

Alessandro Zanni

INVESTMENT BANKING: IPO AND RISK MANAGEMENT

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Investment banking: IPO and Risk Management

Last name, Alessandro Zanni

Satakunnan ammattikorkeakoulu, Satakunta University of Applied Sciences

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Supervisor: Tanhua, Daniela

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The purpose of this thesis was to understand the main tasks of investment banks. Especially, this thesis was focused on the IPO process and the risk management. The case study, concerning Nordea and Säästöpankki, was done to explain differences between commercial banks and investment banks, but at the same time use the relations between them to arrive to a final conclusion about IPO and risk with reliable data.

The interviews were semi-structured therefore, I had the possibility to ask more questions and I collected more data than expected.

The results are a confirmation of the validity of the theoretical part, an interesting comparison between the level of risk in commercial banks and investment banks and the similarity of the forecast tools used from all the types of banks.

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CONTENTS

1	INTRODUCTION.....	5
1.1	Research objectives.....	5
2	WHAT IS AN INVESTMENT BANK?.....	7
2.1	Capital market.....	7
2.1.1	IPO.....	7
2.1.2	Underwriting.....	7
2.1.3	Example of underwriting.....	8
2.1.4	Private placement.....	8
2.1.5	Brokerage.....	8
2.1.6	Trading.....	8
2.1.7	Dealing.....	9
2.1.8	Market making.....	9
2.1.9	Proprietary trading.....	9
2.2	Corporate finance.....	10
2.2.1	Debt restructuring.....	10
2.2.2	Project finance.....	10
2.2.3	Securitization.....	10
2.2.4	Acquisition financing.....	12
2.3	Corporate lending.....	12
2.3.1	Treasury services.....	12
3	WHAT IS RISK?.....	13
3.1	Introduction to risk management.....	13
3.1.1	The theory of risk.....	14
4	IPO PROCESS.....	17
4.1.1	Advantages of going public.....	18
4.1.2	Disadvantages.....	18
4.1.3	Creation of the team IPO.....	19
4.2	Start the process.....	20
4.2.1	Registration statement.....	21
4.2.2	Preliminary Prospectus.....	22
4.2.3	Roadshow.....	24
4.2.4	Due diligence.....	24
4.2.5	Lasts amendments and agreements.....	25
4.2.6	Closing.....	25
4.2.7	Advertisements.....	25
4.2.8	Resume of the underwriting process.....	26

4.2.9	The theory of IPO underpricing	28
4.2.10	ML methods	29
4.2.11	Correlation between aftermarket returns and premarket underpricing.....	30
4.2.12	Evaluation of the model and data.....	30
4.2.13	Conclusion.....	34
4.3	The risks.....	35
4.3.1	IPO litigation risk	35
4.3.2	IPO liquidity risk	36
4.3.3	Influence of risks on IPO.....	39
4.4	The ways to manage risks in investment banks.....	39
4.4.1	Profitability figures used in comparisons	43
4.4.2	Different cultures different behaviors	44
5	METHODOLOGY	45
5.1	Reliability.....	45
5.2	Validity	46
6	EURAJOEN SÄÄSTÖPANKKI.....	46
6.1	Risk in Säästöpankki.....	46
6.2	Macroeconomic events influence for Säästöpankki	47
6.3	Forecast the future.....	48
6.4	Personal reflections	49
7	NORDEA	49
7.1	Risks in Nordea.....	50
7.2	Macroeconomic events influence for Nordea	51
7.3	Forecast the future in Nordea.....	52
7.4	Final reflections	52
7.5	Advices	54
8	INTERFERE OF MACROECONOMICS EVENTS.....	54
8.1	IPO reaction during and after crisis	55
8.1.1	Methodology.....	55
9	CONCLUSION	57
	REFERENCES.....	59
	APPENDICES	

1 INTRODUCTION

This thesis deals the work of investment banks during IPO and the risk management. The IPO process is complicated and long, therefore focus on the steps and the bureaucracy is important and it helps to understand and introduce the risks management. Concerning why I chose this subject, I am really interested in the investment banking world and I hope that in the future I will be able to work in one of the most important investment bank as JP Morgan or Barclays. Indeed, I would use this thesis as a demonstration of my interest in this field. I am really excited to start and I think that this emotion shows my interest and my volition in understanding how IPOs are performed and how the risks are managed. I start this work with only a basic knowledge about this subject, but I also start with the volition to develop and reach a good comprehension of this field. The first part of this thesis is an introduction to investment banks; it helps to understand, which types of tasks they have. After this short introduction there is a deep study of the IPO process and the bureaucracy involved. Subsequently, there is the risks analysis during IPO. This part is focused on the risk for the companies more than the risk for the investment banks. One time defined the principal subjects there is a study with empirical data followed by a digression in the influence of macroeconomics events. The empirical data analysis will be done after a double interview with two Finnish commercial banks, Nordea and Eura-joen Säästöpankki. Unfortunately I would not have the possibility to make an interview with an investment bank. As matter of fact, my interview would require secret information, which the investment banks that I contacted do not want to share. However, the data that I will collect from the meeting with the commercial banks would help me to understand how the risk is managed in financial institution and from these conclusion I will be able to evaluate the risks in investment banks.

1.1 Research objectives

The objectives of this thesis are the most varied. First of all, one of the main goals is to have an overview about investment banks and understand the main tasks. Another, objective is to understand, which are the risks for an investment bank, especially during the IPO process and how the risks are managed. Moreover, one of the main tasks

is to compare the investment banks with the two commercial banks, which I will interview. This link between commercial and investment banks will be the most difficult part of my thesis, where I will have to compare these banks, considering that their tasks are different. Furthermore, I will prove the influence of macroeconomic events on the investment banking markets. At the end of my thesis I will try to evaluate the two commercial banks giving feedback and try to give some advices, thinking of the behaviour of the investment banks and considering the good and the best aspects of theirs volition to risk.

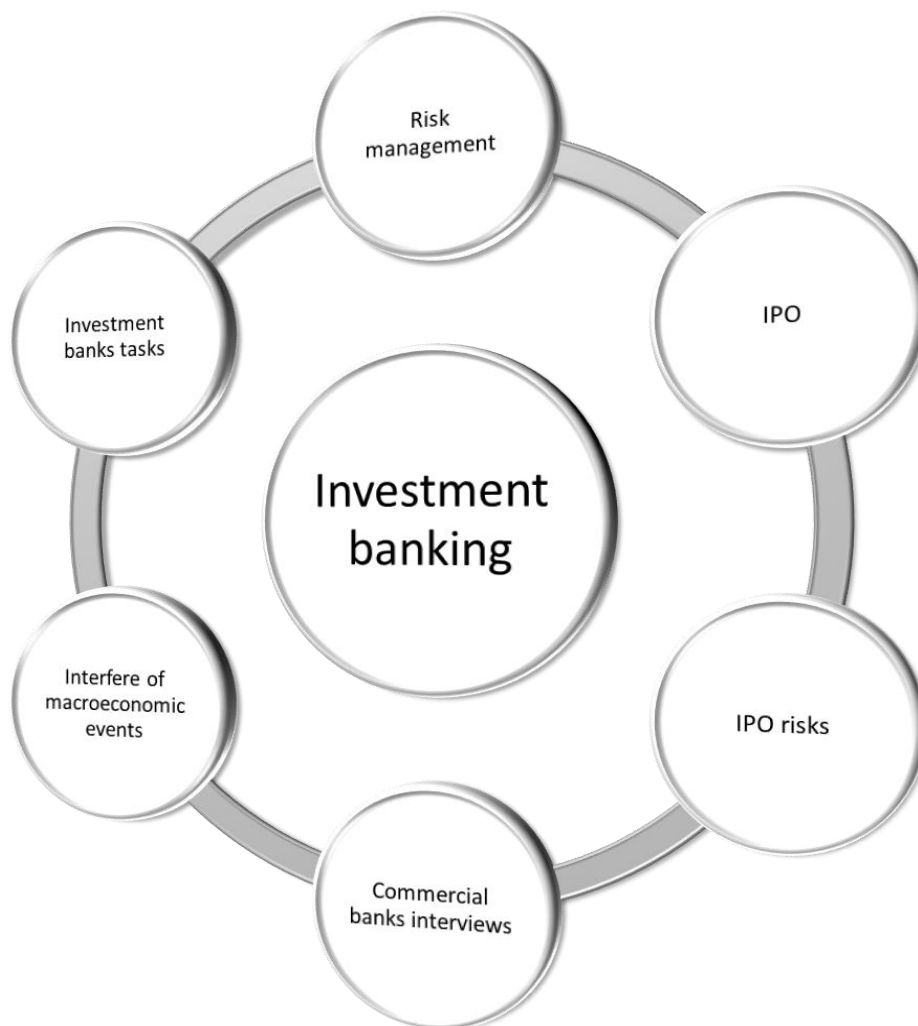


Figure 1. Conceptual Framework (Alessandro Zanni)

The conceptual framework shows how all the subjects of this thesis are related to investment banks. Moreover, it is possible to see how the subjects are connected to each other, all the chapters contain important information for the other ones. Therefore, it is important not to miss any chapter to understand all the steps of this work.

2 WHAT IS AN INVESTMENT BANK?

Investment bank is a financial intermediary, which performs different services. The tasks carried out by the investment bank can be divided into three main areas: capital market, corporate finance and corporate lending. (Website of Investopedia, 2015)

2.1 Capital market

Capital market is a market where sellers and buyers contract for financial securities such as bonds, stocks, etc. The process of selling or buying is undertaken by individuals and institutions. Capital market in investment banks is composed by IPO, underwriting, private placement, brokerage, trading, dealing, market making and proprietary trading. (Website of The Economic Time, 2013)

2.1.1 IPO

It is called IPO or “initial public offering”, when a company sells for the first time a stock. To initialize this process the company contacts an investment bank and asks to become public. The investment bank, after long analysis to understand if the deal will be profitable, starts to sell stock for the company. However, there is the possibility that the company starts to sell its own stock alone, but nowadays it is very difficult to succeed in this way, in fact, no companies do it anymore. The process of raising money from debt or equity is called “Underwriting” (Website of Investopedia, 2015)

2.1.2 Underwriting

Underwriting is one of the most important tasks for investment banks, which work between companies and buying public. Companies usually contact investment banks when they need to pay for an acquisition, start a new project and retire an older bond. The role of investment banks is to analyze risks and value of the business, one time that they finish this process, they fix a price and they underwrite. At the end they sell

the new bonds, also, banks have the possibility to underwrite other securities, such as stocks, through public offering. (Website of the Wall Street Prep, Inc. 2013)

2.1.3 Example of underwriting

Samsung wants to increase money for a new project. Therefore, they will go to an investment bank, which will calculate the value of the new shares. Afterwards, the bank will underwrite the offering and Samsung will be sure that the bank's fee will be lower than the shares price. (Website of Investopedia, 2015)

2.1.4 Private placement

The private placement is the sale of securities to a restricted number of investors, which are usually banks. The placement is offered to a restricted number of individuals, so the placement does not have to be registered with securities and exchange commission. (Website of Investopedia, 2015)

2.1.5 Brokerage

When an investment bank acts as brokers, it means that it acts as an intermediary between buyers and sellers of stock. In this case the investment bank will be compensated only at the end of the deal. (Website of Investopedia, 2015)

2.1.6 Trading

The word "trade" is used when multiple parties take part in a negotiation, in which they exchange goods and services.

On the Website of Barclays (one of the most famous investment banks) there is an advertisement for the trades in investment banks, which say: "Our trades buy, sell and trade products of varying complexity. Here you add value by thinking on your feet, knowing where liquidity lies and building strong client relationships". Traders in in-

vestment banks analyze risks for customers and help them succeed. Therefore, investment banks are paid to be an intermediary between seller and buyer. (Website of Barclays, 2015)

2.1.7 Dealing

Good trader has to have excellent dealing skills. The only way to become a good dealer is with experience. In fact, the majority of the new dealers do not close a single contract during the first year of work. The main problem is that sometimes bargaining is too long and at one point one of the hundreds of wires of the deal breaks. Mark Suster an important American entrepreneur, said in the blog “The Both Sides of the Table”, that “Time is the enemy of the deals”. It means that the prolongation of a deal for too long time is very difficult to manage. (Website of Both Sides of the Table, n.d.)

2.1.8 Market making

When someone wants to buy or sell a stock, it is important to clarify that they need a buyer or a seller at the opposite side. It is in this moment when investment banks act as a market maker. In fact, even if it will not be a buyer at the moment, they will buy them and they will wait until there will be a buyer. During this process investment banks are literally “making a market” for the stock. (Website of About.com Investing for Beginners, 2015)

2.1.9 Proprietary trading

Proprietary trading is a high-risk typology of trading, where the trader use the capital of his own firm. Therefore, there is a very high risk of waste of money. However, investment banks have sophisticated software and information, which help the trader to have succeed. (Website of Wall Street Oasis, 2014)

2.2 Corporate finance

This area of investment banks is focused on maximizing shareholders value, using different kind of strategies. Corporate finance is composed by: debt restructuring, project financing, securitization and acquisition financing. (Website of Wall Street Oasis, 2014)

2.2.1 Debt restructuring

When companies are going to go bankrupt, the court can give them the possibility to start a restructuring process. The recovery from bankruptcy usually goes through debt restructuring. In this case investment banks allow companies to modify payment terms or a schedule to provide them the possibility to save the company. Debt re-structuring usually consists of a restructuring negotiation with financial firm's creditors. The final goal in this case is to accomplish a debt forgiveness or to avoid a bankruptcy (Website of Wall Street Oasis, 2014)

2.2.2 Project finance

IPFA (International Project Finance Association) defines project finance as: "The financing of long-term infrastructure, industrial projects and public services based upon a non-recourse or limited recourse financial structure where project debt and equity used to finance the project are paid back from the cashflow generated by the project". (Website of IPFA, n.d. Referred 22.01.2015. www.ipfa.org). With investment banks companies invest their money and with this investment they can earn or lose money. This change depends on how the infrastructure investment performs. (Website of Merger and Inquisitions, Brain De Chesare, 2015)

2.2.3 Securitization

Securitization is a process where an issue combine financial assets and then marketing tiers to create a financial instrument.

A Representative Securitization Deal

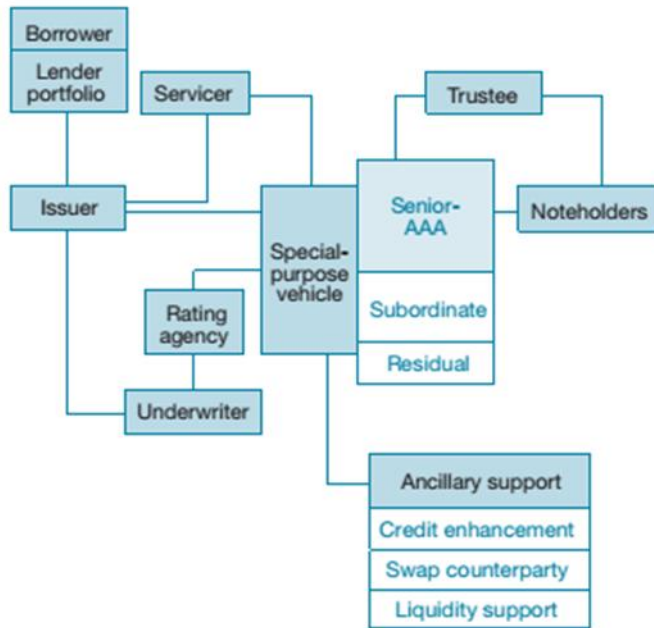


Figure 2. A Representative Securitization Deal (Nicola Cetorelli & Stavros Peristiani, 2012. 49)

Issuers, who put together the collateral assets, usually are loan originators of the portfolio of securitized assets. This happens because structured finance offers a convenient outlet for financial firms (such as banks). In the table assets are sold to an external entity. The special-purpose-vehicle (spv) buys assets from the issuer with the money earned from the buyers of the security tranches issued by spv. With this process the issuer ownership can be removed. The principal tasks of a servicer are to manage payment flows and provide help to the trustee, which is an independent firm with the fiduciary responsibility to manage spv. Underwriter usually cooperates with rating agencies, which provide certification services to investors. The diversity in tranches are put in heterogeneous pool, which represent different kind of risk. The three main pools are subdivided in senior tranches AAA, subordinate and residual. In this case banks are loan issuers and underwrite the loan portfolio to investors. They can take the role of “trustee”, provide credit enhancement, provide liquidity services, also, they can act as “servicer”. (Nicola Cetorelli & Stavros Peristiani, 2012. 48, 49)

2.2.4 Acquisition financing

Acquisition financing is defined as the capital obtained for the goal of buying another business. Companies can “use” investment banks as a strategy of financing (Website of Investopedia, 2015.) (Website of BNP PARIBAS, n.d.)

2.3 Corporate lending

Corporate lending task is to create corporate loans to increase operation or provide financing with the final goal to make acquisitions and buyouts. There are three main different types of loans in this case, the asset-based lending, structured finance and cash flow corporate lending. Therefore, the most important service in corporate lending are the treasury services. (Website of Define Finance, n.d.)

2.3.1 Treasury services

Treasury services are transaction, information and investment services for financial managers. Treasury services invest money of the customer and provide to trade finance and logistic solutions. Main goals of investment banking in these case are “account receivables services”, which help customers to earn money for possible business deals, examples are outstanding bills and invoices. Another tasks of investment banking in this field are “account payable services”, which help customers with solutions for making payment. Moreover, there are “liquidity management services”, which help a company to reach a good working capital, a simple example can be the movement of money around the account in the world. Furthermore, there are “reporting services”, which provide help to the customers to reinforce its receivables and payable position. The main point in “reporting services” is to manage the change of currencies across different countries. The last ones are “trade finance services”, which help the customers in the delivery of payments when they trade across the borders. (Website of Nordic Investment Bank, n.d.)

3 WHAT IS RISK?

In the “Oxford Dictionary” risk is described as: “A situation involving exposure to danger”. Risk represents more than the simple hazard, it is easy to mix these two similar terms, with different meanings. First of all there are a lot of types of risks in different fields, if we speak about the risk in the life of a person risk is the possibility for a person to be harmed or experience every kind of bad effects if exposed to a hazard. On the other hand, hazard is any source of a possible damage or harm under certain condition (Website of SAMK, Moodle, Daniela Tanhua, 2015)

3.1 Introduction to risk management

Risk management is a measure of the changes in value, which will happen in a portfolio as result of the diversity between now and some future point in time. There are four main elements that have to be considered by everyone, before taking a risk. The time of horizon is a period, where people wish to define the uncertainty of the future. If we think about the risk of investing money, we have to take into consideration the length of our investment. An example is when a young worker, who’s horizon is to work for a lot of years, begins to invest money. He has the possibility not to care if during the first months he will lose money because his horizon is long and in the future the investment would bring a superior return. On the other hand, if the person, who invests money is old, he should pay more attention on the short period therefore, his horizon should be shorter than the one of the young investor. Another important element for the risk management is the scenario, which is a possible future evolution of our investment. It is important to include in the scenario all the relevant possible situations, which might happen during the investment. Therefore, we have to include bad and good possible future events, so there is the possibility to manage them in case they happen. Considering the possible scenario is at the base of a good forecast and investment banks have to face a multitude of different scenarios every single day. Risk measure is the third important element for the risk management and it answers to the question, how much should we gauge the riskiness of what we are going to do? It is not the easiest question, measuring the risk requires a good background. In fact, a list of all the possible scenarios is needed, which together have an average level of risk. With that average it is feasible to calculate the measure of the risk. The most common

technique to calculate the risk is called “Value at Risk”, it is used to define how much money is at risk in a bank or in a firm. However, it simplifies the risk with understandable numbers, which could alter the reality. As matter of fact, if we use the Value at Risk method, it is possible that the outcome of two trading desks, for example between Greek bond and German bond (11.02.2015), result the same, even if it is clear that at the moment they are not. The fourth principal element are the benchmarks, which are numbers that allow to make comparisons. These numbers are important to compare the result of different companies, if the benchmark of a company A is lower than the average of the benchmarks of the other companies in the same sector. It means that investing money in A, would be riskier than investing in the ones with a benchmark above the average. However, benchmarks could be deceiving because the money in companies are constantly in movement. Therefore, it is possible that the turnover of a company at the end of the year is lower than the average because of a big investment, which could bring a better revenue in the next years. (Ron S. Dembo, Andrew Freeman, 1998)

3.1.1 The theory of risk

What is the risk when the investor has to choose between A, B or C? Answer to this question is difficult and at the end of the analysis there will not be a certain result. Assuming that the investor has 10€ and he has two funds, where to invest them. He knows that the two funds will have different outcomes at the end of the investment. The principal leverages are the market circumstances, which included the variation of the interest rates that could increase or decrease during the investment period. Beginning to analyze the first fund we can suppose three possible event. The first (A) has the 20% chance that there will be a loss of money. Therefore, the percentage of the possibility to gain money is 80%. In the second (B) there is the eventuality that the loss of money will not be more than 6€ of 90%. The last (C) give an 80% of possibility that the loss of money will not be more than 2€. (Table 3)

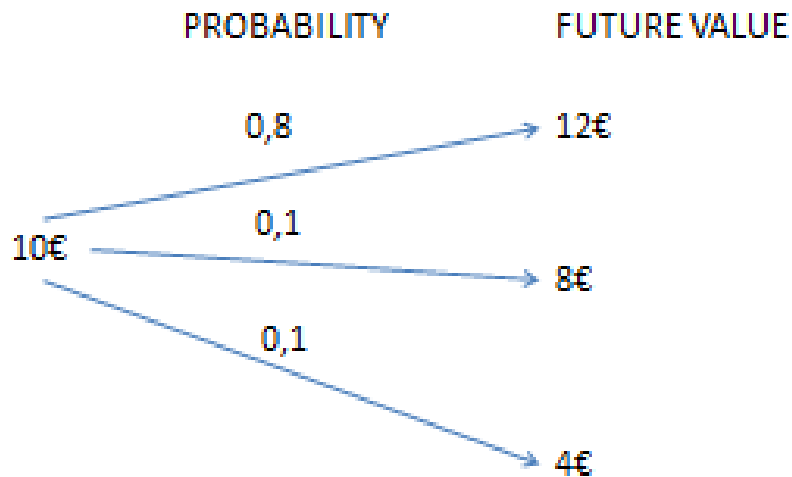


Figure 3. First fund resume (Ron S. Dembo, Andrew Freema. 1998. 57)

It is possible to obtain the average of the three different possible events. However, the calculation assumes that the interest rate movements will not change.

$$12€ * 0.8 + 8€ * 0.1 + 4€ * 0.1 = 10.80€$$

This outcome means that the investor will earn in the long period on average 0.80€ per month, but it does not exclude the possibility to have months where the return will be higher and months where the outcome will be lower.

Moreover there is the possibility to calculate the variance around the result, which will show how much the potential outcome can fluctuate around the average.

$$0.8 * (12€ - 10.8€)^2 + 0.1 * (8€ - 10.8€)^2 + 0.1 * (4€ - 10.8€)^2 = 6.55$$

Another important data for investors is the volatility, which is a measure of the possible variation of the returns. Therefore, it is a measure of the active financial risk and it is calculated by taking the square root of the variance.

$$\sqrt{6.55} = 2.56$$

To conclude the fund A has an average outcome of 0.80€ per month, 6.55 of variance and 2.56 of volatility. Concerning the second fund and assuming that there is 10% of probability to earn money, 0.8% to lose money and 0.9% that the investor will not lose more than 6€.

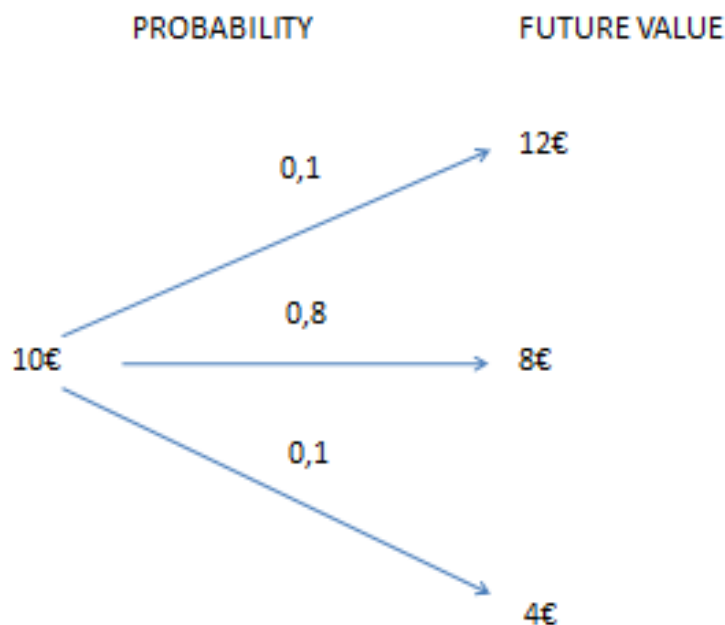


Figure 3.1 Second fund resume (Ron S. Dembo, Andrew Freema. 1998. 59)

Following the fund A strategy we calculate average:

$$0.1 * 12€ + 0.8 * 8€ + 0.1 * 4€ = 8€$$

Therefore, the average outcome of the fund B is lower than in fund A moreover, in fund B is anticipated a loss of 2€. In this case the variance is:

$$0.1 * (12€ - 8€)^2 + 0.8 * (8€ - 8€)^2 + 0.1 * (4€ - 8€)^2 = 3.17$$

The variance is lower than in the fund A. To obtain a full picture of the situation the only missing data is the volatility:

$$\sqrt{3.17} = 1.78$$

At the end of these calculations the investor has to deal with the decision where to put the money. The standard risk measures show that fund B is less risky than fund A. It is important to take into consideration especially the volatility, which if it is higher the investment looks less attractive. In this case the investment theory would suggest that the investor should put the money in each fund, with a big amount going to fund B. (Ron S. Dembo, Andrew Freema. 1998, 57-62)

4 IPO PROCESS

Underwriting is one of the most lucrative service offered by investment banks. I already have introduced this subject at the beginning of my thesis, but in this chapter I will focus on the details of the process and the risks, which an investment bank has to deal with daily. In the equity underwriting market the initial public offering bring big profit to the investment bank, as demonstration the average fee for IPO's is 7 percent of the proceeds increased by the issuer. The following table shows the IPO volume from 2005 to 2010.

Year	U.S. IPO Volume (\$ Billions)	Global IPO Volume (\$ Billions)
2005	\$33.7	\$119.6
2006	42.2	190.6
2007	49.0	223.1
2008	24.5	61.2
2009	21.9	88.0
2010	38.7	200.7

Source: Renaissance Capital IPO Home.

Figure 4.IPO Volume, (Liaw, K. Thomas, 2011. 118)

The first step of the underwriting is called registration statement. During this period the managers of the investment banks do a detailed research about the companies and they collect information concerning the financial status of the customers. The registration statement finish when the investment banks turn in the registration statement to the Securities and Exchange Commission, which is a government commission that has to rule the securities market and protect the investors. If there are no changes in the registration statement the next step is the shelf registration, in which the issuer registers equity and debt. Regarding the shelf registration, in the last years a new law has been created, which allows the companies not to specify the amount of each security and the expected time of the offering. Investment banks can choose two ways to deal with the issuing company, the first is the "best efforts agreement". According to this possibility the investment banks agree to sell the securities, but they do not ensure the price. The second channel is the "firm commitment", in which investment banks agree to purchase all the issues and sell them to institutional and retail investors. Moreover, there are other passages during the registration period as the printing and distribution of the offering document. Furthermore, the transfer agents are cho-sen

and the listing exchange selected. At this point the manager is able to form the underwriting team, which will work for all the time of the contract to succeed in their tasks. The process of underwriting is applicable to IPO's and also to the secondary offerings, but there are some differences between them. First of all, secondary offerings are done with a different mentality as matter of fact, they are usually done for fund-ing requirements, when on the other hand IPO's are done principally for asset diver-sifi-cation and founder's requirement for liquidity. Furthermore, IPO's are more lu-crative for underwriters, even if the initial public offerings are smaller than the sec-ondary. This happens because the risk for an initial public offering is higher and a little bit longer than the other one. In fact, in the majority of cases the principal steps of the process during the secondary offerings are already done as the listing exchange and the composition of the management team. (Liaw, K. Thomas, 2011. 118, 119)

4.1.1 Advantages of going public

There are a lot of good motivations for companies to do an IPO. First of all, it provides an important financing that will be a good start for a successful growth. Moreover, when companies do an initial public offering they improve their corporate image and they have a better public exposure. Furthermore, IPO brings companies to a higher public confidence because of the information required of public companies. The most of the profits are shared between the founder manager, passive founding investors, venture capital and member, who owned shares. In addition, IPOs help also founder entrepreneurs to leave the company and arrange for founding insiders to diversify their affluence. Another important advantage to go public is that there are added benefits for managers and employees, so it will attract new employees with the most brilliant minds. (Liaw, K. Thomas, 2011. 120)

4.1.2 Disadvantages

First of all when a company goes public, managers have to remember that now stake-holders want to see the results in the short-period and the majority of them will get scared if in the first period the situation of the company is not good. Therefore, man-agers have to focus on reaching objectives in the short period, without forgetting the

future, so they have to be able to balance the present with the future. Moreover, if the majority of the shares are sold to the public, the owner risks to lose the control of the company and not only the control. Indeed, it is easy that the culture of the company will change. Therefore, there will probably be a change in the way to think and in the way to act. Another important disadvantage, which has to be taken into consideration is the costs that going public consist, the process of underwriting is very expensive. Also, the costs keep on for all the period, in which the company is public. As matter of fact, the company must meet the requirements of a periodical reporting, disclosure of material information and the requirements for the corporate responsibility and enhance financial disclosures (Sarbanes-Oxley Act, 2002). All this bureaucracy is very expensive and the results of the company depend on the abilities of the managers to deal with all these problems, which make the process hard and dangerous. (Website of Sox Law, 2006)

4.1.3 Creation of the team IPO

IPO team is a group of qualified people, which task is to manage all the underwriting processes for the company. Obviously, one of the most important things are the abilities of the members. If important names are in the list, the company will feel safer because it will lower the risks during the process. Indeed, the final goal for the future IPO team is to reach a leadership in the market. One of the most difficult decisions for the company is the decision which underwriter to select. The underwriter usually is an investment bank, which one time selected, will make a preliminary research about the company and if the deal will be probably profitable or not. The use of the word probably tends to emphasize the insecure situation, in which the investment bank is, when it has to decide whether to accept the work or not. If the members of the investment bank settles to accept the job, they will meet the members of the company to define the offering as the number of share and the type of security. This meeting will steam in a formal agreement between the parties. From this moment (after the company makes the registration with the Security and Exchange Commission) begins the waiting moment, in which the federal securities laws define, which information the company can make public. At this point it is important to determine the most important rules, which the issuers have to observe. First of all, all the issuers and other offering

participants are allowed to use a free writing prospectus after the registration. Moreover, all the issuers are permitted to publish factual business information and forward looking information. Another important rule is that the issuers can communicate with each other in an oral and written way.

Important figures during the long process of IPO are the accountants. Indeed, the SEC rules require an independent public accountant to attest the final financial statement and look over other information included in the registration statement. Moreover, accountants help in answering to the comments made by SEC about accounting matters and issues to underwrite. Accountant answers with letters called “comfort letters”, which usually are followed by the closing letters. There are a lot of people, who take part in the process of underwriting and another important category are the consultants, who are helpers with a lot of experience in the area and they give important wise advices to the company. Also, the attorneys are an important gill for the process as matter of fact, they have to advice on conformity the securities laws during and after the registration process. Furthermore, they usually manage due diligence matters like reviewing minutes of the board and shareholders meetings, articles of incorporation, contract and leases.

The company, to be helped to prepare materials for the roadshow, which is “A presentation by an issuer of securities to potential buyers” (Website of Investopedia, 2015. Referred 26.02.2015. www.investopedia.com) and go through the limitation of the quiet period, should use the services of a financial public relations (PR). PR can be useful also, to provide the list of analysts and the business press editors with news and information about the company. The last, but not least important persons are the transfer agents, who deal with transferring stock and recording the transaction. In addition, transfer agents have to report to the International Revenue Service when dividends are paid. (Liaw, K. Thomas, 2011. 122, 123)

4.2 Start the process

To complete the offering process the company has to be patient. Indeed, the offering process takes a lot of time, usually months. Moreover, the quiet period lasts 40 days, if the security is listed on an exchange or quoted in a stock exchange market (for example NYSE and NASDAQ). However if the security is not listed the company has to

wait 90 days. The principal steps in this process are filing the registration, SEC letter of comments, preparing the amended registration statement, doing the preliminary prospectus, roadshows, performing due diligence research, negotiating amendments, agreement and closing. (Liaw, K. Thomas. 2011)

4.2.1 Registration statement

The Form S-1 is the common form used by SEC. One of the core content of this form is the discussion between managers about the financial condition of the company, the results and the business plan. In addition, the Form S-1 contains data about company's business, officers, directors and the principal shareholders. The Form S-1 is divided in two main Parts, called Part 1 and Part 2.

The First Part is composed by the following sections:

- Cover and Back Page
- Summary information, Risk Factors and Ratio of Earning
- Use of Return
- Offering Price
- Dilution
- Selling Security holders
- Plan of Distribution
- Description of Securities to be registered
- Interest of Named Experts and Counsel
- Information with Respect to the Registrant
- Disclosure of Commission Position on Identification for securities

Part 1 is called "Prospectus" and it also has to contain additional data. Otherwise, The Part two contains information such as signatures of company officers, directors, consent of counsel and the financial schedule. This part is composed by less information than in the Part 1 indeed, there are only 5 principal main steps:

- Other Expense of Issuance and Distribution
- Identification of Directors and Officers
- Recent Sales of Unregistered Securities
- Exhibits and Financial Statement
- Undertakings

Once the Form S-1 is done and the registration statement is filed with the SEC the waiting period begins. During this period there are several restrictions for the company and the underwriter. Moreover, until the registration statement becomes effective no actual sales are allowed.

Before the Preliminary Prospectus starts, the specialists of SEC review the registration statement. They check if there are omissions in the material and when they finish the analysis, they send a letter of comments to the company's legal counsel. In which there are suggestions and possible request of mistakes correction. (Liaw, K. Thomas. 2011)

4.2.2 Preliminary Prospectus

The final goal for a preliminary prospectus is to raise the interest from investors. The cover page of this document must have the words "Preliminary prospectus" , which usually are written with red ink. Moreover, on the cover page it is obligatory that the following sentences are written(always with red ink):"The information in this preliminary prospectus supplement is not complete and may be changed. This preliminary prospectus supplement and the accompanying prospectus are not an offer to sell these securities and are not soliciting an offer to buy these securities in any jurisdiction where the offer or sale thereof is not permitted".

In the picture below there is a cover page of a preliminary prospectus done by JP Morgan for the company "Flowserve corporation" in 2012.

The information in this preliminary prospectus supplement is not complete and may be changed. This preliminary prospectus supplement and the accompanying prospectus are not an offer to sell these securities and are not soliciting an offer to buy these securities in any jurisdiction where the offer or sale thereof is not permitted.

Subject to completion, dated September 6, 2012

Preliminary prospectus supplement
(To prospectus dated August 30, 2012)



Flowserve Corporation

\$500,000,000

% Senior Notes due 2022

The notes will bear interest at the rate of % per year. Interest on the notes is payable on and of each year, commencing on , 2013. The notes will mature on , 2022. We may redeem some or all of the notes at any time before maturity at the price discussed under the section entitled "Description of the notes and guarantees—Optional redemption" beginning on page S-28 of this prospectus supplement.

The notes will be our senior unsecured obligations and will rank equally with all of our other unsubordinated indebtedness from time to time outstanding. Holders of any secured indebtedness will have claims that are prior to your claims as holders of the notes, to the extent of the value of the assets securing such indebtedness, in the event of any bankruptcy, liquidation or similar proceeding. At the time of issuance, the notes will be guaranteed on a senior unsecured basis by each of our domestic subsidiaries that is a guarantor under our primary bank credit facility. The notes will be structurally subordinated to the indebtedness and other liabilities of our non-guarantor subsidiaries. See "Description of the notes and guarantees."

The notes will not be listed on any securities exchange. There is currently no public market for the notes. The notes are a new issue of securities with no established trading market.

Investing in the notes involves risks. See the section entitled "Risk factors" beginning on page S-15 of this prospectus supplement.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement or the accompanying prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

	Public Offering Price		Underwriting Discounts		Proceeds to Flowserve Corporation (before expenses)	
Per Note		%		%		%
Total	\$		\$		\$	

Interest on the notes will accrue from , 2012 to the date of delivery.

Securities entitlements with respect to the notes will be credited on or about , 2012, in book-entry form through the facilities of The Depository Trust Company to the accounts of its participants, including Clearstream Banking, *société anonyme*, and Euroclear Bank S.A./N.V., as operator of the Euroclear System, on behalf of the purchasers.

Joint book-running managers

J.P. Morgan

**BofA Merrill Lynch
Credit Agricole CIB**

Wells Fargo Securities

September , 2012

(Figure 5. Preliminary Prospectus Cover Page. Website of JP Morgan, 2015)

The main contents in a preliminary prospectus are:

- The initial public offering of shares
- Initial public price per share
- List of the representatives of the underwriting (usually in the front and back cover pages)
- Prospectus summary
- Risk factors

- Use of proceeds
- Audited financial reports
- Management's discussion and analysis of financial condition and results of operations
- Business and industry description
- Management
- Principal and selling holders
- Related transaction
- List of underwriter

(Website of Gold Man Sachs, 2015)

4.2.3 Roadshow

This step is one of the most important marketing events. During this period the management team meets financial analysts and brokers, the goal is to find a higher number of potential purchaser. In the roadshow the management team has to show the potential of the company, including their market position and the methods to reach the final goal of the business plan. Furthermore, it is essential that the managers show their skills indeed, everyone knows the importance of a good management team. As matter of fact, many investors consider the skills of managers the core of the company, so the decision of these investors are based for the majority on the management abilities. At the end of the roadshow the lead manager should have a clear idea about the interest of the investors. This information will influence the size of the Initial Public Offering. (Liaw, K. Thomas. 2011)

4.2.4 Due diligence

It is a job of the underwriter to hold a due diligence meeting with the IPO team. These meetings are done to reduce the risk of liability associated to the material in the registration statement. The main purpose is to list, increase and authenticate matters as verification of corporate existence and articles of incorporation. (Liaw, K. Thomas. 2011)

4.2.5 Lasts amendments and agreements

Performance of the company, stock market conditions, benchmarks, market perceptions and forecast aftermarket share value influence the determination of the offering size. Considering all these leverages the underwriter agreement is signed (just before the registration statement become effective). At this point the final amendment to the registration is concluded, it includes the agreed price, underwriter discount and the net proceeds to the company.

It is essential now to define the three primary underwriting contracts. The first is called The Agreement among Underwriters, which defines the relationship between the underwriters. The second is the Dealer Agreement. In which security dealers, who are not part of the syndicate, are contracted to distribute the securities. The last one is the Underwriting Agreement, which defines the relationship between the corporate issuer and the syndicate. This last agreement is very important and it is composed by representation warranties, which cover the guarantee by the company, offering terms, which cover the underwriter's pledge to pay and buy for the securities and subjects about buying shares at the offering price. Moreover, the Underwriting agreement is composed by the conditions, which complete the representation of the company and it defines that both of them cannot sell shares before a specific date. (Liaw, K. Thomas. 2011)

4.2.6 Closing

At the closing date there is a final meeting, where all the principal people, for the process of going public, must join. During this meeting a lot of important documents are exchanged, for example the "Comfort Letter". (Liaw, K. Thomas. 2011)

4.2.7 Advertisements

When it is all ready to go public the company has the occasion to advertise itself. This process is called Tombstone Advertisement and usually there are announcements that the company does on newspapers. Tombstone Advertisements are a good opportunity

for the company to introduce itself to the public and attract the attention of the investors. The company should never underestimate this process because they can decide the future of the company. (Liaw, K. Thomas. 2011)

4.2.8 Resume of the underwriting process

1. (Day 1) Management selects counsel, underwriter, and printer, and signs the letter of intent. The quiet period begins.
2. (Day 3) Board of directors authorizes issuing shares, preparing registration statement, and negotiating underwriting agreement.
3. (Day 6) The IPO team in the initial organization meeting determines the type and structure of the offering, and selects the form of the registration statement.
4. (Day 8) Underwriter and its counsel commence due diligence review.
5. (Day 10) Management, counsel, and independent accountant begin gathering necessary information and financial statements for the registration statement.
6. (Day 15) Management, underwriter, and respective counsels meet to prepare a draft of the underwriting agreement, agreement among underwriters, and power of attorney.
7. (Day 20) Management, its counsel, and underwriter's counsel distribute questionnaires to directors, officers, and selling shareholders related to the registration statement.
8. (Day 25) Management and its counsel complete the corporate cleanup.

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9. (Day 30) All members of the IPO team meet to review the first draft of the textual portion of the registration statement.
10. (Day 35) Management and independent accountant complete draft of financial statements for inclusion in the registration statement.
11. (Day 45) Hold a pre-filing conference with SEC staff. All members meet again to review and comment on the draft registration statement, including financial statements.
12. (Day 50) Management sends first draft of registration statement to the financial printer. Management at this stage also needs to appoint a stock transfer agent and a registrar and then arrange for preparation of stock certificates. Separately, the management, underwriter, and independent accountant discuss comfort letter requirements and procedures.
13. (Day 70) Board of directors approves and signs the registration statement and prospectus.
14. (Day 71) Company files the registration statement. The underwriter distributes the preliminary prospectus.
15. (Day 80) Management, PR firm, and underwriter begin the roadshows.
16. (Day 100) SEC comment letter arrives.
17. (Day 101) IPO team prepares amendments to the registration statement and sends draft to the printer.
18. (Day 105) IPO team reviews printer's proof of amendments. The company files amendments to the registration statement covering SEC comments and updating any material development. Notification is also sent to the SEC that a final price amendment will be held on Day 110 and that the company requests acceleration, so that the registration may become effective on Day 110.
19. (Day 106) Management, its counsel, and independent accountants resolve any final comments and changes with the SEC.
20. (Day 107) In the due diligence meeting, the team determines whether any additional matters should be disclosed in the registration statement and if all parties are satisfied that the registration statement is not misleading.
21. (Day 108) Management and underwriter finalize the offering price.
22. (Day 110) This is the offering date. The independent accountant delivers the first comfort letter to underwriter. Management, underwriter, and respective counsel sign the underwriting agreement. The company files a price amendment to registration statement, and notifies stock exchange and National Association of Securities Dealers of effectiveness.
23. (Day 111) Tombstone advertisement appears in newspapers.
24. (Day 112) Managing underwriter provides registrar with names in which the certificates are to be registered, and packages certificates for delivery.

25. (Day 120) This is the closing date. The independent accountant delivers second comfort letter to the underwriter. The company completes settlement with underwriter, issues stock, and collects proceeds from offering. The management and underwriter sign all final documents.

Figure 5.1 (Liaw, K. Thomas, 2011. 129,130,131)

4.2.9 The theory of IPO underpricing

The different types and unpredictable returns from an IPO are usually caused by the asymmetry of information between the agents involved in the process. The agents, which usually take advantage of the knowledge and experience of this process are the investment banks. There are a lot of theories concerning the links between underpricing and investment banks. For example Baron (1982) assumes that investment banker has more information than the other members. Therefore, underpricing is a mechanism to compensate the experience and skills of the investment banks. On the other hand, there are theories, which explain underpricing as the result of a short-term speculative bubble (Aggarwal, Rivoli, Shiller 1990). Usually to understand if the IPO is systematic, economists use the OLS regression, but in the article "The Review of Financial Studies" written by Jonet Hunt-McCool, Samuel C. Koh and Bill B. Francis has been used another methodology called "stochastic frontier". It is important to define that the stochastic frontier considers a situation of full information for all the parties. With this methodology the writers calculate the maximum price that an IPO can have. The difference between the given price and the maximum price is the result of random error alone. Using ordinary least squares it is possible to forecast the real price. However, in case that the offer price will fall under the maximum potential there are two errors, which influence the result and they are called "one-sided error" and "stochastic error". In this case the stochastic frontier maximum likelihood estimation will appear as a form of skewness in the residuals and it can be calculated for each IPO. (Jonet Hunt-McCool, Samuel C. Koh and Bill B. Francis, 1996. Vol 9, No 4, 1253-1255)

4.2.10 ML methods

ML methods can estimate the stochastic frontier model of ALS.

$$P_i = f(X_i; B) + E_i \quad i = 1, 2, \dots, n$$

$$E_i = V_i + U_i$$

$$V_i \sim N(0, \sigma_v^2)$$

$$U_i \sim N\left(\frac{\sqrt{2}}{\sqrt{\pi}} \sigma_u, \sigma_u^2\right)$$

$$U_i = \min(U_i, 0)$$

P_i : is the price at the beginning of the offering

X : is a vector of characteristics

B : is a vector of IPO's pricing frontier's coefficient

V : is the symmetric error component

U : is shortened at zero and it is an asymmetric component and it is independent by V

E : is the composite error term

U_i : is the non-positive error term, which should say that the actual price is wrong and it is below the right one

v_i : is an indicator, which say that the prices could be above or below the estimated frontier

These are the frontier and distributional assumptions expressed with statistics elements.

The density function of the stochastic model is:

$$f(E_i) = \frac{2}{\sigma} f(E_i/\sigma) [1 - F(E_i \lambda \sigma^{-1})]$$

Where:

$$\sigma^2 = \sigma_u^2 + \sigma_v^2;$$

$$\lambda = \sigma_u / \sigma_v$$

$$-\infty < E_i < +\infty$$

$f(E_i/\sigma)$ = standard normal density

$F(E_i \lambda \sigma^{-1})$ = distribution function

Now to calculate the log-likelihood function the economists had to consider the P 's independently distributed and P_i (the no stochastic part) is defined by the variables X .

The results is the following:

$$\ln L(P, B, \lambda, \sigma_v^2) = N \ln(\sqrt{2}/\sqrt{\pi}) + N \ln \sigma_v^2 + \sum_i \ln[1 - F(E_i \lambda \sigma^{-1})] - (1/2\sigma^2) \sum_i E_i^2$$

$$E_i = P_i - B'X_i, i = 1, \dots, N.$$

With this process it is possible to reach the optimal values of σ^2 and B , Which enables to find the efficient IPO price frontier. (Jonet Hunt-McCool, Samuel C. Koh and Bill B. Francis, 1996. Vol 9, No4,1256-1257)

4.2.11 Correlation between aftermarket returns and premarket underpricing

To test the correlation between aftermarket returns and premarket underpricing, which will bring to clarify the initial returns regressions, the first thing is to estimate P_i^* 's (predicted maximum price for both of the IPO). The economist Jondrow (1982) developed a formula to calculate this price:

$$U_i^* = \begin{cases} -E_i(\sigma_u^2 / \sigma^2) & \text{if } E_i \leq \text{Equation} \\ 0 & \text{if } E_i > 0 \end{cases}$$

The second step was developed by Hunt and Warren (1987) and it develops the formula assumed that the percentage of underpriced (U_i^* / P_i^*) is an independent variable and the initial-day return is the dependent variable.

$$\text{RETURN}_i = \alpha + \beta(U_i^* / P_i^*) + \varepsilon_i$$

In this case alpha and beta have to be estimated and epsilon is a random error term. The ratio U_i^* is the issue-specific percent underprice. (Jonet Hunt-McCool, Samuel C. Koh and Bill B. Francis, 1996. Vol 9, No4,1256-1257)

4.2.12 Evaluation of the model and data

The following studies have been developed by Jay R Ritter in the years between 1975 and 1984. This analysis considers 1035 IPOs and the choosing criteria are that the issue was underwritten between an investment bank and a firm, unit offerings are excluded, the issue was filed with SEC, the firm had 3 years of history before going public and the net proceeds from the issue are a lot 1\$ million. The symbol used in these studies are a lot therefore, it is important to define the most important element:

LOGSALES: proxy variable for the firm's profit

LOGBOOK: level of firm operations

RISKS: number of risk factors

LOGAGE: measure of years since the incorporation

LOGPROC: issue size

INSFR: percentage of the offering by insider

PERATIO: is the average price earnings ratio for the quarter in which the issue is offered to the public

The next variables are called dummy and in this case they represent six industry specific effects.

COMP: dummy variable, computer manufacturing

EQUIP: dummy variable, electronic equipment

OIL/GAS: dummy variable, Oil and Gas industry

SERVICE: data processing and computer services

INSTRUM: manufacture of scientific instrument

HEALTH: health sector

	Full sample	Hot	Nonhot
LOGOP (log of offer price)	2.177 (0.686)	2.175 (0.685)	2.180 (0.687)
RETURNS	0.099 (0.235)	0.103 (0.261)	0.091 (0.169)
LOGBOOK (log of book value)	7.778 (1.661)	7.775 (1.755)	7.785 (1.451)
LOGSALES (log of sales)	16.025 (2.085)	16.064 (2.165)	15.945 (1.911)
RISKS (number of risks on prospectus)	4.661 (5.981)	4.683 (5.847)	4.614 (6.261)
COM (commission rate)	0.080 (0.013)	0.079 (0.014)	0.081 (0.012)
INSFR (insider fraction)	0.701 (0.120)	0.698 (0.122)	0.708 (0.116)
LOGAGE (log of age of firm)	1.937 (1.003)	1.918 (0.995)	1.977 (1.019)
LOGPROC (log of proceeds from issue)	15.817 (0.996)	15.930 (1.003)	15.582 (0.940)
PERATIO (S&P P/E ratio)	10.08 (1.95)	9.15 (1.48)	12.0 (1.28)
COMP (computer industry)	0.1159 —	0.1146 —	0.1187 —
EQUIP (communications equipment industry)	0.1101 —	0.1032 —	0.1246 —
OIL/GAS (oil/gas industry)	0.059 —	0.037 —	0.104 —
SERVICE (Computers/data processing services)	0.088 —	0.083 —	0.098 —
INSTRUM (medical, scientific instruments industry)	0.083 —	0.079 —	0.092 —
HEALTH (health/drug industry)	0.062 —	0.066 —	0.053 —

*Values are means with standard deviations in parentheses.

Figure 5.2 Regression Results (Jonet Hunt-McCool, Samuel C. Koh and Bill B. Francis, 1996, 1261)

The results are divided into three different columns, full sample, hot and nonhot. In this analysis the hot column represent IPOs in the period between January 1980 to March 1981 and from January 1983 to December 1984. In the third column there are

the IPOs that are referred to the period from January 1975 to December 1979 and from April 1981 to December 1982.

In the full sample appears that almost the 50% are increase by the dummy variables. When the calculation is done dividing per period the data, it is difficult to see explicit result. However, from the calculation is possible to observe that the oil and gas industry influence the nonhot period and also the PERATIO is higher during that period. Unfortunately for now it is very difficult to figure out the result because the data between hot and nonhot periods are very close. Therefore, the analysts decided to continue the calculation and they obtained the following table.

	Full sample	Hot	Nonhot
Constant	-1.003 (-3.57)	-1.307 (-3.34)	-0.608 (-1.12)
LOGBOOK (log of book value)	0.015 (1.68)	0.010 (0.91)	0.023 (1.16)
LOGSALES (log of sales)	0.235 (3.16)	0.019 (1.99)	0.042 (3.16)
RISKS (number of risks on prospectus)	-0.022 (-9.07)	-0.022 (-6.94)	-0.023 (-5.61)
COM (commission rate)	-11.37 (-13.37)	-9.392 (-9.07)	-13.605 (-6.41)
INSFR (insider fraction)	0.541 (6.11)	0.432 (3.80)	0.834 (5.39)
LOGAGE (log of age of firm)	0.040 (3.42)	0.049 (3.34)	0.014 (0.70)
LOGPROC (log of proceeds from issue)	0.222 (15.16)	0.244 (11.81)	0.201 (7.64)
PERATIO (S&P P/E ratio)	0.009 (1.59)	0.003 (0.33)	-0.024 (-1.67)
COMP (computer industry)	0.0554 (1.54)	0.046 (0.98)	0.064 (1.09)
EQUIP (communication equipment industry)	-0.003 (-0.08)	0.023 (0.48)	-0.042 (-0.75)
OIL/GAS (oil/gas industry)	-0.055 (-1.31)	-0.025 (0.45)	-0.086 (-1.36)
SERVICE (computers/data processing services)	0.069 (1.71)	0.075 (0.050)	0.021 (0.32)
INSTRUM (medical, scientific instruments industry)	0.078 (2.18)	0.036 (0.81)	0.134 (1.92)
HEALTH (health/drug industry)	0.201 (4.88)	0.250 (5.29)	0.143 (1.73)
λ	2.672 (9.06)	2.92 (9.42)	1.992 (3.99)
σ	0.522 (33.54)	0.538 (28.97)	0.498 (13.64)
n	1035	698	337
L	-334.94	-234.08	-79.63

Figure 5.3 Maximum likelihood estimates (Jonet Hunt-McCool, Samuel C. Koh and Bill B. Francis, 1996. 1262)

The results show that the coefficient are statistically significant in fact, LOGBOOK and LOGSALES are correlated with the maximum potential offer price. As well, INSFR, LOGAGE and LOGPROC have the same positive influence. From the data is possible to see that the RISKS and COM are the elements, which change the frontier down. On the other hand INSTRUM, HEALTH and SERVICE show high frontier prices.

In this table appears also the term Lambda, which is the one-sided error (σ_u / σ_v). This result is significant and it shows that the application of the ML method in this case is statistically more efficient than OLS because it shows that the skewness in the residuals exists. Log-likelihood ratio test is used to define a structural shift in IPO pricing happened between hot and nonhot IPO periods. This ratio has a distribution of χ^2 and it has K (number of restriction) free degrees. In the last table finally compares a lambda, which measures the influence of the asymmetric error to the symmetric one. In this case lambda is different from zero and can be used to influence the presence of deliberate underpricing in the IPO premarket. The conclusion is that the IPO pre-market is characterized by deliberate underpricing and that during the hot market the underpricing is potentially higher.

As last analysis the article calculates if the deliberate underpricing is connected to the initial-day returns. If the final result will give a positive correlation between them, it will mean that the average of the initial-day return is overestimated. Therefore, if the link is almost perfect it could be that the excess returns could be a problem with the measurement of IPO price.

	All	Hot	Nonhot
Constant	1.069 (-2.70)	-0.96 (-1.96)	-0.705 (-1.07)
LOGBOOK (log of book value)	0.016 (1.74)	0.013 (1.22)	0.029 (1.40)
LOGSALES (log of sales)	0.021 (2.49)	0.015 (1.55)	0.043 (2.80)
RISKS (number of risks on prospectus)	-0.029 (-10.72)	-0.028 (-7.78)	-0.028 (-6.73)
COM (commission rate)	-13.61 (-9.66)	-12.64 (1.70)	-14.59 (5.93)
INSFR (insider fraction)	0.619 (6.19)	0.463 (3.81)	0.964 (5.67)
LOGAGE (log of age of firm)	0.046 (3.56)	0.058 (3.63)	0.001 (0.31)
LOGPROC (log of proceeds from issue)	0.215 (11.54)	0.227 (9.76)	0.198 (6.76)
PERATIO (S&P P/E ratio)	0.005 (0.77)	-0.194 (-1.87)	-0.034 (-2.51)
COMP (computer industry)	0.053 (1.41)	0.043 (0.93)	0.061 (1.02)
EQUIP (communication equipment industry)	0.020 (0.54)	0.061 (1.28)	-0.036 (-0.63)
OIL/GAS (oil/gas industry)	-0.091 (-1.78)	-0.096 (-1.19)	-0.106 (-1.70)
SERVICE (computer/data processing services)	0.062 (1.51)	0.050 (0.97)	0.048 (0.75)
INSTRUM (medical, scientific instruments industry)	0.073 (1.74)	0.0004 (0.0007)	0.168 (2.61)
HEALTH (health/drug industry)	0.191 (3.97)	0.201 (3.44)	0.154 (1.89)
<i>n</i>	1035	698	337
<i>R</i> ²	0.742	0.732	0.791

Figure 5.4 Ordinary least-squares (Jonet Hunt-McCool, Samuel C. Koh and Bill B. Francis, 1996. 1265)

To conclude this analysis the OLS methods are used to calculate the initial returns equation.

	Full sample	Hot	Nonhot
Constant	0.08 (9.31)	0.07 (6.49)	0.09 (8.10)
u^* / P_t^*	0.24 (5.07)	0.35 (5.76)	0.04 (0.06)
R^2	0.02	0.05	0.001
n	1035	698	337

Figure 5.5 IPO Returns (Jonet Hunt-McCool, Samuel C. Koh and Bill B. Francis, 1996. 1266)

In this last table there are the IPO returns as a function of underpricing coefficient there are all the aftermarket returns . The result of this analysis is that the relation between underpricing and returns in the nonhot period is weak. Therefore, when the aftermarket returns are high the deliberate underpricing help in the determination of the returns. We can conclude that the underpricing can explain only a part of the observed excess returns. It can mostly contribute in the calculation during the period of high aftermarket returns.(Jonet Hunt-McCool, Samuel C. Koh and Bill B. Francis, 1996. Vol 9, No4,1256-1257)

4.2.13 Conclusion

This long analysis brings at the conclusion that it is possible, with the stochastic frontier estimator, to make a differentiation between premarket and aftermarket IPO pricing. Moreover, we reached the conclusion that IPO underpricing is influenced by the market period. Indeed, hot markets, during the premarket, have higher irregular returns and more underpricing. Finally it is important to define that the deliberate underpricing is evolved without dependence on the aftermarket price or other aftermarket information. (Jonet Hunt-McCool, Samuel C. Koh and Bill B. Francis, 1996. Vol 9, No4,1256-1257)

4.3 The risks

When an investment bank accepts to be the underwriter for a company, it knows that during this process there are a lot of risks. The floating risks are the principal risks, which the investment bank has to face off. The floating risks are composed by waiting risks (usually the waiting risks heartfelt more from the company), marketing risks and pricing risks. Waiting risks are mostly taken in the period between the delivery of the registration statement and the effective date of beginning, because every small change in the market can influence the offering price. The pricing risks occurs when the condition of the market changes after the Underwriting Agreement is concluded and signed. Marketing risks are all the risks concerning the possible changes in the market, which could happen at every moment of the process.

Risks are always unpredictable and during the underwriting process no one can underestimate the possibilities that some variables could change. However, there are some ways to reduce risks, for example it is possible to form a syndicate, in which the members take only a portion of the deal. Therefore, risks are spread on more than one member and if something happens the damage would not be only on one member. Another way to lower the risks is to create a list of interest before the effective date. The trend forecast is an essential tool to foresee the future and it is widely used by all the investment banks because having an eye on the future is important in order to act in the right way in front of difficult decisions. The main risks which will be analyzed are the failure risks, IPO liquidity risks and the litigation risk. (Ron S. Dembo, Andrew Freeman, 1998)

4.3.1 IPO litigation risk

One of the most important steps during an IPO is the price decision. There are two possible ways, offer a high price, which will bring to an increase of the proceeds from the IPO, but at the same time it raises the future litigation costs. On the other hand, a too low price could bring to a failure and a revenue under the expectation.

In case the litigation risks are high the company will purchase more insurance, underpricing their shares. Moreover, the companies, which have a high level of insur-

ance, have a lower expected litigation risks. This interrelation is explained in the following equation:

$$\text{Insurance effect: Initial return} = \gamma_1 \text{ litigation risk} + \theta_1 X + \beta_1 X_1 + \varepsilon_1$$

$$\text{Deterrence effect: Litigation risk} = \gamma_2 \text{ Initial return} + \theta_2 X + \beta_2 X_2 + \varepsilon_2$$

In this case the initial return is the amount of underpricing for IPO, litigation risk is the probability of litigation, X , X_1 and X_2 are vectors. The final goal of these equations is to model an IPO firm's trade-off between higher litigation risk and lower underpricing. The first equation explains how expected litigation risk influence a company's underpricing. Instead, the second equation addresses if the underpricing is a leverage for the litigation risk. It is possible to use together these two equations because of the interdependency between underpricing and the litigation risk.

The estimation of these two equations bring to a complicated but interesting result:

$$\text{Insurance effect: Initial return} = \gamma_1 \sigma_2 \text{ litigation risk}^{**} + \theta_1 X + \beta_1 X_1 + \varepsilon_1$$

$$\text{Deterrence effect: Litigation risk} = \gamma_2 / \sigma_2 \text{ initial return} + \theta_2 / \sigma_2 X + \beta_2 / \sigma_2 X_2 + \varepsilon_2 / \sigma_2$$

The estimation of the final equation is so complicated because in the first one the initial return is continuous. However, in the second equation litigation risk is a dichotomous variable, which means that it can assume two different modalities. Therefore, it is more difficult to estimate the second than the first. The σ_2^2 represent the variance of ε_2 . At this point thanks to regressions done by Michelle Lowry and Susan Shu we can reach the conclusion that potential litigation costs are significant for companies, which are doing an IPO. Moreover, companies with a high litigation risk underprice their IPOs. (Michelle Lowry and Susan Shu, 2000. 1-27)

4.3.2 IPO liquidity risk

Subrahmanyam (1998), Radcliffe (1998) and Brennan (1996) discovered that the stock expected returns are cross-sectionally related to stock liquidity measures. They found that the share turnover is a leverage to lower a stock expected return. In an article

written by B. Espen Eckbo and Oyvind Norli, the researchers figured out that the IPO stocks have lower leverage ratios and show greater liquidity than other stocks. This happened because of the quick changes equity returns by rise factor loadings, lower the stock's exposure to factors related to risk variables. Furthermore, Espen and Oyvind, starting from a theoretical model developed by Fama and French (1993), have studied the risk-reducing of greater liquidity. They create a liquidity factor, which is a difference between a portfolio of low-liquidity and a portfolio of high liquidity stocks. The final goal that the factor is priced and they arrived to the conclusion that it produces factor loadings of a magnitude and comparable to the one produced by the momentum factor, which is the rate of acceleration of a security's price or volume. The latest discovery done by Eckbo and Norli was about the frequency in the returns extreme events. They found that there are no evidence that the companies, which are going public, have differences possibilities than the non-IPO ones. In addition, the possibility to have a very low return is not easier for a non-IPO firm than an IPO, but an IPO firm has more probability to have a return that can reach 1000% or more. (Espen Eckbo and Oyvind Norli 2000, 1-36)

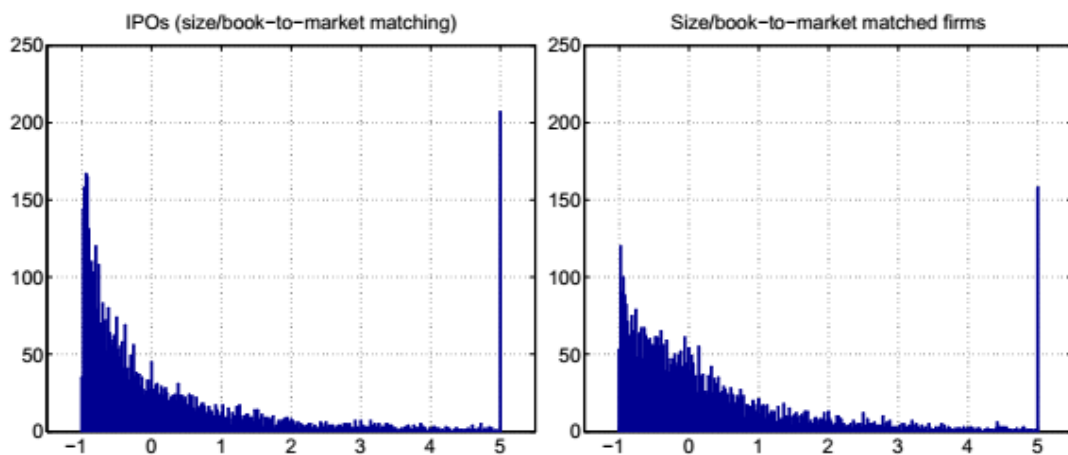


Figure 6 Histograms of five-year holding period returns between -100% and 500% (Espen Eckbo and Oyvind Norli, 2000. 27)

The bars in the histograms represent a 2 percentage point interval. Each of the bar shows the number of firms, which had a five-year holding period return within 2 percentage point interval. Therefore, the vertical bar shows the number of firms and the horizontal shows the percentage. (Espen Eckbo and Oyvind Norli, 2000. 1-36)

The failure risk is always high for a company and during the first five years after an IPO the percentage of failure risk increases a lot. In the next tables it will be possible to analyze the number of IPO failures during the period between 1980 and 2000.

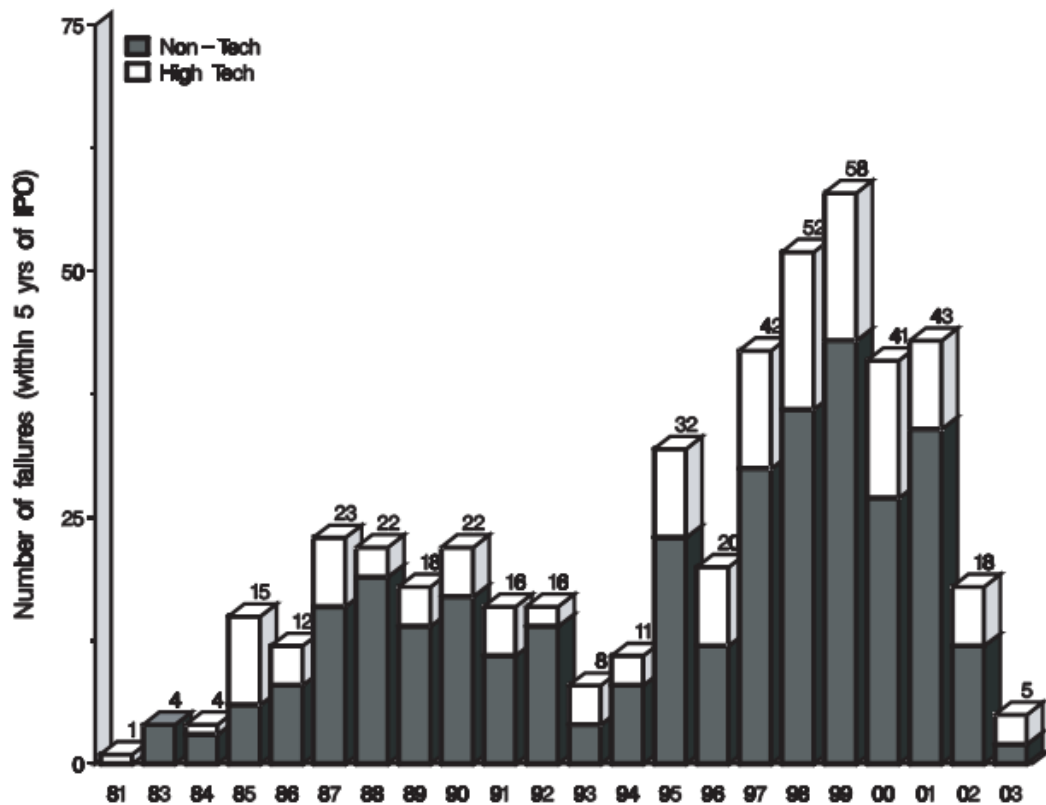


Figure 6.1 IPO failure within five years of IPO date (Elizabeth Demers and Philip Joos, 2006. 11)

As we can see from the table the number of failures during an IPO are very high and the number of failures in the field of high tech is comparable to all the others fields. This happened because starting from 1980 until today the high tech companies occupied a big portion of the global market. In the table we can find in the vertical bar the number of failures and in the horizontal bar the date. The period with the highest number of failures was the 1999, where the number of failures was 58 and it is impressive that $\frac{1}{4}$ of the failures was composed only by high-tech companies. It is interesting how at the borders of the graphic the numbers are very low and that the failures concern almost all high-tech companies. In a study done by Elizabeth Demers and Philip Joos about the IPO failure risk, the result of the test showed that the financial accounting plays an important role in this field. Moreover, it is essential to divide the researches

in smaller fields, for example the number of high-tech companies IPO failures and no high-tech companies failures. However, the conclusion of the test was that the risk of failure has not to be considered fully in the calculation of the IPO. (Elizabeth Demers and Philip Joos, 2006. 1-40)

4.3.3 Influence of risks on IPO

Therefore, “do risks influence IPO?” If we watch back in the chapters before we can conclude that risks influence IPO decisions on both sides, investment banking and companies. One of the aftermaths of the high number of risks is the underpricing. As matter of fact, IPO in the emerging countries, which have more risks, had an underpricing higher than the one already developed. However, there is always a good side when the underpricing is high indeed, in the case of emerging countries if the price of IPO is really low the foreign investors would be attracted and so the companies would have success. With this example I can reach the conclusion that the risks influence the value of the IPO a lot and therefore, the reaction from the investors.

4.4 The ways to manage risks in investment banks

The best way to manage risks in investment banks is to have an excellent group of analysts. The job of the analysts is to study the companies' situation and forecast a possible future. They have to analyze the financial statements and balance sheets in the most careful way. These two documents are essential to understanding the real situation of the company and they give information about the trend that they had in the last years. Moreover, with these documents it is possible to calculate ratios, which can give to the companies a feedback. One of the principal figures is the equity ratio, which measures the solvency and capability to bear losses and liability on long term. Furthermore, it indicates the share of assets, which are covered by equity funding by nature. The formula used to calculate the equity ratio is:

$$\text{Equity ratio} = \frac{\text{Shareholders' equity}}{(\text{Assets} - \text{Advances received})} * 100$$

Evaluate the results:

- Excellent < 50%
- Good $35% < x < 50%$
- Satisfactory $25% < x < 35%$
- Tolerable $15% < x < 25%$
- Poor < 15%

Another important figure is the net gearing, which describe the solvency or financial standing position of the company. The formula to calculate the net gearing is:

Net gearing = $(\text{Interest bearing liabilities} - \text{Cash and cash equivalents}) / \text{Shareholders' equity} * 100$

Evaluate the results:

- Excellent < 10%
- Good $10% < x < 60%$
- Satisfactory $60% < x < 120%$
- Tolerable $120% < x < 200%$
- Poor > 200%

Knowing how the company is able to take care of liabilities is very important and there is a figure, which can evaluate also this ability. It is called payback and it measures how many years it would take, if money received from ordinary business was used to pay back interest bearing liabilities. Here is the formula used to calculate this value:

Payback = $\text{Interest bearing liabilities} / \text{Profit before extraordinary items (12 months)}$

Evaluate the results:

- Excellent < 1 year
- Good $1 < x < 3$ years
- Satisfactory $3 < x < 5$ years
- Tolerable $5 < x < 10$
- Poor > 10 years

These three figures are called “solvency key figures”, but they are not the only one. Indeed, there are liquidity and profitability figures. The return on equity (ROE) is one important measure included in the profitability figures. It is used to understand the quantity of net income returned as a percentage of shareholders equity. It is calculated:

$$\text{ROE} = \text{Net income} / \text{shareholders' equity} * 100$$

Evaluate the results:

- Excellent < 20%
- Good $15 < x < 20\%$
- Satisfactory $10 < x < 15\%$
- Tolerable $5 < x < 10\%$
- Poor < 5%

In the category of the profitability figures there is also the return on invested capital (ROIC), which is a good measure to evaluate the efficiency of the company to allocate the capital under its control to profitable investments. In other words it says if the company is using the money in a good way. The formula of this figure is:

$$\text{ROIC} = (\text{Net income} + \text{finance costs} + \text{Income taxes}) / \text{total capital} * 100$$

Evaluate the results:

- Excellent < 15%
- Good $10\% < x < 15\%$
- Satisfactory $6\% < x < 10\%$
- Tolerable $3\% < x < 6\%$
- Poor < 3%

The last types of figures are the liquidity ones. These kind of figures are to be considerate only temporary (?, confusing) and sometimes they can be tricky but they are important in showing the actual situation of the company. The first figure is the quick ratio or also called Acid test, it is a test, which describes the capability of the company to take care of short terms liabilities and describes the short term liquidity. It is calculated:

$$\text{Quick ratio} = (\text{Cash and cash equivalents} + \text{Current receivables}) / \text{Current liabilities}$$

Evaluate the results:

- Excellent $> 1,5$
- Good $1 < x < 1,5$
- Satisfactory $0,5 < x < 1$
- Tolerable $0,3 < x < 0,5$
- Poor $< 0,3$

The next figure is the current ratio, it is close to the quick ratio. Indeed, it measures the short term liquidity and the ability of the company to take care of short terms liabilities. This figure includes also the inventories because they are considered to be easily turned into cash. The formula is:

$$\text{Current ratio} = (\text{Cash and cash equivalents} + \text{Current assets}) / \text{Current liabilities}$$

Evaluate the results:

- Excellent $< 2,5$
- Good $2 < x < 2,5$
- Satisfactory $1,5 < x < 2$
- Tolerable $1 < x < 1,5$
- Poor < 1

Unfortunately ratios do not say the motivation of a good or a bad result. Therefore, the tasks of the analysts are to evaluate these data and understand what is going on in the company. To help the analysts there is the possibility to compare the companies in the same sector. For example it would be interesting to compare a company such as Apple with the results of Samsung, LG, Nokia etc. However, it would be useless in this case to compare Apple with Barilla, in fact only the comparison in the same field can say something about the company situation. The value used to compare companies is the “benchmark”, which is a number calculated on the average of all the companies in the same field. However, it is not the only figure used to compare companies. As matter of fact, there are percentage of profitability figures, which are easy to calculate also, they are easy to compare with other companies. (Arto Keskinen, 2014/2015), (Pignataro P, 2013), (Pignataro P.2013)

4.4.1 Profitability figures used in comparisons

The first figure is the change in net sales and it is calculated as percentage:

Change in net sales % = Change in net sales/Net sales for the previous fiscal period

An important thing related to this figure is that the investment banks' analysts have to consider the inflation factor, which every year changes. Therefore, the change in net sales has to be adjusted with the changes in inflation. The final goal of this ratio is to keep a constant growth rate and as a result a constant turnover.

Another important figure is the operating margin %, which describes the operating results of the business prior to depreciation and financial items. The formula is the following:

Operating margin % = Operating margin/Total operating income*100

In this case analysts must take into consideration the depreciation of fixed requirements assets and the amount of financial expenses related to the external capital.

Another profitability figure important for comparisons is the operating result %, which is known with the name of EBIT (earnings before interest and taxes). This figure indicates the quantity of profits with which a company has to cover financial items and taxes. The formula to calculate this key is:

Operating profit % = Operating results/Total operating income*100

The return on assets %, also called ROA%, compares the operating result with the total capital. ROA is a measure, which is not influenced by the tax policy and the tax characteristics of the corporate form of the business. The formula to calculate it is.

Return on Assets % = (Net result + Financial expenses + Taxes)/Average balance sheet total*100

Where the net result is composed by the sum between Operating result and financial income and the difference between this result and financial expansive and taxes. This ratio gives an important information to the analysts indeed, it shows the ability of the company to create profits compared to the average balance sheet total.

Another figure is the Return on investment %, which measures the profit that has been created on the Invested capital. To understand if the ROI of a company is acceptable there are benchmark ranges to consider. If the percentage is above 10% the ROI is good, in the case that it is between 5% and 10% the situation is satisfactory, but if the ROI is below the 5% the situation is poor. These benchmarks are important to understand the situation of the company. However, this ratio is not always easy to use for comparison in the case that data from which to separate the interest bearing liabilities from the non interest liabilities is poor. ROI% is calculated:

$$\text{ROI\%} = (\text{Net result} + \text{Financial expensive} + \text{taxes}) / \text{Average invested capital for the fiscal period} * 100$$

The last figure is the Return on Equity % or ROE%, which shows the return of the shareholders' equity. This ratio is calculated after the remuneration of the external financiers and after the payment of the income taxes. The formula is:

$$\text{Return on equity} = \text{Net result} / \text{Average shareholders' equity for the fiscal period} * 100$$

All the ratios listed until now are useful for the analysts and they use them to forecast and evaluate if taking the role of underwriter with a company is a good deal or not. However, these ratios can give only an idea about the situation of the company indeed, analysts need explanation and deeper researches. (Arto Keskinen 2014/2015), (Pignataro P. 2013), (Pignataro P. 2013)

4.4.2 Different cultures different behaviors

The IPO process is managed by the investment banks usually in the same way, but it is possible that different cultures bring investment banks and companies to behave in different ways. In fact, as I said in the chapter "influence of risks on IPO" investment

banks make differences between different countries and they apply different methodologies to define the price of IPO. The example of emerging countries is only one of the possible hundreds variables, which could influence the price of IPO. The culture of a country is one important variable, which could show how trustable the companies in a specific country are. Obviously, more trustable the companies are, the less consideration would be given to the risks (it does not mean that it is not considered at all, it is considered less). Afterwards, it is the investment bank's decision whether to take a big risk or not. If the investment bank accepts to do an IPO with a high level of risk, they will have a higher return for the work. In fact, if the process is riskier, more percentage of the returns will be given to the bank. (Ulisse Belotti 2012/2013)

5 METHODOLOGY

In this part of the thesis I will describe why this study has validity and why this study is reliable. It has been hard to find good sources, because the information concerning investment banks are quite difficult to find. However, I managed the situation with the interviews at the commercial banks.

5.1 Reliability

My thesis is reliable because all the information derives from reliable sources. All the Websites are important economic Websites, which are consulted and managed by important business men or economist. Moreover, the books concerning investment banks, financial administration and risk management have been written by competent economic experts. The materials from schools are from highly professional teachers. Concerning the interviews, both of the banks gave me the possibility to speak with managers with a lot of experience. Therefore, all the material coming from the interviews is reliable. All the information collected in this thesis has a high reliability, only the conclusion and the reflections, which I will do in the empirical data part, are my personal thoughts. Even if the IPO process is not confirmed by the interviews, because the commercial banks are not involved in this process. I had the possibility to connect

some information, which I got from the interviews, to the IPO part of my thesis. Especially concerning the risks during IPO and the influence of macroeconomic events.

5.2 Validity

During my studies I learned how to select the good information and from where to take them. Therefore, I did not put attention only in the sources, but I also selected the most valid part inside them. In fact, the majority of the books use other authors' quotes, which I carefully selected. The validity of the IPO process is high, even if it was not confirmed from the interviews. In fact, the sources are reliable and the interviews gave me the possibility to verify almost all the theory concerning IPO. The material that came from the interviews has high validity as matter of fact, all the information matches with the last economic information from the most important sources, such as the magazine "The Economist" and other world news paper and studies. The econometric studies, which I presented are all from University teachers or important economist.

6 EURAJOEN SÄÄSTÖPANKKI

Säästöpankki is the oldest saving group in Finland and has been operating since 1822. The first bank was opened in Turku, the old capital of Finland and one of the most important city nowadays. Säästöpankki is a group of private banks, which operate alone, but which have connection to each other. Moreover, they have a "cover of money" that all the private banks of the group can use, following the Government rules. The most important value for Säästöpankki is the safety of its customers and this factor influence their behavior.

6.1 Risk in Säästöpankki

During the interview with Johanna Aston, "Accounts Manager" for 5 years, steamed up how the risks are considered in Säästöpankki. However, first I wanted to know what

the definition of risk is in general for Johanna and the answer has been interesting and quite close to the theoretical definition. In fact, she said that the risk in her opinion is some kind of danger coming from outside, that could be controlled with everyday life decisions. Therefore, risk can be minimized, but it should not be deleted as matter of fact, to achieve the goals of our life, everyone has to take risks. This definition matches perfectly with account managers, because it shows the importance to weigh the risks in their job. After this general introduction Johanna focused on which kind of risks there are in Säästöpankki. The risk of failure is minimal, because the safety of customers is the most important value, so the bank invests money only in a safe way. However, this brings the customers to pay more and at this point it is possible to see the tradeoff between the safety and the amount of money that has to be paid. In all the situations of our life people have to give something to be more safe, we have to pay a higher amount of money to have a better insurance, we have lower returns from an investment if it is not high risk and, as we have seen, we have to pay more to have safer bank deposits. Moreover, from the interview appears that the liquidity risk for Säästöpankki is very low. Even if, the private bank in Rauma works alone, there are a lot of relations with the other private banks from different cities, not only all of these banks have a big general deposit of money, which could be used in case of necessity. Johanna explained that the dimension of the bank is small, therefore the number of deposits can be well managed with very low liquidity risk. The last risk considered in this thesis is the litigation risk, which also is very low for a private bank, which acts in a small area. Therefore, it is possible to conclude that the risks in Säästöpankki are very low and very well managed despite of the interest rate paid by the customers.

6.2 Macroeconomic events influence for Säästöpankki

Johanna explained that the macroeconomic events have an influence in their bank. However, these interferences are not very dangerous for Säästöpankki, because their small bank is well protected. After the last crisis a lot of things changed, especially the rules given by the European Union, these rules control the banks with straighter constraints. For example it has raised the reserve requirement level and it forces the banks to have more liquidity. However, Johanna explained that because of the dimensions of

Säästöpankki the influence of the last crisis (it) did not hurt a lot their economic situation and the people have trusted the bank also in that occasion. Therefore, the bank saved itself with the trust of its customers that has been built during the years. On the other hand, Johanna said that the situation after crisis was characterized from an upside down of the market, which made forecasting the future very difficult, but in Johanna's opinion now it would be a great moment to invest for the future because she thinks that the market will go better and in few years the situation would be fixed. Then, for Säästöpankki macroeconomic events did not influence a lot the situation of the bank, especially because of the trust that customers have in Säästöpankki.

6.3 Forecast the future

Säästöpankki usually does not ask help from an outside analyst company, the decisions concerning investments are taken from the managers. It can happen that sometimes, when the amount of money is big, the bank asks an outsider to evaluate the investment, but it is rare. The principal tools used for forecasting are the financial statements and the balance sheets, which are always accompanied by a long meeting with the customers. These tools are the principals, but there are also some other ways to understand if an investment is good or not. In fact, Säästöpankki uses some websites, which are very expensive, where it is possible to find a very big quantity of information about the customers. One of the principal websites is Bloomberg, not only another important website used is www.morningstar.fi where it is possible to find lot of information about the market. Unfortunately, this last website is available only in Finnish. Johanna said that forecasting is essential for a bank and for a safe one such as Säästöpankki it is very important to invest money only where the risk is very low. For example she said that they have a very small amount of money invested in Greece, which in this period is having a lot of financial troubles. Customers in Säästöpankki are definitely not willing to the risk and the bank in order to maintain a good relation with its clients have to show that they are not risking. Aston explained also that in case of a bad investment the risk for the customers is still low because of the "money cover", which Säästöpankkis have. During the interview it appeared evident that in Johanna's opinion the future of the Europe economy will be every year closer to the USA economical system. It means that the economy in Europe will be every year more focused

on the stock market. Johanna said that based on the information received in Säästöpankki the European stock market has grown about 5% in the past years. Therefore, all the banks have to shape their behavior and be ready for the future.

6.4 Personal reflections

The interview with Johanna Aston gave me a lot of information and a lot of reflections concerning the differences between a small private bank as Eurajoen Säästöpankki and a big investment bank as JP Morgan. Obviously the work of a private saving bank is different than a big investment bank, but this interview helped me to understand better the theory of risk, how the people reacted in front of the risk and what the aftermaths of taking risks are. When we think about the risks that an investment bank has to take we can understand why the fees are so high and when we think about Säästöpankki we can understand why they do not take a lot of risks. In my opinion the dimensions of a bank count and they influence how much a bank is willing to take risks. The amount of money, which a bank can count on, influence the amount of risks, which can be taken. Säästöpankki would have too big risks in case of a request of a big investment, on the other hand that amount of money would be nothing for an investment bank. However, only one example is not enough to define the real differences and if it is true that the size of a bank influence the amount of risks that should be taken. Therefore I will introduce now the interview that I had with Nordea, which is one of the biggest commercial banks in Finland and which operates all around the world.

7 NORDEA

Nordea is a commercial bank, which operate all around the world. It is the largest financial services group in Northern Europe with a market capitalization about 38.9 bn and total assets about 669.3 bn. Nordea operates in 8 home markets including Denmark, Finland, Norway, Sweden, Estonia, Latvia, Lithuania and Russia. Therefore, we can consider Nordea a bank with a big size. During the interview, which I did in the

Nordea bank Finland PLC, Corporate Branch Sata-Vakka, located in Rauma, I got a lot information and opinions from the Relationship Manager Hannu Raunio.

7.1 Risks in Nordea

Nordea is a big bank, so they have more possibilities to do a big and important investment. However, it involves more risks for them and Hannu was clear when he defined, which risks they have to face off and how they manage them. First of all, it has been defined the different types of company that are involved and why the evaluation of the risk change between them. The public companies usually have more money, but at the same time they are more difficult to evaluate and they are exposed to more risks than a non-public one. Moreover, in case of B2B market Nordea has to pay more attention, because the real value of the companies is more difficult to define. Therefore, as we can see every time that Nordea has to decide if invest or not, it has to consider different aspects. In fact, the risk of bankruptcy is obviously low thanks due to the size of the bank, but it is not to be underestimated. As matter of fact, Hannu said that there is always the risk that customers do not pay back or even worse that the company fails, so analyzing the risk in the right way is a priority. The Finnish culture after the 1990 started to be conservative and the banks are not willing to the risks as before. Nowadays, the name of the bank is also a good weapon against some risks. Customers, in front of bad economic news, get scared easily and the possibility of a bank run is not to be underestimated. Therefore, a good and trustable bank with an important name can limit that risk. The failure risk for Nordea is also low because of the big market capitalization and the trust of its customers. As we saw in the theoretical part more risk the bank takes, higher is the fee asked. Hannu considers going public a good thing for the health of the company, on the other hand it is possible that the IPO will not go well, especially in the first five years. This one is another risk for a bank as Nordea, the future is difficult to forecast and the economy nowadays is unstable. The liquidity risk for Nordea is not high, the size of the bank would protect well from a bank run, but as we saw during the last crisis, it is not only the size of a bank that saves them from the liquidity risk. Moreover, in case of important loss the Finnish Central Bank would support Nordea with liquidity. The last type of risk considered is concerning the bureaucracy, provide services in the right way, following the rules and do not

go against the law is fundamental for Nordea, which have to submit to the EU rules. Hannu spoke about one of his personal experiences during his career, in which he had to face off a big risk. It happened that a company asked a loan of 15 Million for the construction of a new machine. However, the investment did not work for the company. The aftermaths were a rise of the product's prices and a decrease of the company's rate. In this bad situation the owner of the company had to put his own money to pay back the loans, if he would not have the possibility, Nordea would have had to distrain the company and sell it to have back part of the money. In this case Hannu had been lucky and he managed well the situation, otherwise bad investment could damage seriously the health of the bank. However, Hannu said that the amount of market capitalization is so high that it would be difficult that only one bad investment would put Nordea in a bad position.

7.2 Macroeconomic events influence for Nordea

Hannu was clear about the influence of macroeconomic events. Even if Nordea is well protected, he said that macroeconomic events influence the behavior of banks. In fact, the European Central Bank, in front of crisis, have reacted and changed rules. Concerning the last crisis Hannu said that the financial system was saved by the Federal Reserve in USA and from the European Central Bank in Europe, with economic operations, which have influenced a lot the behavior of banks. The European system is based on the banks, on the other hand the USA system is based on the Stock options. Moreover, USA is an older union of states with equal rules and better organized than the "young" Europe. Therefore, Hannu said that it was good that the financial crisis started in America and not in Europe. As we can see the knowledge of a manager in a bank about the macroeconomic events have to be high to be ready to prevent possible shocks in the market. The econometric study in the last part of this thesis will show with empirical data, how the last crisis influenced the IPOs requests. If in Nordea the macroeconomic events influence quite a lot, we can imagine that in investment banks the influence is even higher, in fact the risks, which are already high in the normal periods, would be even more high and the trust of the customers is easier to be lost in a risky investment bank than in a commercial one. Therefore, macroeconomic events such as the last crisis influence a lot the behavior and the "health" of investment banks.

7.3 Forecast the future in Nordea

Nordea has a lot of clients and have to face requests of loans every day. Then, knowing if the investment would be good or not and knowing the conditions of the customers is essential. The principal tools are, as in Säästöpankki, the financial statements and the balance sheets, from which it is possible to calculate the ratios that describe the situation of the customers. However, because of the amount of requests and the sizes of some of them, Nordea usually hires an analyst company, which analyzes the data and evaluates the situation of the customers. In fact, balance sheet and financial statement are not enough and before investing money the bank has to have securities. It happens also that sometimes the analyst company is not required, in that case the managers of the bank have to use tools as Bloomberg and meeting with the customers. As matter of fact, speaking with the owner is always the best way to understand the real condition of a company and the level of risk. Hannu said that usually they do not take high risks for the safety of the customers, but in case it happens, the interest rate is very high. Another important figures for forecasting used by Nordea are the benchmarks, which can say important things about the future.

7.4 Final reflections

Considering the two interesting interviews with Säästöpankki and Nordea, it is possible to analyze the data and compare them with investment banks. If we would do a scale about the sizes of the banks, we would consider Säästöpankki the smaller, Nordea the middle one and the investment bank the biggest. Obviously the two interviews with the saving and commercial banks cover only a part of the theory, but with some reasoning it is possible to achieve a good quantity of goals. Starting from how these banks manage the risks and how much risk they are willing to take, we can see and make differences concerning the goals of these banks. As matter of fact, the principal goal of Säästöpankki is the safety of the customers and they put all their strength to make the customers feel safe, on the other hand for this service they earn less from investments and this is the motivation that explain why the customers of Säästöpankki have to pay a quite high rate. Concerning Nordea, its size permits them to risk more and undertake more investments. It does not mean that the customers are in danger in

fact, Hannu said that the safety of them is a priority. Of course the bankruptcy is a far thought, but also for the Lehman Brothers, which was one of the biggest investment banks, the bankruptcy was, in their opinion, far away, but the History showed that was not true. I do not mean that Nordea would go easily in bankruptcy, in fact Nordea investments do not have so high risk. The last bank to consider is the investment bank, if we think about the size of the investments done by JP Morgan or Barclays, we can understand the big differences between commercial banks and investment banks. The job of an investment bank is to be able to risk in the best way and yes it is true that also Nordea takes risks, but the sizes of them are quite different. However, through these two smaller banks it is possible to evaluate the risks, which an investment bank faces every day. Thinking that Nordea, which principal job is not to take risks, but to promote the safety of the customers, takes already risks, which could influence a lot its structure and financial condition, We can understand the level of risks taken by investment banks. In fact, they have to take more risks and that is why the IPOs processes have so high fees. With these interviews we also proved that a high risk involves a high fee to pay. Therefore, risks are directly proportional to the revenues (Obviously if the investments have good end). Imagining the risks in investment banking now is not difficult as at the beginning of this thesis. After the theoretical part about the risk in investment banks and after the two interviews made with Nordea and Säästöpankki, it is clear that during IPOs the smallest wrong things could bring the investment banks on the edge of the bankruptcy. In fact, the IPO process is long, expensive and full of small steps, which have to be done with the biggest care. Then, it is easy to understand the underprice factor, when the IPOs teams have to give the right price to the first stocks, they have to consider all the possible risks, so if the IPOs are underpriced it is because of these risks, which an underprice of IPOs could prevent. We have to consider that IPOs are as well investments for investment banks. Therefore, if we consider (the) Hannu's bad experience concerning the investment, which went bad and that was going to cost a lot of money to Nordea, we can understand what can happen to the investment banks and to the customers in case of a fail during the IPOs. The aftermaths could be devastating for both of them. In fact, the amount of money invested is way more than in a commercial bank. Even if the amount of money in investment banks in theory is bigger than in the commercial one, it does not mean than a problem as a failed IPO can be solved. In fact, the liquidity of investment banks

is not always trustable and a fail in one process could scare the other customers and ruin the “name” of the investment bank.

7.5 Advices

Giving advices to two banks as Säästöpankki and Nordea is a real “risk” for me. My skills are probably not high enough to give the perfect solution to the risk management. However, the conclusion that I reached during the last reflections could give them a general idea about how much they are willing to risk. In fact, it steamed up that Säästöpankki invests money only in a secure way and that because of this the customers have to pay a higher rate. In fact, they reduce the risks by paying a higher amount of money. Concerning Nordea, they are more willing to risk and they have more possibilities to do that. In fact, their size is bigger than Säästöpankki. It does not need that one is better than the other one as matter of fact, it depends only on how much the people are willing to risk. If the customers want a risk near the level zero and they are willing to have a higher interest rate they will use the services of Säästöpankki. On the other hand, if the customers will be more willing to risk they will use the services of Nordea. I think that for a bank saying the level of risk in their services is very important and this would give the possibility for the customers to choose a bank that fits the best for them. It is wrong in my opinion to say that after the last crisis all the customers do not want to risk anymore. In fact, the last crisis the financial situation went worse therefore, it could be that a quite good amount of customers would be interested in a riskier investment than in a safe and expensive one. The level of risk during IPOs is known, but the companies keep going public, in my opinion it means that, without considering the period “during crisis”, all the types of banks, willing to risk or not, have a lot of possibilities of success.

8 INTERFERE OF MACROECONOMICS EVENTS

The decisions of investment banks are usually influenced by a lot of leverage. However, one question that not always is taken into consideration is “do macroeconomics events influence investment banks decision?”.

8.1 IPO reaction during and after crisis

Determining the IPO price is always difficult for the companies and investment banks because only a small mistake can bring to the underpricing. There are a lot of leverages, which can bring to an underpricing and Mustafa Hakan Gunturkun, sevin Gurarda and Hilal Humeyra Erdogan did a research about the influence of macroeconomics event on IPO. More precisely, they take into consideration the recent global financial crisis and they studied the impact on Turkey's IPO. This article analyzes the relations between the rise of underpricing in Turkey starting from 2006 to 2011. Therefore will be considered the period before the crisis, the period during the crisis and the period after the crisis. The macroeconomics factors considered in this study are GDP, ISE 100 index, consumer price index, consumer confidence index, interest rate and world oil price. (Mustafa Hakan Gunturkun, sevin Gurarda and Hilal Humeyra Erdogan, 2012. 1-13)

8.1.1 Methodology

The study is about 75 IPOs done in Turkey between the period 2006 and 2011. In this first table is explained the distribution of IPOs in that period.

Year	Total Number of IPOs	Merged Acquired	Others	Number of IPOs included	% of IPOs included
2006	21	2	7	12	57%
2007	11		3	8	73%
2008	3		1	2	67%
2009	5	1	1	3	60%
2010	26		3	23	88%
2011	27			27	100%
Total	93	3	15	75	81%

Figure 7. IPOs distribution (Mustafa Hakan Gunturkun, sevin Gurarda and Hilal Humeyra Erdogan, 2012. 4)

As we can see from the table not all the IPOs have been considered in the studies due to the poor information given by some of the companies. The analysis continue with the calculation of all the Cumulative Abnormal Returns and the Average Annual Returns.

All firms (n=75)	AAR	CAR
Initial Return	0,077*	0,077**
2 nd day	0,014**	0,092**
3 rd day	0,011	0,104**
4 th day	0,005	0,110*
1 st week	0,121***	0,231*
2 nd week	0,003	0,234*
3 rd week	-0,000	0,234*
1 st month	0,113*	0,347*

Figure 7.1. ARR (Mustafa Hakan Gunturkun, sevin Gurarda and Hilal Humeyra Erdogan, 2012. 6)

This table (7.1) shows that the first two days of IPO brought a positive return, but starting from the third day the result is poor. The next table (7.2) will show how the crisis of 2008 influenced the number of companies, which went public during that specific period. The result shows that the number of IPOs decreased significantly. Indeed, in the first months of the 2008 only two firms went public and it is surprising that only in 2011 it has been possible to see a higher return.

Year	No. of firms	Initial Return	2 nd day	3 rd day	4 th day	1 st week	2 nd week	3 rd week	1 st month
2006	12	0,060*	0,024***	0,010***	0,001***	0,081*	-0,022*	0,005*	0,039*
2007	8	0,078*	-0,004	0,023	-6,693	0,122*	-0,038	-0,025*	0,044*
2008	2	0,0980	0,1090	0,1120	0,1090	0,5330	0,031***	-0,1760	0,0990
2009	3	-0,169	0,0007	-0,096	0,004	-0,279	-0,008	0,029**	-0,343
2010	23	0,018*	0,016	0,028*	0,002***	0,085*	0,019*	0,006*	0,114*
2011	27	0,160**	0,009***	0,009***	0,010***	0,182**	0,0150	0,0140	0,218**

Note: *, **, *** denote statistical significance at 1%, 5%, and 10%, respectively

Figure 7.2. Initial and Average Abnormal Returns in the first month of IPO (Mustafa Hakan Gunturkun, sevin Gurarda and Hilal Humeyra Erdogan, 2012. 7)

Moreover, the analysts checked the trend of Cumulative Abnormal Returns (CARs) in the first month of IPO in 2008 and 2009. They found that the underpricing is still continuing and that in 2009 CARs are negative. The next table shows the results:

Year	No. of firms	Initial Return	2 nd day	3 rd day	4 th day	1 st week	2 nd week	3 rd week	1 st month
2006	12	0,060*	0,084*	0,073*	0,072*	0,154*	0,131*	0,137*	0,177*
2007	8	0,078*	0,074*	0,097*	0,097*	0,219*	0,180*	0,155*	0,200*
2008	2	0,0980	0,2080	0,3210	0,4300	0,9630	0,9310	0,7550	0,8550
2009	3	-0,169	-0,168	-0,264	-0,260	-0,539	-0,548	-0,577	-0,920
2010	23	0,018*	0,035*	0,064*	0,061*	0,146*	0,165*	0,171*	0,286*
2011	27	0,160**	0,170**	0,179**	0,190**	0,372**	0,388**	0,403**	0,622**

Note: *, **, *** denote statistical significance at 1%, 5%, and 10%, respectively

Figure 7.3. CARs in the first month after IPO (2008-2009) (Mustafa Hakan Gunturkun, sevin Gurarda and Hilal Humeyra Erdogan, 2012. 7)

The final conclusion of these studies shows that the financial crisis had a strong impact on the numbers and the results of the IPOs. However, the analysts found interesting differences between the influences of macroeconomics factors. As matter of fact, they discovered that ISE 100 index, consumer price index, interest rate and GDP per capita did not influence the underpricing during the period between 2006 and 2011. The CCI or Consumer Confidence Index influenced the price of IPO. Moreover, if it is considered for only few years it influenced even more. World oil price did not affect the underpricing for the period pre and during crisis. However it started work as leverage in the period after crisis. The conclusion of the article is that people before investing considered the all world economic situation therefore, mac-roeconomic events influence all the decisions related to investments. (Mustafa Hakan Gunturkun, sevin Gurarda and Hilal Humeyra Erdogan, 2012. 1-13)

9 CONCLUSION

At the end of this long study and evaluation concerning investment banking, I can say that I am really satisfied with my work. The principal goals are achieved in fact, I was able, with a quite short introduction, to explain all the main tasks of investment banks. I could speak write for pages and pages about the tasks, but, as I said in my project

plan, my objective was to focus on the IPO and risks. Therefore, in my personal opinion the tasks are explained through the right amount of pages. Another important goal, which I achieved is the right explanation of the IPO process and thanks to the interviews and some thoughts I have been able to give my information an excellent validity and reliability. The final thought about IPO is that this process is very complicated and from the beginning to the end no one knows the real conclusion of this process. In fact, risks are high and the evaluation of the risks is another goal, which I looked for and that I achieved. The principal risks have been described with details and valid data. Moreover, with the two interviews I had the possibility to understand that a lot of risks are similar between commercial banks and investment banks. The main difference is how much these banks are willing to risk. As matter of fact, in the final reflection we saw that the size of the investments influence the level of the risks and obviously the banks, which risk more are the investment ones. An unexpected subject, which I was not going to analyze at the beginning is the problem of underpricing, which at first was not considered the principal subject about the risk, but at the end of this work I can say that it had an important influence in my work. The interviews with the two commercial banks were an important experience, which gave validity to my data and gave me the possibility to create connection and conclusion concerning investment banks. The principal result of this thesis is the evaluation of the risk in investment banking and especially during the IPO process.

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APPENDIX 1 INTERVIEWS QUESTIONS

- Could you describe yourself? (Who are you? Where are you working?)
- Could you describe your job?
- How do you describe the risk?
- Which are the advantages and disadvantages of going public?
- How do the team IPO is created?
- Which are the skills to be chosen to be a member of the IPO team?
- Could you define the difficulties of the IPO process?
- Could you speak about the theory of IPO underpricing?
- What is your opinion about it?
- Which kind of risks do you have to face during the underwriting process?
- Is the risk of failure high?
- How much is your bank willing to the risks?
- Do you think that your bank is different from the other?
- Do you think that different culture influence the behavior of banks?
- How is your bank organized?
- Which type of different team groups are there?
- Which kind of different tasks do you have to deal with daily?
- Which one are the principal steps for the process of underwriting?
- What do you have to consider during underwriting?
- Which kind of risks there are during the process of underwriting?
- Which risks do you have to fight every day?
- Which one are the principal risks for your bank?
- Is your bank willing to risk?
- How do you forecast the future?
- Which tools do you use for forecast?
- Does forecast help in taking decision?
- Can you explain the importance of trend forecasting in your bank?
- Which are the principals software that you use in your work?
- How do you analyze if an investment is good? Which are the principles phases?
- Could you tell me one important experience that you had? And could you describe the principals phases, which you went through? Which risks did you have to face off?

- Do macroeconomic events influence the decision of your banks? If yes, how do they do it?
- What is the impact of the last financial crisis? What did it change?