.25 million shares. The closing market price of the share was \$58.25, leaving near \$129 million on the table. That might be a very good reason why the issuers should be upset. But, Loughran and Ritter (2002) propose a prospect theory that could unravel the situation. Their theory assumes that issuers care

⁶⁵See Loughran, T., and J. R. Ritter, 2002, Why Don't Issuers Get Upset About Leaving Money on the Table in IPOs? *The Review of Financial Studies Special*, Vol. 15, No 2, pp. 413-418.

more about the change in their wealth than the level of wealth, and predicts that the loss of wealth from leaving money on the table will be balanced by the gain on the retained shares from a price jump, producing a net increase in wealth for pre-issue shareholders⁶⁶.

Figure 1.2

Money "left on the table" since 1990



Source: Ritter, J. R., 2010, Some Factoids about the 2009 IPO Market, University of Florida, p. 2.

The key to understand why IPOs are underpriced lies within the valuation process⁶⁷. Due to the fact that many IPOs belong to young growth companies the use of

⁶⁶For more information, see idem.

⁶⁷ The valuation of the firm occurs at the "pricing meeting" before the effective date, where issuer and underwriter assess the market conditions and the results from the book-building. See Ellis,

accounting information is limited in order to project future cash flows. Hence, the valuation relies heavily on market conditions and estimations.

Many theories were developed to explain the underpricing phenomenon in relation with market knowledge (asymmetric and symmetric information), market functions, corporate ownership and other practices⁶⁸. Ljungqvist (2006) groups the theories of underpricing in four broad headings: "asymmetric information, institutional reasons, control considerations, and behavioral approaches"⁶⁹. Thus, he marks that the asymmetric information based models are the best established.

Asymmetric models assume that among the concerned parties (issuers, underwriters and investors) in the IPO one of those is more informed than the others. Baron and Holmstrom (1980) assume that underwriters (e.g. investment bankers) are more informed about the market conditions (demand) and exploit their market knowledge to underprice issues, which permits underwriters to minimize the marketing and ingratiate with the investors. This hypothesis is also known as "the investment banker's monopsony power"⁷⁰. Habib and Ljungqvist (2001) share the same position, arguing that underpricing allows cost saving in other areas of marketing, hence is an alternative for costly marketing expenditures. Baron (1982) reiterates that information asymmetry in which issuer is less informed relative to its underwriter, leads to a principal-agent problem. The issuers try to induce the underwriter to put in the requisite effort to market shares by permitting some underpricing, because monitoring the underwriter comes not without a cost. Beatty and Ritter (1986) note that investment banks have an incentive to ensure that new issues are underpriced by enough lest they lose underwriting commissions in the future, and coerce issuers to underprice their offerings.

K., Michaely, R., and M. O'Hara, 1999, loc. cit., pp. 7-8, Loughran, T., and J. R. Ritter, 2004, Why Has IPO Underpricing Changed Over Time? *Financial Management*, Vol. 33, No. 3, pp. 7-9, and Ritter, J. R., 1998, loc. cit., pp. 19-20.

⁶⁸ See Brau, J. C., and S. E. Fawcett, 2006, loc. cit., pp. 414-415, for a rigorous analysis.

⁶⁹ See Ljungqvist, A. P., 2006, IPO Underpricing: A Survey. in: Eckbo, B. E. (ed.), *Handbook of Corporate Finance: Empirical Corporate Finance*, Volume A, Chapter 7, Amsterdam: Elsevier/North-Holland, p. 2.

⁷⁰ See Ritter, J. R., 1998, loc. cit., p. 14.

Underpricing results as well from asymmetric information, when some investors know more than other investors. Rock (1986) suggests that there are investors better informed about the true value of the shares of an IPO than other investors, the issuing firm or its underwriting bank. That has as a result, the informed investors to bid only for attractively priced IPOs, whereas the less or uninformed to bid indiscriminately. The uninformed investors will receive all the shares they have bid for on the unattractive IPOs, while in the attractive IPOs they will be crowded out by the informed. Then, they face the "winner's curse"⁷¹. The less informed investors will purchase shares, if the IPO is underpriced sufficiently to compensate them for the bias in the allocation of new issues. In case that the uninformed receive 100% allocations in overpriced IPOs, then their average returns will be negative. If that happens, uninformed investors will feel reluctant to bid for IPO allocations and the market will be consisted with informed investors. Rock (1986) also argues that existence of uninformed investors in the primary market is important, in sense that informed demand is insufficient to take up all shares on offer even in attractive offerings. Moreover, he underlines that rationing *per se* does not necessitate the underpricing, on the contrary, it is the bias in rationing with uninformed investors expecting more rationing in good than in bad offerings. Another interesting theory on rationing has formed Welch (1992) to describe the effects of pricing offers too high. He assumes that investors attempt to judge the interest of other investors around hot offering. When investors find that the pricing of the offering is high and the probability of failure is also high, then they abstain from purchasing. That behavior influences and other investors, who end up also abstaining, resulting to a "negative cascade". This effect is also known as "the bandwagon hypothesis"⁷².

However, Hanley and Wilhelm (1995) disagree with Rock (1986), showing that the difference in the size of allocations which institutions receive in underpriced and overpriced issues is little. Furthermore, institutions do not appear to selectively choose the best offerings. The different level of information that investors have, causes them an

⁷¹ Winner's curse can be considered an application of Akerlof's (1970) asymmetric information model. For more information, see Ljungqvist, A. P., 2006, loc. cit., p. 11.

⁷² See Ritter, J. R., 1998, loc. cit., pp. 8-9.

uncertainty around the IPO firms, which biases the offering prices lower than the future market price (Beatty and Ritter, 1986).

When investors have an information advantage, Benveniste and Spindt (1989) argue that underpricing will compensate investors for sharing their information before the offering price is settled. The same opinion with Benveniste and Spindt (1989) also share Benveniste and Wilhelm (1990) and Spat and Srivastava (1991), who argue that underpricing rewards investors for revealing accurate valuation information during the book-building process. In this process the underwriters and the issuers try to elicit indications of interest from prospective investors, which are used in setting the price. This task is accomplished by taking the company on a "road show" to market to potential investors. If the demand is strong, the underwriters will set the offering price high. Knowing this the investors must be induced by underwriters with a combination of more IPO allocations and underpricing, if only they indicate willingness to buy shares at high price. The book building resembles to a market feedback process. Depending on the response of the market the respective trade off among underwriters and investors takes place.

A last case of underpricing caused by asymmetric information is based on the assumption that the issuers are the better informed. This assumption is advanced by Welch (1989), arguing that high quality issuers in order to distinguish themselves from the low quality issuers will deliberately sell their shares at a lower price than the market believes they worth. Acting like this, the high quality issuers deter the others from imitating them and signal their quality to the investors. The issuers by sending underpricing signals follow a dynamic issue strategy in which their IPO will be followed by other seasoned offerings⁷³. However, Michaely and Shaw (1994) find no evidence of a higher propensity to return to the market for a seasoned offering. In respect with signaling theory⁷⁴, it is worthy to note that Demers and Lewellen (2003) assume that stocks are underpriced so IPO firms can bring attention their offering.

⁷³ See Welch, I., 1989, Seasoned Offerings, Imitation Costs, and the Underpricing of Initial Public Offerings, *Journal of Finance*, Vol. 44, No. 2, p. 421-422.

⁷⁴ For a thorough approach of signaling theory, check Ljungqvist, A. P., 2006, loc. cit., pp. 36-39.

Following Ljungqvist (2006) sorting of underpricing theories, the institutional approach gives us interesting insights on the subject. Institutional theories centre on three features of the marketplace: litigation, stabilization activities from investment banks and taxation. Regarding the first, Logue (1973) and Ibbotson (1975) point out that companies sell their stock at a discount to reduce the likelihood of future lawsuits from disappointed shareholders by the post IPO performance of their shares. Nevertheless this explanation is not economically significant in many countries around the world⁷⁵. In favor of the litigation explanation are Tinic (1988) and Hughes and Thakor (1992), who argue that underpricing reduces the issuers' legal liability. Further, Hensler (1995) argues that underpricing may act like insurance against lawsuits for violations relating to IPOs (securities litigation). At this point it is important to underline that the Securities Act of 1933 makes all participants in the offer who sign the prospectus liable for any material omissions. Hence underpricing is a way of reducing frequent and severe lawsuits. However, Drake and Vetsuypens (1993) find that underpricing did not protect IPOs from being sued⁷⁶.

From the price stabilization approach, Benveniste, Bubb and Wilhelm (1996) argue that price stabilization is a mechanism that "bonds" underwriters and investors. Book building helps underwriters convince investors that the issue will not be intentionally overpriced. Price support benefits mainly institutional investors participating in book building, because "if no relevant information is shared from investors there is no need to offer them price support". Moreover, the price support can be seen as "a put option written by the underwriter and held by the IPO investors, in the sense that stabilizing activities put a floor under early after-market prices and thus act as insurance against price falls"⁷⁷. The third part of the institutional approach of underpricing is in conjunction with taxes. Rydqvist (1997) argues that underpricing may be advantageous from a tax point of view. He bases this argument, relying on his

⁷⁵ E.g. Australia, Finland, Germany, Japan, Sweden, Switzerland, U.K.

⁷⁶ Lowry, M., and S. Shu, 2002, Litigation Risk and IPO Underpricing, *Journal of Financial Economics*, Vol. 65, No. 3, p. 311 disagree with them, because they find that "firms with higher litigation risk underprice their IPOs by significantly greater amounts". See also Ritter, J. R., and I. Welch, 2002, A Review of IPO Activity, Pricing, and Allocations, *The Journal of Finance*, Vol. 57, No. 4, p. 1807.

⁷⁷ See Ljungqvist, A. P., 2006, loc. cit., p. 46.

observations made in Sweden. At the same time, Taranto (2003) puts forward a similar argument. He argues that a quirk of U.S. tax law may increase senior manager's incentive to underprice their company's IPO. The tax benefit from underpricing acts as an incentive⁷⁸.

Underpricing in context of ownership and control theories helps "shape the shareholder base so as to reduce intervention by outside investors once the company is public"⁷⁹. In addition, a company may intentionally underprice their shares, generating excess demand, in order to disperse them to a larger number of shareholders. This ownership dispersion will increase the liquidity of newly public firm (Booth and Chua, 1996). In accordance with this argument are Brennan and Franks (1997). They agree that underpricing allows for a wide base of owners, although they find the motivation in entrenching management. Moreover, they argue that through underpricing the firm also entrenches the agency cost by avoiding monitoring from a large outside shareholder. In contrast to them, Stoughton and Zechner (1998) suggest that underpricing may be used to minimize agency costs by encouraging monitoring⁸⁰.

The last group of theories dealing with underpricing is the behavioral explanations. They assume the presence of (irrational) investors that bid up the price of IPO shares even though their value does not represent the true one, and issuers that are subject to behavioral biases, failing to pressure underwriting banks in order to reduce underpricing⁸¹. Loughran and Ritter (2002) propose a behavior theory suggesting that issuers are pleasantly surprised by the amount they raised in the IPO. Thus, issuers are not concerned with the underpricing⁸². While, Ljungqvist, Nanda and Singh (2006) assume that "sentiment investors" hold optimistic beliefs about the future prospects for the IPO firm and the issuers and investment bankers target them in their marketing. Specifically, issuers supplying more stock to "sentiment" investors maximize the excess valuation over the fundamental value of their stock. Hence, providing more stock to the

⁷⁸ For more details, see Taranto, M. A., 2003, *Employee Stock Options and the Underpricing of Initial Public Offerings*, Working Paper, University of Pennsylvania - The Wharton School, p. 34.

⁷⁹ See Ljungqvist, A. P., 2006, loc. cit., p. 6.

⁸⁰ See idem.

⁸¹ See ibid., p. 61.

⁸² See Brau, J. C., and S. E. Fawcett, 2006, loc. cit., p. 415.

market depresses the price and the underwriters hold back stock to keep price from falling⁸³.

Lastly, a few interesting explanations of underpricing IPOs relate to marketing functions and the facilitation of questionable practices. In conjunction with marketing, Boehmer and Fishe (2001) demonstrate that underpricing increases the after-issue trading volume of the stock⁸⁴. Underpricing, on the other hand, can make possible questionable practices like spinning⁸⁵, suggested by Siconolfi (1997), Maynard (2002) and Griffith (2004). Further, Ljungqvist and Wilhelm (2003) assert that through directed share programs underpricing enriches friends and family. While, underpricing according to Aggarwal (2003), Fishe (2002) and Krigman, Shaw and Womack (1999) provides favored investors the practice of flipping.

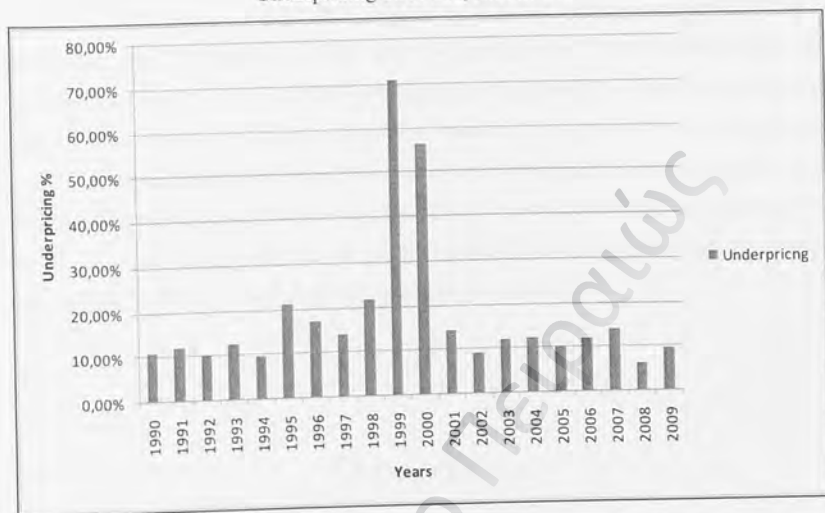
⁸³ See Ljungqvist, A. P., 2006, loc. cit., p. 66.

⁸⁴ See Brau, J. C., and S. E. Fawcett, 2006, loc. cit., p. 414.

⁸⁵ Spinning refers to the practice of the underwriter/investment bank to offer underpriced shares of the issuing company to senior executives of a third party company in exchange for future business with him.

Figure 1.3

Underpricing over the years in U.S.



Source: Ritter, J. R., 2010, Some Facts about the 2009 IPO Market, University of Florida, p. 2.

In the process of going public, underpricing represents a fundamental feature of the IPO market. It is of great importance to understand the reasons, which lead to underpricing, and also to consider it as a mechanism that has ambiguous results for the issuing company. Nevertheless, the issuing company should cooperate and consult the underwriter relied on IPO stable valuations to agree on the underprice level that will not severely affect the long-term performance of the company's stock in the aftermarket.

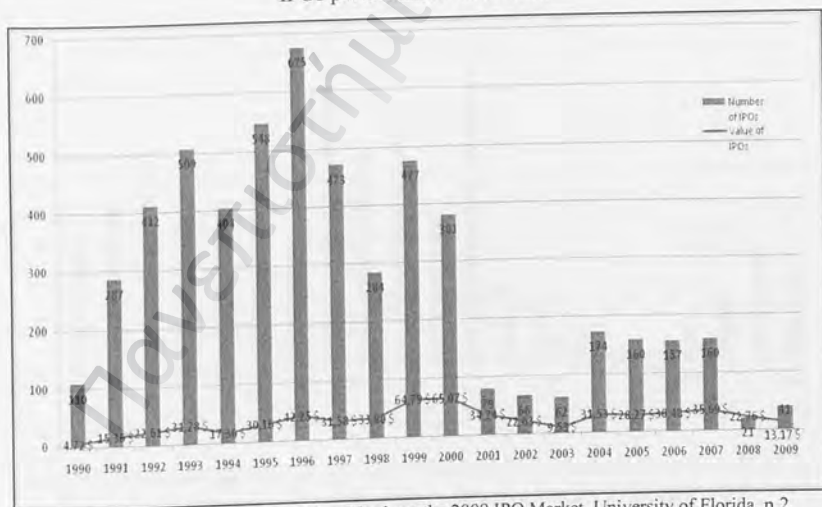
1.8 BRIEF VIEW ON U.S. IPO MARKET ACTIVITY.

In the recent history of the U.S. IPO market, there were at least three major turning points, which indicate the cyclical nature of this market and the effects of global economy, causing the market to change from sellers' to institutional buyers' market (Ghosh, 1990). During the 90s, the demand for high technology or internet IPOs was skyrocketed twice. The year 1996 was considered as the record year of issuing; according

to Ritter (2010) 675 IPOs were issued, raising aggregate \$42.25 billion. The sectors with the highest IPOs were business software, mortgage finance and telecommunications services⁸⁶. Three years later, the IPO market experienced another breakthrough of IPO issues. The total IPOs issued in 1999 was 544, though the money raised reached the highest – until today – amount of \$69.1 billion, marking the year as the “The year of the IPOs”⁸⁷. Nevertheless, the high demand for internet IPOs, which fueled the previous years’ market, dropped due to the overextension of the internet sector and the little earning margin. Hence, in 2000 the collapse of the internet market drew down, as well, the IPO market. The lowest point in the IPO market history was recorded on January 2003, where no IPOs were offered, setting a negative record.

Figure 1.4

IPOs performance since 1990



Source: Ritter, J. R., 2010, Some Facts about the 2009 IPO Market, University of Florida, p.2.

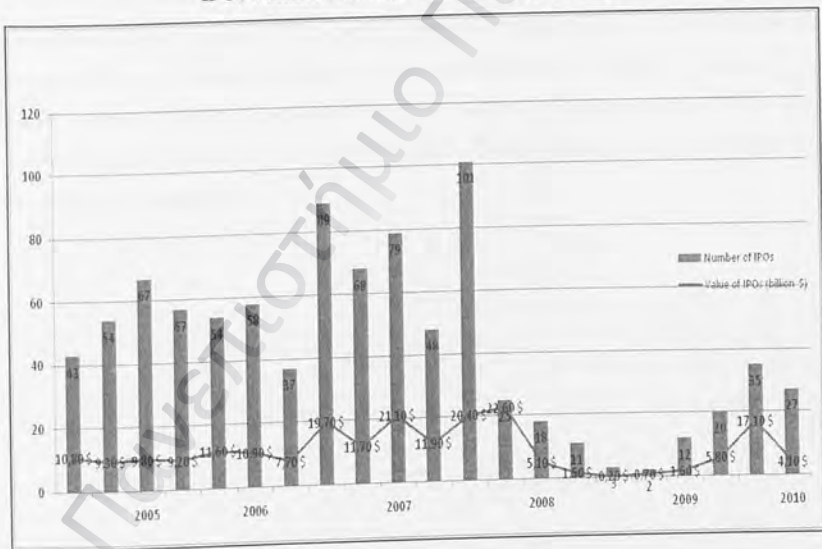
⁸⁶ See Ghosh, A., 2006, The IPO Phenomenon in the 1990s, *The Social Science Journal*, Vol. 43, No. 3, p. 488.

⁸⁷ See idem.

For the period 2004-2007 the IPO market had managed to remain stable with a relatively high issuing activity. As of October 2008, the crisis in the credit markets and the loss of confidence in the capital markets, were enough to deter companies for pursuing an IPO. In 2008, the IPO activity compared to 2007 was dropped significantly, with the exception of the Visa Inc. IPO, which raised \$17.9 billion and being placed as one of the biggest in the world. The last two quarters of 2008, was considered the slowest since 70s. The total number of IPOs issued was 57 with proceeds of \$29.4 billion.

Figure 1.5

IPOs volume and value since 2005 (quarterly)



Source: PricewaterhouseCoopers, 2010, *Executing a successful IPO For companies serious about going public - the time to prepare is now*, p. 3. Updated from PwC internet site, NYSE and NASDAQ.

In the first quarter of 2009 the IPO market resumed the same trend of low activity of the previous year. During the first two quarters only 14 IPOs were issued with an

offering value of \$2.3 billion combined. From the third quarter of 2009 that the markets began to stabilize, there was a rebound of the IPO market, giving signs that the companies' interest for capital from the public equity markets was renewed. The fourth quarter of 2009 was considered as a great recovery; especially if it compared with the fourth quarter of 2007 the difference in offering value is only 16.1% (or \$3.3 billion). Ultimately, 2009 ended with 69 issues and an offering value of \$25.2 billion.

The IPO market in the first quarter of 2010 showed an increase in compare to the same period in the previous two years, promising an upward tendency for the whole year. The number of IPO issued this first quarter is 27, raising \$4.1 billion.

Since 1990 the IPO market experienced many down- and upward tendencies resulting from both the demand and supply sides. Recently, a very interesting observation of the IPO "hot market" phenomenon in respect to the average initial returns has been under consideration by the IPO literature. Lowry and Schwert (2002) find that there is a positive relation between the information learned during the registration period and the future volume of IPOs. Nevertheless, the IPO market is influenced by a rather large number of factors that are more related to the economic situation, the underwriters and the available information.

2.1 CORPORATE PLANNING AND THE IPO PROCESS.

It has already been argued that a private company undergoing a public transformation via an IPO has to make crucial decisions in a short time period with great implications to its future operation. Further, it is stressed that a firm aiming at equity markets should start operating as a public one for a reasonable amount of time⁸⁸ before the anticipated issuing date. Elaborating on this, the firm's management should, in due course, introduce a central plan, which will utilize the intrinsic firm's characteristics to achieve the desired objective. By employing a corporate planning system, the firm adopts changes regarding the organization structure, the top management team operation and the monitoring, auditing and decision making processes, which will contribute in increasing firm's value and performance while meeting its own particular needs and goals.

Corporate planning, which is a dimension of management, can be considered as "a total approach to running a business"⁸⁹. It includes "the setting of objectives, organizing the work, people, and system to enable those objectives to be attained, motivating through the planning process and through the plans, measuring performance and so controlling process of plan, and developing people through better decision-making, clearer objectives, more involvement, and awareness of progress"⁹⁰.

The incorporation of planning activities as a function of firm's management has been the subject of corporate literature since the 1960s. Corporate planning is long since then well established in the business and academic world. A vast number of studies have flourished, presenting the merits of corporate planning and at the same time examining it in conjunction with the effects on firm's performance.

⁸⁸ That time in certain cases starts at least two years before the IPO procedure, while there are companies established with the solely purpose of becoming a public traded firm. See Table 1.4.

⁸⁹ See Hussey, D., 1974, *Corporate planning: Theory and Practice*, Pergamon Press: Oxford, pp. 24-26.

⁹⁰ See Drucker, P. F., 1955, *The practice of management*, Heinemann. Cited also by *ibid.*, p. 5.

There are many reasons why corporate planning constitutes such a necessity to companies, when one takes into account the benefits arising from it. By applying a corporate plan, the firm can primarily make assessments on its strengths and weaknesses, as well as identify and turn to advantage opportunities that otherwise would have been overlooked. In addition, planning improves the communication among agents, which in certain cases reflects a great cost to all stakeholders. Agency theory sets forth that a conflict of interest between corporate insiders (e.g. managers, controlling shareholders) and outside investors (e.g. minority shareholders) exists⁹¹, though impacting not on corporate best interests, because insiders in dispersed corporations have a tendency to use corporate assets with detrimental effects on the outsiders.

With corporate planning certain organizational challenges can be overcome. Thus, planning can constitute the main reason for organizational changes. The contribution of corporate planning to the firm can be viewed by real and tangible results, indicating that firms using planning activities can sustain both growth and profitability. Moreover, the attainment of the certain objectives presumes clarity of purpose as well as actions, which a corporate plan facilitates in appointing. However, the most essential benefit of corporate planning is the enhancement of co-ordination and decision-making processes. The success of corporate planning is reflected to the immediate effects of the decision-making. Decisions concerning tough issues such as the type of funding or investment, determine the course of the business activity. Nonetheless, corporate planning does not mean that a company will never make a bad decision. Essentially, corporate planning is giving upper echelon the best available option by eliminating worst alternatives.

The key element that makes a corporate plan more successful and more relative to the firm's context is strategy. Further, the part of planning regarding the decision-making, the assessment of the firm's position and the determination of long-term direction is undoubtedly a strategic process. Hence, in recent corporate finance literature the term strategic management has been the prevalent term expressing the conditions and means that must be fulfilled and employed accordingly to raise the firm's value. Specifically,

⁹¹See La Porta, R., Lopez-De-Silanes, F., Shleifer, A., and R. W. Vishny, 2000, Agency Problems and Dividend Policies Around the World, *The Journal of Finance*, Vol. 55, No. 1, p. 3.

strategic management can be defined as “a set of managerial decisions and actions that determines the long-run performance of a corporation”⁹². It involves the use of a number of models, which monitor and analyze both the internal and external factors (resources and environment) of the firm, and facilitate in defining the actions to accomplish the plan.

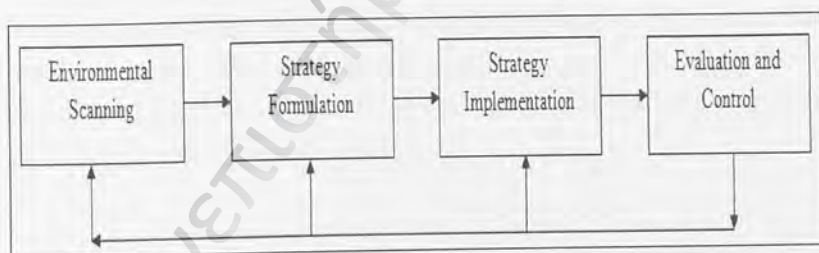
The implementation of strategic management is based in four broad “pillars”⁹³:

- Firm and environmental analysis
- Strategy formulation
- Strategy implementation
- Evaluation, control and review

By covering each of the above fields, the firm can formulate a plan that corresponds to its particular strengths and weaknesses, position and the market conditions. Figure 2.1 illustrates how the above elements interact.

Figure 2.1

Elements of the strategic management process



Source: Wheelen, T. L., and J. D. Hunger, 2006, *Strategic Management and Business Policy: Concepts and Cases*, 10th edition, Upper Saddle River, New Jersey: Pearson Prentice Hall., p. 11.

Under each step of strategic management planning stands a certain activity or condition or even another analytical model. More precisely, for the first step, the firm and

⁹² See Wheelen, T. L., and J. D. Hunger, 2006, *Strategic Management and Business Policy: Concepts and Cases*, 10th edition, Upper Saddle River, New Jersey: Pearson Prentice Hall, pp. 3-5.

⁹³ See Wheelen, T. L., and J. D. Hunger, 2006, op. cit., pp. 10-13.

environment analysis, a SWOT analysis⁹⁴ is employed. Next, under the title strategy formulation, the mission, the objectives, the strategies and policies are described. The step regarding the strategy implementation is inextricably linked with programs, budgets and procedures. Lastly, the step of evaluation, control and review is related to the monitoring of the firm's performance and the reassessment procedures.

Before formulating a strategy it is of great importance for the company to set the organization's mission⁹⁵ and objectives. Many corporations define their mission broadly, such as "[to] serve the best interests of shareholders, customers and employees". This statement communicates the public image of the company to investors, shareholders and other stakeholders. Thus, it serves as a statement of the current position of the firm and its outlook for the future⁹⁶. The objectives of the company are the quantified results of the corporation's mission achievement⁹⁷. For instance, "the increase of firm's profitability for the next year by 20%" is a common objective for many companies. Nevertheless, objectives can also be non-financial, which can help avoiding the shortsightedness of a strictly financial approach of objectives.

Another essential element that should also be considered before planning is the stakeholder analysis. Any change in the operation of the company affects shareholders, customers, suppliers, lenders and others. The stakeholder analysis's purpose is to identify any conflicting expectations of different stakeholders, their power and influence, and help prioritizing and resolving them by negotiation.

⁹⁴ SWOT is an acronym for Strength, Weakness, Opportunities and Threats.

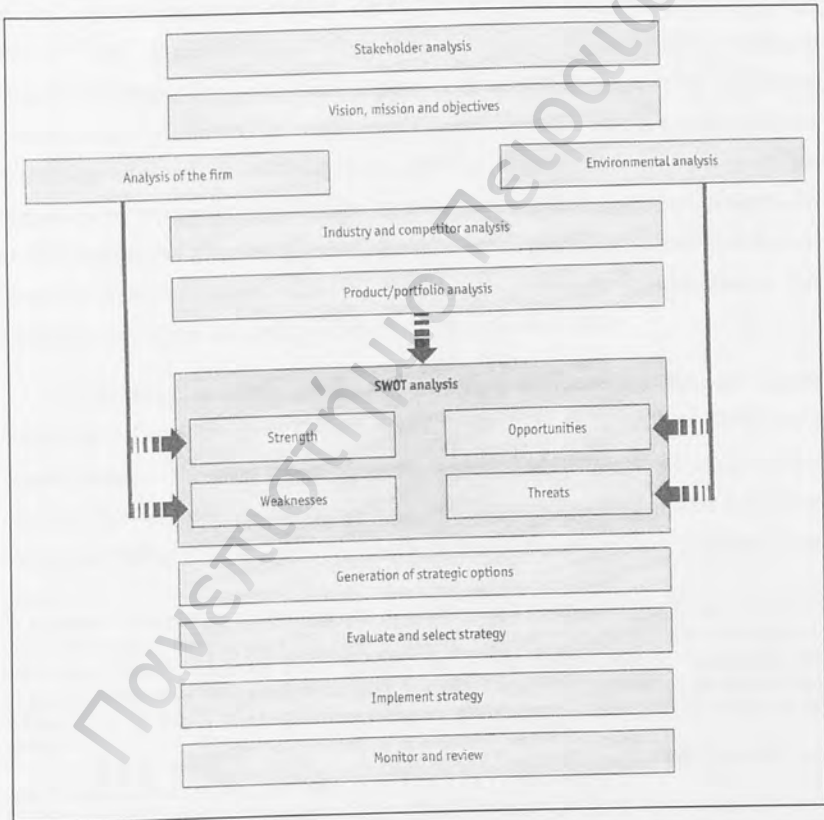
⁹⁵ In many studies, there is a distinction between vision and mission. The first defines the state of the organization and also provides its broad direction. While, the mission explains how the vision is to be achieved. See Friend G., and S. Zehle, 2004, *Guide to Business Planning*, London: The Economist in association with Profile Books, pp. 27-29. In this study, the use of the term "mission" includes both vision and mission.

⁹⁶ See Wheelen, T. L., and J. D. Hunger, 2006, op. cit., p. 13.

⁹⁷ An optimal method to set the objectives is by considering the following points: to be specific, measurable, achievable within the stated time frame, relevant in the context of the vision (or mission) and to be time bounded. In other words, objectives should be SMART. See Friend G., and S. Zehle, 2004, op. cit., pp. 27-29.

A comprehensive view on the planning process is presented in figure 2.2. The illustrated strategic planning process utilizes a number of analyses in connection with the external and internal factors.

Figure 2.2
The strategic planning process



Source: Friend G., and S. Zehle, 2004, *Guide to Business Planning*, London: The Economist in association with Profile Books, p. 26.

Consistent with the mission and the objectives of the company while formulating the strategy is the overall organization structure. The structure of the company can be a source of competitive advantage⁹⁸ and also a decisive factor for the performance of the firm. By paraphrasing Fama and Jensen (1983), it can be noted that the scope and complexity of the production process of a firm determines the way it is organized⁹⁹. The firm's organizational structure reveals the chain of command, the responsibilities and powers of each department, the lines of reporting and information flow, the span of control and the employee numbers. Further, according to the "structural contingency theory"¹⁰⁰ an organization should adapt to environmental contingencies by altering its structure to remain "fit"¹⁰¹. Listed companies and going public companies as well have to develop codes of practice and certain governance structures or organizational forms, which respond to institutional forces. Certo (2003) among other researchers suggests that organizational legitimacy is paramount for firm performance and survival. Undertaking an IPO requires the adoption of prevailing practices and procedures, which lead firms to resemble other organizations facing the same set of environmental circumstances. This legitimacy may signal the quality of the firm at the time of the IPO.

Elaborating on public companies' command and structure, they are usually headed by a Chief Executive Officer (CEO), a Chief Financial Officer (CFO) and a general counsel. Of course, depending on the industry and the size of the company there can be a Chief Information Officer (CIO), a Chief Technology Officer (CTO) and a Chief Operations Officer (COO). There are three basic types of organizational structures¹⁰² that

⁹⁸ A source of competitive advantage can be found when an organization is optimized for a particular business. See Kay, J., 1993, *Foundations of corporate success: How business strategies add value*, Oxford University Press. Further, Ho, C. K., 2005, Corporate Governance and Corporate Competitiveness: An International Analysis, *Corporate Governance: An International Review*, Vol. 13, No. 2, p.211, considers corporate governance a competitive advantage for the company.

⁹⁹ See Fama, E. F., and M. C. Jensen, 1983, Separation of Ownership and Control, *Journal of Law and Economics*, Vol. 26, No. 2, p. 302.

¹⁰⁰ The structural contingency theory indicates which structure is required for the organization to operate most effectively by indentifying a set of contingency factors. See Donaldson, L., 1995, *American anti-management theories of organization: A critique of paradigm proliferation*, Cambridge University Press.

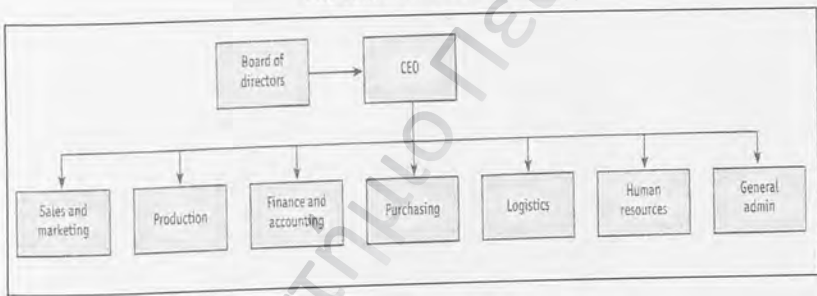
¹⁰¹ See Burton, P., 2000, Antecedents and Consequences of Corporate Governance Structures, *Corporate Governance*, Vol. 8, No. 3, p. 195.

¹⁰² If the simple structure e.g. owner-worker is excluded.

their combinations originate new hybrid structures. The functional structure illustrated in figure 2.3, is a simple structure, which divides the business along the main value chain activities with each reporting to the top management. It is appropriate for medium-sized companies with several product lines in one industry¹⁰³. The advantage of this structure lies in its concentration and specialization in one industry. However, it would be insipid for a company to continue operate under circumstances when it tries to diversify its product.

Figure 2.3

The functional structure



Source: Friend G., and S. Zehle, 2004, *Guide to Business Planning*, London: The Economist in association with Profile Books, p. 139.

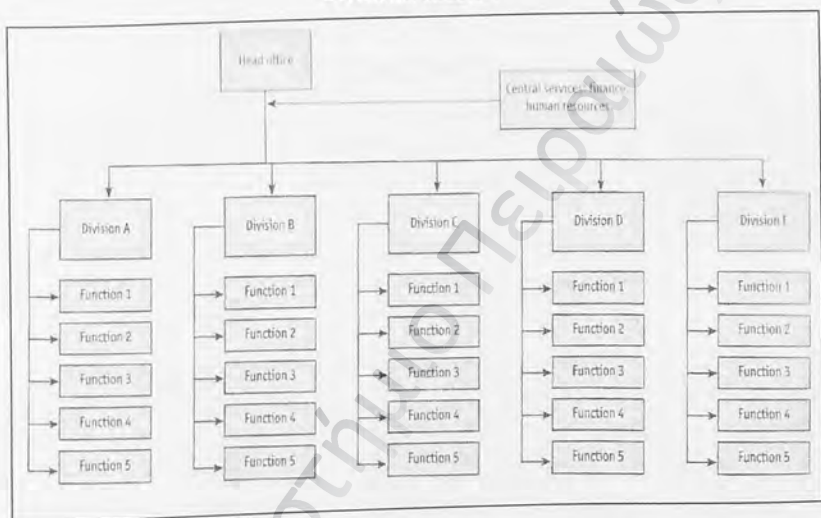
The next type of structure, the divisional, is more complex than the previous, suitable for larger companies. In this organizational structure the divisions represent strategic business units, which can have a great diversity regarding their product or services. From figure 2.4 can be noticed that the support functions (finance, human resources, etc.) are located at head office level. Management uses horizontal linkages in order to find some synergy among each division's activity. Further, this organizational structure has a high level of decentralization. The advantage of this structure is its

¹⁰³ See Wheelen, T. L., and J. D. Hunger, 2006, op. cit., p. 222.

“almost unlimited resources”¹⁰⁴. Whereas, it’s most important disadvantage is that it tends to become inflexible due to its size and complexity.

Figure 2.4

Divisional structure



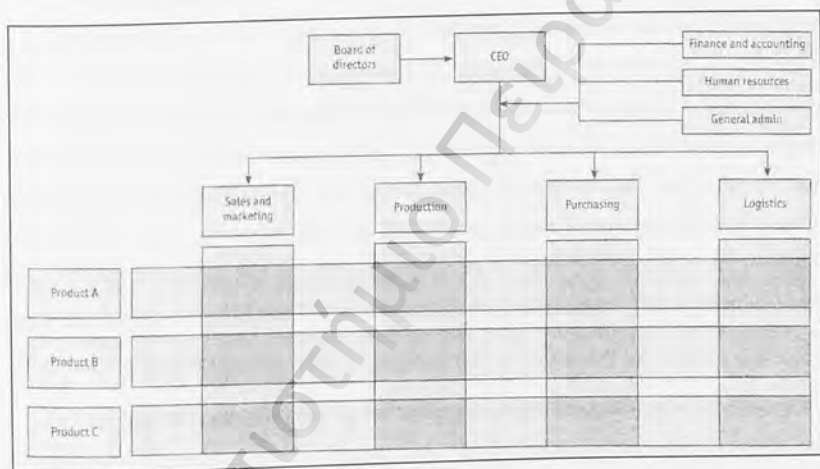
Source: Friend G., and S. Zehle, 2004, *Guide to Business Planning*, London: The Economist in association with Profile Books, p. 140.

The third structure is a combination of elements from the previous two types. The matrix structure is product-oriented with the primary and support functions to be shared among several products. This type of structure is also suitable for large companies, appearing to be complex and highly decentralized as well. Matrix structure is illustrated in figure 2.5. This structure was developed to combine the stability of the functional structure with the flexibility of the product form (Wheelen and Hunger, 2006). Additionally, this structure is considered very useful when the external environment exhibits high complexity and uncertainty level. However, it has like every other structure

¹⁰⁴ See *ibid.*, p. 223.

certain downsides. It produces conflicts regarding duties, authority and resource allocation between functional and divisional managers, leading to battles for power. Avoiding such conflicts can be managed by setting specific goals and introducing new practical and comprehensible technologies.

Figure 2.5
Matrix structure



Source: Friend G., and S. Zehle, 2004, *Guide to Business Planning*, London: The Economist in association with Profile Books, p. 140.

The organizational structure of a company is an essential factor for the preparation of an IPO and the thereafter performance of the firm. In addition, considering the Sarbanes-Oxley Act of 2002 provisions that require transparency and the establishment of a system of financial controls, monitoring frequently the firm's operation¹⁰⁵, the proper definition of the organizational structure can alleviate agency conflicts and enhance control and auditing processes. Further, management's

¹⁰⁵ See Johnston, J., and J. Madura, 2009, The Pricing of IPOs Post-Sarbanes-Oxley, *The Financial Review*, Vol. 44, No. 2, p. 293.

responsibilities, accountability and power stem from organizational structure. Consequently, top management position in the firm can influence the strategic process.

The strategic planning process sets the CEO as "the key strategy maker"¹⁰⁶, who is responsible for conceiving and imposing the implementation of the strategic plan to the organization¹⁰⁷. However, assessing the corporation's internal and external environment, setting long- or medium- term objectives and formulating the appropriate strategies in view of objectives requires the participation of top management.

Top management uses a variety of product/portfolio analysis tools, which allow them to determine how the company should operate regarding the market's conditions and its resources. The most commonly used analysis is the analysis of strengths, weaknesses, opportunities and threats (SWOT) (in Figure 2.6), which brings together three separate types of analysis, namely, firm analysis (internal), environmental analysis (external) and portfolio analysis. The main benefit of SWOT analysis lies in the fact that management attains an overview of the firm in the context of opportunities and threats. Further, SWOT analysis has the advantage that can be done quickly and it can be easily understood and communicated. It can stimulate managers to discuss and to think in a way that is not too restrictive.

The SWOT analysis aims in "revealing" to the company how to sustain its competitive advantages, using two approaches. The first is regarding to the strengths and weaknesses, which can be highlighted by the firm analysis. Therefore, evaluation elements like VRIO¹⁰⁸, resource audit, value chain and others are employed. Strengths can be important only if they can be used to pursuit an opportunity or counter a threat. In a similar way the identification of a weakness can be done, considering whether or not it is related to a threat. The second approach refers to the opportunities and threats that the environment in which the company operates, contains. To this end, the environmental

¹⁰⁶ See Andersen, T. J., 2000, Strategic Planning, Autonomous Actions and Corporate Performance, *Long Range Planning*, Vol. 33, No. 2, p. 186.

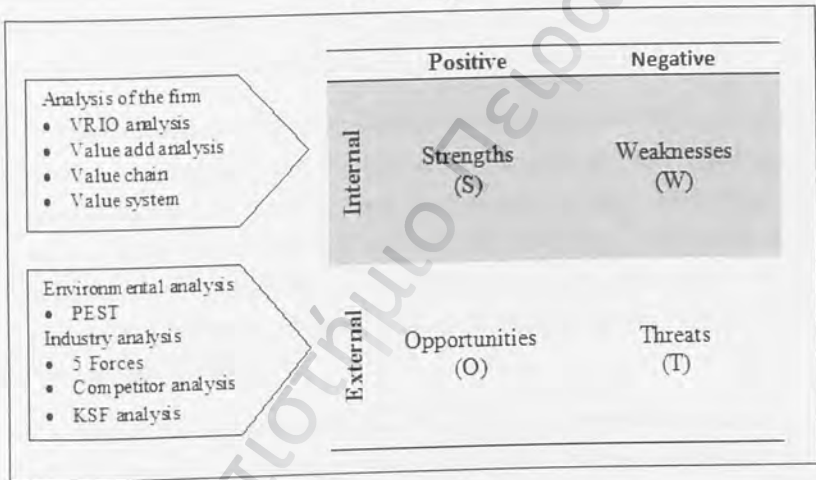
¹⁰⁷ See idem.

¹⁰⁸ The acronym VRIO stands for Valuable, Rare Imitable and Organization. For more information on VRIO analysis see Friend G., and S. Zehle, 2004, op. cit., p. 43.

analysis involves a PEST analysis¹⁰⁹ combined with the industry and competitor analyses such as the Porter's five forces, the competitor and KSF analysis and others. Opportunities and threats are closely related with the changes in the environment and should be considered in the context of strengths and weaknesses.

Figure 2.6

SWOT analysis



Source: Friend G., and S. Zehle, 2004, *Guide to Business Planning*, London: The Economist in association with Profile Books, p. 86.

By employing such analysis the top management obtains a total perspective of the issues affecting the firm and the market, and a basis in order to develop their strategies, while the planning process becomes more realistic and plausible. Lastly, SWOT analysis seems to be helpful enough in cases of equity financing by considering additional factors such as the allocation of new shares and its implication for the ownership and control, the equity market conditions (timing), the alternative types of equity, and the firm's

¹⁰⁹ PEST stands for the evaluation of Political, Economical, Social and Technological factors. See Friend G., and S. Zehle, 2004, op. cit., pp. 32-35.

resources. It is essential for a financial plan of a company contemplating an IPO to include a SWOT analysis, which will facilitate the adjustment of the company in the new environment by setting forth its competitive advantages.

2.1.1 PLANNING GUIDANCE FOR AN IPO.

An IPO is a very intense and time consuming process, which requires the maximum commitment of the firm's management. However, the planning process of the "going public" firm commences with the necessary adjustments on management, the introduction of new committees, and the enhancement of the operation standards.

The first concern of an issuing company is the development of "an impressive and professional management team"¹¹⁰, because it will send the right signals to the prospective underwriters. It is self-evident that a capable CEO and/or CFO will be more useful during the meetings with the analysts of the underwriters, allowing the smooth operation of the firm. Additionally, the firm should have a strong management team with experienced key employees. Therefore, a management evaluation before setting course to IPO would be well-advised.

Further changes introduced for the IPO process can be applied at organizational level. The company should incorporate in its structure auditing and remuneration committees, composed from independent directors. The audit committee should include persons that understand the company's accounting, and be able to hire independent auditors and determine their compensation while approving all the services performed by them. The independence of this committee is essential for the function of the financial reporting processes. The remuneration committee is responsible for overseeing the company's overall compensation structure, policies and programs. It recommends to independent directors the level of compensation for the CEO and the senior management. In addition the company should develop compensation packages in order to attract, retain

¹¹⁰ Lipman, F. D., 2009, *International and U.S. IPO Planning: A Business Strategy Guide*, Hoboken, New Jersey: John Wiley and Sons Inc, p. 33.

or motivate its key employees. In other words compensation packages are used as a mean to keep the interests of management in line with the shareholders¹¹¹.

Before going public, the firm should develop a strategy based on the maximization of earnings. Investors are interested in a firm that could maintain a high level of earnings in the post-IPO period. The firm should show earnings for at least two or three fiscal years prior of the IPO effective date. In addition, a firm which shows high earnings level has access to more underwriters and can reduce the percentage of the company sold in the IPO.

Lastly, the issuing firm should upgrade its internal accounting system so that can satisfy the extensive disclosure and control requirements of S.E.C. In many cases, IPOs are delayed, because of the inability of the firm to provide audited financial statements with the use of IPO-acceptable accounting principles.

Letting aside the legislative and financial requirements of an IPO, the most important element that must be satisfied by the issuing firm is the assurance of the management quality. The top management capabilities are determinant of the performance of the firm in the pre- and post- IPO period.

2.2 MANAGEMENT QUALITY AND IPO PERFORMANCE.

A common practice and concern as well among private firms¹¹² preparing for an IPO is the restructuring of the top management team in order to convince potential investors of the firm's quality (Hellmann and Puri, 2002; Higgins and Gulati, 2006). A skillful and experienced with IPO management team can credibly convey the firm's value to outsiders and at the same time reduce the informational asymmetry that the firm faces in the equity market (Chemmanur and Paeglis, 2005). Further, Higgins and Gulati (2006) assert that the top management's structure influences the investor's decisions.

¹¹¹ Compensation packages may include equity incentives like stock options, stock appreciation rights, restricted stock bonus or even phantom stock plans.

¹¹² Particularly, concerns firms that are backed by venture capitalists.

Nevertheless, the factors that lead to the restructuring of top management during the pre-IPO period, affecting its quality and reputation must be equally considered. Li (2008) found that the top management team tenure, the top management founder percentage and its functional heterogeneity are three major factors determining the management restructuring in the pre-IPO stage. Li's empirical research, which is in contrast with agency theory (Jensen and Meckling, 1976), shows that the three aforementioned management characteristics are all negatively associated with the extent of pre-IPO management restructuring. Moreover, the results regarding the top management tenure showed that long-tenured teams have a high level of structural and expert power within the pre-IPO firm, lowering the risk of restructuring. The level of founder ownership in the management team is negative associated with management restructuring due to the fact that certain central positions are assumed by the founders. Thus, they provide a unique "firm-specific knowledge" to the firm. The third attribute of the management team, the heterogeneity, is desirable for a firm going public, because a functional heterogeneous team is more likely to address the new problems arising from this process. Additionally, Li (2008) stresses that the effects of the three management team characteristics on the firm depend on the operation context of the firm and its growth rate. This study offers a different perspective on the elements that drive firms to change their management structure. Altering the structure of management may entail great implications to its quality.

In context of strategic planning, the relationship between the quality and reputation of the issuing firm's management and its performance comes to fore. The impact of top management team on the IPO performance is considered as a "grey issue" for the academic literature.

A very interesting research worthy of remark concerning management's quality and IPO performance belongs to Chemmanur and Paeglis (2005). They examine the relationship between the quality and reputation of the firm's management and various aspects of the pre- and post- IPO performance, reaching an interesting conclusion in respect to the size of IPO, the underwriters' and investors' reputation, the underpricing and the post IPO firm performance. Chemmanur and Paeglis (2005) found that firms with

better and more reputable managers have larger IPO offer sizes. Further, they note that firms of higher management quality and reputation are more likely to associate with more reputable underwriters (also positive relationship). Furthermore, they document a negative relationship between the quality and reputation of the firm's management and the level of underpricing in its IPO, as a consequence of the reduction of information asymmetry (Rock, 1986). Thus, this reduction can be further associated with the one in outsider's evaluation cost. The underwriting expenses as well are negatively related to management quality and reputation¹¹³. Additionally, a firm with high management quality can attract more institutional investors, which is also consistent with the underwriters' reputation. The last relationship that Chemmanur and Paeglis (2005) document is among management quality and reputation and the post-IPO long-term stock returns, which they found to be positive and consistent with the notion that the heterogeneous expectations among investors in an environment of costly short-selling is the main cause of long-term underperformance of IPOs.

The management quality and reputation are important elements of the transition to public ownership and therefore requires special attention. The planning of an IPO should commence with the management restructuring, because of the profound benefits that it has on the underwriter selection, the IPO marketing and the latter performance of the firm.

2.3 MANAGEMENT AND HOSTILE TAKEOVER DEFENSES OF IPO FIRMS.

Hostile¹¹⁴ takeovers have long been a salient feature of the corporate world, which may occur "when managers have not been willing or able to maximize the profit potential of

¹¹³ This relationship is consistent with the notion that the costs to acquire and transmit to market information incurred by the underwriters will be lower for firms with higher management quality and reputation. See Chemmanur, T. J., and I. Paeglis, 2005, Management Quality, Certification, and Initial Public Offerings, *Journal of Financial Economics*, Vol. 76, No. 2, p. 366.

¹¹⁴ "Hostile" refers to the fact that there has been an invitation by a potential purchaser to the shareholders to accept the offer whether the board has made any recommendation or not.

the resources under their control¹¹⁵. Management's performance is highly interdependent with firm's performance and profitability and therefore may constitute a prime reason for such situation. Nevertheless, management alone cannot be responsible for the firm's underperformance. Characteristics of corporate governance such as the composition of board of directors, the equity ownership of insiders and outsiders as well as poor corporate performance can also constitute reasons for a potential hostile takeover¹¹⁶. When a hostile takeover takes place, a third company acquires the underperforming firm, initiating a series of changes in all respects. Hostile takeovers differ from other takeovers, which can be used from managerial side to keep the managers interests in alignment with the shareholders' and have the approval of the board of directors. However, the danger of a raider gaining control over the firm from uncoordinated shareholders is still present.

In the 1980s a phenomenal volume of hostile takeovers was recorded, reaching its climax in 1988-1989. Since then, hostile takeover activity has been decreased, due to the measures (antitakeover laws) taken by states and, more significantly, the adoption of takeover defenses by the firms. Takeover defenses take many forms and can be integrated in the corporate charter or introduced by managers' practices. Further, takeover defenses can be divided into two groups, those which make it difficult for the raider to acquire control and those which aim in diluting raider's equity.

Every company, private or public is in need of a defense policy against hostile takeovers. Especially, according to Easterbrook and Fischel (1991), those firms that go public, because they are "in easy to acquire form". Consequently, the viability of such firms depends on the antitakeover measures that they deploy and on the time as well that they are deployed¹¹⁷.

¹¹⁵ See Ehrhardt, M. C., and E. F. Brigham, 2009, *Corporate Finance: A Focused Approach*, 3rd Ed., Cengage Learning Publishing, p. 454.

¹¹⁶ See Shivdasani, A., 1993, Board Composition, Ownership Structure, and Hostile Takeovers, *Journal of Accounting and Economics*, Vol. 16, No. 1-3, pp. 168-169 and Weisbach, M. S., 1993, Corporate Governance and Hostile Takeovers, *Journal of Accounting and Economics*, Vol. 16, No. 1-3, pp. 200-201.

¹¹⁷ Takeover defenses can be deployed either during the IPO or after the IPO. Easterbrook, F. H., and D. R. Fischel, 1991, *The Economic Structure of Corporate Law*, Cambridge: Harvard

The most known takeover defenses appropriate for companies that are amidst an IPO are the staggered boards, the supermajority voting provision, the fair price clauses, the poison pills and the most controversial defense of all the greenmail¹¹⁸. Specifically, a staggered board defense is a provision in the corporate charter, which concedes the right of reelection in a given year only to a fraction of members rather than all directors, so that the acquirement of full control by a successful raider can take more time¹¹⁹. The next commonly used defense is the supermajority voting provision, which force the raider to acquire 80 or 90% of the votes in order to effect a merger or another significant corporate reorganization¹²⁰. The fair price clauses are provisions that force the acquirer to offer a premium for all shares by imposing a very stringent supermajority clause, unless a higher¹²¹ and uniform price is offered for all shares¹²². The poison pill practice also known as shareholder rights provision, gives the shareholders the right to buy a specified number of shares in their company at a very low price if a specified percentage of the firm's stock is acquired by a raider¹²³. The last commonly used defense practice is the greenmail or targeted block stock repurchases. The management uses the corporate money to purchase at a premium the raider's block of the target's stock¹²⁴. Greenmail is considered as controversial, because the management and the raider collude at the expense of the shareholders.

Field and Karpoff (2002) argue that firms deploy their takeover defenses when they go public by selecting longer term defensive postures. Further, they argue that IPO managers use takeover defenses, because they "seem to care about control issues". Field and Karpoff (2002) support the view of Brennan and Franks (1997), stressing that managers try to ensure the continuation of their personal control benefits during the IPO,

University Press, argue that managers acquire their takeover defenses after the IPO, because they lower the firm value.

¹¹⁸ Few other takeover defenses are the differential voting rights, the dual-class recapitalizations, the scorched-earth policies, litigation practices and the white knight practice. For more information, see Tirole, J., 2006, *The Theory of Corporate Finance*, New Jersey: Princeton University Press, pp. 425-442.

¹¹⁹ See Tirole, J., 2006, op. cit., p. 45-47.

¹²⁰ See idem.

¹²¹ "High" means that the bid must be higher than the highest share price of the preceding year.

¹²² See idem.

¹²³ See Ehrhardt, M. C., and E. F. Brigham, 2009, op. cit., p. 455.

¹²⁴ See Tirole, J., 2006, op. cit., p. 45-47.

insulating themselves from the market. Moreover, in their research Field and Karpoff find that the probability for an IPO firm to have a takeover defense is positively related to managers' compensation whilst being negatively related to managerial ownership and measures of monitoring from non-managerial shareholders. Additionally, they point that the likelihood of a takeover defense depends on the benefits that managers have from their positions. Managers also appear to shift the cost of takeover defenses on non-managerial shareholders, if that is possible.

The protection of IPO firms against hostile takeovers brings into light an issue that is related to the agency theory and the governance of the firm. The separation of management and ownership can be considered as an additional cost to the firm. The study of corporate governance structure can help to understand how these agency costs arise and how they can be mitigated.

Corporate Governance and the Initial Public Offerings

3.1 CORPORATE GOVERNANCE AND ISSUING COMPANIES.

The recent financial crisis has brought once again¹²⁵ the issue of “good” corporate governance back to centre stage. Public and private companies recognize even more the contribution of corporate governance to their financial performance and realize the necessity for this aspect of value-based management¹²⁶ regarding their decision making, the managerial accountability and the access to external funds.

Corporate governance is related to the “the ways in which the suppliers of finance to corporations assure themselves of getting a return on their investment”¹²⁷. It refers to the set of rules and procedures used to motivate the corporation’s insiders (e.g. managers) to return funds to outside investors (shareholders), maximizing the wealth of the latter and therefore attracting external financing. Nevertheless, this definition reflects a narrow economic view of corporate governance, which is limited to the investors’ interest. “Employees, communities, suppliers, or customers also have a vested interest”¹²⁸ in the performance of the company, and their concern as “stakeholders” should be taken into account. A concise and thorough definition of corporate governance is given by Ho (2005), describing it as “the structure and processes among the board of directors, shareholders, top management and other stakeholders, and involves the roles of the stewardship process and exercising strategic leadership, and the objectives of assuring accountability and improving performance”¹²⁹.

¹²⁵ The economic events in Asian markets in 1998, the dotcom bubble in 2001 and 2002 and the accounting scandals responsible for poor performance of companies had previously revealed many shortcomings in the governance of companies.

¹²⁶ Value-based management refers to “the systematic use of corporate valuation model to evaluate a company’s potential decisions”, see Ehrhardt, M. C., and E. F. Brigham, 2009, op. cit., p. 463.

¹²⁷ See Shleifer, A., and R. W. Vishny, 1997, A Survey of Corporate Governance, *Journal of Finance*, Vol. 52, No.2, p. 737.

¹²⁸ See Tirole, J., 2006, op. cit., p. 16.

¹²⁹ See Ho, C. K., 2005, Corporate Governance and Corporate Competitiveness: An International Analysis, *Corporate Governance: An International Review*, Vol. 13, No. 2, p. 212.

In essence, corporate governance is a mechanism, which separates ownership and control¹³⁰ of the corporation. The separation of those two main functions has led the corporate insiders (e.g. managers) to misbehavior, and has brought conflicts with the shareholders under the assumption that "corporate insiders need not to act in the best interests of the providers of the funds"¹³¹. This problem of corporate governance is known as the "agency problem" or "moral hazard" and has many guises such as a) insufficient effort, b) extravagant investments, c) entrenchment strategies and d) self-dealing¹³². Therefore, shareholders in order to make sure that the management is working in their best interest make use of two mechanisms: the "threat of replacing"¹³³ and the "compensation", which are similar to the "stick and carrot" method. These two mechanisms link the performance of the company with compensation contracts, mitigating the tendency of managers to maximize their own "satisfaction". Nevertheless, motivation of management with such incentives should be carefully planned and used, due to the fact that they can make management behave "myopically", by sacrificing the long-term performance over the short-term. Additional, control mechanisms that have been devised to mitigate conflicts, include board structures, antitakeover provisions, ownership structures, and takeovers.

However, it is important to underline that the dysfunction of corporate governance is not related exclusively on the managerial behavior. There are additional factors in terms of practices and procedures in the company that have a profound impact in its governance. The lack of transparency exacerbates the relationship of investors and management, because the former are imperfectly informed about the compensation of the latter. Further, the limited transparency of managerial stock options is also a conflict point¹³⁴. Moreover, the compensation packages such as salary and bonuses of the top management can reach very so high levels that can no longer be considered as performance incentives. A prime example of such practices is the "golden parachute" provision. The link between performance and compensation is important in aspect of

¹³⁰ Or management and finance accordingly.

¹³¹ See Tirole, J., 2006, op. cit., p. 16-17.

¹³² See idem.

¹³³ Shareholders may attempt or threat management with a friendly takeover.

¹³⁴ For more information see Tirole, J., 2006, op. cit., p. 18.

promoting the investors best interests. Lastly, another practice that causes corporate governance to dysfunction is the accounting manipulation, which can inflate the performance of a company. The “creative” accounting serves a number of purposes, mainly related to the achievement of performance goals or the concealment of poor performance. However, it is worthy to note that these manipulations are committed in order to avoid violating bank covenants, and to enable the financing continuation.

“Good” or “best practices of” corporate governance should be “viewed as an essential mechanism which will safeguard the company’s assets, maintain and enhance investor confidence, provide greater access to funds and reduce potential risks associated with fraud”¹³⁵. In addition, it should protect the interests of the owners and reconcile them with those of management and other stakeholders through the appropriate board structure and processes¹³⁶. The assurance of good corporate governance practices has been among the priorities of states with developed economies. Laws and guidelines are established by governments that regulate the function –mostly- of public companies, aiming to the protection of the investors.

The Sarbanes-Oxley Act of 2002 in the U.S. is typical example of the importance given to this subject, regarding public (and “going public”) companies. The act calls the companies to disclose financial information, to establish a system of financial controls, to monitor and audit their systems. Specifically, the 404 section of the act provides that the company’s top management (CEO and CFO) will provide certifications in periodic filing with S.E.C. regarding the evaluation of the effectiveness of its internal controls over financial reporting¹³⁷. Thus, the act requires a certification that the financial statements are accurate by the CEO and the CFO. The board of directors should be truly independent with at least one of its member to have a financial background and another one to chair the audit committee. Moreover, the establishment of an independent audit committee constituted of at least one financial expert as a member is imperative. The act also

¹³⁵ See “Burton, B., Helliar C. and D. Power, 2004, The Role of Corporate Governance in the IPO Process: A Note, *Corporate Governance: An International Review*, Vol. 12, No.3, p. 353.

¹³⁶ See Ho, C. K., 2005, loc. cit., p. 213.

¹³⁷ For more information, see Section 404 of Sarbanes-Oxley Act 2002 available at <http://www.soxtoolkit.com/> and PricewaterhouseCoopers, 2004, loc. cit., p. 13.

prohibits company's external auditor from providing certain non-audit, including but not limited to services such as internal audit, legal and valuation services. Nevertheless, there are services like tax and general advisory services that can be allowed after the approval of the auditing committee. Specifically, regarding the corporate structure, the act requires that the majority of the board of directors should be composed from independent directors (outsiders)¹³⁸. Lastly, it is required a code of ethics to be implemented by the senior financial officers.

Additional rules on corporate governance are imposed by the stock exchanges, which overlap many of the aforementioned rules. For example U.S. companies listed on NYSE, it is required additionally to have an independent compensation and a nominating/corporate governance committee¹³⁹. Thus, companies must generally obtain shareholder approval in respect to any equity compensation plan.

For a private company that is about to go public, it is self-evident that should make fundamental internal changes to the way it operates. The corporate governance rules and practices imposed have an impact to the dispersion of ownership, affecting the structure of the company, to the size, role and the liabilities of the board of directors, and add a number of committees that establish internal controls and communication procedures. Hence, the companies contemplating an IPO change the corporate governance model to this new environment.

There is a wide range of corporate governance models in the world, each serving a different purpose and offering distinctive competitive advantages; U.S. companies employ a liberal approach of corporate governance. The U.S. corporate governance model provides that the corporation is governed by a board of directors, which chooses the chief executive officer (CEO). The CEO is responsible for managing the corporation with the permission of the board. In the liberal model, however, the board is the main instrument of company, which on behalf of the shareholders monitors the company's performance, defines the corporate strategy, and approves major business decisions.

¹³⁸ Companies qualified as control companies (e.g. the Japanese "keiretsu") are exempted from this requirement.

¹³⁹ This committee is responsible for nominating candidates (e.g. directors) for office in the organization.

Corporate performance has been closely related by theoretical and empirical studies with corporate governance on different levels, though the results do not lead to a solid conclusion. The inconclusive evidences, which are related to various aspects of the relationship between corporate governance and performance, can be rendered to the fact that corporate governance variables are endogenous. Subjective factors, such as management, affect different processes that take place inside the firm and, therefore, change its performance. For example, firm's performance can be presumed as a result of a decision made by the directors, as well as a factor that potentially affects the choice of directors. Consequently, the way of approaching the corporate governance variables can have an impact on the evidence.

3.2 CORPORATE GOVERNANCE STRUCTURE, PERFORMANCE AND VALUE OF IPO FIRMS.

Aspects of corporate governance have been linked by many studies¹⁴⁰ with a number of issues related to the evaluation of the firm. The consideration that corporate governance correlates with the value of a firm as well as its performance is consistent with the theory of going public. Barney (2001) stresses that broad corporate governance factors may be a source of competitive advantage. Companies that issue shares via an IPO experience a major change in their corporate governance mechanisms, particularly regarding their internal mechanisms. Field and Sheehan (2004) note that a firm doing an IPO is in the best position to determine their ownership structure. During the time of the IPO as well as afterwards¹⁴¹, the changes in corporate governance mechanisms can either be a) on board of directors structure, size (Yermack, 1996), composition and leadership structure (Jensen, 1993), and/or b) on ownership structure (type of ownership and variation of

¹⁴⁰ See e.g. Burton et al., 2004; Bruton et al., 2010; Balatbat et al., 2004; Boulton et al., 2010; Price et al., 2011.

¹⁴¹ Depending on the research approach, the relationship between IPO performance and corporate governance mechanisms can be two fold. It can be either static (at the time of the IPO or short-term performance) or dynamic (for long-term performance), see Gürünlü, M., 2008, *The Effects of Corporate Governance Mechanisms on Post-IPO Performance: Empirical Evidence from an Emerging Market, Istanbul Stock Exchange (ISE)*, Working Paper, Maltepe University, p. 4.

ownership¹⁴²) (Chahine, 2004). Nevertheless, it must be underlined that ownership structure is a determinant factor of the firm's value and, consequently, the company should design the sales of new shares with the final ownership structure in mind before the IPO (Mello and Parsons, 1998).

The interrelation between board (structure) characteristics and firm's performance and value sets off by the role that the board of directors must fulfill. The board is considered as the heart of corporate governance. It acts as the central internal control mechanism, monitoring the management on behalf of shareholders. Thus, the quality of monitoring has an impact on firm's performance. Further, from an agency theory perspective, Zald (1969) reiterates the role of board as control mechanism, finding that "we usually think of boards of directors as agents of the "owners". but legally they are servants of the corporation vested with corporate control"¹⁴³. He notices that the establishment of such mechanism sends signals to equity owners and potential owners that their interests are aligned with the management's. Consistent with this observation are Filatotchev and Bishop (2002), arguing that board characteristics may signal outside investors that the company has an efficient corporate governance system. Thus, they underline that in such way the firm can differentiate its IPO from others.

Another interesting interrelation regarding the board size and the firm's performance was expressed by Jensen (1993). Firm's performance can be affected by the number of the board members. Zahra and Pearce (1989) argue that there is a positive relationship between size and effectiveness. They suggest that the larger the board is the more difficult is for the CEO to dominate the board. In other words, a large board secures its independence and avoids a managerial entrenchment. Contrariwise, Yermack (1996) finds a negative relationship between board size and firm value by drawing evidence from a sample of 452 large U.S. firms. Hermalin and Weisbach (2003) argue that larger boards become ineffective due to less participation in the decision making process and more free-riding efforts of directors. In spite of those perspectives, Jensen (1993)

¹⁴²The levels of managerial stock ownership and the extent of block holder stock ownership.

¹⁴³See Zald, M. N., 1969, The power and functions of boards of directors: A theoretical synthesis, *American Journal of Sociology*, Vol. 75, No. 1, pp. 97-111.

suggests that an optimal board size exists, and recommends limiting it to seven or eight members.

The firm performance and value may also be influenced by the composition and the particular characteristics of the board. Agency theory provides that a conflict of interest among ownership and control exists, implying an additional cost. The reduction of such cost can be achieved by appointing executive and non-executive directors in the board¹⁴⁴. The latter are usually appointed by shareholders to monitor and control managers. Fama and Jensen (1983) argue that the firm will avail from the mixed board composition in terms of the competencies and good knowledge of the executive directors and the participation of non-executives in strategic decisions with "relevant complementary knowledge". Baysinger and Butler (1985) found a positive correlation between the proportion of independent directors and the accounting measures of performance. Another positive relationship between firm's performance and board composition has been noticed as well by Rosenstein and Wyatt (1990), when they correlated a small increase in stock price with the addition of an outside director to the board. However, Baysinger and Hoskisson (1990) believe that outside directors intervene on multiple boards, while they may not effectively understand the business. In addition, Hermalin and Weisbach (1991) and Bhagat and Black (2001) argue that a higher percentage of independent directors on the board does not have a significant impact on the accounting measures of firm's performance.

A key attribute of board that can be reflected on firm's value is the equity ownership of its members. Demsetz and Lehn (1985) found that ownership concentration is not associated with the firm performance or value. However, a high concentration of ownership may lead to a lower proportion of outside directors and a unitary leadership structure (Beatty and Zajac, 1994). This conclusion is drawn from the assumption that board members with low equity ownership have the incentive to monitor managers who fail to maximize their wealth. Hence, the relationship between board equity ownership

¹⁴⁴ See Chahine, S., 2004, Corporate Governance and Firm Value for Small and Medium Sized IPOs, *Financial Markets and Portfolio Management*, Vol. 18, No. 2, p. 145.

and the level of firm monitoring is negative¹⁴⁵. Thus, at higher levels of ownership the relationship between firm value and ownership concentration becomes negative, rendered to the management entrenchment (Morck et al., 1988). Additionally, a negative impact of ownership concentration on board independence is noticed by Setia-Atmaja (2009). Closely associated with the high board equity ownership is the concept of the "duality"¹⁴⁶, which may also lead to family interest protection or managerial entrenchment, and may decrease the firm's value. Nevertheless, the separation of chairmanship and CEO role may have positive effects on the firm performance. Rechner and Dalton (1991) found that firms opting for independent leadership have consistently outperformed those that relied upon duality.

Stoughton and Zechner (1998) stress that "ownership structure affects the efficiency of corporate governance and thus the intrinsic value of the firm"¹⁴⁷. The ownership of a firm can mainly take five forms: institutional, individual, corporate, state and family (Gedaljovic and Shapiro, 1998). Moreover, the type of ownership structure in accordance with the type of involvement that satisfies the needs expressed by the ownership determines the role of the governing body¹⁴⁸. Jensen and Meckling (1976) colligate the agency problem and the ownership structure. Relying on the divergence of interest between owner-manager's and shareholders, they point out that it is related to the dispersion of ownership structure. In many public or issuing companies there is a large amount of equity retain by family members. Family ownership and relationships as well in the firm have an effect on its performance. McConaughy, Matthews and Fialko (2001) support the idea that founding family managers have more incentives to improve firm's performance. In addition, they noticed a positive relationship between family ownership and the performance of firms in America. Hence, firms controlled by founding family

¹⁴⁵ See Beatty, R. P., and E. J. Zajac, 1994 Managerial Incentives, Monitoring and Risk Bearing: A Study of Executive Compensation, Ownership and Board Structure in Initial Public Offerings, *Administrative Science Quarterly*, Vol. 39, No. 2, pp. 320-333.

¹⁴⁶ Referring to the situation where one member of the board of directors "wears two hats", that of CEO and chairperson. See Baliga, B. R., Moyer, R. C., and R. S. Rao, 1996, CEO Duality and Firm Performance: What's the fuss?, *Strategic Management Journal*, Vol. 17, No. 1, pp. 41-53.

¹⁴⁷ See Stoughton, N., and J. Zechner, 1998, IPO-Mechanisms, Monitoring and Ownership Structure, *Journal of Financial Economics*, Vol. 49, No. 1, p. 47.

¹⁴⁸ See Giovannini, R., 2010, Corporate Governance, Family Ownership and Performance, *Journal of Management and Governance*, Vol. 14, No. 2, p. 147.

have greater value and can operate more efficiently. In contrast, Shleifer and Vishny (1997) argue that in a firm controlled by family, there may be a tendency to favor family shareholders at expense of public investors. Claessens, Djankov and Lang (2000) agree with Shleifer and Vishny (1997), noting that when a relationship among managers and family shareholders exists, there is a risk of a non-professional managerial approach, attempting to secure the interests of the family.

Related to the value of the firm, there are two more ownership attributes that should be approached: a) the level of equity that belongs to management and b) the blockholder¹⁴⁹ equity. The level of management equity ownership increases the value of the firm by lowering agency costs, because upper management with high percentage of shares in aspect of maximizing its own wealth will align interests with owners/shareholders (Jensen and Meckling, 1976). Aggarwal and Klapper (2003) point out that firms offer Equity Stock Ownership Plans (ESOPs)¹⁵⁰ as an incentive to managers to act more on behalf of shareholders. Notwithstanding, the ESOPs seem to motivate employees only for a limited period, because they sell the stock as soon as they exercise their options¹⁵¹. On the other hand, Stulz (1988) presents a very interesting relationship between firm value and managerial ownership. He describes the above relationship as curvilinear; arguing that the value of a firm may eventually decrease as managers become more dominant in the ownership. In essence, the convergence of interests hypothesis provides that "higher managerial ownership reduces asymmetric information and increases the offer price-to-book and/or the initial return", while the entrenchment hypothesis suggests the opposite¹⁵². However, Gugler (1999) in his study of U.S. and U.K. firms found that the owner-controlled firms outperformed significantly the manager-controlled firms.

¹⁴⁹ According to Aggarwal, R., and L. Klapper, 2003, Ownership Structure and Initial Public Offerings, *Policy Research Working Paper*, Series 3103, The World Bank, p. 9, blockholders are defined as any shareholder owning five percent or more of the stock, though with an upper limit of 10 and 15 percent.

¹⁵⁰ Equity Stock Option Plans or ESOPs are option plans that give stock to key managers and executives of the firm in order to motivate them. For a critique on ESOPs, see Ehrhardt, M. C., and E. F. Brigham, 2009, op. cit., p. 458.

¹⁵¹ See idem.

¹⁵² See Chahine, S., 2004, loc. cit., p. 146.

The blockholder equity as an indicator of firm's value was examined by Mak and Kusnadi (2005). They found that blockholder ownership has a positive effect on firm value in a sample of Singapore and Malaysian firms. This hypothesis was propounded by Shleifer and Vishny (1986), arguing that blockholder ownership increases efficiency as they have more incentive to efficiently monitor managers. It should be stressed also that after the IPO in order to retain high incentives to maximize the firm's value, the ownership concentration of blockholdership, the executive compensation and the board independence are expected to increase (Gürünlü [2008]). Of course, in case of high blockholder ownership it is likely that the incentives of an entrenchment would increase. Lastly, an additional relationship between corporate governance and firm value is tested by Aggarwal and Klapper (2003). Their findings suggest that venture capitalist ownership is positively associated with corporate governance and performance. When venture capitalists are shareholders, according to Baker and Gompers (2003), they provide financial instruments, inside board members as well as other value-added services.

During their preparation to go public, firms realign their ownership and corporate governance structure, which impacts on firm's value and performance¹⁵³. Changes set forth prior to the IPO, affect the proportion and allocation of the shares offered to the public, the marketing process and the underpricing levels, the subsequent ownership and the adjustment of the firm to the new environment.

3.3 IPO UNDERPRICING AND CORPORATE GOVERNANCE STRUCTURE.

In corporate finance, there is a notable interaction between corporate governance structure and the phenomenon of IPO underpricing. Underpricing can be considered as a mechanism to influence the post-IPO ownership structure of the firm. Nevertheless, empirical evidence shows that relationship is not always significant and therefore it is criticized.

¹⁵³ Namely, impacts on the IPO and the long term performance.

There are two fundamental theories that examine the above interaction, belonging to Brennan and Franks (1997), and Stoughton and Zechner (1998). Both studies proceed from a common hypothesis, suggesting that the issuers and underwriters use underpricing to solicit oversubscription and thereby allocate shares to preferred investors, forming their advised ownership structure. However, they use different arguments about the interaction that underpricing has on ownership structure.

Brennan and Franks (1997) suggest that the role of underpricing is to help insiders retain control and reduce the probability of hostile takeovers. They find that the discrimination in the allocation of shares should favor small applicants, because of the non-pecuniary benefits of control. Additionally, they find that "the size of underpricing of is negatively related to the size of large blocks assembled after the IPO, which is consistent with underpricing being an effective mechanism to secure a diffuse outside shareholding"¹⁵⁴.

On contrary, Stoughton and Zechner (1998) found that strategic rationing is positively correlated with underpricing¹⁵⁵. Further, they argue that "underpricing and rationing in favor of large shareholders" (large investors) "lead to a higher intrinsic value of the firm which more than offsets the amount of underpricing"¹⁵⁶. Alternatively, the reason why large investors were preferred rests on the fact that in a concentrated ownership structure they have incentives to monitor the managers and help maximize the firm's value. In addition, they argue that their model is applicable where control issues are of lesser importance and where the benefit-to-cost ratio of monitoring is high. The following table 3.1 shows the different arguments of the above theories.

¹⁵⁴ See Brennan, M. J., and J. Franks, 1997, Underpricing, Ownership and Control in Initial Public Offerings of Equity Securities in the U.K., *Journal of Financial Economics*, Vol. 45, No. 3, p. 412.

¹⁵⁵ The same relationship is also true in a regulated environment. See Stoughton, N., and J. Zechner, 1998, IPO-Mechanisms, Monitoring and Ownership Structure, *Journal of Financial Economics*, Vol. 49, No. 1, p. 75.

¹⁵⁶ See Stoughton, N., and J. Zechner, 1998, loc. cit., p. 48.

Table 3.1

Relations between underpricing and ownership structure according to Brennan and Franks (1997) and Stoughton and Zechner (1998)

Possible relations between underpricing and ownership structure			
Hypothesis	Ownership dispersion measures		
	Total # of shareholders	Blockholder ownership	# of non-block institutional shareholders
Brennan and Franks (1997)	Positive	Negative	Positive
Stoughton and Zechner (1998)	Negative	Positive	Negative

Source: Zheng, S. X., and M. Li, 2008, Underpricing, Ownership Dispersion, and Aftermarket Liquidity of IPO Stocks, *Journal of Empirical Finance*, Vol.15, No. 3, p. 439.

Opposing to the existence of a relation between underpricing and ownership structure, stands a number of recent studies, showing that no significant evidence is found to support it.

Field and Sheehan (2004) undertake a study, analyzing whether there is any relation between underpricing and the subsequent to IPO outside block ownership of the firm's stock. In a sample of 1072 U.S. firms that went public in the years 1988-1992, their research revealed that underpricing has little or no effect on outside block ownership. Additionally, they show that 83% of all firms have an outside blockholder in place even before going public. Lastly, they point that underpricing goes in the direction that Brennan and Franks (1997) suggested.

Consistent with the findings of the previous study is the research of Hill (2006), which employs data related to shareholdings of firms listed on the London Stock Exchange (LSE). She found evidence that IPO underpricing does not play a significant role in determining the proportion of block holdings in the share ownership structure of the firm, either at the IPO or long-term.

However, Zheng and Li (2008) in their paper examined three hypotheses: how does underpricing affect post-IPO ownership structure, whether dispersed ownership improve aftermarket liquidity for IPO stocks, and whether underpricing has any direct effect on the IPO aftermarket liquidity after controlling for ownership dispersion. To that end, they used a sample of 1179 NASDAQ IPOs from 1993 to 2000. They found that underpricing is negatively related to changes in the total number of shareholders, though it is positively related to the number of non-block institutional shareholders after the IPO. Further, they interpret their evidence as an intentionally underpricing used to attract non-block institutional shareholders. Notwithstanding, they underline that their findings cannot provide a strong support for Stoughton and Zechner (1998) hypothesis, because they do not find any significant relation between underpricing and the change in blockholder ownership.

Lastly, an interesting study on underpricing worthy of noticing belongs to Boulton, Smart and Zutter (2010). They study, how differences in country-level governance affect IPO underpricing. After examining a sample of 4462 firms in 29 countries for the period of 2000-2004, they concluded that underpricing is higher in countries where corporate governance protects more investors than insiders¹⁵⁷. Their results are consistent with Zingales (1995), Brennan and Franks (1997) and others as well, that hypothesize IPO to be used to disperse outside ownership structure. Specifically, they found that underpricing has a negative association with post-IPO outside blockholdings and a positive association with private control benefits. A dispersed outside ownership structure facilitates managerial entrenchment; hence, in connection with country governance mechanisms the need for a dispersed outside ownership increases, when strong investor protections are present.

¹⁵⁷ It is the "governance quality hypothesis". See Boulton, T. J., Smart, S. B., and C. J. Zutter, 2010, IPO Underpricing and International Corporate Governance, *Journal of International Business Studies*, Vol. 41, No. 2, p. 219.

3.4 CORPORATE GOVERNANCE, FIRM PERFORMANCE AND DIVIDEND POLICY.

Studying upon the factors that influence the corporate governance mechanisms, one can come across the impact of dividend policy on the firm governance. Dividends can be of particular interest in unraveling the effects that external and internal corporate governance has on firm's performance and value. Sawicki (2009) argues that corporate governance can be viewed as "a set of mechanisms that ensure a proper return to investors". Thus, she notices that high dividends are evidence that those mechanisms are working properly.

The idea of using the dividends as a signal of future profitability of the firm has been proposed and supported with empirical evidence by many economists. La Porta et al. (2000) have examined the role of dividend policy in context of agency theory, under the premise that dividend policies address agency problems between corporate insiders and outside shareholders. They first distinguish two alternative agency models of dividends, namely the "outcome model" and the "substitute model", and then test those models. The "outcome model" posits that dividends are an outcome of effective legal protection of the minority shareholders, which enables them to extract dividend payments from corporate insiders. While the "substitute model" stresses that insiders considering a future equity issue pay dividends to establish a reputation for decent treatment of the minority shareholders¹⁵⁸. In this model dividends are a substitute for effective legal protection¹⁵⁹. According to the first model, the dividends paid to minority shareholders will be higher in fast growth firms of countries with better protection of such shareholders. Contrariwise, the second model predicts the opposite.

In his study, Setia-Atmaja (2009), approaches dividend policy in conjunction with corporate governance, stressing that dividend policy can assist dispersed (or minority) shareholders in monitoring managers (or large controlling shareholders). He underlines that the dividend policy can alleviate agency problems by reducing the amount of free

¹⁵⁸ See La Porta, R., Lopez-De-Silanes, F., Shleifer, A., and R. W. Vishny, 2000, loc. cit., p. 4-8.

¹⁵⁹ See *ibid.*, p. 27.

cash flow that might otherwise be expropriated¹⁶⁰ and forcing insiders to raise funds in the capital markets more frequently, consequently, subjecting themselves to outside scrutiny¹⁶¹. Essentially, dividend policy can be considered as a complementary monitoring mechanism to the existing control mechanisms. Moreover, Setia-Atmaja (2009) found that dividends can be a more effective mechanism regarding the protection of minority shareholders in closely-held firms in Australia, whereas the independent directors are more effective in controlling owner-manager conflict in widely-held firms. Higher dividends are paid when the agency conflicts are low, while low or no dividends denote the expropriation of minority shareholders. Consequently, the payout level of dividends may moderate both the role and the independence of the board of directors and the auditing committee¹⁶². Alternatively, the level of the dividend payouts can be related to the resolution of agency conflicts.

Lastly, a study also associating the corporate structure of the firm and the dividend policy belongs to Chen et al. (2005). They document that the composition of the board of directors has little impact on the firm performance and dividend policy. Particularly, there is a significant negative relationship between dividend payouts and family up to 10% of the company's stock, whilst for ownership between 10% and 35% the relationship becomes positive.

3.5 CORPORATE GOVERNANCE AND SURVIVABILITY OF IPOs.

An alternative approach indicating the necessity that IPO firms have on incorporating a good corporate governance system, can be obtained by examining the survivability rate of such firms. Issuing firms change their governance mechanisms, undergoing a great pressure from the increased market monitoring and the expectations of market analysts.

¹⁶⁰ See Jensen, M. C., 1986, Agency Costs of Free Cash Flow, Corporate Finance, and Takeover, *American Economic Review*, Vol. 76, No. 2, pp. 323-324.

¹⁶¹ See Easterbrook, F. H., 1984, Two Agency-Cost Explanations of Dividends, *American Economic Review*, Vol. 74, No. 4, p. 655.

¹⁶² See Setia-Atmaja, L., 2009, Governance Mechanisms and Firm Value: The Impact of Ownership Concentration and Dividends, *Corporate Governance: An International Review*, Vol. 17, No. 6, p. 698.

Thus, they face challenges related to product market competition and conditions, which can considerably shorten their "life-span" as public companies. Hence, the survival rate of such firms must not come as a surprise. According to Jain and Kini (1999; 2008) a third of IPO issuing firms in U.S. fails¹⁶³ or is acquired within five years of going public. Corporate governance characteristics can be associated with the time, which an IPO firm remains viable, as well as with the market conditions, because firms often go public when their cash flows are negative; consequently a slowdown in capital markets may threaten their survival¹⁶⁴. More specifically, the managerial ownership structure and the governance mechanisms of the issuing firms constitute a significant reason for their survival in the public markets.

Empirical studies¹⁶⁵ have shown that the interrelation between the post IPO performance of a firm and the managerial ownership structure cannot be solidly supported, due to the contradicting evidence. Nevertheless, Hensler et al. (1997) after investigating a large number of IPOs on NASDAQ found that the survival time for IPOs increases with the size of the offer, the firm's age at the offering, the initial return, the IPO activity level in the market and the percentage of insider ownership; while the survival time decreases upon increasing the general market level at the offering time and the number of risk characteristics. On contrary, a similar study on the survival profile of IPO made by Jain and Kini (2000) showed that retention of ownership by management and offer size are not significant, whereas the involvement of venture capitalists has positive results.

In a more recent study, Yang and Sheu (2006) tried to investigate whether the managerial ownership structure improves the survival of IPOs by classifying the insiders in accordance with their information access, and employing a piecewise exponential model. Their study was based on a sample of IPOs issued in Taiwan for the period of 1992-2000. They found that IPO survival depends also on the allocation of property

¹⁶³ Firms are delisted; see Ritter, J. R., and I. Welch, 2002, A Review of IPO Activity, Pricing, and Allocations, *The Journal of Finance*, Vol. 57, No. 4, pp. 1795-1802.

¹⁶⁴ See Jain, B. A., and O. Kini, 2008, The Impact of Strategic Investment Choices on Post-Issue Operating Performance and Survival of US IPO Firms, *Journal of Business Finance and Accounting*, Vol. 35, No. 3-4, p. 460.

¹⁶⁵ See Leland and Pyle (1977); McConnell and Servaes (1990); Agrawal and Knoeber (1996)

rights, in form of equity stake hold by executives. Thus, they argue that “the likelihood of IPO survival first decreases and then increases with total insider ownership at the time of the offering, forming a U-shaped relationship”¹⁶⁶. Additionally, they highlight that survival time is positively influenced by the increase in officer-to-insider holding ratio and not by the director-to-insider holding ratio.

It is worthy of remark that, Yang’s and Sheu’s (2006) study reiterates and reinforces once more the assumption of agency theorists, which supports that by increasing insider’s (managerial) ownership, top officers have more incentives to commit to the firm¹⁶⁷. Consequently, the agency cost of an IPO issuer is reduced and the survivability of the firm in the aftermarket is improved.

Lowering the risk of failure of firms in the early post-issue period can be partly rendered to the corporate governance (structure). Firms that have formulated a corporate governance system are viable for longer period of time and have more opportunities to adapt to the new market conditions, assuring a period in which structural changes may be furthered.

3.6 CORPORATE GOVERNANCE CHARACTERISTICS AND EVIDENCE FROM EMPIRICAL STUDIES.

The study of corporate governance in conjunction with corporate performance has been the focal point of many researchers, which investigate how various corporate governance characteristics are interrelated to the firm operation. The evidence of such studies -as stated above- are diverging, because attributes of corporate governance are approached by different methodologies, leading to different outcomes. It is, therefore, essential to present few major empirical evidences stemming from well acknowledged studies that were used for the purpose of this study. The following table 3.2 presents the relationship

¹⁶⁶ See Yang, C. Y., and H. J. Sheu, 2006, Managerial Ownership Structure and IPO Survivability, *Journal of Management and Governance*, Vol. 10, No. 1, p. 73.

¹⁶⁷ And also align with the shareholders interests.

of certain corporate governance characteristics in connection with firm performance and value. This table serves as a broad overview of this chapter theoretical framework.

Table 3.2

The relationship between corporate governance and firm performance

Positive	Neutral or Negative
Board Structure	
<i>Size</i>	
<u>Zahra and Pearce (1989)</u> : Positive relationship between size and effectiveness.	<u>Yermack (1996)</u> : Negative relationship between board size and firm value.
	<u>Hermalin and Weisbach (2003)</u> : Larger boards become ineffective due to less participation in the decision making process and more free-riding efforts of directors
<i>Board independency</i>	
<u>Baysinger and Butler (1985)</u> : Positive correlation between the proportion of independent directors and the accounting measures of performance.	<u>Hermalin and Weisbach (1991)</u> ; <u>Bhagat and Black (2001)</u> : Higher percentage of independent directors on the board does not have a significant impact on the accounting measures of firm's performance.
<i>Inside and outside board directors</i>	
<u>Fama and Jensen (1983)</u> : A firm will avail from the mixed board composition in terms of the competencies and good knowledge of the executive directors and the participation of non-executives in strategic decisions with "relevant complementary	<u>Baysinger and Hoskisson (1990)</u> : Outside directors intervene on multiple boards, while they may not effectively understand the business.

knowledge”.

Rosenstein and Wyatt (1990): Positive relationship between firm’s performance and board composition.

CEO duality

Rechner and Dalton (1991): Firms opting for independent leadership have consistently outperformed those that relied upon duality.

Ownership

Ownership concentration

Demsetz and Lehn (1985): Ownership concentration is not associated with the firm performance or value.

Morck et al. (1988): At higher levels of ownership the relationship between firm value and ownership concentration becomes negative, rendered to the management entrenchment.

Beatty and Zajac (1994): A high concentration of ownership may lead to a lower proportion of outside directors and a unitary leadership structure. The relationship between board equity ownership and the level of firm monitoring is negative.

Setia-Atmaja (2009): Ownership

concentration has a negative impact on board independence.

Management ownership

Jensen and Meckling (1976): The level of management equity ownership increases the value of the firm by lowering agency costs.

Stulz (1988): A curvilinear relationship between firm value and managerial ownership exists. The value of a firm may eventually decrease as managers become more dominant in the ownership.

Blockholders

Shleifer and Vishny (1986): Blockholder ownership increases efficiency as they have more incentive to efficiently monitor managers.

Mak and Kusnadi (2005): Blockholder ownership has a positive effect on firm value.

Family ownership

Gugler (1999): The owner-controlled firms outperformed significantly the manager-controlled firms.

Shleifer and Vishny (1997): A firm controlled by family may have a tendency to favor family shareholders at expense of public investors.

McConaughy et al. (2001): Founding family managers have more incentives to improve firm's performance. A positive relationship between family ownership and the performance of firms in America exists.

Firms controlled by founding family have greater value and can operate more efficiently.

Venture Capitalists

Aggarwal and Klapper (2003): Venture capitalist ownership is positively associated with corporate governance and performance.

Baker and Gompers (2003): When venture capitalists are shareholders, they provide financial instruments, inside board members as well as other value-added services.

Dividend policy

Chen et al. (2005): The composition of the board of directors has little impact on the firm performance and dividend policy.

CHAPTER 4

Empirical Approach

4.1 TESTING HYPOTHESES.

In the light of the theoretical approach to the relationships between the corporate governance structure, performance and value of the IPO firms that were described on the previous chapter, this study attempts to investigate further on several hypotheses. For the empirical portion of this study, five central hypotheses were chosen to be tested. These hypotheses were drawn from Yermack (1996), Mak and Kusnadi (2005), Baysinger and Bulter (1985), Bhagat and Black (2001), Agrawal and Knoeber (1996), Rechner and Dalton (1991), Baliga et al. (1996), Chahine and Tohmé (2009), Clarkson et al. (1991), Bruton et al. (2010), Aggarwal et al. (2002) and Su (2004), and were adjusted for the purposes of this study. In particular, these are the following:

Central Hypothesis 1: *"The largest fraction of lost value occurs as boards grow from small to medium size."*¹⁶⁸

Yermack (1996) draw evidence from a sample of 452 large U.S. industrial corporations between 1984 and 1991 showing that a convex shape association appears between board size and firm value, which suggests an inverse relationship between board size and firm value. Yermack (1996) stressed that "financial ratios related to profitability and operating efficiency appear to decline as board size grows", because the incentives such as compensation and the threat of dismissal towards CEO performance are less effective in larger boards. Additionally, Mak and Kusnadi (2005) found that an inverse relationship between board size and firm value.

Hypothesis 1: *"There is a negative relationship between the number of the board directors and the value of the IPO firm."*

Central Hypothesis 1a: *"There is a reasonably strong correlation between performance and board independence"*¹⁶⁹

¹⁶⁸ See Yermack, D., 1996, Higher Market Valuation of Companies with a Small Board of Directors, *Journal of Financial Economics*, Vol. 40, No.2, p. 209.

Baysinger and Butler (1985) explored the relationships among performance and composition arguing that the proportion of independent directors on the board is a potentially important performance variable. Bhagat and Black (2001) found that board independence changes "seem[s] to be driven by the poor performance of the firm rather than by firm and industry growth opportunities". Nevertheless, they note that there is no solid evidence that greater board independence leads to improved firm performance, because there are hints in the other direction as well. Agrawal and Knoeber (1996) are consistent with the last position, finding a statistically significant negative relation between outside representation on the board of directors and firm performance.

Hypothesis 1a: "There is a positive relationship between the percentage of independent directors on the board and the firm value/performance of the IPO firm."

Central Hypothesis 2: "Firms opting for independent leadership outperform those relying upon CEO duality"¹⁷⁰

Rechner and Dalton (1991) researched on the effect that dual and independent leadership structures have on the firms' organizational performance. Therefore, they formed and tested null hypotheses regarding the effect of leadership structures on return on investment, return on equity and the profit margin. They found that "firms with independent governance still consistently outperformed the CEO duality firms". Further, Baliga et al. (1996) found weak evidence that duality status affects the long-term performance and suggest that determinants of firm performance, due to their high complexity and interrelations, cannot be isolated in the context of a single variable, such as duality.

¹⁶⁹ See Bhagat, S., and B. S. Black, 2001, The Non-correlation between Board Independence and Long Term Firm Performance, *Journal of Corporation Law*, Vol. 27, No. 2, pp. 261-263 underline that poor performance has as a consequence an increase in board independence. Compare with Agrawal, A., and C. R. Knoeber, 1996, Firm performance and mechanisms to control agency problems between managers and shareholders, *Journal of Financial and Quantitative Analysis*, Vol. 31, No. 3, p. 394, who find a negative relationship between board independence and performance (measured by Tobin's Q ratio).

¹⁷⁰ See Rechner, P. L. and Dalton, D. R., 1991, Research notes and communications CEO Duality and Organizational Performance: A Longitudinal Analysis, *Strategic Management Journal*, Vol. 12, No. 2, p. 155.

Hypothesis 2: “The CEO and Chair duality affects the performance IPO firm either positively or negatively.”

Central Hypothesis 2a: “There is a relationship between IPOs underpricing and dual structure leadership”¹⁷¹

Chahine and Tohmé (2009) reviewed and examined the relationship between IPO underpricing level and the CEO duality in the region of Middle East and North Africa (MENA). They found that “underpricing increases with CEO duality, but that CEO duality decreases underpricing when it is accompanied by larger strategic shareholder ownership”.

Hypothesis 2a: “The CEO and Chair duality affects the level of underpricing.”

Central Hypothesis 3: “The percentage of retained ownership affects the initial market valuation”¹⁷²

Clarkson et al. (1991) consistent with signaling theory (Leland and Pyle, 1977) found evidence from a sample of 180 IPOs listed on Toronto Stock Exchange (TSE) between 1984 and 1987 that “initial valuation is increasing in the ownership retention signal”¹⁷³. In other words, there is a positive relationship between initial market valuation and ownership retention. More recent studies (see, e.g. Agrawal and Knoeber, 1996; Bruton et al. 2010) focused on the effects that the concentration of retained ownership has on firm performance of IPO firms. The ownership concentration can be particularly important governance parameter, because it mitigates agency conflicts leading to the enhancement of IPO firm performance and the reduction of the negative effects of the

¹⁷¹ Chahine, S., and N. S. Tohmé, 2009, Is CEO Duality Always Negative? An Exploration of CEO Duality and Ownership Structure in the Arab IPO Context, *Corporate Governance: An International Review*, Vol. 17, No. 2, p. 125.

¹⁷² This central hypothesis is a paraphrase of Clarkson, P. M., Dontoh, A., Richardson, G., and S. E. Sefcik, 1991, Retained ownership and the valuation of initial public offerings: Canadian Evidence, *Contemporary Accounting Research*, Vol. 8, No. 1, p. 131.

¹⁷³ See Clarkson, P. M., Dontoh, A., Richardson, G., and S. E. Sefcik, 1991, Retained ownership and the valuation of initial public offerings: Canadian Evidence, *Contemporary Accounting Research*, Vol. 8, No. 1, p. 131.

“IPO discount”¹⁷⁴. Nevertheless, this study seeks only the relative relation between retained ownership and IPO firm performance.

Hypothesis 3: “*The retained ownership affects the performance of the IPO firm.*”

Central Hypothesis 4: “*Insider’s ownership is related to firm performance*”.

By regressing firm performance (Tobin’s Q ratio) on their set of control mechanisms, Agrawal and Knoeber (1996) found a statistically significant relationship between firm performance and insiders’ ownership. Specifically, greater insiders’ ownership is positive related to the performance. In addition, Balatbat et al. (2004) found a positive association between insider ownership and firm operating performance, but not for the first three years after the listing. Nonetheless, this study seeks also a relationship between insiders’ ownership and firm value.

Hypothesis 4: “*Insider’s (or management’s) share ownership affects the value and the performance of the firm after the IPO.*”

Central Hypothesis 4a: “*Insider’s ownership is correlated with the underpricing level*”.

Aggarwal et al. (2002) found that managerial shareholdings are positively related with the first-day underpricing. They argue that “risk-averse managers will underprice more in order to ensure that the IPO is successful” and that those managers will also want to “sell more at the expiration of the lockup in order to diversify their holdings. In addition, Su (2004) found that managers and directors signal their confidence in the IPO by retaining sizable share ownership and underpricing¹⁷⁵.”

Hypothesis 4a: “*Insider’s (or management’s) share ownership is positively associated with the level of underpricing.*”

Central Hypothesis 5: “*Blockholder ownership is related to firm value*”.

¹⁷⁴ For a more comprehensive analysis, see Bruton et al., 2010, *ibid.*, p. 494.

¹⁷⁵ For more information, see Su, D., 2004, Leverage, insider ownership, and the underpricing of IPOs in China, *Journal of International Financial Markets, Institutions and Money*, Vol. 14, No. 1, p. 53.

Mak and Kusnadi (2005) found regarding the corporate governance mechanisms that blockholder ownership is related to the firm value.

Hypothesis 5: "Blockholder ownership affects positively the firm value of the IPO firm."

The following table 4.1 presents a detailed summary of the hypotheses that are going to be tested in this study.

Table 4.1
Detailed summary of hypotheses

<p>Central Hypothesis 1: <i>"There is a negative relationship between the number of the board directors and the value of the IPO firm"</i> $H_{0,1}: \beta_{\text{board size}} = 0$, $H_{1,(a,b,c)}: \beta_{\text{board size}} < 0$ $H_{1,a}$: There is a (-) relationship between board directors and Tobin's Q $H_{1,b}$: There is a (-) relationship between board directors and Price-to-Book $H_{1,c}$: There is a (-) relationship between board directors and Initial Returns</p>
<p>Central Hypothesis 1a: <i>"There is a positive relationship between the percentage of independent directors on the board and the value and performance of the IPO firm"</i> $H_{0,1a}: \beta_{\text{independent directors}} = 0$, $H_{1,(a,b,c,d)}: \beta_{\text{independent directors}} > 0$ $H_{1,A,a}$: There is a (+) relationship between independent directors and Tobin's Q $H_{1,A,b}$: There is a (+) relationship between independent directors and Price-to-Book $H_{1,A,c}$: There is a (+) relationship between independent directors and Initial Returns $H_{1,A,d}$: There is a (+) relationship between independent directors and Return on Assets</p>
<p>Central Hypothesis 2: <i>"The CEO/Chairman duality affects the IPO firm performance positively or negatively"</i> $H_{0,2}: \beta_{\text{duality}} = 0$, $H_{1,a}: \beta_{\text{duality}} \neq 0$ $H_{2,a}$: There is a (+) or (-) relationship between CEO/Chairman duality and Return on Assets</p>
<p>Central Hypothesis 2a: <i>"The CEO/Chairman duality affects positively or negatively the IPO underpricing level"</i> $H_{0,2a}: \beta_{\text{duality}} = 0$, $H_{1,a}: \beta_{\text{duality}} \neq 0$ $H_{2,A,a}$: There is a (+) or (-) relationship between CEO/Chairman duality and Initial Returns</p>
<p>Central Hypothesis 3: <i>"The retained ownership affects the performance of the IPO firm"</i> $H_{0,3}: \beta_{\text{retained ownership}} = 0$, $H_{1,a}: \beta_{\text{retained ownership}} \neq 0$ $H_{3,a}$: There is a (+) or (-) relationship between retained ownership and Return on Assets</p>
<p>Central Hypothesis 4: <i>"Insider's (or management's) share ownership affects the value and the performance of the firm after the IPO."</i> $H_{0,4}: \beta_{\text{insider ownership}} = 0$, $H_{1,(a,b,c)}: \beta_{\text{insider ownership}} \neq 0$ $H_{4,a}$: There is a (+) or (-) relationship between insider ownership and Tobin's Q $H_{4,b}$: There is a (+) or (-) relationship between insider ownership and Price-to-Book</p>

H_{4,c}: There is a (+) or (-) relationship between insider ownership and Return on Assets

Central Hypothesis 4a:

"Insider's (or management's) share ownership is positively associated with the level of underpricing"

H_{0,4a}: $\beta_{\text{insider ownership}} = 0$, H_{1,a}: $\beta_{\text{insider ownership}} > 0$

H_{4A,a}: There is a (+) relationship between insider ownership and Initial Returns

Central Hypothesis 5:

"Block holder's ownership affects positively the value of the IPO firm"

H_{0,5}: $\beta_{\text{blockholder ownership}} = 0$, H_{1,(a,b,c)}}: $\beta_{\text{blockholder ownership}} > 0$

H_{5,a}: There is a (+) relationship between blockholder ownership and Tobin's Q

H_{5,b}: There is a (+) relationship between blockholder ownership and Price-to-Book

H_{5,c}: There is a (+) relationship between blockholder ownership and Initial Returns

4.2 DATA DESCRIPTION AND METHODOLOGY.

In order to examine the implications set forth in the above paragraph; this study uses a sample of firms that went public over the 1997-2010. The sample comprises only 66 firms from the transportation sector listed on NYSE, NYSE:AMEX and NASDAQ, due to missing and limited data. Hence, the firms studied are those for which their prospectuses were available and the data gathered were sufficient to test the hypotheses. The obtained data refer to both financial and corporate governance information. The firms' financial information during and after the IPO were obtained from Bloomberg database, whereas the corporate governance data were collected from disclosed information available on S.E.C.

For the purposes of this analysis three sets of variables are used. The first set of variables—the dependent variables—concerns financial information, which reflects the value of the firms by considering both sides of the market, institutions (i.e. investment banks) and investors, and the operating performance. Variables representing firm value are Tobin's Q ratio, Price-to-Book (P/B) ratio, Initial Returns Rates (or Underpricing). Firm performance is examined by employing the Return on Assets at the end of the IPO year¹⁷⁶ as variable. This study grasps the importance of each ratio and employs them in separate testable equations. The values of Tobin's Q ratio and Price-to-Book ratio¹⁷⁷ were obtained from Bloomberg database after the closing of each firms' IPO and the prospectuses filed in S.E.C. respectively, while the underpricing level of the studied firms' IPOs was calculated as (the first-day closing price – offer price) / offer price.

¹⁷⁶ Consistent with Bruton et al. (2010) the Return on Assets variable was chosen as performance variable, because “[this measure] takes into account the size of the firm and ensures that the relative asset intensity of various firms does not drive the results”. See Bruton, G. D., Filatotchev, I., Chahine, S., and M. Wright, 2010, Governance, Ownership Structure, and Performance of IPO Firms: The Impact of Different Types of Private Equity Investors and Institutional Environments, *Strategic Management Journal*, Vol. 31, No. 5, p. 500.

¹⁷⁷ Bloomberg measures Tobin's Q ratio as (market capitalization + liabilities + preferred equity + minority interest) / total assets. It is worthy to note that Tobin's Q ratio cannot fully indicate the true value of firms in transportation industry and especially in shipping, because “earnings and cash flows do not fully support [Net] Asset Values”. For more information, see Merikas, A., Gounopoulos, D., and C. Nounis, 2009, Global shipping IPOs performance, *Maritime Policy & Management*, Vol. 36, No. 6, p. 485. Price-to-book ratio was calculated as Offer Price divided by the pro forma net (tangible) book value per share after giving effect to the offering.

The second set of variables –the independent variables– concerns governance information and refers to specific board characteristics such as Size, number of Independent Directors and Chairman and CEO duality. Further, variables showing the ownership structure were included, because they help testing the stated hypotheses. The percentage of retained ownership of the firm after giving effect to the IPO, the level of insider (or management) and blockholder ownership are the three additional variables. It is important to note that the independent directors' variable is calculated as a percentage of the board size, that the CEO/Chairman variable is allocated "0" for split roles and "1" for duality, and that the ownership variables were calculated based on the amount of shares outstanding after the IPO. The corporate governance data were collected from final prospectuses (424B4 form) and the, F-1/S-1, 20 F and DEF 14 A forms.

Lastly, a third set of variables was used in order to ensure that the relations found were not affected by the absence of other variables and to validate as well those relations¹⁷⁸. The control variables used for this purpose are the natural logarithm of total assets, which is used to "control for firm size and development stage"¹⁷⁹, the natural logarithm of the firm's age, the underwriter reputation allocated as "0" for non-reputable underwriters and "1" for reputable (i.e. Citigroup, Goldman Sachs, JPMorgan, Merrill), and the standard deviation of the daily aftermarket return calculated over a 60 days period following the first day closing price (Volatility).

The studied sample is comprised of firms operating in the transportation industry. Specifically, it consists of the IPOs of 47 shipping companies, 7 airlines, 3 logistic services companies, 1 freight railroad firm, 2 truckload carriers and 6 companies providing other transportation and freight forwarding services.

Table 4.2 provides few summary statistics for the IPO sample. The distribution of IPOs of the sample is presented in the first panel. Panel B shows the means and medians of few characteristics of the sample. The level of underpricing (first-day initial return) of

¹⁷⁸ See Chahine, S., 2004, loc. cit., p. 148.

¹⁷⁹ See Nelson, T., 2003, The persistence of founder influence: Management, Ownership, and Performance Effects at Initial Public Offering, *Strategic Management Journal*, Vol. 24, No. 8, p. 717. Firm Size was not selected as control variable, because Chahine (2004) found a positive and significant association with the offer Price-to-Book ratio.

this sample has a mean value of 9.88% and a median of 0.96%, while the market adjusted initial returns have an average of 8.91% underpricing with a median of 2.09%. The mean value of offer price is \$16.35 and the average size of the issues is \$258.33 million.

Table 4.2

Sample summary statistics

Panel A: Number of Issues Per Year		
Year	Number of Issues	
1997	3	
1998	1	
1999	1	
2000	2	
2001	1	
2002	5	
2003	3	
2004	5	
2005	18	
2006	7	
2007	10	
2008	4	
2009	2	
2010	4	
Total	66	
Panel B: Characteristics of IPO Sample		
Descriptive Measure	Mean	Median
Initial Return (%)	9.884	0.96
Adjusted Initial Returns (%)	8.912	2.09
Offer price (\$)	16.351	16
Size of the issue (in \$ million)	258.336	159.25

4.2.1 THE REGRESSION MODEL.

Following the methodology of previous IPO literature (Chahine, 2004), this study is also proposing cubic models of corporate ownership in order to control for non-linear relationships between the dependent variables and the corporate governance variables¹⁸⁰, wherein high levels of significance appear, because they offer a greater explanatory power¹⁸¹. Therefore, the testable equation that this study uses is equal to:

$$\begin{aligned} DV = & \beta_0 + \beta_1 \text{ Board Size} \\ & + \beta_2 \text{ Board Independent Directors} \\ & + \beta_3 \text{ Board Independent Directors}^2 \\ & + \beta_4 \text{ CEO and Chairman Duality} \\ & + \beta_5 \text{ Retained Ownership} \\ & + \beta_6 \text{ Retained Ownership}^2 \\ & + \beta_7 \text{ Insider Ownership} \\ & + \beta_8 \text{ Insider Ownership}^2 \\ & + \beta_9 \text{ Insider Ownership}^3 \\ & + \beta_{10} \text{ Blockholder Ownership} \\ & + \beta_{11} \text{ Blockholder Ownership}^2 \\ & + \varepsilon_{DV} \end{aligned} \tag{1}$$

Where, DV, the dependent variable, represents the Tobin's Q ratio, the Price-to-Book ratio, the Return on Assets or the first-day initial returns (underpricing). This equation investigates the potential effect of the selected governance metrics on the firm value and performance (approached by Tobin's Q ratio, Price-to-Book ratio, Return on Assets ratio and underpricing level).

¹⁸⁰ See Chahine, S., 2004, loc. cit., p. 149.

¹⁸¹ "The explanatory power of the [cubic] model is greater than the quadratic model", see Griffith, J. M., 1999, CEO Ownership and Firm Value, *Managerial and Decision Economics*, Vol. 20, No. 1, p. 4.

4.3 EMPIRICAL RESULTS.

4.3.1 *DESCRIPTIVE STATISTICS AND CORRELATION AMONG VARIABLES.*

Table 4.3 presents a summary of means, medians and standard deviation of the variables used to attest the hypotheses under consideration. The variables presented by the table are organized and depicted in three groups (corporate governance characteristics, dependent variables and control variables, accordingly). Regarding the corporate governance variables, it can be noticed that board size has a mean of round 7 directors, changing between 3 and 15 board members, which is in accordance with Jensen's (1993) estimation of seven (or eight) directors as the optimal board size. The proportion of directors deemed as independent on board has a mean of 57.37%, which is consistent with the listing requirements, stipulating a majority of independent directors on the board. Table 4.3 indicates that dual leadership of CEO and Chairman for this sample has an average value of 34.8%. The level of the retained ownership after the IPO of the studied firms has a mean of 58.1%. Further, the average percentage of insiders' ownership is 32.5%, and the percentage ownership belonging to blockholders has a mean value of 49.9%.

The second group of variables on table 4.3, presenting the dependent variables, shows that the average Tobin's Q ratio is 1.6% and the Price-to-Book ratio has a mean of 2.6%. The Initial Returns (underpricing) level is relatively low with a mean value of 9.8% and the adjusted Return on Assets, has an average of 6.4%.

Lastly, the third group presented provides us with the values of the natural logarithms of total assets and age, the percentage of firms with reputable underwriters and the stock standard deviation for sixty days. Although not shown by this table, the average total assets of the studied sample are \$1,069.2 million while the average age of the firms until their IPO is 17.7 years. Moreover, a 65% of the issuing firms had a reputable underwriter.

Table 4.3

Descriptive statistics (Mean, Median and Standard Deviation)

	Number	Mean	Median	Std. Dev.
<i>Variables</i>				
Board Size	66	6.712	7	1.919
% Independent directors	66	0.5737	0.188	0.188
Duality CEO/chair	66	0.348	0	0.480
% Retained ownership	66	0.581	0.613	0.228
% Insider ownership	66	0.325	0.199	0.500
% Block ownership	66	0.499	0.528	0.263
<i>Value and performance metrics</i>				
Tobin's Q	66	1.619	1.445	0.816
P/B	66	2.603	1.938	6.443
Initial Returns	66	9.884	0.964	40.847
Adj. Return on Assets	66	6.431	4.83	8.685
<i>Control variables</i>				
LN Total Assets	66	6.021	6.005	1.167
LN Firm's Age	66	1.934	1.945	1.447
Underwriter Reputation	66	0.651	1	0.480
Stock Return Volatility	66	1.310	1.045	0.983

Table 4.4 presents the Pearson correlation matrix of the sample variables employed for controlling the hypotheses. This correlation reveals dependencies that provide us with more explanatory power over the variables behavior in the model. Table 4.4 shows that the Board Size is significantly related with the Tobin's Q ratio, the percentage of retained ownership, the natural logarithm of total assets and the stock return volatility. It is important to note that board size appears to be positively related with Tobin's Q ratio in contrast with Yermack (1996), who argues that a negative relationship between those two variables exists. Further, board size appears also positive related with the Price-to-Book ratio and the Initial Returns though these relationships are not significant. Statistically significant, as expected, are the relationships between the percentage of retained ownership and the percentage of blockholder ownership, the natural logarithm of total assets and firm's age and the stock return volatility.

Table 4.4

Pearson correlation matrix

	Tobin's Q	P/B	Initial Returns	Adj. ROA	Board Size	% Independent directors	Duality CEO/chair
Tobin's Q	1.000						
P/B ratio	-0.015	1.000					
Initial Returns	0.083	-0.015	1.000				
Adj. ROA	0.321***	-0.051	-0.118	1.000			
Board Size	0.357***	0.132	0.164	0.007	1.000		
% Independent directors	-0.156	-0.166	-0.107	0.014	-0.007	1.000	
Duality CEO/chair	-0.060	-0.155	-0.117	0.003	0.010	0.129	1.000
% Retained ownership	0.148	0.058	0.153	0.064	0.295**	0.016	0.038
% Insider ownership	0.004	-0.0283	0.086	-0.035	-0.141	0.036	0.230*
% Block ownership	-0.098	0.036	0.117	0.136	-0.092	0.062	-0.040
LN Total Assets	0.053	-0.011	-0.162	0.052	0.442***	0.039	0.018
LN Firm's Age	0.162	0.174	0.015	-0.111	0.338**	-0.106	-0.113
Underwriter Reputation	0.143	-0.199	-0.227*	0.178	0.089	-0.057	-0.065
Stock Return Volatility	0.113	-0.066	0.172	-0.103	0.298**	0.018	0.131
	% Retained ownership	% Insider ownership	% Block ownership	LN Total Assets	LN Firm's Age	Underwriter Reputation	Stock Return Volatility
% Retained ownership	1.000						
% Insider ownership	-0.003	1.000					
% Block ownership	0.466***	0.120	1.000				
LN Total Assets	0.298**	-0.169	0.024	1.000			
LN Firm's Age	0.286**	-0.064	-0.144	0.174	1.000		
Underwriter Reputation	0.061	-0.047	0.050	0.393***	-0.131	1.000	
Stock Return Volatility	0.260**	-0.097	-0.170	0.265**	0.216*	0.001	1.000

*, **, ***, Denote significance at the 0.10, 0.05 and 0.01 levels, respectively.

Worthy of remark is the relationship between the Initial Returns and the underwriter reputation, which is in line with Beatty and Ritter (1986), who argue that investment banks have an incentive to ensure that new issues are underpriced by enough; otherwise, they can jeopardize their reputation. Consistent with this position are Kenourgios, Papathanasiou and Melas (2007), who found that underwriter's reputation is negatively associated with underpricing. Moreover, a significant association is revealed between the duality structure of IPO firms and the percentage of insiders' ownership. This relation can be rendered to role and the incentives of management (insiders) in the firm.

At this juncture must be stressed that the Pearson correlation matrix did not show any significance between the percentage of independent directors on the board and the adjusted Return on Assets nor between the duality structure of the firm and the adjusted Return on Assets, as would have been expected. Nevertheless, the nature of their association supports previous literature showing in both cases a positive relationship (Bhagat and Black, 2001; Rechner and Dalton, 1991).

4.3.2 REGRESSION RESULTS.

It must be stressed that the regression results since the preliminary research for this study were **weak** and, therefore, **no conclusion** can be reached. In this paragraph, the regression results are presented under the assumption that cannot be used to validate any evidence from previous studies. This study runs nineteen models of multiple regressions¹⁸² using Tobin's Q ratio, Price-to-Book ratio, Initial Returns and adjusted Return on Assets as dependent variables. The following tables 4.5 and 4.6 present the seven most statistically significant models.

The regressions in table 4.5 investigate the hypotheses concerning the value of the firm, whereas in table 4.6 the firm value and performance. Model 1 runs a regression which uses as dependent variable the Tobin's Q ratio and as independent variables the percentage of independent directors on the board and the percentage of retained ownership.

¹⁸² The results of the total number of models (significant and not) are presented in the appendix.

Table 4.5

Most significant regression models (1-4)

	Tobin's Q OLS Model 1	Tobin's Q OLS Model 2	Tobin's Q OLS Model 3	Tobin's Q OLS Model 4
Constant	2.178*	0.924	1.579*	2.342*
p-value	(0.093)	(0.332)	(0.066)	(0.083)
Board Size	0.195***	0.173***		0.191***
p-value	(0.002)	(0.004)		(0.003)
% Independent directors	-4.013			-4.447
p-value	(0.170)			(0.132)
% Independent directors ²	3.190			3.666
p-value	(0.157)			(0.104)
Duality CEO/chair		-0.072		-0.098
p-value		(0.701)		(0.575)
% Retained ownership	0.077	0.651		2.891
p-value	(0.973)	(0.764)		(0.272)
% Retained ownership ²	0.141	-0.396		-2.104
p-value	(0.949)	(0.846)		(0.375)
% Insider ownership			-0.974	-1.439
p-value			(0.514)	(0.294)
% Insider ownership ²			1.536	2.522
p-value			(0.499)	(0.213)
% Insider ownership ³			-0.337	-0.559
p-value			(0.505)	(0.215)
% Block ownership				-2.176
p-value				(0.227)
% Block ownership ²				1.535
p-value				(0.309)
LN Total Assets	-0.175*	-0.160	-0.049	-0.184*
p-value	(0.089)	(0.110)	(0.729)	(0.093)
LN Firm's Age	0.015	0.038	0.114	-0.018
p-value	(0.851)	(0.608)	(0.121)	(0.814)
Underwriter Reputation	0.305	0.348*	0.294	0.309
p-value	(0.115)	(0.056)	(0.104)	(0.126)
Volatility				
p-value				
R ²	0.234	0.184	0.063	0.282
F	2.735	2.734	4.258	5.181
P-value	0.012	0.016	0.001	0.000

*, **, ***, ****: denote p<0.10, p<0.05, p<0.01 and p<0.001, respectively

Each model using Tobin's Q ratio and Initial Returns as dependent variables employs the natural logarithms of total assets and age, and the underwriter's reputation as control variables. The models with adjusted Return on Assets as dependent variable include as control variables the stock volatility and the natural logarithm of the firm's age and the underwriter's reputation.

Model 1 shows that board size is significantly related to firm value ($p < 0.01$), though the association between board size and Tobin's Q ratio is positive. Interestingly, models 2, 4 and 5 indicate also significance between board size, Tobin's Q ratio and Initial Returns. Contrariwise, none of the regressions using Price-to-Book ratio as dependent variable showed any significant relation with board size.

Further, Hypothesis 1a cannot be confirmed by models 1, 4 and 5, because the coefficient of the percentage of independent directors on board lacks significance. Therefore, the null hypothesis ($H_{0,1A} : \beta_{\text{independent directors}} = 0$) cannot be rejected. The results from the regressions on Models 4 and 5 do not show any relationship between the duality structure of the firm and the value of the firm. In addition, the regression model in which adjusted Return on Assets was used as dependent variable also did not show any relation with the duality variable¹⁸³. Hypothesis 2 cannot be confirmed by the regression run on this sample. Moreover, model 5 indicates a negative relationship between Initial Returns and the duality variable, though the p-value is marginally significant (at 0.10) to reject the null hypothesis 2a.

The regression on model 6 (table 4.6) in which the adjusted Return on Assets ratio is the dependent variable, indicates that there is no significant effect of the percentage of retained ownership on the firm's performance. Hence, hypothesis 3 cannot be confirmed. Models 3, 4 and 7 show that the percentage of insider's ownership after the IPO is associated with Tobin's Q ratio and adjusted Return on Assets negatively, though the effect of the insider's ownership on these variables is not significant. Additionally, these regression models reject the fourth hypothesis.

¹⁸³ This regression model is presented in the appendix.

Table 4.6

Most significant regression models (5-7)

	Initial Returns OLS Model 5	ROA OLS Model 6	ROA OLS Model 7
Constant	89.27	3.796	6.115*
p-value	(0.174)	(0.531)	(0.087)
Board Size	6.155**		
p-value	(0.034)		
% Independent directors	-164.9		
p-value	(0.145)		
% Independent directors ²	127.3		
p-value	(0.135)		
Duality CEO/chair	-15.91		
p-value	(0.136)		
% Retained ownership	-63.14	7.497	
p-value	(0.711)	(0.764)	
% Retained ownership ²	89.38	-3.116	
p-value	(0.548)	(0.889)	
% Insider ownership	36.29		-13.11
p-value	(0.665)		(0.473)
% Insider ownership ²	-6.141		31.19
p-value	(0.968)		(0.292)
% Insider ownership ³	-0.355		-7.545
p-value	(0.992)		(0.258)
% Block ownership	-45.08		
p-value	(0.718)		
% Block ownership ²	46.04		
p-value	(0.682)		
LN Total Assets	-7.568		
p-value	(0.355)		
LN Firm's Age	-4.953	-0.582	-0.557
p-value	(0.279)	(0.511)	(0.491)
Underwriter Reputation	-17.39	2.946	3.303
p-value	(0.343)	(0.215)	(0.207)
Volatility		-0.992	-0.637
p-value		(0.264)	(0.439)
R ²	0.251	0.058	0.095
F	1.903	0.765	7.587
P-value	0.048	0.057	0.000

*, **, ***, ****: denote p<0.10, p<0.05, p<0.01 and p<0.001, respectively

Hypothesis 4a is controlled by model 5, a cubic model, in which the Initial Returns (dependent variable) are regressed with all the corporate governance variables. This model shows no significance between insider's ownership and firm value. Further, in this model the percentage of insider's ownership is positively associated with the Initial Returns.

The last hypothesis this study tests is regarding the effect of blockholders' ownership on the firm's value (Hypothesis 5). Model 4 shows a negative rather than positive association of blockholders' ownership with firm value. The lack of significance for this variable is obvious in this model as well, leading to the acceptance of the null hypothesis ($H_{0,5}: \beta_{\text{blockholder ownership}} = 0$).

CONCLUSION

Eventually, many firms that reach a certain stage of growth tend to resort to equity financing in order to foster and secure their opportunities for a sustainable development. The prevalent way of achieving such type of financing is through an IPO. The conversion of equity into shares and consequently its issuance to the public provides companies efficiently with money to carry out their investment plans. Nevertheless, raising capital by "going public" is considered a tough decision involving a great deal of implications for the future operation of the firm. The IPO is a standardized and complex process, which requires careful planning and preparation. Further, changes that take place during preparation on managerial level and corporate governance practices in order for companies to "float" often incur more expenses to the company than expected.

Related to the IPO process are two "phenomena" that have been approached by many studies. The explanation of the IPO underpricing and IPO underperformance in conjunction with the company attributes has been a dominant subject to research. The IPO underpricing refers to the difference between the offer price and the closing price on the first day of the IPO trade, while IPO underperformance refers to the fact that IPO firms' long-run stock returns are significantly less than those of non-IPO firms. Theories such as asymmetric information and behavioral approaches have been employed to explain (partially) why IPOs are underpriced. Underperformance, on the other hand, has been viewed in connection with underpricing and company's evaluation.

In an attempt to explain, whether IPO firm's performance is influenced by internal corporate mechanisms or not, agency theorists searched for interrelations between corporate governance characteristics and corporate value metrics (level of underpricing, firm value, stock performance). Interestingly, the results arising from the hypotheses formed to reveal the causal nexus between corporate governance and firm value and performance were rather diverging.

This study draws from existing literature five central hypotheses, which attempts to verify in a sample of 66 firms from the transportation industry listed on American

stock exchanges. To that end, it follows a cubic model equation employed by Griffith (1999) and Chahine (2004), from which it is possible to control for non linear relationships. The model equation uses as dependent variables either Tobin's Q ratio, Price-to-Book ratio, Initial Returns or Return on Assets. As for independent variables are the board size, the percentage of independent directors on the board, the existence of duality structure, the percentage of retained ownership, the percentage of ownership that belongs to insiders and the percentage of ownership of blockholders. Each dependent variable was tested in different OLS regression models, the total number of which was nineteen. However, the results from the regressions were statistically weak and consequently this study cannot reach any conclusion based on the regressions.

Overall, the results from this research showed that there is little dependence between the corporate governance variables and the IPO firm value and performance variables. Even so, it is important to note that this study does not anticipate that future research will lead to the same outcome. Therefore, it hopes and urges for further investigation on this matter. Studying the role and the effects of corporate governance on the value and performance of IPO firms still remains an intriguing and evolving research subject.

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Πανεπιστήμιο Πειραιώς

Table A.1

Regression results with Tobin's Q ratio as dependent variable

	Tobin's Q OLS (1)	Tobin's Q OLS (2)	Tobin's Q OLS (3)	Tobin's Q OLS (4)	Tobin's Q OLS (5)
Constant	2.178*	0.924	1.579*	1.847***	2.342*
p-value	(0.093)	(0.332)	(0.066)	(0.008)	(0.083)
Board Size	0.195***	0.173***			0.191***
p-value	(0.002)	(0.004)			(0.003)
% Independent directors	-4.013				-4.447
p-value	(0.170)				(0.132)
% Independent directors ²	3.190				3.666
p-value	(0.157)				(0.104)
Duality CEO/chair		-0.072			-0.098
p-value		(0.701)			(0.575)
% Retained ownership	0.077	0.651			2.891
p-value	(0.973)	(0.764)			(0.272)
% Retained ownership ²	0.141	-0.396			-2.104
p-value	(0.949)	(0.846)			(0.375)
% Insider ownership			-0.974		-1.439
p-value			(0.514)		(0.294)
% Insider ownership ²			1.536		2.522
p-value			(0.499)		(0.213)
% Insider ownership ³			-0.337		-0.559
p-value			(0.505)		(0.215)
% Block ownership				-1.531	-2.176
p-value				(0.344)	(0.227)
% Block ownership ²				1.337	1.535
p-value				(0.365)	(0.309)
LN Total Assets	-0.175*	-0.160	-0.049	-0.054	-0.184*
p-value	(0.089)	(0.110)	(0.729)	(0.654)	(0.093)
LN Firm's Age	0.015	0.038	0.114	0.107*	-0.018
p-value	(0.851)	(0.608)	(0.121)	(0.092)	(0.814)
Underwriter Reputation	0.305	0.348*	0.294	0.357*	0.309
p-value	(0.115)	(0.056)	(0.104)	(0.065)	(0.126)

Volatility p-value					
R ²	0.234	0.184	0.063	0.075	0.282
F	2.735	2.734	4.258	1.226	5.181
P-value	0.012	0.016	0.001	0.308	0.000

*, **, ***, ****: denote p<0.10, p<0.05, p<0.01 and p<0.001, respectively

Table A.2

Regression results with Price-to-Book ratio as dependent variable

	P/B OLS (6)	P/B OLS (7)	P/B OLS (8)	P/B OLS (9)	P/B OLS (10)
Constant	3.428	-1.280	3.067	1.434	3.507
p-value	(0.505)	(0.812)	(0.516)	(0.662)	(0.527)
Board Size	0.450	0.458			0.516
p-value	(0.259)	(0.256)			(0.355)
% Independent directors	-10.48				-9.243
p-value	(0.331)				(0.420)
% Independent directors ²	4.458				3.762
p-value	(0.656)				(0.736)
Duality CEO/chair		-2.196			-1.801
p-value		(0.152)			(0.268)
% Retained ownership	5.408	9.325			7.427
p-value	(0.733)	(0.576)			(0.640)
% Retained ownership ²	-5.040	-8.726			-7.426
p-value	(0.747)	(0.602)			(0.647)
% Insider ownership			-5.318		-4.221
p-value			(0.687)		(0.821)
% Insider ownership ²			6.699		3.928
p-value			(0.689)		(0.862)
% Insider ownership ³			-1.413		-0.706
p-value			(0.692)		(0.883)
% Block ownership				-0.578	0.063
p-value				(0.957)	(0.997)
% Block ownership ²				2.313	2.356
p-value				(0.806)	(0.878)

LN Total Assets p-value	0.089 (0.854)	0.112 (0.813)	0.124 (0.781)	0.184 (0.669)	-0.008 (0.990)
LN Firm's Age p-value	0.348 (0.439)	0.352 (0.385)	0.653 (0.222)	0.680 (0.198)	0.382 (0.537)
Underwriter Reputation p-value	-2.835 (0.199)	-2.765 (0.200)	-2.847 (0.264)	-2.613 (0.256)	-3.212 (0.298)
Volatility p-value					
R ²	0.104	0.103	0.068	0.069	0.136
F	0.733	0.540	1.998	0.769	1.692
P-value	0.661	0.800	0.080	0.575	0.086

*, **, ***, ****: denote $p < 0.10$, $p < 0.05$, $p < 0.01$ and $p < 0.001$, respectively

Table A.3
Regression results with Initial Returns as dependent variable

	Initial Returns OLS (11)	Initial Returns OLS (12)	Initial Returns OLS (13)	Initial Returns OLS (14)	Initial Returns OLS (15)
Constant p-value	92.58 (0.181)	41.45 (0.477)	25.52 (0.604)	42.75 (0.350)	89.27 (0.174)
Board Size p-value	6.185** (0.018)	5.491** (0.027)			6.155** (0.034)
% Independent directors p-value	-159.4 (0.128)				-164.9 (0.145)
% Independent directors ² p-value	120.1 (0.120)				127.3 (0.135)
Duality CEO/chair p-value		-12.82 (0.196)			-15.91 (0.136)
% Retained ownership p-value	-53.43 (0.618)	-24.08 (0.811)			-63.14 (0.711)
% Retained ownership ² p-value	85.94 (0.482)	59.22 (0.615)			89.38 (0.548)
% Insider ownership p-value			-11.65 (0.927)		36.29 (0.665)
% Insider ownership ² p-value			71.95 (0.802)		-6.141 (0.968)

% Insider ownership ³			-18.42		-0.355
p-value			(0.907)		(0.992)
% Block ownership				-40.15	-45.08
p-value				(0.637)	(0.718)
% Block ownership ²				63.48	46.04
p-value				(0.534)	(0.682)
LN Total Assets	-9.760	-9.030	-1.758	-4.125	-7.568
p-value	(0.243)	(0.269)	(0.798)	(0.556)	(0.355)
LN Firm's Age	-4.224	-3.767	-0.327	0.862	-4.953
p-value	(0.364)	(0.382)	(0.932)	(0.810)	(0.279)
Underwriter Reputation	-18.30	-17.44	-14.98	-15.07	-17.39
p-value	(0.241)	(0.245)	(0.307)	(0.320)	(0.343)
Volatility					
p-value					
R ²	0.196	0.181	0.092	0.086	0.251
F	1.453	1.467	1.520	1.358	1.903
P-value	0.195	0.197	0.185	0.253	0.048

*, **, ***, ****: denote p<0.10, p<0.05, p<0.01 and p<0.001, respectively

Table A.4

Regression results with Return on Assets ratio as dependent variable

	ROA OLS (16)	ROA OLS (17)	ROA OLS (18)	ROA OLS (19)
Constant	7.842	6.137**	3.796	6.115*
p-value	(0.122)	(0.011)	(0.531)	(0.087)
Board Size	0.322			
p-value	(0.485)			
% Independent directors	-14.38			
p-value	(0.458)			
% Independent directors ²	13.99			
p-value	(0.446)			
Duality CEO/chair		0.341		
p-value		(0.891)		
% Retained ownership			7.497	
p-value			(0.764)	
% Retained ownership ²			-3.116	
p-value			(0.889)	

% Insider ownership				-13.11
p-value				(0.473)
% Insider ownership ²				31.19
p-value				(0.292)
% Insider ownership ³				-7.545
p-value				(0.258)
% Block ownership				
p-value				
% Block ownership ²				
p-value				
LN Total Assets				
p-value				
LN Firm's Age	-0.594	-0.401	-0.582	-0.557
p-value	(0.504)	(0.351)	(0.511)	(0.491)
Underwriter Reputation	2.810	3.093	2.946	3.303
p-value	(0.259)	(0.192)	(0.215)	(0.207)
Volatility	-0.835	-0.812	-0.992	-0.637
p-value	(0.335)	(0.351)	(0.264)	(0.439)
R ²	0.056	0.048	0.058	0.095
F	0.887	0.808	0.765	7.587
P-value	0.510	0.524	0.057	0.000

*, **, ***, ****: denote p<0.10, p<0.05, p<0.01 and p<0.001, respectively

Table A.5

Firms that consist the sample

Name	Ticker	Stock Exchange	Public Date
Knightsbridge Tankers Limited	VLCCF	NASDAQ	6/2/1997
Trailer Bridge, Inc.	TRBR	NASDAQ	24/7/1997
C.H. Robinson Worldwide, Inc.	CHRW	NASDAQ	12/10/1997
Marinemax, Inc.	HZO	NYSE	3/6/1998
United Parcel Service, Inc.	UPS	NYSE	10/11/1999
Grupo Aeroportuario del Sureste, S.A.B.	ASR	NYSE	28/9/2000
Uti Worldwide, Inc.	UTIW	NASDAQ	2/11/2000
General Maritime Corporation	GMR	NYSE	12/6/2001
Tsakos Energy Navigation Ltd	TNP	NYSE	4/3/2002
Jetblue Airways Corporation	JBLU	NASDAQ	12/4/2002
ExpressJet Holdings, Inc.	XJT	NYSE	18/4/2002
Pacer International, Inc.	PACR	NASDAQ	13/6/2002
Martin Midstream Partners L.P.	MMLP	NASDAQ	1/11/2002

Dampskibsselskabet Torm A/S	TRMD	NASDAQ	22/1/2003
Quality Distribution, Inc.	QLTY	NASDAQ	7/11/2003
Pinnacle Airlines Corp.	PNCL	NASDAQ	22/11/2003
K-Sea Transportation Partners L.P.	KSP	NYSE	9/1/2004
Hornbeck Offshore Services, Inc.	HOS	NYSE	23/3/2004
Republic Airways Holdings, Inc.	RJET	NASDAQ	27/5/2004
Gol Linhas Aéreas Inteligentes S.A.	GOL	NYSE	24/6/2004
Top Ships, Inc.	TOPS	NASDAQ	23/6/2004
Seabright Insurance Holdings, Inc.	SBX	NYSE	21/1/2005
Dry Ships, Inc.	DRYS	NASDAQ	3/2/2005
Universal Truckload Services, Inc.	UACL	NASDAQ	11/2/2005
Rand Logistics, Inc.	RLOG	NASDAQ	17/2/2005
Diana Shipping, Inc.	DSX	NYSE	18/3/2005
Trico Marine Services, Inc.	TRMA	NASDAQ	22/3/2005
Teekay LNG Partners L.P.	TGP	NYSE	5/5/2005
NewLead Holdings Ltd.	NEWL	NASDAQ	3/6/2005
Eagle Bulk Shipping, Inc.	EGLE	NASDAQ	23/6/2005
TBS International Limited	TBSI	NASDAQ	24/6/2005
Genco Shipping & Trading Limited	GNK	NYSE	22/7/2005
Seaspan Corporation	SSW	NYSE	9/8/2005
Horizon Lines, Inc.	HRZ	NYSE	27/9/2005
American Commercial Lines	ACLI	NASDAQ	4/10/2005
StealthGas Inc.	GASS	NASDAQ	6/10/2005
DHT Holdings, Inc.	DHT	NYSE	13/10/2005
Copa Holdings S.A.	CPA	NYSE	15/12/2005
Freeseas, Inc.	FREE	NASDAQ	16/12/2005
Omega Navigation Enterprises, Inc.	ONAV	NASDAQ	7/4/2006
Euroseas Ltd	ESEA	NASDAQ	5/10/2006
Danaos Corporation	DAC	NYSE	6/10/2006
Ultrapetrol Bahamas Limited	ULTR	NASDAQ	13/10/2006
Agean Marine Petroleum Network, Inc.	ANW	NYSE	8/12/2006
Allegiant Travel Company, LLC	ALGT	NASDAQ	8/12/2006
Teekay Offshore Partners L.P.	TOO	NYSE	14/12/2006
Capital Product Partners L.P.	CPLP	NASDAQ	30/3/2007
Oceanaut, Inc.	OKN	NYSE:AMEX	5/4/2007
OceanFreight, Inc.	OCNF	NASDAQ	25/4/2007
Paragon Shipping, Inc.	PRGN	NASDAQ	10/8/2007
Seanergy Maritime Holdings Corp.	SHIP	NASDAQ	24/9/2007
OSG America L.P. Group, Inc.	OSP	NYSE	9/11/2007
Navios Maritime Partners L.P.	NMM	NYSE	13/11/2007
Star Bulk Carriers Corp.	SBLK	NASDAQ	30/11/2007
Teekay Tankers Ltd.	TNK	NYSE	13/12/2007
Gulfstream International Group, Inc.	GIA	NYSE	17/12/2007
Sino-Global Shipping A.M.	SINO	NASDAQ	21/5/2008
Safe Bulkers, Inc.	SB	NYSE	29/5/2008
Global ship Lease, Inc.	GSL	NYSE	15/8/2008
Alexander & Baldwin, Inc.	ALEX	NYSE	29/9/2008

Echo Global Logistics, Inc.	ECHO	NASDAQ	2/10/2009
RailAmerica, Inc.	RA	NYSE	13/10/2009
Baltic Trading Limited	BALT	NYSE	10/3/2010
Crude Carriers Corp.	CRU	NYSE	12/3/2010
Scorpio Tankers, Inc.	STNG	NYSE	31/3/2010
Roadrunner Transportation Services Holdings, Inc.	RRTS	NYSE	13/5/2010

Πανεπιστήμιο Πειραιώς