

# UNDERPRICING OF INITIAL PUBLIC OFFERINGS

Case: Ho Chi Minh Stock Exchange

LAHTI UNIVERSITY OF APPLIED  
SCIENCES  
Degree Programme in International Business  
Thesis  
Spring 2011  
Mai, Truong Loc

Lahti University of Applied Sciences  
Degree Programme in International Business

MAI, TRUONG LOC:

Underpricing of Initial Public Offerings  
Case: Ho Chi Minh Stock Exchange

Bachelor's Thesis of Degree Programme in International Business, 86 pages, 9  
pages of appendices

Spring 2011

## ABSTRACT

---

Initial public offering (IPO) is a favorite investing channel particularly because of the stock's tendency to be priced under its real value. This underpricing phenomenon prompts a large initial return for investors once the stock starts to circulate on an exchange. The return rate is especially high in developing countries, and therefore attracts great interest from international investors. Vietnam is among the most promising markets, yet there is a serious shortage of valuable knowledge about IPOs that prevents investors from tapping a lucrative investing opportunity.

The aim of this thesis is to aid investors in venturing into Vietnamese equity markets. Specifically, the author examines, as a case study, the Ho Chi Minh Stock Exchange and various issues surrounding IPOs in that market. The results aim to clarify the feasibility of IPOs as an investing channel, and determine factors influencing underpricing level. This study utilizes the deductive method with a combination of qualitative and quantitative approaches. Data was collected from a number of sources, ranging from books, journals and reports to personal observations and financial databases. Moreover, the author gained invaluable insights from interviews with experts in the investment banking business.

An investigation into the underpricing level of IPOs and the determinants of underpricing is presented in the empirical portion of the thesis. The author examines return rate across different time frames, taking into account local features and return rates of comparable markets. Next, analysis on the determinants of the underpricing level identifies the weight of each factor on the underpricing level. Finally, a multiple regression analysis is conducted to affirm the findings in this study.

Findings in the empirical part suggest a substantial return rate compared to other markets. Thus the author finds investing in Vietnamese IPOs to be very advantageous and advises international investors to do so. Moreover, two stock portfolios are provided. Each portfolio describes characteristics of a typical underpriced stock, and provides a list of companies that fit these criteria. These characteristics should serve as guidance for investors looking to invest in Vietnamese IPOs.

Keywords: Initial public offering, underpricing, HOSE, Vietnam, IPO

## TABLE OF CONTENTS

1	INTRODUCTION	1
1.1	Background information	1
1.2	Research objectives and questions	2
1.3	Research method and data collection	3
1.4	Scope and limitations	6
1.5	Thesis structure	7
2	INITIAL PUBLIC OFFERING	9
2.1	Reasons to go public	9
2.2	Advantages and disadvantages of doing an initial public offering	12
2.2.1	Advantages	12
2.2.2	Disadvantages	14
2.3	Initial public offering process	15
2.3.1	Corporate issues	16
2.3.2	Offering structure	16
2.3.3	Regulation and documentation	17
2.3.4	Marketing	19
2.3.5	Pricing and allocation	20
2.3.6	Aftermarket	23
2.4	Criteria for a successful initial public offering	24
3	UNDERPRICING PHENOMENON	27
3.1	Reasons for new issue underpricing	27
3.1.1	Asymmetric information	28
3.1.2	Symmetric information	31
3.2	Factors influencing underpricing level of initial public offerings	32
3.2.1	Offering size	32
3.2.2	Age of the firm	33
3.2.3	Size of the firm	34
3.2.4	Time lag between offering and listing dates	34
3.2.5	Industry composition	35
3.3	International evidence	36
4	CASE STUDY - HO CHI MINH STOCK EXCHANGE	38

4.1	Overview of Ho Chi Minh Stock Exchange	38
4.2	Initial public offerings by mean of state-owned companies' privatizations	41
4.3	Price setting mechanism and stock allocation	43
4.4	Listing requirements	45
4.5	Collection of eligible initial public offerings	47
5	RETURN RATE OF VIETNAMESE INITIAL PUBLIC OFFERINGS	49
5.1	Return rate of Vietnamese initial public offerings	50
5.2	Comparison of return rates of initial public offerings in Vietnam and other markets	55
5.3	Complications for international investors	56
5.3.1	Restricted share quantity	56
5.3.2	Time lag between auction and listing dates	57
7	CONCLUSIONS	58
7.1	Investment decision	58
7.3	Future research possibilities	59
8	SUMMARY	63
	REFERENCES	65

## LIST OF FIGURES

FIGURE 1.	Research methodology.	6
FIGURE 2.	Thesis structure.	7
FIGURE 3.	Typical sources of new venture financing.	10
FIGURE 4.	IPO process.	15
FIGURE 5.	Objectives of companies, investors and underwriters in an IPO.	25
FIGURE 6.	Reasons to underprice new issue.	28
FIGURE 7.	Average first day returns of IPOs in sample countries.	37
FIGURE 8.	Number of stocks and market capitalization of HOSE in 2006-2010.	38
FIGURE 9.	HOSE - Sector composition in term of market capitalization.	40
FIGURE 10.	Average first-day returns of IPOs in Vietnam and other markets.	55

## LIST OF TABLES

TABLE 1.	Largest international IPOs to date.	12
TABLE 2.	International Organization of Securities Commission's prospectus content standard.	18
TABLE 3.	Market capitalization of listed companies (% of GDP).	39
TABLE 4.	State ownership of the top ten companies on HOSE by market capitalization.	41
TABLE 5.	HOSE's listing requirements.	45
TABLE 6.	Descriptive statistics on initial return of Vietnamese IPOs.	50
TABLE 7.	Descriptive statistics of underpricing and overpricing incidents.	52
TABLE 8.	Number of underpriced and overpriced IPOs in 2005-2009.	53

## GLOSSARY

ASEAN	Association of Southeast Asian Nations
Auction day	On the auction day investors compete with each others to get IPO stocks, which will be allocated to the highest bidders.
EUR	Euro
GDP	Gross Domestic Product
HNX	Hanoi Stock Exchange
HOSE	Ho Chi Minh Stock Exchange
IPO	Initial Public Offering
JSC	Joint Stock Company
Listing	The act of putting a company's stock on a stock exchange.
Money left on the table	When stocks are underpriced, the offering company cannot raise as much money as it could when share's price is evaluated correctly. The untouched money is referred to as "money left on the table".
POE	Private-owned enterprise
Road show	Meeting between the IPO issuers and investors, where the issuers give presentation about the upcoming initial public offering
ROI	Return on Investment
SOE	State-owned enterprise
SSC	State Securities Commission of Vietnam
Underpricing	The pricing of an initial public offering below their real value. This undervaluation is evident at the first trading day when share price jumps to their true worth, resulting in a large return for investors.

Underwrite	One or several investment banks guarantee that a company will receive the expected capital from its IPO, regardless of demand. If the offering shares are undersubscribed, the banks will buy the remaining shares.
Underwriter	One who underwrites an initial public offering
VND	Vietnam Dong



# 1 INTRODUCTION

## 1.1 Background information

In the publication entitled “The World in 2050”, PricewaterhouseCoopers asserts that Vietnam will be among the top 20 largest economies in the world by 2050, ranking at 14 and ahead of Italy, South Korea and Spain (PricewaterhouseCoopers 2011, 9). This is a remarkable prediction, given the size and level of development of the Vietnamese economy at this point. Still, the forecast is consistent with previous claims made in prior versions of this publication both before and during the financial crisis, in 2006 and 2008 respectively. In the immediate future, though, it is clear that Vietnam is receiving tremendous interest from investors. JP Morgan named Vietnam one of the “Frontier Five” markets worth investigating, together with Kazakhstan, Bangladesh, Nigeria and Kenya (JP Morgan 2007, 3). Mark Mobius, head of emerging market division of the EUR 458.4 billion Franklin Templeton funds, states that Nigeria, Vietnam and Kazakhstan are “frontier” markets Franklin Templeton expects to place its biggest bets on in 2011 (African Alliance Securities 2010, 8).

On the other side, investors looking for opportunities in Vietnam face a setback common to a majority of developing markets: information deficiency. In this case, there are several complications that make the problem even worse. First of all, Vietnam has a modified centrally planned economy unique to a handful of countries, thus it is difficult to apply the common knowledge of a market economy to such an environment. Moreover, Vietnamese stock exchanges, namely the Ho Chi Minh Stock Exchange (HOSE) and Hanoi Stock Exchange (HNX), are relatively new: the former was founded in 2000 and the latter in 2005 (Ho Chi Minh Stock Exchange 2011a). These facts undermine the abundance of information and academic literature which otherwise can serve as a basis for investing decisions.

During his practical training period at Saigon Securities Incorporation, a prominent investment banking house in Vietnam, the author had the opportunity

to participate in various discussions with international financial institution experts regarding entry options to the Vietnam stock market. These conversations echoed the lack of information stated above. Discussion participants agreed that the topic of private companies offering their shares to the public, in an initial public offering is a fundamental one, yet there is almost no research on this issue in the Vietnamese environment at present. Given the rate at which private companies are going public on Vietnamese stock exchanges nowadays, IPOs are increasingly becoming lucrative investing options. Thus, the availability of such a study would be a valuable piece of knowledge in order to assist financial institutions and individual investors in the process of investing in Vietnam's capital markets. Moreover, it will add to the scarce literature about this emerging market, and serve as a foundation for further research.

## 1.2 Research objectives and questions

The purpose of this thesis is to examine the attractiveness of investing in initial public offerings in Vietnam. This purpose is expressed in the main research question:

- Is it worthwhile for international financial institutions and individual investors to participate in initial public offerings in Vietnam?

It is a well-known fact that when a private company first sells its shares to the public, such shares tend to be priced below their intrinsic value or be underpriced. This level of underpricing is evident when the stock is traded on a stock exchange for the first time, as the market will push the share price back to its real value, resulting in a large return for investors who purchased the offering shares. (Ibbotson, Sindelar & Ritter 1994, 67.) The return can be very substantial, just as in the case of Chinese IPOs in the period before 1995, whose share prices increased 948 percent on average after listing, or nine times the initial investment (Su & Fleisher 1999, 174). A more recent study in Bangladesh stock exchange puts the figure at 480 percent, almost five times the initial share price (Islam, Ali & Ahmad 2010, 36). Thus to examine the feasibility of IPOs as an investment

opportunity, it is necessary to find out the rate of return, or level of underpricing, and compare this rate with those of comparable markets. Accordingly, two sub-questions have to be addressed:

- What is the underpricing level of Vietnamese initial public offerings?
- Does this underpricing level represent a substantial rate of return on investment in comparison with those of otherwise comparable markets?

The second purpose of this study is to examine factors influencing the underpricing level in Vietnam. To date, various factors have been put forth to explain underpricing across markets, yet their significances vary under local conditions. The author anticipates that a discovery of such factors in the Vietnamese market will have a big impact on investing decisions, because those variables will help investors identify the most favorable initial public offering deals and consequently enhance profitability. This purpose is expressed in the second main research question:

- What factors influence the level of underpricing of Vietnamese IPOs?

Overall, these two research questions sum up the author's intention and the objectives of this thesis. Subsequent parts of this chapter discuss the research method, the thesis's scopes and limitations, as well as the thesis structure.

### 1.3 Research method and data collection

Research method is an important part of the thesis, in that it provides the means to justify the author's choice of research conduct within a particular organization (Eriksson & Kovalainen 2008, 25-26). Research method not only details precisely how research objectives will be met, but also rationalizes the choice of method in the light of those objectives. Breaking down into components, research method is

composed of: research design and choice of data collection. (Saunders, Lewis & Thornhill 2009, 43.) This section presents the author's choice of research design as well as data gathering and provides justification for these selections.

First of all, research approach is one of the two components of research design. It defines the link between literature review and empirical study, as well as the general course of a thesis. There are generally two choices: deductive approach and inductive approach. Deductive approach involves the development of a hypothesis from the theory before a research strategy is designed in order to test this hypothesis. In contrast, in inductive approach, data is collected and a theory is developed as a result of the data analysis. However, it is also possible for a combination approach that integrates elements of both deduction and induction. (Saunders et al. 2009, 124-127.) Overall, the exploratory nature of this study induces the author to choose deductive approach as the primary guideline.

Next, research method is the other component of research design. Traditional research methods are often divided into two main types: quantitative and qualitative methods. Their differences lie in the manipulation of data collection technique and data analysis procedure. On one hand, the quantitative method predominantly uses data collection techniques, such as questionnaires, and data analysis procedures such as statistics that generates and uses numerical data. On the other hand, the qualitative method utilizes data collection techniques such as interviews and data analysis procedures such as categorizing data that uses and returns non-numerical data. (Saunders et al. 2009, 151.) While both methods are suitable for research and have been used extensively, their shortcomings have become more evident with the ever growing complexity of business issues. Driven by the need to study these complex issues, researchers more often than not find a combination of quantitative and qualitative methods desirable, for their natures are mutually complementary (Gorard & Taylor 2004, 3). Hence the use of both qualitative and quantitative approach in business research, or mixed method, is completely justified.

As such, mixed method is deemed most suitable for the purpose of this study. Due to the nature of information necessitated to answer the main research questions,

the study utilizes a great deal of quantitative method. Nonetheless, the vast theoretical framework, as well as the lack of prior study in the Vietnamese environment means that the author must comply with some sorts of qualitative method to approach the conclusion.

In addition, the collection of data also requires a systematic approach. Different data sources are utilized in this thesis, which are divided into theoretical and empirical parts. Necessary data for the theoretical part is collected mostly from books, reports and research articles that focus on IPOs and the aftermarket performance of IPO stocks. Next, the empirical part utilizes various financial databases to gather companies' data which constitutes the main source for the analysis. Moreover, a large amount of primary data is collected from company prospectus, a legal document that has to be submitted to the exchange authorities prior to listing.

Most importantly, the author has gathered invaluable insights from interviews with Mr. Pham Dinh Huy, Associate Director and Ms. Tran Mai Thuy, Analyst of Investment Banking Business, Saigon Securities Incorporation. Information was gathered using unstructured interviews, with each interview utilizes different themes and questions. The exploratory nature of this thesis induces the author to rely on unstructured interviews, which are deemed most suitable for this type of study (Saunders et al. 2009, 323). In summary, the following Figure 1 sums up the whole research methodology of this study:

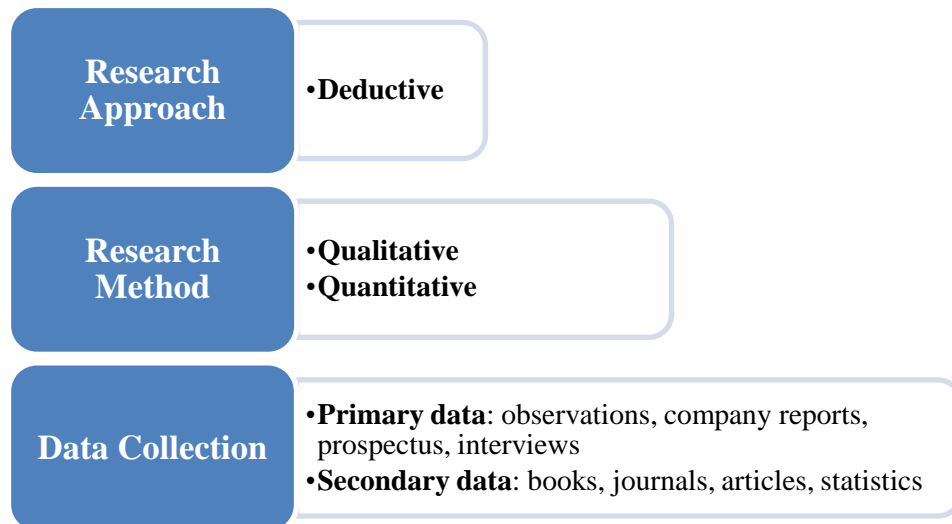


FIGURE 1. Research methodology.

#### 1.4 Scope and limitations

First, the chief concern of this study is to examine the IPO activities and the underpricing phenomenon in Vietnam. While the subject of IPOs is vast with many sub-disciplines, within the scope of this bachelor thesis the author elects to investigate only a narrow topic. This is done to preserve the consistency of the thesis and enhance knowledge of this particular topic, which can serve as a foundation for further research.

Second, the study is written from an investor's point of view and therefore financial institutions, such as investment and private banks, funds and venture capital funds, as well as private investors, will find the subject relevant and practical. Furthermore, this thesis also benefits companies looking for a joint venture, merger and acquisition, or simply long-term cooperation with Vietnamese enterprises with regard to allocating and preserving strategic capital resources. Although it is a narrow topic, the author believes its implications are far reaching and applicable to many business issues.

Third, the author decides to investigate only companies that have been listed on one Vietnamese stock exchange, the HOSE. Although Vietnam has two official stock exchanges, namely HOSE and HNX, the author finds that the addition of

HNX in the study will only bring marginal benefit for several reasons. HOSE was created to serve national, well-established enterprises whilst HNX was created to serve smaller and younger local companies. Thus the size and scope of HNX are more of a national caliber, serving chiefly domestic investors. On the other hand, HOSE aims at both national and international investors, manifesting more stringent listing requirements and regulations. HNX lags behind HOSE in term of size, scope and liquidity, the last of which is of paramount importance to international investors. Hence the author finds it appropriate to exclude companies listed on HNX not only to give the thesis a more international orientation but also to maintain the integrity of the study.

### 1.5 Thesis structure

The thesis structure comprises of two parts: the theoretical framework and the empirical study. The following Figure 2 demonstrates briefly the structure of this thesis:

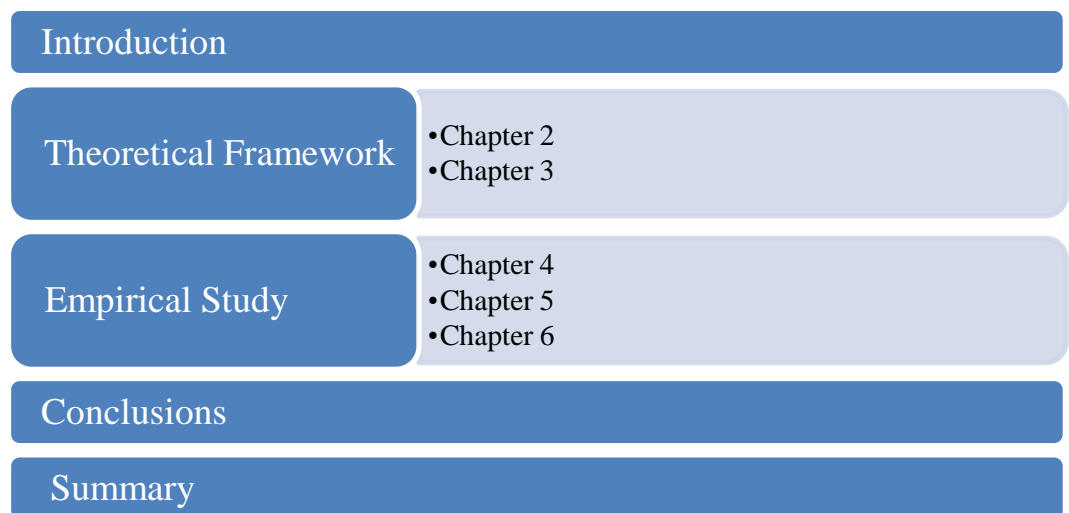


FIGURE 2. Thesis structure.

The study starts with the introduction in Chapter 1, where motives and objectives of the thesis are presented together with the utilized research methodology and

structure. Next, Chapter 2 and 3 encompass the theoretical framework. Chapter 2 presents an overview on IPOs with regard to incentives, process and price setting mechanisms. Chapter 3 conveys general knowledge of underpricing in IPOs with regard to motivations for underpricing, its determinants as well as its importance in an emerging markets context.

The empirical part is described in Chapter 4, 5 and 6 of this thesis. Chapter 4 presents the case study and discusses some unique features that will have an impact on the final result as well as investing options. Basing on the theoretical framework, in Chapter 5 the author uses data collected from financial sources to determine the level of underpricing in HOSE and places the result in comparison with that of other developing markets, in order to answer the first main question and its two sub-questions. In Chapter 6 various determinants of underpricing described in Chapter 3 are put into context within the Vietnam market, in order to examine their influence on the price behavior of IPOs.

Chapter 7 draws on studies in the empirical part to answer both main questions. Moreover, implications of the result will be discussed to give recommendations to future investors as well as outline future research possibilities to further the cause of this study. Finally, Chapter 8 summarizes the whole thesis.



## 2 INITIAL PUBLIC OFFERING

An initial public offering occurs when a private company sells its shares to the public for the first time. This is done with the assistance of an investment bank which markets the offering to investors in what is called the primary market. This primary market is strictly reserved for stocks that have never been issued before. Once investors have possession of said stocks, these stocks circulate on a secondary market, which is typically a national stock exchange. (Bodie, Kane & Marcus 2005, 66.)

Although firms regularly raise capital by offering shares to public, an IPO is special in that it marks the firm's transition from a private business to a public entity, a substantial change which transforms the whole ownership structure and every facet of the business. Indeed, IPO and "going public" are used interchangeably because of their close association. Moreover, an IPO is frequently the largest equity issue a corporation ever makes. (Zingales 1995, 425.) Once an IPO is done, a company cannot do another IPO; all subsequent public offerings are termed seasoned new issues, which require less stringent procedures and regulations than an IPO. Due to its strategic importance, every IPO requires careful research and involves various parties, who often work together for many years before the issue is through. (Geddes 2003, 1.) In order to equip the audience with a general knowledge of IPOs, this chapter provides an insight on a firm's decision to do an IPO, advantages and disadvantages of doing an IPO, the offering process as well as criteria for a successful IPO.

### 2.1 Reasons to go public

There are numerous reasons for private firms to offer shares to outsiders and henceforth effectively transform themselves into public companies, though a majority of them do so for two reasons:

(1) Raising capital to further the cause of a company

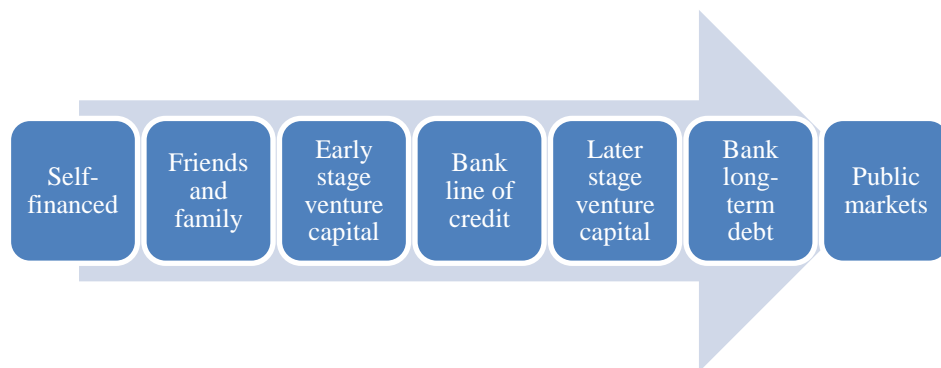


FIGURE 3. Typical sources of new venture financing (Geddes et al. 2003, 8).

During the life cycle of a business, a company will have access to several sources of financing. However, all options do not present at once but rather at various stages of the company's development. As the company grows, its capital sources expand. Figure 3 describes typical capital sources for a growing business. A company in need of capital can attempt to take loans from financial institutions or seek venture financing, etc. However, raising capital by mean of a public offering carries a distinct advantage over debt: the company does not have to pay for interest incurred from loans. Instead, it may pay regular dividends for its new shareholders, an option that the firm can choose to exercise. Moreover, the incoming capital can be used to pay off debt, thereby solidifying the financial situation of the firm. An IPO is a desirable financing option for all these reasons. (Geddes et al. 2003, 8.)

Nevertheless, opportunities for an IPO may appear only at a later stage of the business cycle, where the company is of a certain size and has some maturity. Investment has always been associated with risk, and inasmuch as an investor wants to profit, he/she wants to minimize risk as well. Apparently, the younger and less well-known the firm is, the higher the risk. (Bodie et al. 2005, 68.) Another facet of this pattern rests in the fact that most IPOs are priced below their potential value, also known as underpricing. This phenomenon will be described in more detail in Chapter 3.

## (2) Raising funds for the existing shareholders

More often than not, existing shareholders may wish to sell a part of their stake in the company. They might be professional investors, for example, who invested money in the firm in the past and want to cash in their investments to realize the profits (Brealey & Meyers 2003, 406). Venture capitalists and private equity providers are never long-term shareholders. Most have a target time horizon of three to seven years from the date of investment to the date of their departure. If stock markets are favorable, an IPO flotation may maximize their returns. (Geddes et al. 2003, 13.)

In many cases, the founders are those who sell shares to the public. Although they have every right to do so, such offerings nonetheless generate a great deal of doubt from future buyers. The reason for this mistrust is because these insiders are usually regarded as the most knowledgeable persons about the performance of the offering firm and its future prospects. Thus when the founders want to part with their holdings, investors may suspect that this move indicates problems within the company. This is also the reason why every IPO requires a lockup period in which insiders are forbidden to sell their shares immediately after the completion of the offering. (Brav & Gompers 2003, 1.)

Furthermore, a growing number of shareholder-led IPOs come from the part of government in the process of privatizing state-owned companies (SOEs). Although fundamentally identical to an IPO of a private business, political factors have greatly complicated the privatization of SOEs. Nevertheless, privatizations by way of share offerings have contributed to the development of equity markets in countries as diverse as Austria and Malaysia. (Gregoriou 2006, 191.) The case is especially imminent in China and Vietnam, where a majority of national enterprises are SOEs (Huy 2010). Whereas most of contemporary IPOs come from private firms, some of the largest IPOs ever are those from governments turning SOEs into public companies (Brealey et al. 2003, 406).

TABLE 1. Largest international IPOs to date (Renaissance Capital 2010).

<b>Company name</b>	<b>Offer year</b>	<b>Country of origin</b>	<b>Deal size (US\$ Millions)</b>	<b>Pre-IPO state-owned enterprise</b>
<b>ABC Bank</b>	2010	China	\$19 228	Yes
<b>ICBC Bank</b>	2006	China	\$19 092	Yes
<b>NTT Mobile</b>	1998	Japan	\$18 099	
<b>Visa</b>	2008	USA	\$17 864	
<b>AIA</b>	2010	HongKong	\$17 816	
<b>ENEL Spa</b>	1999	Italy	\$16 452	Yes
<b>General Motors</b>	2010	USA	\$15 774	
<b>Nippon Tel</b>	1987	Japan	\$15 301	Yes
<b>Deutsche Telekom</b>	1996	Germany	\$13 034	Yes
<b>Bank of China</b>	2006	China	\$11 186	Yes

Even though an IPO is beneficial for the initiator, it is not without disadvantages. The process of going public is a strategic one that will affect the business in the long term. As such, companies must recognize and weigh potential risks.

## 2.2 Advantages and disadvantages of doing an initial public offering

### 2.2.1 Advantages

#### **Liquidity and increased share price**

Companies listed on a stock exchange are typically worth more than similar companies that are privately held. The obligation of a public company to disclose its operational information as required by law reduces uncertainty and thereby increases the company's value. Moreover, share listing facilitates trading and brings liquidity to the market so that investors can trade in the stocks at will. This alone is worth a premium, as private companies' stocks have little to no liquidity. On average, the listed company will be worth approximately 30 percent more than

the private company, even if they are identical in all other aspects. (Geddes et al. 2003, 24.)

### **Management and employee motivation**

The use of stock options and stock bonuses as a reward is popular among public companies. Although private firms can and have been issuing stocks to employees as bonuses, the practice is more widespread in public corporations, mainly because of the limited liquidity of private companies' stocks. These incentives are convenient for two reasons: deferring operational expenses and facilitating long-term relationship with employees. Furthermore, since employees have more motivation to work, their efforts will be reflected in share prices. (Chemmanur & Fulghieri 1999, 251.)

### **Enhanced image**

Public companies are required by stock exchange authorities and securities commissions to disclose information on a regular basis. This continuous disclosure maintains and enhances the company's prestige in the public. Moreover, company's image also benefits the employees due to a considerable prestige attached to managing and working for a publicly listed company. This can lead to the recruitment and retention of higher quality employees. A listing may also bring marketing benefits by making the company stronger and more substantial. Accordingly, press coverage of public companies is typically greater than that of private-owned firms. (Geddes et al. 2003, 251.)

### **Access to alternative sources of capital**

Alternative sources of capital are more accessible to a firm when it becomes a public company. Therefore, listed companies are often able to raise money more easily and quickly than do private companies of similar size. Since the main reason to initiate an IPO is to raise capital, such an offering generally improves a company's debt-to-equity ratio so that the company may be able to borrow on better terms in the future. (Geddes et al. 2003, 25.)

### 2.2.2 Disadvantages

#### **Increased disclosure**

One of the main disadvantages in doing an IPO is the obligation to disclose more information to the public. Since the information is available to everybody, the number of people who has access to the company's financial records increases significantly. Prior to doing an IPO, a company has to release a substantial amount of information about the offering in the prospectus to inform investors of its prospects. In addition, companies are required by the stock exchange, on which the company's stocks are listed and the securities commissions to disclose information on a regular basis so as to investors can decide their action towards the stocks: buy, sell or hold. (Spindler 2010, 5.)

#### **Costs of IPOs**

An IPO often carries substantial expenses because of its complexity. For example, the underwriters' commissions are about seven percent of the total value of the IPO. There is also a considerable cost of other activities such as public relations, printing, marketing and consultancy. In addition to the costs of the IPO, when the firm's stocks are listed on a stock exchange there are also many costs to maintain the firm's compliance with the exchange's regulations. (Chen & Ritter 2000, 1105-1106.)

#### **Separation of ownership and control**

A certain consequence of doing an IPO is the dilution of ownership control for existing shareholders. Prior to an IPO, the owners and the managers are often the same persons. At the end of the IPO, the number of shareholders usually increases. This increase in ownership pool means that the original shareholders have to share voting power with new shareholders, and thereby reduce the former's ability to control the company. Moreover, public companies have a higher tendency to hire professionals for the management team. This separation of ownership and control has a potential problem: hired managers are suspected of

working for their best interest since they have no ownership of the company. In order to ensure that the managers work in the best interest of the shareholders, public companies have board of directors to inspect managers' actions on behalf of the shareholders. (Geddes et al. 2003, 28; Pham, Kalev & Steen 2003, 920.)

### 2.3 Initial public offering process

An IPO is an expensive and arduous process, requiring a significant time commitment from the company's boards and the investment bank advising the IPO. The ultimate goal of an IPO encompasses achieving several parties' objectives which requires careful calculation and compromise. Moreover, the IPO process heavily depends on respective laws and regulations pertaining to particular countries. Even so, there are some commonalities among IPOs around the world. (Geddes et al. 2003, 4.) As a result, a general knowledge about these commonalities is essential not only to understand the whole process, but also to distinguish unique features when it comes to a distinct country.

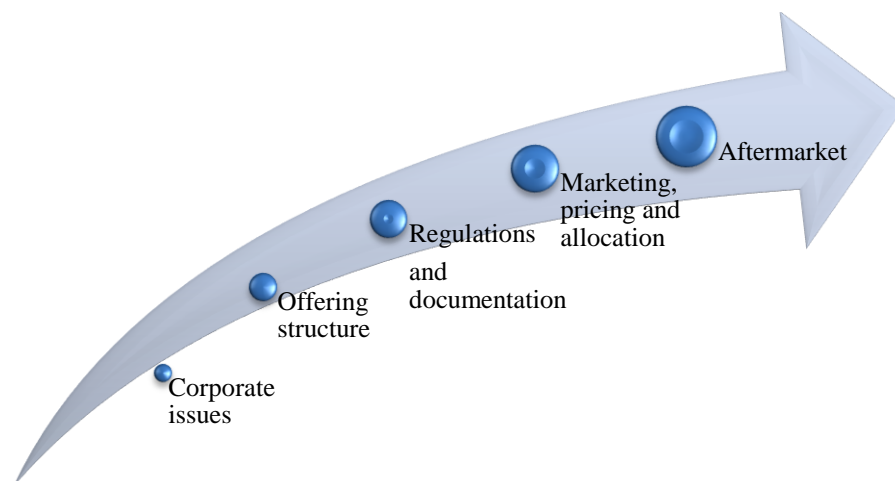


FIGURE 4. IPO process (Geddes et al. 2003, 44).

In this subchapter, common components of the IPO process are discussed. These components include corporate issues, offering structure, regulations and documentation, marketing, stock pricing, stock allocation and aftermarket issues.

### 2.3.1 Corporate issues

When issuing an IPO, a firm's management and shareholders need to find out how to get the company in condition for the public markets. Usually, companies require a good deal of corporate housekeeping before they can go public. First and foremost, corporate structure and organizational issues need to meet the requirement for a public company. Determining the corporate structure is straightforward in most cases, with the exception of privatizations, which have always been more conservative in organizational structure than their private counterparts. Thereafter, determining membership of the board of directors has to be done. It is important to include several independent directors and preferably ensure that non-executive directors are in the majority. It is useful to have independent directors who have been directors or senior officers of other public companies and who are known to be the main institutional investors. In addition, some offerings, particularly those of large privatizations, include a separate tranche of shares offered to the company's employees. In other offerings, employees place orders for shares like any retail investors, but receive a preferential allocation. Furthermore, the shares are usually priced at a discount to the price paid by investors. (Geddes et al. 2003, 47.)

### 2.3.2 Offering structure

Next, the company has to decide when to sell its shares and on which stock exchange to list the newly issued stocks upon completion of the IPO. For example, a large, well-established and profitable company is most suitable to be listed on its home country's main stock exchange and preferably sells shares to domestic investors. If it is very large, underwriters may recommend selling additional shares to international investors. On the contrary, young and small companies tend to list on their home country's second market, which has been specially developed for such companies. In either case, the company will be subject to its home jurisdiction's rules and regulations, which are administered by local securities regulators. (Geddes et al. 2003, 49.)



### 2.3.3 Regulation and documentation

Individual exchanges have distinct regulations and documentation requirements. Thus, these issues can only be handled after the company makes a decision on offering structure, which determines investor's demographic and a specific stock exchange to list on. Subsequently, the IPO issuer and its underwriters must begin to prepare the documentation that will be required to be produced, both for potential investors and for regulators. The main documents are registration statements and a prospectus which contains all the financial and non-financial information that potential investors require in order to make the investment decision. In most countries, the local securities regulators have to approve the contents of the prospectus before it can be distributed to potential buyers. (Bodie et al., 66.)

The prospectus holds a special place in the whole documentation process, especially since it has to fill two roles. First, it is a legal requirement that binds the offering parties with legal liabilities. Second, it is the only paper that will be distributed to investors, and therefore the only chance for the issuer to persuade potential customers. A prospectus containing comprehensive information about the offering company can help reduce the risk of liability for misleading future buyers. However, it is difficult to balance the two purposes. If there is too much marketing, the prospectus may not provide sufficient disclosure, whereas too much legal information may defeat the paper's selling effort. Usually, a distributable prospectus has to convey information concisely and precisely about the issuer's business, details of the offered shares and a summary of financial data. (Geddes et al. 2003, 54.)

Although the required content may vary, today many prospectuses have adapted the international disclosure standard from the International Organization of Securities Commission (IOSCO). Indeed, the disclosure standard of the Association of South East Asia Nations (ASEAN), which includes Vietnam, was built upon the IOSCO standard (ACMF's ASEAN and Plus Standards 2011).

TABLE 2. International Organization of Securities Commission's prospectus content standard (IOSCO 2011).

<b>Category</b>	<b>Criteria</b>
<b><i>Identity of directors, senior management, and advisors</i></b>	Directors and senior management Advisors Auditors
<b><i>Offer statistics and expected timetable</i></b>	Offer statistics Expected timetable
<b><i>Key information</i></b>	Selected financial data Capitalization and indebtedness Reasons for the offer and use of proceeds Risk factors
<b><i>Information on company</i></b>	History and development of the company Business overview Organizational structure Property, plant, and equipment
<b><i>Operating and financial review and prospects</i></b>	Operating results Liquidity and capital resources Research and development, patents, licenses Future prospect information
<b><i>Directors, senior management, and employees</i></b>	Directors and senior management Compensation Board practices Employees Share ownership
<b><i>Major shareholders and related party transactions</i></b>	Major shareholders Related party transactions Interest of experts and counsel
<b><i>Financial information</i></b>	Consolidated statements and other financial information Significant changes
<b><i>The offer and listing</i></b>	Offer and listing details Distribution plan Markets Selling shareholders Dilution Expenses of the issue
<b><i>Additional information</i></b>	Share capital Memorandum and articles of association Material contracts Exchange controls Taxation Dividends and paying agents Statement by experts Documents on display Subsidiary information

Furthermore, the managers of the offering have a separate responsibility to make a reasonable investigation to ensure the accuracy of the offering documents. In the process, information is gathered in order to produce a marketing plan. Plus, this investigation is also a disclosure document that provides full disclosure. The gathered formation will reduce liability for potential risks. Specifically, Geddes et al. (2003, 108) lists some of the risks mitigated by this investigation from a marketing perspective:

- Inadequate/inaccurate disclosure;
- Pricing not reflecting risk;
- Ill-informed decision making by investors;
- Undermining the reputation of the issuer and investment banks involved.

#### 2.3.4 Marketing

Once authorities have approved all required documents, the company and its advisors start preparing for marketing and distributing the shares. Depending on the size and complexity of an offering, this marketing period can last up to four months and even longer. In some privatizations, the marketing campaign begins more than a year before the launch of the offering. The purpose of this marketing period is to raise investors' awareness about the deal, so that they are already familiar with the company once the IPO commences. In addition, companies planning for IPOs may also increase or begin corporate advertising, aimed at either financial institutions or individual investors. This decision depends on who is expected to provide the strongest demand for the offering. Most companies who initiate their IPOs as part of the privatization process start retail-oriented information advertising campaign months before they start advertising the offering. (Geddes et al. 2003, 56.)

Generally, there are two marketing phases associated with an IPO. In the pre-marketing period, the issuers devote large efforts to make investors familiar with the offering company. This period is often the most variable in length and depends largely on the degree of public exposure of the firm. This phase is often

commenced before or in parallel with the documentation process, preceding the publication of the prospectus. The most important result of this period is to screen public interest and evaluate market conditions, as well as to provide an acceptable price range for the IPO. If the issuers find unfavorable conclusions in the pre-marketing period, they may cancel the offering entirely. When the final prospectus is approved, the formal marketing period begins. The issuers will start to distribute the approved prospectus and arrange road shows, where company's executives give presentations to interested parties. These road shows give investors opportunities to interact with insiders in the company and ask questions regarding the upcoming offering. On the company side, these presentations help generate greater public interest and gauge the future results. This period is intended to intensify public interest generated in the pre-marketing effort, and convert the interest into orders. As the final offering price will be available at the end of the marketing phase, the success of an IPO depends largely on the performance of the offering team in the marketing period. (Bodie et al. 2005, 68.)

### 2.3.5 Pricing and allocation

Price evaluation and stock allocation are the most important parts of an IPO process. Investment banks that specialize in IPO business generally use one of three methods to determine the price of stock: bookbuilding, fixed price offer or stock auction. When the price is available, the shares will be distributed to registered buyers. More often than not, investors' demand will exceed the number of stocks available for sale. In that case, issuers must decide how to distribute stock equitably. (Geddes et al. 2003, 58.)

Nowadays, bookbuilding is the most popular method, followed by fixed price offerings. Stock auctions were popular in the past, especially in Japan, France and Belgium, but have been increasingly obsolete ever since. (Geddes et al. 2003, 66.) Nevertheless, the dominant price setting mechanism in Vietnam's primary market is the stock auction (Huy 2010).

## **Bookbuilding**

In the bookbuilding method, the investment bank advises the company to set a possible price range for its upcoming IPO and then uses the proposed price range to examine investors' interest with a formal bookbuilding campaign. The issuers use this period to canvass investors' opinions in both the price and the quantity of shares they are willing to purchase. These opinions are collected in a "book", giving the company a clear picture of demand at different price levels. At the end of this bookbuilding period, the company and its investment bank will decide on the final price and offering quantity based on gathered information during the bookbuilding period. All investors are entitled to buy shares at this price. Usually, the investment bank who is responsible for this IPO will underwrite the deal at this stage. As such, it guarantees the proceeds of the company's IPO offering, and will buy all the unsold shares at the final price. Today, most large international equity offerings are run as bookbuilding exercises, regardless of the issuers' traditional domestic market practices. (Geddes et al. 2003, 70.)

The IPO of industry giant Neste Oil on Helsinki Stock Exchange in 2005 is a prime example of IPO using bookbuilding method. Prior to the IPO, Neste's issuers established a price range of EUR 13 – EUR 15 per share and canvassed investors' interest during the bookbuilding period. At the end of this period, the final price was decided, which was EUR 15 and thus gave Neste an initial market capitalization of EUR 3.9 billion. (Neste 2011.)

## **Fixed price**

In the fixed price mechanism, the price and number of shares offered are fixed before the IPO is announced. There are two types of fixed price offers: underwritten and best efforts. In the underwritten fixed price offer, the issuers canvass investors' opinion in a less formal manner than in the bookbuilding offer. The investigation period is not announced, and there is no specific time frame for this activity. Using the information gathered, the issuer and its banks decide on an offering price. When the price is set, the bank underwrites the offer, guaranteeing that the company will receive the desired amount of capital that it expects from

the IPO. Hence, the underwriters will buy any unsold stocks at a specified price in compliance with their underwriting commitment. Generally, an underwritten fixed price offer is considered riskier than an underwritten bookbuilding for the investment bank who facilitates the deal. Unlike the bookbuilding IPO, in the fixed price IPO the underwriters do not know in advance the demand for the IPO. Whereas, in the bookbuilding offering, the investment banks only underwrite the IPO once they know there is sufficient demand for the offer. (Geddes et al. 2003, 69.)

In the best effort fixed price offering, the investment banks advising the deal guarantee that they will try “their best” to sell the IPO stocks. The price is set in the same manner as in the underwritten fixed price offer, but follows by a minimum and sometimes maximum offering size set. Investors are invited to subscribe for the IPO’s stocks in a limited period. If there are insufficient orders to reach the minimum size, the offering will be abandoned. If there is a heavy demand and the maximum offering size is attained, the subscription period will be followed by stock allocation. Practically, best efforts deals tend to be done for smaller enterprises. Finally, investors in best efforts offerings tend to be individuals, not institutions. (Geddes et al. 2003, 69.)

### **Auction**

If an IPO uses the auction mechanism, the issuers allow investors to submit bids for the number of shares they want at a particular price. Moreover, the issuers will specify a minimum price and only allow investors to bid for shares at or above that minimum. In some auctions, participating investors are allowed to make only one bid at one price. On the contrary, in other auctions, investors can place multiple bids at different prices, thus increasing their chances and diversifying the demand. Even so, both types of auction have a final offering price from which there are sufficient orders to cover the number of shares in the offering. All investors are charged the final offering price for their shares, even if they were willing to pay a higher price. By naming their own price, investors preempt much of the first-day volatility that occurs when some investors flip their stocks to others who desperately want to get a share from the IPO. As such, auction method

usually results in a low underpricing level, which brings a low initial return. (Geddes et al. 2003, 66.) One notable example is the Japanese market between 1993 and 2001. Between 1993 and 1997, 481 auctioned IPOs registered an average one day gain of 11.4 percent. From 1997 to 2001, there were 469 IPOs whose price setting mechanism is bookbuilding. The average first-day return of these IPOs jumped to 48 percent. (Kaneko & Pettway 2003, 459.)

An auction can be beneficial for the issuers: generally it incurs lower commissions and it should be able to maximize proceeds. However, a potential lack of aftermarket demand can cause the shares offered in this manner to languish in the stock market, which might not bode well for any future offerings of the company. Nowadays, auctions are the least common form of price setting, although they continue to be used occasionally in some markets. The auction process has traditionally accounted for a large portion of French domestic offerings. Other markets in which auctions have accounted for a significant proportion of IPOs include Belgium, Chile, Japan and Portugal. (Geddes et al. 2003, 66.)

#### 2.3.6 Aftermarket

The period immediately after the allocation and listing of the stocks is critical. If a company's stocks do not generate a high demand, their price may decline on the stock exchange. Consequently, a company that requires further equity financing will find it difficult to make subsequent offerings. In order to avoid this shortfall, an IPO is often priced below its real value so that when the stocks are first traded on the market their price will increase, providing a good initial return for buyers and thus guaranteeing their orders for the next capital offering. (Brealey et al. 2003, 411.)

Besides, all companies who have listed their stocks on the stock exchanges are required to regularly disclose company information. At a minimum, this disclosure includes an interim and annual report, as well as announcements to the market whenever anything happens that may have an impact on the share price. The disclosure obligation can prove an obstacle for a newly transformed public company, which faced little public scrutiny and reporting standards when it was

still a private enterprise. Nevertheless, tightening regulations resulting from financial frauds in recent years mean that any mishap will be closely examined and at worst the stocks will be denied from circulation by the listing exchange. (Geddes et al. 2003, 208.)

Additionally, existing shareholders of IPO companies are subject to a lockup period that typically lasts for six months, in which they are forbidden to sell any of their shares. Information about the lockup agreement, including time span, number of shares and the involved persons, is detailed in the prospectus, and is approved before the offering is finalized. This procedure is to prevent any shareholder from dumping his/her holdings on the market, especially venture capitalists that do not follow a holding strategy for public stocks. Moreover, the move provides a signal of commitment and quality of the IPO, evading suspicion on the intention of the selling parties and confirming insiders' ties with the company. (Brav et al. 2003, 1.)

## 2.4 Criteria for a successful initial public offering

In an IPO, participating parties have different expectations. The company initiating an IPO wants to maximize the proceeds from the offering and have a stable ownership base once the IPO is completed. On the other hand, investors expect a sizable profit from the acquired shares. As the intermediary, the investment bank wants to satisfy both the company and the investors, and expects its association with a successful deal will bring more business. (Geddes et al. 2003, 30.)



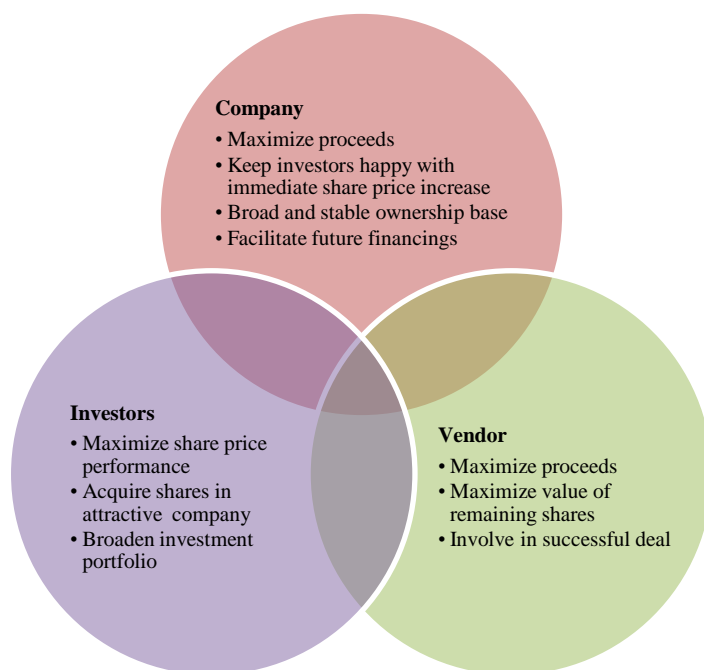


FIGURE 5. Objectives of companies, investors and underwriters in an IPO (Geddes et al. et al. 2003, 2).

An IPO is considered successful when it meets the expectations of the issuing company, the investors and to a lesser degree the underwriter (Geddes et al. 2003, 30). Although these parties' expectations are not similar, there are some commonalities:

- All parties expect a reasonable increase in stock price on the first trading day. This increase should be high enough to keep investors happy, but not too high so as to induce the issuer that it has left too much money in the process. Moreover, such premium warrants that subsequent offerings from the company are welcomed. Additionally, underwriters acquire a boost to their reputations from participating in a successful deal. (Geddes et al. 2003, 30.)
- A broad and balanced distribution of stocks is desirable for the stability of the company and the liquidity of stocks. A balanced presence of institutional investors and individual shareholders, as well as short-term and long-term investors is desirable. This structure gives the firm a stable

ownership structure while still ensuring stock liquidity on the market.  
(Geddes et al. 2003, 30.)

One of the two common expectations of all parties in an IPO is a reasonable increase in stock's price on the first trading day. This expectation is a prelude for underpricing phenomenon, which will be described in more details in Chapter 3.

### 3 UNDERPRICING PHENOMENON

The most notable feature of an IPO is perhaps the large initial return, characterizing by a remarkable increase in price between the offering price and the market price at the end of the first trading day on stock market (Ibbotson et al. 1994, 67). Indeed, this anomaly has been observed in most stock markets in both developed and emerging countries, albeit in different scales (Loughran, Ritter & Rydqvist 2010). More importantly, this anomaly demonstrates that IPO stocks are commonly underpriced compared to where they could have been marketed. The underpricing depicts a serious problem: had IPO stocks been priced higher, companies would have received more capital. One can say that the IPO process is inefficient and there is “money left on the table”. In a sense, the untapped money should be regarded as another cost of the issue. Yet underpricing occurs consistently whenever an IPO is documented. (Geddes et al. 2003, 27.) As a result, it has attracted a great deal of attention and spawned an extensive literature, which attempts to explain this eminent financial oddity.

#### 3.1 Reasons for new issue underpricing

Over the years, several reasons have been put forth to demystify this large initial return. Ritter (1998, 7) proposes seven hypotheses as possible causes: winner’s curse hypothesis, market feedback hypothesis, bandwagon hypothesis, investment banker’s monopsony power hypothesis, lawsuit avoidance hypothesis, signaling theory and ownership dispersion hypothesis.

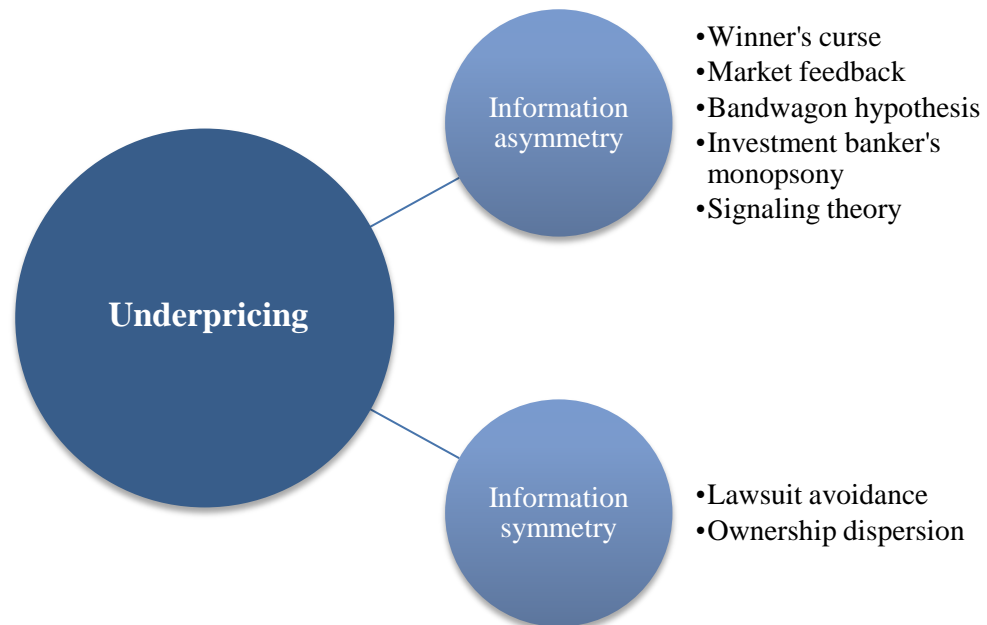


FIGURE 6. Reasons to underprice new issue (Ritter et al. 1998, 7).

Furthermore, these hypotheses fall into two categories, depending on whether asymmetric information or symmetric information is assumed. Asymmetric information refers to situations in which not all information is available for everyone, accordingly there are investors who know better than others, and vice versa. On the contrary, advocates for symmetric information believe that all information surrounding an IPO is readily available for all interested parties. (Ritter & Welch 2002, 1803.)

### 3.1.1 Asymmetric information

#### **Winner's curse hypothesis**

Asymmetric information proponents argue that there is a great deal of uncertainty surrounding an IPO due to information scarcity at the time of the offering. Consequently, it is difficult to identify the true value of the tender. The situation creates two classes of investors: those who have superior access to information, and those who have limited information resources. Evidently, informed investors are in a better position to concentrate on underpriced IPOs and reject overpriced

IPOs. On the contrary, uninformed investors cannot allocate their resources as efficiently as their counterparts, putting them at a disadvantage. Nevertheless, the uninformed crowd naturally constitutes the majority of potential buyers. Accordingly, uninformed investors face a dilemma: they could get all the shares they asked for only if the informed investors did not want the shares. This forms the winner's curse hypothesis. (Brealey et al. 2003, 412.) As a result, the presence of underpricing is deliberately created to provide a rationale for uninformed investors to overcome this information bias (Rock 1986, 190-191). However, Habib & Ljungqvist (1998, 383) provide evidences that underpricing will decrease IPO proceeds even in the absence of any change in uncertainty, suggesting that the documented positive relationship between underpricing and risk consideration is dubious.

Nevertheless, this perspective has gained mainstream recognition with the support of further evidence, such as the researches of Allen & Faulhaber (1989, 318) and Ibbotson et al. (1994, 70). Recently, studies have found the connection between the winner's curse hypothesis and underpricing in some Asian markets to be significant. For example, this theory supports the explanation for underpricing of a sample of 562 Chinese IPOs between 1996-2001 (Coakley, Instefjord & Shen 2007, 19). Similar results are documented in Malaysian markets (Yong 2009, 27) and Singaporean markets (Jagannathan & Sherman 2006, 23).

### **Market feedback hypothesis**

Market feedback hypothesis assumes that a proportion of investors are better informed than the underwriters. Under this assumption, the underwriters underprice the IPOs to induce investors to reveal information, which can then be used to evaluate share price during the bookbuilding process. In this sense, the underwriters compensate investors through underpricing for revealing the investors' valuations of the upcoming offering. However, one complication of the market feedback hypothesis is that investors have little incentive to reveal valuable information, which may lead to an increase in the final offering price and therefore hurt their profit. Hence the centerpiece of this hypothesis relies on the

ability of the underwriters to show buyers that it is in their best interest to reveal information truthfully. (Ritter et al. 2002, 1805.)

### **Bandwagon effect hypothesis**

In an IPO, the bandwagon effect hypothesis argues that potential investors pay attention not only to their own information but also to the actions of other investors. If an investor observes that nobody wants to buy shares of a particular IPO, he or she may decide not to buy even when there is favorable information. To prevent this from happening, the issuer deliberately underprices an issue to attract the first few potential buyers and therefore bring about a bandwagon, in which subsequent buyers will want to participate regardless of their own information concerning the issue. (Ritter et al. 1998, 9.)

### **Underwriter's monopsony power hypothesis**

Underwriters who hold considerable power in deciding the offering price can take advantage of their position to underprice the issue so that they are able to spend less marketing effort and favor themselves with investors. This conflict of interest is well-known and has made spotlight quite a few times. For example, part of the Wall Street scandals of 2000-2002 centered on the allocation of shares in IPOs, in which underwriters gave generous IPO allocation to executives of particular firms in return for the firm's future issuing business. (Bodie et al. 2005, 70.) While the practice is still common, tightening regulations and supervision have lowered its incidences and level. Nevertheless, in less sophisticated markets whose regulations are lax, such as emerging markets, there is no guarantee of the limitation of this practice (Huy 2010).

### **Signaling theory**

Signaling theory constitutes an important explanation for the occurrence of underpriced shares. Under signaling theory, the company sacrifices part of the gain from IPO hoping that investors will return to purchase more in subsequent offerings. As stated in Chapter 2, an IPO is considered successful when it meets

the expectation of all participating parties: the company, the underwriter and the investors. When conflicts of interest arise, compromises must be made. According to Geddes et al. (2003, 5), the signaling theory is one such compromise. A company is willing to accept “money left on the table” in order to keep investors happy as they reap immediate profit from the surge in stock’s price upon listing. In return, the company hopes to build long term relationship with investors and makes future offerings more attractive to them. This theory has been proved to be credible as underpricing can signal favorable prospects for the firm (Allen et al. 1989, 319).

### 3.1.2 Symmetric information

#### **Lawsuit avoidance**

Tinic (1988, 800) finds that underpricing can be possibly used as a hedge against future lawsuit from disappointed new shareholders. Indeed, since private companies do not disclose their information to the public, necessary knowledge to grade an upcoming IPO is scarce for investors. Hence investors have to rely on information from the underwriters about the company to conduct their research. Furthermore, both the company and the underwriters are held liable for this information as required by law. The disclosure, while accurate at the time of composition, cannot include all data nor account for changes in management and financial position during the IPO process. Thus the company and the underwriters are exposed to possible lawsuit threats, regardless of their intentions. In order to avoid that possibility, the issuing parties intentionally lower the share prices to keep investors happy, thus lower the risk of lawsuit. (Hughes & Thakor 1992, 737.) However, Ritter et al. (1998, 9) argues that the hypothesis is not credible, reasoning that in countries where such lawsuit actions are unknown, such as Finland, the level of underpricing is just as much as in countries familiar with those actions.

## **Ownership dispersion**

The issuing company may use underpricing as a tool to control its ownership structure. As such it will deliberately underprice its shares to generate excess demand so that there will be a large number of small shareholders, each having insignificant voting power. The intention is twofold: for one, a dispersed ownership will increase the company's stock liquidity on the market, as small shareholders are more likely than big shareholder to sell stocks for profit, instead of retaining them for voting rights. On the other hand, this ownership structure makes it more difficult to challenge the board of management. (Ritter et al. 1998, 10; Pagano & Roell 1998, 215.)

### **3.2 Factors influencing underpricing level of initial public offerings**

#### **3.2.1 Offering size**

Ritter (1984, 1236) finds that not only do initial returns on IPOs correlate with the size of the offerings, but that these two variables also negatively affect each other. Overall, evidence suggests that a smaller IPO is riskier than a larger IPO, with all other things being equal. Therefore, a smaller IPO is underpriced more often than a larger IPO to induce investors into taking a higher risk (Ritter et al. 1984, 1236). This explanation lends credibility to the winner's curse hypothesis in the previous part, which dictates that issuers reward uninformed investors for participating in risky IPOs to offset potential loss due to information asymmetry.

Later research by Megginson & Weiss (1990, 898) proves the pattern to be consistent. However, they comment that the significance of offering size depends on whether other variables are taken into account. According to their research, the age of a company has more weight in determining the underpricing level.

Nevertheless, recent studies in developing markets encourage the eligibility of offering size as a predictor of the degree of underpricing. A study of IPOs in



Chinese markets by Su et al. (1999, 185) reveals that with every one percent decrease in the size of an IPO, there is a one percent decrease in the share price. On the other hand, a one percent increase in the IPO size leads to approximately 0.52 percent decline in the IPO return. Another research on the Indian exchange in the periods of 1992-1995 and 1999-2003 reveals that on average the size of the issue reduces underpricing by 75 percent (Ranjan & Madhusoodanan 2004, 19). Last but not least, the IPOs on Chittagong Stock Exchange of Bangladesh, a comparable emerging market with Vietnam, have been influenced significantly by offering size (Islam et al. 2010, 41).

### 3.2.2 Age of the firm

How long a company has been established prior to its IPO has a positive impact on initial share price. Investors perceive a young company as a higher risk than an established company with a proven track record. Therefore, buyers require a higher return to offset the uncertainty risk of the younger firm. This requirement transforms into a higher level of underpricing, or lower share price, which the firm more or less is advised to do. (Ljungqvist 2006, 60.)

A company's age prior to the IPO is widely regarded as a main determinant on the post market performance of its shares. In fact, many empirical studies on underpricing have used this factor to explain the initial stock performance across countries. Clark (2002, 399) sampled a list of 1234 IPOs in the United States between 1991 and 1997 and found a statistically significant correlation between firm age at IPO and post IPO excess returns. In Asian markets, the result is restated in a study of Japanese IPOs (Kaneko et al. 2003, 459).

Perhaps the most relevant study about this factor is by Uddin (2008, 71) who examined determinants of underpricing in the Singapore and Malaysia stock exchanges using a fairly large sample of 861 IPOs from 1990 to 2000. The result shows a mixed conclusion. While Malaysian IPOs significantly affected by how old the firms are, this factor is insignificant in determining Singaporean IPOs' underpricing. However, age of the firm proves influential in the combined sample,

which suggests that the Singaporean IPOs result is somewhat questionable. On the other hand, a company's age is insignificant as a variable for IPOs return in another South East Asian country: Thailand (Chiraphadhanakul & Gunawardana 2005, 6).

### 3.2.3 Size of the firm

Based on empirical research, Dalton, Certo & Daily (2003, 299) confirms that a company's size also influences underpricing. They explain that since larger firms are perceived as more stable, this characteristic reduces the amount of risk investors are exposed to. This phenomenon is in accordance with the above mentioned winner's curse hypothesis, which associates lower underpricing with lower exposed risk. This is a follow up of the study of Buckland & Davis (1990, 219), which indicates that United Kingdom IPOs are largely influenced by a firm's size, regardless of other variables.

Comparable markets in Asia have shown that this variable accounts for how much stocks are underpriced. For example, evidence is found in Thailand's stock exchanges (Chiraphadhanakul et al. 2005, 4), Malaysia's stock exchanges (Annuar 1998, 77), as well as Bangladesh's stock exchange (Islam et al. 2010, 41). As a result of these findings, size of the firm is credible as a determinant of IPO stock price, especially for similar markets in the same region.

### 3.2.4 Time lag between offering and listing dates

Recent evidence proves that there is a correlation between underpricing and the length of time from offering date to listing date. This correlation is described in the study of Derrien & Kecskes (2007) about United Kingdom IPOs, in which they argue that the time lag between the two events lowers the incidence of underpricing. As such, the longer the waiting period to listing date, the lower the initial increase in stock price at the first trading day. The provided explanation stipulates that since much information has been released in the intermediate

period between the IPOs and the listing, the market absorbs this information and thereby reduce the risk associated with these IPOs. As risk is mitigated, investors find little incentive to demand a higher compensation and thus are more willing to accept a lower initial return.

In Asia, the eminence of this factor has been documented in the Shanghai Stock Exchange, where the time lag was significant in the period 1990-1993 (Mok & Hui 1998, 460). More recently, Yu & Tse (2006, 377) reexamine this factor, using more recent data from the IPOs in 1995-1998 and find an unimportant relation between time lag and underpricing. They attribute this finding to the dramatically shortened time between offering and listing. Although their study runs contrarily to previous finding, its implication strengthens the importance of time lag as a determinant.

### 3.2.5 Industry composition

It has long been known that people ascribe industry sectors with different values. For example, the financial sector has always been held with prestige and high value, while the agricultural sector is perceived as low value and dated. It has nothing to do with individual companies, as investigation will show a coffee company generates more revenue and profit than an auditing service just as often as people perceive oppositely. Investors are just normal people, and more often than not are subjected to prejudice. Indeed, industry preference is widespread among investors across countries, and researches show that underpricing is tied with industrial sectors (Islam et al. 2010, 41).

On the other hand, firms have an advantage to list on stock exchange where there are already a number of listed firms in the same industry. It is because those preceding firms provided information in their prospectus, in which more or less information about the industry was included. Such information provides an insight on the prospect of the firm as well as the industry as a whole, thereby reducing uncertainty on the future of the industry. This fact benefits upcoming firms in the

same industry, as the increased transparency reduces the likelihood that the issuers have to underprice shares to attract investors. (Mauer & Senbet 1992, 76.)

In addition, industry composition is also significant in that it determines the weight of other variables. In Chiraphadhanakul et al. (2005, 4) study, they find that firm's size is relevant to financial companies' IPOs, yet it poses no relationship with initial return of food industry's IPOs. Likewise, the result is repeated in construction material sector and technological sector (Chiraphadhanakul et al. 2005, 5).

### 3.3 International evidence

The first record of abnormal initial return of an IPO dated back to 1963 in a special study by the United States Security and Exchange Commission. Since then, stock underpricing has been found in many markets in both developed and developing economies. Depending on market conditions, the degree of underpricing varies (Loughran et al. 2010). The following Figure 7 describes the average first day return of IPO stocks on a number of countries. Among developed countries, results show that the average first day increase of stocks ranges from 6.5 percent in Austria to as high as 50.8 percent in Greece and 63.5 percent in South Korea. In Finland, a sample of 162 IPOs between 1971 and 2006 logs an initial return of 17.2 percent. Overall, investors in developed markets see an average of 16 percent in initial returns (Loughran et al. 2010).

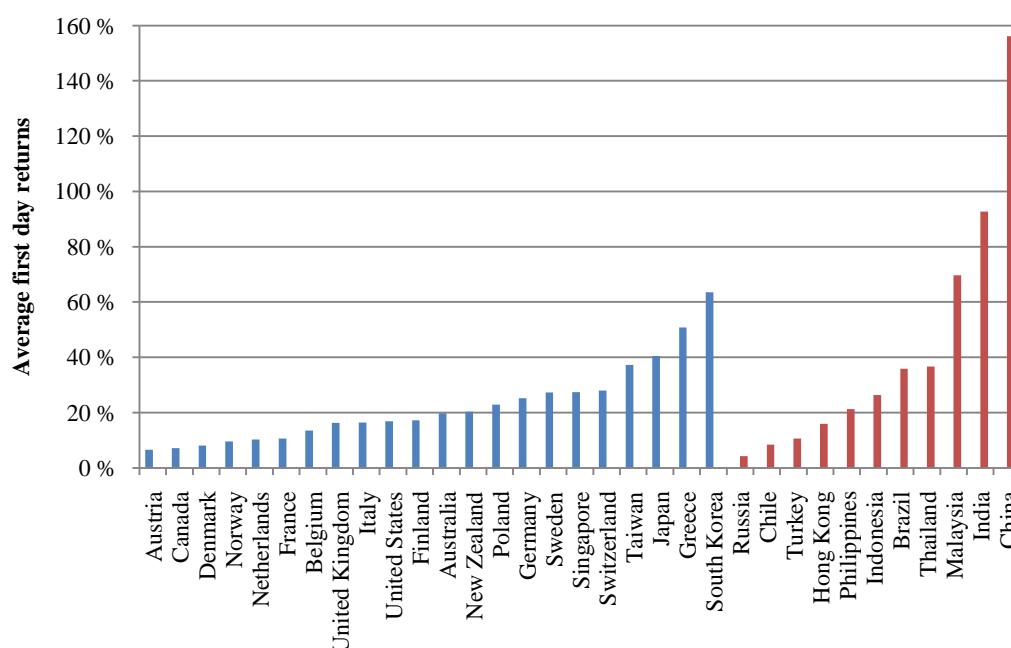


FIGURE 7. Average first day returns of IPOs in sample countries (adapted from Loughran et al. 2010).

The situation in developing countries is more dramatic. Loughran et al. (2010) puts the initial return in the Russian market at 4.2 percent, the lowest among these countries. In the same study, investors in Brazil, Thailand, Malaysia and India can expect a first day closing price of 35.8 percent, 36.6 percent, 69.6 percent and 92.7 percent higher than the offering price. At top of the chart, the level of underpricing in China is almost 156 percent. Another study shows an even more phenomenal figure: a sample of 308 Chinese IPOs between 1987 and 1995 has a mean first day return of 948.6 percent (Su et al., 174). Accordingly, investors who follow a simple strategy of buying the IPOs and selling these stocks at the first trading day can realize a profit nine times the starting investment. Although underpricing pattern in developed countries is more consistent according to Figure 7, offshore investors can expect to find some of the highest initial returns in exotic markets.

#### 4 CASE STUDY - HO CHI MINH STOCK EXCHANGE

This chapter presents a general overview of the case study - Ho Chi Minh Stock Exchange - as well as its listed companies. Furthermore, this part gives an insight of the price setting mechanism that dictates the valuation of share prices of all IPOs in Vietnam, especially SOEs who form the majority in the sample companies.

##### 4.1 Overview of Ho Chi Minh Stock Exchange

Established in 2000, and then named Ho Chi Minh City Stock Trading Center, HOSE is the first and foremost dedicated equity trading platform in Vietnam. It was the only stock exchange in Vietnam until 2005, when HNX was inaugurated. Although run as a limited company, HOSE is under state control and is supervised by the State Securities Commission (SSC), which is administrated by the Ministry of Finance. HOSE was elevated to a full exchange in 2007, and took the current name to reflect this change. (Ho Chi Minh Stock Exchange 2011a.)

**HOSE - number of stocks and market cap (USDbn)**

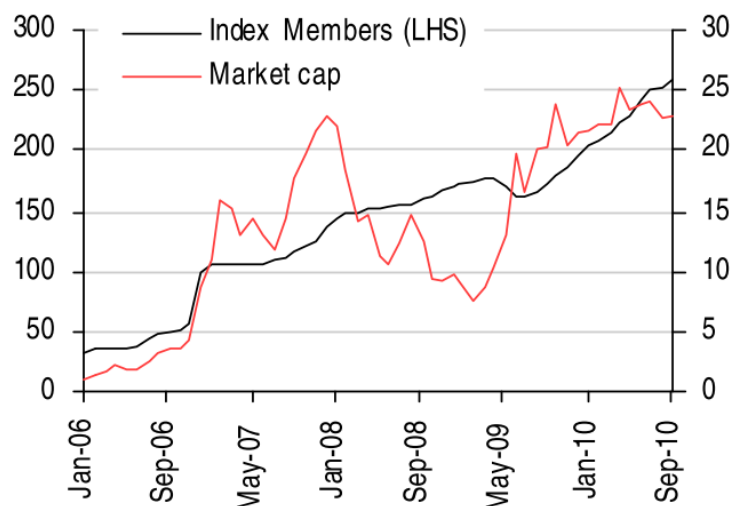


FIGURE 8. Number of stocks and market capitalization of HOSE in 2006-2010 (HSBC 2010, 11).

Nowadays HOSE is the biggest national stock exchange in Vietnam, handling 262 stocks with daily trading volume exceeds EUR 35 million. While HNX outnumbers HOSE in term of number of stocks, the Hanoi-based exchange trails HOSE in market capitalization: total market capitalization of 346 companies on HNX is EUR 4 billion, four times less than the EUR 19 billion market value of 262 stocks on HOSE. (HSBC 2010, 11.) On the other hand, the total market value of all listed companies in Vietnam adds up to only 23.1 percent of total gross domestic product (GDP), a figure well below many markets in the regions (World Bank 2011). As such, there is plenty of room for the capital markets to expand. Even if this percentage stays the same from now till 2050, total market capitalization of listed companies in 2050 will be EUR 654 billion, of which HOSE's market value is EUR 540 billion. This projection translates to a growth of 109 percent on a year-by-year basis for the next 40 years, with GDP growth is at 8.8 percent annually at the same time (PricewaterhouseCoopers 2011, 9). Although the figure seems remarkable, it is dwarfed by historical growth of HOSE itself: the HOSE grew in size around 32 times in four and a half years between 2006 and 2010 (HSBC 2010, 12).

TABLE 3. Market capitalization of listed companies (% of GDP) (World Bank 2011).

Countries	Market capitalization of listed companies (% of GDP)
<b>Asia Pacific</b>	
Vietnam	23.1%
Malaysia	133.6%
Thailand	52.4%
Philippines	49.9%
Singapore	170.5%
China	100.5%
Japan	66.7%
HongKong SAR, China	617%

---

**Others**

Finland	38.3%
France	74.4%
United Kingdom	128.6%
United States	105.8%
India	90%
Brazil	74.3%
Russia	70%

---

In term of market composition, HOSE is skewed towards the financial sector, whose companies constitute more than 50 percent of the total market capitalization. The consumer staples sector is a distant second with a 14 percent share, followed by industrials and materials with 12 percent and 10 percent shares, respectively. (HSBC 2010, 14-17.)

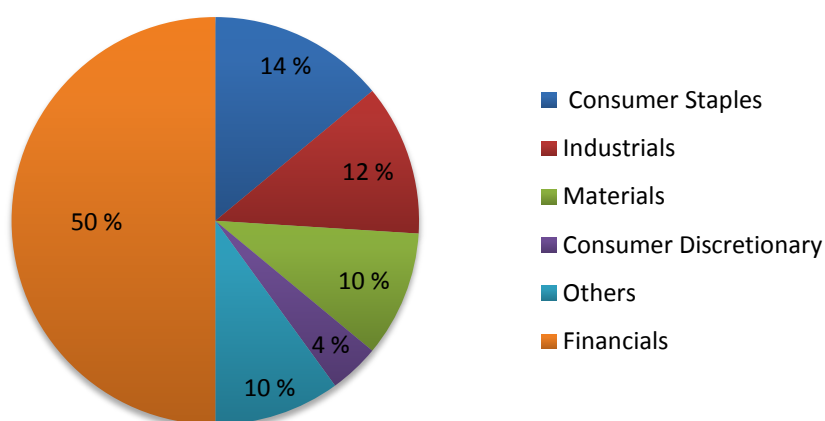


FIGURE 9. HOSE - Sector composition in term of market capitalization (HSBC 2010, 12).

Noticeably, in spite of the acceleration of privatization of SOEs in Vietnam, SOEs still account for a large proportion of companies on HOSE with approximately 100 firms. The two largest firms are state-owned, and five in ten of the biggest companies are controlled by the government (Stockbiz 2011).



TABLE 4. State ownership of the top ten companies on HOSE by market capitalization (Stockbiz 2011a – Stockbiz 2011j).

Company name	State ownership
BaoViet Finance-Insurance Group	74.17%
Joint Stock Commercial Bank for Foreign Trade of Vietnam	90.72%
Vincom JSC	0.00%
Masan Group Corporation	0.00%
Vietnam Joint Stock Commercial Bank For Industrial And Trade	89.23%
Vietnam Dairy Products JSC	46.83%
Hoang Anh Gia Lai JSC	0.00%
Vietnam Export Import Commercial Joint Stock Bank	0.00%
Petrovietnam Fertilizer and Chemical Corporation	60.05%
Saigon Thuong Tin Commercial Jointstock Bank	0.01%

Such a prominent presence of SOEs indicates that investors should spend extra attention to their IPOs. In the next subchapters, various issues surrounding an IPO of a SOE will be discussed.

#### 4.2 Initial public offerings by mean of state-owned companies' privatizations

Vietnam has two types of companies, SOEs and private-owned enterprises (POEs) that can initiate public offerings. The process is straightforward for POEs and largely follows the procedure described in Chapter 2. However, the case of SOEs' IPOs is more complicated due to more specific regulations on the IPO process. Still, a majority of IPOs in Vietnam are from SOEs' privatizations, thus making examining their cases worthwhile (Huy 2010).

Decree 109/2007/ND-CP of the Government on conversion of state-owned companies into shareholding companies provides the guideline on the privatization process by means of offering shares to public. According to the decree, the privatization process of a SOE starts with the approval of the government authorizing the share offering. There are three types of privatizations that require a public offering: IPO with 100 percent new share, IPO with partial

sales of government's stake and IPO with all shares coming from government possession. Next, an IPO Committee will be established by the company to oversee the whole process, which includes preparing legal documents, selecting an investment bank and auditor and supervising the valuation of the firm. (Decree 109/2007/ND-CP, point 3.)

The valuation of the IPO is a crucial responsibility of the IPO Committee and often begins right after the privatization approval. A company can undertake a variety of valuation methods which it sees fit for the firm's situation. However, SOEs are allowed to use mainly two methods to determine the company value, and hence the IPO price: discounted cash flow method and the asset-based valuation method (Decree 109/2007/ND-CP, point 23). In asset-based valuation method, the SOE's value is based on financial records at the time of privatization, taking into account market value of all assets minus all liabilities (Decree 109/2007/ND-CP, section 2). The asset-based valuation is based on readily available information which is fairly recent, and therefore is simple to compute. However, the utilization of such a method does not take into account the added value of the company, particularly its future prospects (Thuy 2010). As a result, discounted cash flow valuation is used as a remedy, even though it requires more documentations and efforts.

In order to do a discounted valuation, decree 109/2007/ND-CP, point 34 requires some prerequisites from the company. First, financial statements of five years prior to the time of privatization are required for the valuation. Second, the decree demands the availability of a three to five year business plan after the SOE becomes a public company. Third, the interest rate used in this method is long term government bond at the nearest date from the IPO. As one of the requirements stresses the availability of financial statements for five years prior to IPO, this method is not possible for young SOEs whose operational history is less than this period. Nevertheless this drawback has little effect on the evaluation of SOEs since the vast majority of SOEs have a well-established history prior to privatizations. (Thuy 2010.) More specifically, only five companies or 10 percent of all cases in this study have operated for five years or less at the time of their initial offerings.

Afterward, the IPO Committee has to submit registration documents and a prospectus to the SSC for approval. According to point 27 of decree 109/2007/ND-CP, an initial public offering has to offer a minimum of 20 percent of its registered capital. While pending approval, the issuer is permitted to arrange road shows for marketing purpose as well as for price exploration. Market information gathered in those road shows can be used to correct the initial offer price in the submitted prospectus; however this correction has to be done before the approval. Otherwise, the issuers have to resubmit the reviewed registration documents, and wait again for approval. Once the offer is approved, the issuer has to complete the IPO within three months. (Decree 109/2007/ND-CP, point 44.)

#### 4.3 Price setting mechanism and stock allocation

The main price setting mechanism of IPOs in Vietnam is auction, specifically discriminatory auction. In this bidding scheme, potential investors register with the issuers, specifying their desired quantity of shares as well as the price they are willing to pay for each share. After all demands are collected, the issuers will start allocating stocks to the highest bidder, then to the second-highest bidder and so on until all the auctioned shares are distributed. If there are several investors who bid at the same price, and there are not enough shares to allocate at that price, then each buyer will receive a number of shares in proportion of their intended purchasing quantity. However, there exists an initial minimum price which is stated in the prospectus. If there is not enough demand on the shares at a higher price, the issuers will refuse to sell the remaining shares lower than this minimum. (Huy 2010.)

As such, under this price setting mechanism, companies are exposed to an undersubscribed scenario where the demand for shares is inadequate, thereby lowering the IPO proceeds. This puts discriminatory auction at a disadvantage compared to bookbuilding method, in which issuers are certain about the subscription rate before carrying the IPOs. Nevertheless, since the stocks are allocated to the highest bidders first, this mechanism potentially decreases

underpricing level as investors are forced to bid the stocks nearer their fair value in order not to lose the auction. (Huy 2010.)

The auction process in Vietnam starts with the announcement of SSC's approval of the offering. Next, the issuers will begin to distribute prospectuses to interested parties, as well as making documentation available at the company's premises, stock auction centers (in all cases a stock exchange, whether HOSE or HNX), and on the company's website. Once the official auction commences, investors have five days to register for participation. First of all, they have to fill in a registration form for auction participation at the auction affiliates' registration place or on stock exchange's website where the auction will be held. Foreign institutions and individuals are also required to submit proof of their possession of a Vietnam Dong (VND) – nominated domestic bank account. Secondly, investors deposit 10 percent of total share value which they intend to buy at the minimum price. The deposit should be in VND and paid to the account of the auction organizer, in this case the IPO's investment bank. After completing registration, buyers will receive an auction slip certifying their rights to participate in the auction. (HOSE 2011.)

The auction takes place using the above mentioned price setting mechanism. Successful investors have 15 days to pay the full amount for the shares they bid. If they fail to pay within this period, the issuers will not allocate shares to these buyers, plus they will lose the deposit to the amount of shares unpaid. On the other hand, unsuccessful bidders will receive their deposit from the issuers in full within five days of auction result disclosure day. (HOSE 2011.)

One feature of Vietnamese auctioned IPOs is the preferential treatment of a privileged group of investors. They are company's executives, employees and strategic investors, which may or may not include foreign investors. Executives and employees are entitled to buy 100 shares per employed year at the company at the discounted price. For example, an executive who works for the firm for 30 years is allowed to buy 3000 shares. The discount price is set at 60 percent of the average successful bidding price, or market clearing price. Strategic investors are entitled to this preferential treatment too, and can buy up to 20 percent of all stock offered at the market clearing price, thus avoiding the bidding procedure. If these

preferred buyers wish to buy more shares than those allocated to them, they have to participate in the auction and go through bidding process like normal investors, though. (Decree 109/2007/ND-CP, section 5.) Besides, foreign investors are restricted by regulations from owning a controlling stake in a public company. This means that if an IPO offers 100 percent of existing shares for the public, a foreign investor can only buy up to 49 percent of the total shares and only up to 30 percent in the case of a bank. (Thuy 2010.)

#### 4.4 Listing requirements

HOSE's listing requirements are the strictest in Vietnam, and thus ensure that listed companies on HOSE attain a particular quality. For instance, unprofitable companies are not allowed to list on the exchange, and a company must disclose its plan to repay all overdue debt prior to listing approval. (HSBC 2011, 51.)

TABLE 5. HOSE's listing requirements (HSBC 2011, 51).

<i>Requirements</i>	
<i>Admission criteria</i>	<ul style="list-style-type: none"> <li>• Minimum book value of VND80 billion for the last two consecutive years.</li> <li>• No accumulated losses up to the year of listing.</li> <li>• Overdue debt must be earmarked for payment from existing reserves and disclosures should be made regarding debts owned.</li> <li>• At least 20% of the voting shares of the applicant company must be held by no less than 100 shareholders.</li> <li>• Shareholder who is an executive should not sell any shares for six months after listing and sell no more than 50% of his/her shares in the following six months.</li> <li>• The applicant company has to submit a completed application file.</li> </ul>
<i>Approval time</i>	<ul style="list-style-type: none"> <li>• Within 30 days of submitting the application, HOSE is required to issue its decision. If there is any material change, the</li> </ul>

---

	applicant has to resubmit the application
--	---

---

<i><b>Quotation</b></i>	<ul style="list-style-type: none"> <li>• Once the listing is approved, offering should be completed within 90 days of the approval date.</li> <li>• The notice of approval should be made public within five working days from the date of approval.</li> <li>• Service fees must be paid to the exchange within five working days from the approval date.</li> <li>• The shareholder register book must be submitted to HOSE.</li> </ul>
-------------------------	---

---

<i><b>Pricing and Trading</b></i>	<ul style="list-style-type: none"> <li>• The applicant company will determine and announce the offering price which will be the reference price of first day of trading.</li> <li>• The transaction price must not be more than or less than 20% of the reference on the first day.</li> </ul>
-----------------------------------	--

---

After the completion of the IPO, the newly public company can choose to go on an exchange immediately, or remain unlisted. Many Vietnamese IPOs choose not to be listed on any exchange for many years after the offering date, which explains the small sample size of listed IPOs out of a large pool of finished public offerings. Out of a total of 877 auctions, including 156 auctions documented by HOSE, 104 documented by HNX and 357 documented by SSC, only 56 companies offered IPOs and then listed on HOSE. Another reason for this listing reluctance is because of stringent listing requirements of HOSE, which chooses to list only profitable and transparent companies.

In summary, the case of Vietnam Joint Stock Commercial Bank for Industry and Trade (Vietinbank) serves as an illustration of a typical IPO in Vietnam.

Vietinbank's IPO was initiated at the beginning of 2007 with the approval of the Vietnamese government. The final plan was approved in September 2008. On 16 December 2008, the issuers arranged a road show to present the company's IPO and start distributing the prospectus to interested investors. The minimum price for the upcoming auction was set at VND 20,000 and total number of stocks was

53,600,000. (Vietinbank 2011a.) The auction day was set on 25 December 2008. At the end of the auction day, all offered stocks were bought with the average winning bid, or market clearing price, was VND 20,265 (Ho Chi Minh Stock Exchange 2011b).

However, the stocks were not listed immediately after the auction. Instead, Vietinbank waited until 2009 and only then did it send registration documents asking for listing on HOSE. The bank had to submit a new prospectus as part of the required documents, in which it specified a nominated price for the first trading day. As stocks' price on the first trading day cannot increase or decrease more than 20 percent according to HOSE's regulation, an initial price is needed. Most noticeably, this initial price is not necessarily similar to the market clearing price. In the case of Vietinbank, the company decided that the stock's initial price would be VND 50,000. (Vietinbank 2011b.) Consequently, the stock's price could fluctuate from VND 40,000 to VND 60,000 with the 20 percent trading cap. In fact, the final price of the first trading day of Vietinbank's stock was VND 40,100, slightly higher than the minimum price. Even so, this price was 97 percent higher than the market clearing price. If IPO investors decided to sell their stocks at the first listing day, their return on investment (ROI) rate would be 97 percent. Considering that the investment time was seven months, this return rate was nonetheless remarkable.

#### 4.5 Collection of eligible initial public offerings

Necessary data for the investigation is collected from a number of different sources. Information on historical auctioned IPOs between 2005 and 2009 is collected from the database of HOSE, HNX and the SSC. This data covers auction dates, size of auctions, average successful bid price and date of listings. Out of a total of 877 auctions, including 156 auctions documented by HOSE, 104 documented by HNX and 357 documented by SSC, 56 auctions fit the criteria. This sample represents auctions of 56 companies which subsequently listed on HOSE. Among them, one company merged with another company in the sample and therefore has not been counted. Consequently, the final sample consists of 55

auctions of 55 companies. These companies represent 98 percent of companies that offered IPOs and then listed on HOSE.

Next, daily price movement and closing price on HOSE for companies in the data sample are assembled from FPT Securities and StoxPlus, some of the most comprehensive databases of financial information in Vietnam. A company's information such as size, age and industry is collected from its prospectus, which companies had to submit to HOSE prior to listing. As such, HOSE's database is the chief source to collect this information.

There are several reasons for this small sample in comparison to the initial collection. First of all, the database of SSC contains auctions on both HOSE and HNX, and is used to cross-check the data sample from HOSE and HNX. Secondly, while some companies auctioned on HNX and then listed on HOSE, the vast majority of IPOs on HNX is either listed on HNX, or still not listed. While there are some auctions dating back to prior 2005, the databases from HOSE and HNX official sources only record auctions from 2005 onwards. Additionally, the author chooses the year 2009 to mark the end of the data sample date in order to find sufficient data on price movement.



## 5 RETURN RATE OF VIETNAMESE INITIAL PUBLIC OFFERINGS

A common method to investigate the underpricing level is to measure the difference of the closing price at the specific date in question with the offering price and then divide the result by the offer price. Recent IPO underpricing studies, which utilize this model, in China (Cheng 2010, 144) and Bangladesh (Islam et al. 2010, 39) further entrenches the versatility of such a model in a developing scenario.

$$R_{s,t} = \frac{P_{s,t} - P_{s,0}}{P_{s,0}}$$

- $R_{s,t}$  : the return of stock  $s$  in the period  $t$
- $P_{s,t}$  : the price of stock  $s$  in the end of period  $t$
- $P_{s,0}$  : the initial offer price of stock  $s$

The most popular choice for period  $t$  is one day, which is evident in numerous researches about underpricing described in Figure 7 in page 37. However, plain utilization of this time frame in Vietnam's environment is insufficient. Its main setback rests in the fact that this period is only suitable in markets where price movement is unconstrained. For instance, the closing price on the first trading day can rocket to 698 percent of the offered IPO price, as in the case of VA Linux in United States' market (Bodie et al. 2005, 69). However, there is a trading cap in Vietnamese stock exchanges that dictates the maximum and minimum amount of price movement. On HOSE, common stocks are only allowed to increase or decrease by five percent of the previous trading day's price (Ho Chi Minh Stock Exchange 2011c).

Nonetheless, there is an exception for stocks that are traded for the first time, in which the price can fluctuate to a maximum of 20 percent based on the initial listing price (Ho Chi Minh Stock Exchange 2011c). Thus all IPOs in this study are only accepted to rise no higher than 20 percent on the first trading day. As such, if there is a newly listed stock with a similar underpricing level to that of VA Linux, the market will need a total of 138 days to return the stock value to its true worth.

Clearly, the first trading day price movement cannot fully reflect the level of underpricing on HOSE. Notwithstanding this shortcoming, the first day price movement is still taken into account in order to provide an equivalent comparison with other markets. Nonetheless, the full degree of underpricing could only be seen in a longer period, which provides more room for price movement. This justification motivates the author to include other time frames in this study. The periods of choice include 10 trading days, 1 month, 3 months, 6 months and 1 year. Moreover, most studies in Chapter 2 show that underpricing is a short-term phenomenon, making the inclusion of longer periods unnecessary. The highest average initial return ever recorded is 948 percent in the Shanghai Stock Exchange in the period 1992-1995 (Su et al. 1999, 174). Even if IPOs in Vietnam have such a dramatic degree of underpricing, a 6-month time frame with a five percent increase daily is more than enough to reveal a similar degree. Even so, the author decided to include a one year time frame in anticipation of an even higher initial return rate.

### 5.1 Return rate of Vietnamese initial public offerings

Data gathered from the sample IPOs in Chapter 4 are used as the input for the above mentioned formula. Afterwards, descriptive statistics are used to describe the results. Investigation on price movement of stocks on the initial listing period yields the following result:

TABLE 6. Descriptive statistics on initial return of Vietnamese IPOs.

Tim period	Range	Minimum	Maximum	Mean	Standard Deviation	Skewness
<b>1<sup>st</sup> day</b>	9.5821	-.9482	8.6339	.6987	2.0112	2.613
<b>10<sup>th</sup> days</b>	10.6183	-.9469	9.6714	.7723	2.1243	2.404
<b>1 month</b>	13.5766	-.9410	12.6357	.9255	2.5025	2.739
<b>3 months</b>	21.3538	-.9369	20.4169	1.0084	3.1724	4.613
<b>6 months</b>	18.8619	-.9646	17.8973	.7630	2.8212	4.560
<b>1 year</b>	11.4550	-.9684	10.4866	.4802	1.8656	3.338

As can be seen from Table 6, initial returns among the time periods represent a wide spectrum, from a 1-year average return of 48 percent to a spectacular 100.8 percent average return within 3 months of trading. Overall, all periods reveal a positive initial return, which confirms the presence of the underpricing practice in Vietnam. However, such a wide spectrum also indicates that newly listed stocks are volatile, which adds to financial risks that investors may have to bear.

According to the statistics, the average initial return for the first trading day is 70 percent. It ranges from a minimum of -95 percent to a maximum of 863 percent, resulting in a very large spread of 958 percent between both ends. The result comes as a surprise, as the author did not anticipate such a high price movement on the first day, especially since IPO stocks are only allowed to increase or decrease a maximum 20 percent on the first trading day. Nevertheless, this incident could be explained by the fact that IPO issuers are required by law to submit a second prospectus as part of listing requirements. In this listing prospectus, the company has to set a suggested listing price for its stocks, which will be used as a base from which price swings. This listing price is subjected to renewed valuation, and thus may be different from the market clearing price in the IPO's auction.

On a longer period, initial return jumps to 77 percent at the 10th trading day, with the minimum return rate is unchanged while the maximum return rate increases 10 percent. More importantly, there is a decrease in skewness level, which suggests that initial returns of stocks are more evenly distributed. In fact, this skewness level is the lowest among the examined periods. As such, it is safe to say that initial return of stocks is most uniform in 10-day period, which thereby increases the consistency of trends in underpricing level. Such a consistency is very important in this study, as it will clear any abnormal behaviors in price movement that not only have insignificant affect on underpricing level, but also distort the cohesiveness of underpricing determinants' effects.

Overall, the trend in increased initial return continues past the first trading month, and peaks after 3 months at 97 percent. This trend shows a notable increase in the return between the period of 1 month and 10 days, in comparison to a more

modest rise in the period between the 1st and 10th day. Investors with a holding period longer than three months fare worse than shorter term investors. Consequently, investors who still own IPO stocks one year after the listing fare the worst, realizing only a 44 percent profit. The trend again confirms that underpricing is a short-term phenomenon although it takes more time for Vietnamese markets to correct underpriced stocks. If authorities allowed unrestricted price movement on HOSE, this trend would end considerably sooner. Given the development rate of HOSE nowadays, the author does not see any reason for change in market trading cap in the immediate future. Yet the move toward free price fluctuation is inevitable, and sooner or later this feature will be implemented in conformity with other equity markets in the world.

On a case-by-case basis, the highest recorded initial return is 2041 percent and belongs to Petro Vietnam Drilling & Well Service Joint Stock Company, a state-owned company. On the opposite, the highest overpricing level recorded in this study belongs to stocks of Cotec Construction Joint Stock Company, a former state-owned company. Overall, companies which are state-owned or former state-owned make up the majority of IPOs in Vietnam. In this study, out of a sample of 55 IPO cases, 54 companies have some ties to the government. Only one company is owned by individuals: Kinh Do Corporation, whose stocks' first day return is 36 percent, less than half of the average return.

TABLE 7. Descriptive statistics of underpricing and overpricing incidents.

	Underpricing	Overpricing
<b>Number of companies</b>	30	25
<b>Average level of underpricing/overpricing</b>	1.6946	-0.0652
<b>Maximum</b>	8.6339	-0.9482
<b>Minimum</b>	0.0231	-0.4964
<b>Standard deviation</b>	2.2801	0.3030
<b>Skewness</b>	2.109	-0.143

Most importantly, the study finds that the offering shares are overpriced in nearly half of the sample IPOs. The average overpricing in these cases is 30 percent which nonetheless is sizeable. In the most extreme case, Cotec Construction JSC's IPO decreased more than 94 percent in the first trading day. At the other end, the minimum overpricing stands at 6.5 percent. The spread in underpricing level is even more dramatic, with the most undervalued stock is priced 863 percent lower than its real value and the least undervalued stock is priced at two percent lower than its worth. Since the price of a newly listed stock can swing over 20 percent, this tiny gain in the first day can hardly be seen as a sign of undervaluation.

Even though the spread in underpricing level is more dramatic, skewness level for underpriced stocks shows a higher value than that of overpriced stocks. In fact, skewness level of overpriced stocks is only -0.143, exhibits a more even distribution as this figure is closer to 0. On the other hand, skewness level of underpricing incidences is 2.109, suggesting that the strong average initial return of underpriced stocks is due to particularly high price movement of a handful of IPO cases. As such, this fact shows that the overpricing trend is more consistent than the underpricing trend, which relies more on particular cases than an even distribution of underpricing level across samples.

TABLE 8. Number of underpriced and overpriced IPOs in 2005-2009.

Year	Number of IPOs	Underpriced IPOs	Underpricing level	Overpriced IPOs	Overpricing level
<b>2005</b>	14	9	+266.24%	5	-56.41%
<b>2006</b>	15	10	+188.50%	5	-74.12%
<b>2007</b>	20	6	+41.91%	14	-40.13%
<b>2008</b>	5	4	+102.02%	1	-26.67%
<b>2009</b>	1	1	+143.00%	-	-

On a yearly basis, Table 8 shows that initial public offerings are most numerous in 2007, following by 2006's and 2005's figures. With the financial crisis in full

effect by the year 2008, this year and 2009 have the least number of IPOs. Nevertheless, IPOs in the last two years are considerably priced lower: four out of five IPOs in 2008 are underpriced. Although 2007 saw the most deals going through, a majority of the stocks are overpriced. Of 20 IPOs in 2007, the prices of 14 IPOs are higher than their real value. Yet the average overpricing level is lower than that of other more successful years: while 2005 and 2006 each has only 5 overpriced IPO, their average overvaluations are 56 percent and 74 percent respectively. These rates are both higher than the figure in 2007 with the average overpricing level of 14 IPOs only 40 percent. Overall, the result represents an interesting trend: unfavorable international market conditions lower the incidence of overpriced stocks. Moreover, all underpriced IPOs in 2008 and 2009 posted a satisfactory initial return rate. Evidently, the issuers are more reluctant to overprice their shares and more prone to underpricing when market conditions are bad. This in turn explains the surge in initial return in 2008 from a below average rate in 2007.

Although IPOs in 2005 and 2006 provide the best initial return rate, the author finds IPOs' return rate in 2008 more desirable. While profit is nearly three times the investment in 2005, profitable deals only account for 64 percent of all cases. This figure increased to 80 percent in 2008, and investors still enjoy an above average return rate at 102 percent. Even if they buy an overpriced stock, the overpricing level is still only half the nearest overpricing level in other years. Return rate for 2009's IPOs is very worthwhile, yet the number of IPOs in 2009 is too low to generalize a convincing trend.

In summary, the analysis shows that ROI in IPO stocks is very desirable, which corresponds to a high underpricing level. However, further researches reveal a disturbing scene: the IPO market in Vietnam is volatile and risky. Without proper research, a potential investor would run into an unprofitable IPO deal roughly half the time. Moreover, while the overpricing trend is more predictable, the underpricing trend is less clear and relies more on a case-by-case analysis. Nevertheless, the exact intention of this study is to find credible factors that affect the underpricing level. With the aid of these determinants, investors will be able

to identify favorable deals, and therefore reduce their failure rate. The exploration of these factors is described in Chapter 6 of this study.

## 5.2 Comparison of return rates of initial public offerings in Vietnam and other markets

In Chapter 5, the author has reviewed initial return rates of various markets in the world. This subchapter put these figures against the initial return rate on HOSE, as described in Figure 10.

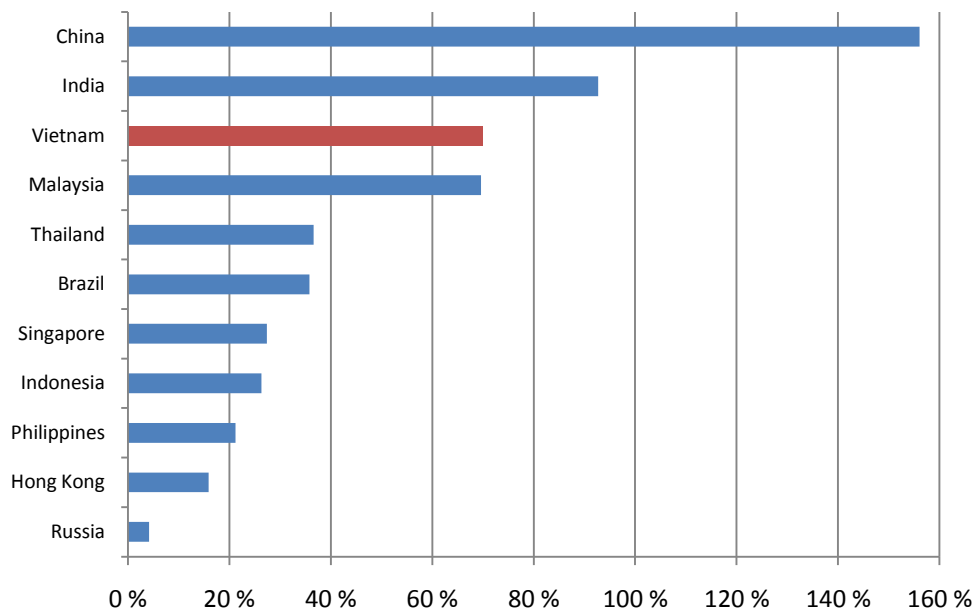


FIGURE 10. Average first-day returns of IPOs in Vietnam and other markets (adapted from Loughran et al. 2010).

In previous part of this chapter, the result reveals that average first day return of Vietnamese IPOs in the period between 2005 and 2009 is 70 percent. This figure surpasses initial returns on most markets in Asia Pacific, rivaling Malaysia and falling just behind China. More specifically, the initial return on Kuala Lumpur Stock Exchange is 69.6 percent, on par with HOSE's figure at 69.8 percent. These figures are the highest among South East Asian countries, exceeding those of

comparable markets in Philippines and Indonesia, and those of more sophisticated markets in Thailand and Singapore as well.

Another comparison with the four most progressive developing countries put the Vietnam's figure above that of Brazil and Russia, but below China and India. However, the most up to date Indian figure dates back to 2007, preceding the financial crisis of 2008. Thus a more precise comparison requires a newer data set from the Indian market.

The result shows that public offerings in Vietnam are substantially priced below their potential value. This undervaluation puts investors in Vietnamese IPOs at a more favorable position than their counterparts in other markets in Asia. For instance, the difference in initial return between Vietnam's and Singapore's markets is more than 30 percent. The figure is as high as 65 percent in comparison with Russian exchanges. In conclusion, the author finds that those who invest in Vietnamese private companies' stocks at the time of IPO are very well rewarded.

### 5.3 Complications for international investors

#### 5.3.1 Restricted share quantity

An important restriction for foreign investors is the limited ownership in a public company in Vietnam. As stated in decision 55/2009/QD-TTg and decree 69/2007/ND-CP, all foreign investors can only own up to 49 percent of a company's stocks, and up to 30 percent if the company is a bank (Decision 55/2009/QD-TTg, point 2; Decree 69/2007/ND-CP, section 1). While this regulation does not have any imminent effect on stock liquidity, it certainly restricts the ability to purchase IPOs' shares. From an investor's point of view, the restriction significantly affects economies of scale, and may force investors to spread their capital over several IPOs to get the desired investing rate.



On the other hand, this spread decreases failure risk if the investor concentrates on only one IPO and distributes the risk on several IPOs, thereby enhancing the return rate. Moreover, findings in the previous part have demonstrated that initial return peaked at around three months and then decreased. As such, this restriction on shares affects largely long-term investors who try to control the company, but not short term investors who rely on the underpricing notion for immediate profit.

### 5.3.2 Time lag between auction and listing dates

Among IPOs in this study, it takes an average 479 days, or approximately one year and three months, for a new Vietnamese public company to go on an exchange. In the most extreme case the issuers waited for almost five years before deciding to list their stocks on the market. The fastest issuers listed their stocks on HOSE two months after the completion of the IPOs.

This practice differentiates HOSE from other more developed markets, whose time lag between the completion of IPOs and the listing date is often insignificant and is counted in weeks. In Vietnam's case, this time lag exposes IPO purchasers to unknown risks, as company performance differs from time to time (Thuy 2010). Moreover, before a stock is listed it can only be traded over the counter, or directly between individuals with or without a broker. As such, this limits stock liquidity, and sellers will have difficulties finding other buyers at that time. Time lag also has another implication: it tends to reduce underpricing. Results in Tian's study have showed a negative correlation between the length of time from the IPO date to the listing date and the level of underpricing (Tian 2005, 26). As such, this fact also potentially lowers the return for IPO buyers.

## 6 CONCLUSIONS

Investment is an important activity in that it stimulates economic growth and creates wealth for individuals. It is also a sophisticated and complicated activity, requiring a variety of tools as well as extensive research and knowledge in order to carry out. However, investors in emerging markets face a serious shortage of both manpower and market knowledge, of which the latter is more severe (Huy 2010). This study is conducted with the purpose of assisting those who are considering investing in Vietnamese capital markets. Specifically, the author examines a phenomenon that has been associated with a lucrative investment option, which is underpricing and IPO, respectively. The findings in previous chapters will be discussed further in this part.

While findings are conclusive and promising, the author acknowledges that there are still many factors that need to be examined prior to investing in an IPO. In this chapter, further research topics are also addressed to pave the way for a fuller understanding about the issue.

### 6.1 Investment decision

The study finds that a high underpricing level in Vietnam has created an invaluable investment opportunity for international investors. The ROI in Vietnamese IPOs stands at 70 percent, which is higher than most markets in Asia Pacific. Moreover, this study examines Vietnamese IPOs both before and during the financial crisis of 2008, and hence has taken into account substantial financial risks. The author anticipates an even higher return rate with the emergence of the world economy's stabilization that took place at the end of 2009. As the Vietnamese economy prospects brighten, investment opportunities will also multiply.

The author also addresses two most important things for foreign investors: regulations and market volatility. Although there are regulations that restrict foreign ownership of stocks as well as price movement on stock exchanges, these

restrictions are of little concern for short-term investors. Findings in Chapter 5 have shown that underpricing is a short-term phenomenon and reveals substantial profits only in a short period. As a result, an IPO stock is best suited for investors with a relatively brief investing interval. Furthermore, the author has clarified the participation procedure in IPO, thus easing the investing process. At a glance, the study finds that HOSE is a volatile and risky market, which also manifests in a high return rate. Nevertheless, further examination in Chapter 6 has shown that these risks can be easily avoided if buyers follow certain patterns.

In summary, the author strongly recommends buying Vietnamese IPO stocks as an investment strategy. ROI is excellent, and empirical study in determinant factors of underpricing level has shown that with proper research, investors can substantially reduce risks. On the whole, investors following this strategy will find that they fare better than their counterparts in other markets in Asia Pacific.

## 6.2 Future research possibilities

### **Risks for international investors**

While the initial returns of Vietnamese IPOs are very desirable, the author acknowledges that investing in an international environment carries many potential uncertainties, such as changing regulations and currency exchange rate fluctuation. When taken into account, those risks may decimate the return rate, or even wipe out the whole investment. There are too many incidents that keep us aware of the volatility of foreign markets; some of them are very recent. The Asian financial crisis of 1997, the Russian debt default of 1998, and the late financial crisis of 2008, all leave a bitter taste to offshore investors. Moreover, every country has its own characteristics which can alter investing conditions. This is particularly true for Vietnam, which has a modified centrally planned economy.

As a result, the author believes that it is essential to have an in-depth assessment of possible risks associated with Vietnamese capital markets in general and with

public offerings in particular. These threats include operational risk and financial risk. On one hand, operational risks such as legal risk may pose a problem to offshore investors due to the looseness of regulations in Vietnam. On the other hand, common financial risks may amplify in a hot, new capital markets like Vietnam. These risks include currency risk, default risk, liquidity risk and volatility risk, etc. Such a study will give a fuller evaluation on the desirability of venturing into Vietnam.

### **Other determinants of IPO**

The result shows that a company's age and size, size of the IPO offer, time lag between offering date and listing date and industry sector have a combined 50.4 percent influence on underpricing level in Vietnam. In addition, it also points out that there are other determinants that account for the remaining 49.6 percent of the variations in IPO price. A discovery of these factors will complement this thesis, and thus give investors a more complete, powerful reference base for IPO evaluation.

A starting point would be a further investigation on a company's financial indicators prior to the IPO, which can reveal some of these unknown factors. These indicators include, but are not limited to: price/earning ratio, debt ratio, return on asset, return on equity rate and EBITDA (earning before interest, tax, depreciation and amortization). Moreover, socio-economic factors are also potential determinants. However, extensive mix method researches have to be done to indentify and transform these factors into numerical form, so that they can be incorporated into multiple regression analysis.

### **Second offering**

As described in Chapter 3, one of the reason to underprice IPOs is to promote long term relationship with investors, who after reap a sizeable profit from IPOs will come back for subsequent offering. This strategy guarantees that later offerings will be welcomed by the public, and thus are more likely to be successful. However, the extent to which this strategy is effective remains

doubtful. If a company meets difficulties raising more capital even after a successful IPO, then its efforts in underpricing shares are not worthwhile. From a corporate point of view, this is a serious problem (Thuy 2010).

Therefore, a study on the effectiveness of underpricing as a promotion tool for later offerings is necessary. The result of that study will prompt companies to reevaluate their IPO strategy, thereby having an impact on underpricing level. Overall, the author recommends this research possibility in order to balance investors' benefits and a company's needs.

### **Long term performance of IPO stocks**

Long term performance of IPO stocks is a popular topic that often associates with underpricing. In general, researches to date find that IPO stocks underperform the market in the long term. As a result, stocks from newly listed companies are considered a poor long-term investment.

However, recent study by Chan, Wei and Wang (2004, 428) shows the performance of IPO stocks is not necessarily low over years. In fact, long term performance of such stocks in Chinese and Canadian markets is even higher than the average market return in a three-year period (Chan et al. 2004, 428; Kooli, L'Her & Suret 2003, 21). So far in this study the author has discovered a decreasing trend in return rate, which started six months after the listing date. Nevertheless, this period is hardly considered long-term. Therefore, longer holding terms have to be examined before a conclusive answer is given. A research on this topic will benefit certain financial institutions, especially those who operate funds that have a long-term holding strategy such as index funds and closed-end funds.

### **Underpricing in Hanoi Stock Exchange**

This study focuses on IPOs of HOSE, the major stock exchange in Vietnam. On a more local scale, HNX offers some very interesting companies. Due to less stringent listing requirements, companies on HNX tend to be younger, smaller and

less well-known than those listed on HOSE. Yet their short history also hints that they are growing faster than more mature companies. Moreover, these less well-known firms also tend to price their IPO stocks lower, resulting in a higher underpricing level and higher initial return for investors, according to signaling hypothesis. In addition, a feature of HNX that some investors will find desirable is that it allows foreign investors own up to 49 percent of a public bank, whereas HOSE only allows a maximum 30 percent ownership stake. Furthermore, future expansion of the economy also means a similar enlargement of both exchanges and therefore liquidity, so that at some point investors will find HNX's stock liquidity sufficient to carry a trade. In anticipation of such change, it is always good to start before the prime time comes so as to be sufficiently prepared.

## 7 SUMMARY

This thesis exists to investigate the potential of Vietnamese IPOs as an investing channel. Moreover, the study investigates the presence of underpricing, a widespread financial phenomenon and its application in investing in the Vietnamese market. To that end, the findings have fulfilled the research questions.

First of all, theoretical framework dominates the first part of this study. Various factors associated with IPO and underpricing phenomenon are discussed, in order to provide the basis for the empirical part. The IPO and its price setting mechanism are described in great detail so that investors can get a more familiar view on the process in Vietnam. Subsequently, underpricing is discussed with regard to reasons, influential factors and international evidence. Most importantly, the framework identifies possible determinants of underpricing, namely company's age, company's size, IPO size, time lag between IPO's completion date and listing date, as well as industry composition. This knowledge is then put to use in settling the importance of individual determinants in the Vietnamese environment.

In the second part, the author seeks answers for the research questions in the empirical study. The case study of Ho Chi Minh Stock Exchange is presented together with its features that will have an impact on foreign investors. These features include price setting mechanism, auction process and the process of privatization, which contribute the vast majority of IPOs on HOSE. Knowledge of these features is indispensable in making investing decisions.

Next, basing on IPOs that have been listed on the Ho Chi Minh Stock Exchange, the author examines their initial price increase in various time frames, and pitches the return rate with other comparable markets. The result provides the answer to the first sub research question, in which the authors find the ROI rate on Vietnamese IPOs surpasses most markets in Asia Pacific. This prompts a very positive recommendation for international investors in the investing prospect of public offerings in Vietnam.

In conclusion, the author finds the prospect of investing in Vietnamese IPOs is excellent, with the ROI higher than most markets in Asia Pacific. To facilitate investing decisions, two portfolios of stocks are recommended for international investors. Based on the findings about determinants of underpricing, these portfolios summarize characteristics of a typical underpriced stock and provide some companies that fit in these criteria. Nonetheless, the author acknowledges that there are still many factors to consider prior to venturing into Vietnam's equity markets. As such, he recommends several topics that build on the findings of this thesis for further research.



## REFERENCES

### **Published references**

African Alliance Securities 2010. African Alliance Pan-African Securities Research. 17 December 2010.

Allen, F. & Faulhaber, G.R. 1989. Signaling by Underpricing in the IPO market. *Journal of Financial Economics*. Vol. 23 No. 2, 303-323.

Annuar, M.N. & Shamsheer, M. 1998. The Performance and Signalling Process of Initial Public Offers in Malaysia: 1980-1996. *Pertanika Journal of Social Sciences & Humanities*. Vol. 6 No. 2, 71-79.

Bodie, Z., Kane, A. & Marcus, A.J. 2005. *Investments*. 6th edition. Singapore: McGraw-Hill.

Brav, A. & Gompers, P.A. 2003. The Role of Lockups in Initial Public Offerings. *The Review of Financial Studies*. Vol. 16 No. 1, 1-29.

Brealey, R.A. & Myers, S.C. 2003. *Principles of Corporate Finance*. 7<sup>th</sup> edition. London: McGraw-Hill.

Buckland, R. & Davis, E. 1990. The pricing of new issues on the unlisted securities market: the influence of firm size in the context of the information content of new issue prospectuses. *British Accounting Review*. Vol. 22 No. 3, 207-222.

Chan, K.L., Wei, K.C.J. & Wang, J. 2004. Underpricing and long-term performance of IPOs in China. *Journal of Corporate Finance*. Vol. 10 No. 3, 409-430.

Chemmanur, T. & Fulghieri, P. 1999. A Theory of the Going-Public Decision. *The Review of Financial Studies*. Vol. 12 No. 2, 249-279.

- Chen, G., Firth, M. & Kim, J.B. 2003. IPO underpricing in China's new stock markets. *Journal of Multinational Financial Management*. Vol. 14 No. 3, 283-302.
- Chen, H.S. & Ritter, J.R. 2000. The seven percent solution. *The Journal of Finance*. Vol. 55 No. 3, 1105-1131.
- Cheng, W. 2010. The Initial Public Offerings of Chinese State-Owned Enterprises in HongKong Stock Exchange. *International Research Journal of Finance and Economics*. Vol. 52, 142-148.
- Chiraphadhanakul, V. & Gunawardana, K.D. 2005. The factors affecting on IPO return in Thai Stock Market. *Proceedings of the International Conference on Computer and Industrial Management*. Vol. 19, 1-6.
- Clark, D.T. 2002. A Study of the Relationship Between Firm Age-at-IPO and Aftermarket Stock Performance. *Financial Markets, Institutions & Instruments*. Vol. 11 No. 4, 385-400.
- Coakley, J., Instefjord N. & Shen, Z. 2007. The winner's curse and lottery-allocated IPOs in China. Working Paper. Department of Accounting, Finance and Management and Essex Finance Centre. University of Essex.
- Dalton, D.R. Certo S.T. & Daily C.M. 2003. IPOs as a Web of Conflicts of Interest: An Empirical Assessment. *Business Ethics Quarterly*. Vol. 13 No. 3, 289-314.
- Derrien, F. & Kecskes, A. 2007. The Initial Public Offerings of Listed Firms. *The Journal of Finance*. Vol. 62 No. 1, 447-479.
- Eriksson, P. & Kovalainen, A. 2008. *Qualitative Methods in Business Research*. 1<sup>st</sup> edition. London: SAGE.
- Geddes, R. 2003. *IPOs and equity offerings*. 1<sup>st</sup> edition. Oxford: Butterworth-Heinemann.

Gorard & Taylor 2004. Combining methods in educational and social research. 1<sup>st</sup> edition. London: McGraw-Hill Education.

Gregoriou, G.N. 2006. Initial Public Offerings. An International Perspective. Burlington, MA. Butterworth-Heinemann.

Habib, M. & Ljungqvist, A. 1998. Underpricing and IPO proceeds: a note. Economic Letters. Vol. 61, 381-383.

Hughes, P.J. & Thakor, A.V. 1992. Litigation Risk, Intermediation, and the Underpricing of Initial Public Offerings. The Review of Financial Studies. Vol. 5 No. 4, 709-742.

Ibbotson, R. G., Sindelar, J. L. & Ritter, J. R. 1994. The market's problem with the pricing of IPOs. Journal of Applied Corporate Finance. Vol. 7 No. 1, 66-74.

Islam, A., Ali, R. & Ahmad, Z. 2010. An Empirical Investigation of the Underpricing of IPOs in the Chittagong Stock Exchange. International Journal of Economics and Finance. Vol. 2 No. 4, 36-46.

Jagannathan, R. & Sherman, A.E. 2006. Why do IPO Auctions Fail? NBER Working Paper Series. Vol. 12151, 1-53.

JP Morgan 2007. Ho Chi Minh Trail to Mexico. Emerging Markets Equity Research. 4 April 2007.

Kaneko, T. & Pettway, R.H. 2003. Auctions versus book building of Japanese IPOs. Pacific-Basin Finance Journal. Vol. 11 No. 4, 439-462.

Kooli, M., L'Her, J. & Suret J. 2003. Do IPOs Underperform in the Long-Run? New Evidence from the Canadian Stock Market. CIRANO Working Papers. No. 16, 1-38.

Ma, S. & Faff, R. 2007. Market conditions and the optimal IPO allocation mechanism in China. Pacific-Basin Finance Journal. Vol. 15, 121-139.

- Mauer, D.C. & Senbet, L.W. 1992. The Effect of the Secondary Market on the Pricing of IPOs: Theory and Evidence. *The Journal of Financial and Quantitative Analysis*. Vol. 27 No. 1, 55-79.
- Meggison, W.L. & Weiss, K.A. 1990. Venture Capitalist Certification in IPOs. *The Journal of Finance*. Vol. 46 No. 3, 879-903.
- Mok, H.M.K. & Hui, Y.V. 1998. Underpricing and aftermarket performance of IPOs in Shanghai, China. *Pacific-Basin Finance Journal*. Vol. 6 No. 5, 453-474.
- Pagano, M. & Roell, A. 1998. The Choice of Stock Ownership Structure: Agency Costs, Monitoring, and the Decision to go Public. *The Quarterly Journal of Economics*. Vol. 113 No. 1, 187-225.
- Pallant, J. 2010. *SPSS Survival Manual*. 1st edition. England: McGraw-Hill Education.
- Pham, P.K., Kalev, P.S. & Steen, A.B. 2003. Underpricing, stock allocation, ownership structure and post-listing liquidity of newly listed firms. *Journal of Banking & Finance*. Vol. 27 No. 5, 919-947.
- PricewaterhouseCoopers 2011. *The World in 2050 The accelerating shift of global economic power: challenges and opportunities*. London.
- Ritter, J. R. 1984. Signaling and the Valuation of Unseasoned New Issues: A content. *The Journal of Finance*. Vol. 39 No. 4, 1231-1237.
- Ritter, J.R. & Welch I. 2002. A Review of IPO Activity, Pricing, and Allocations. *The Journal of Finance*. Vol. 57 No. 4, 1795-1828.
- Ritter, J.R. 1998. IPOs. *Contemporary Finance Digest*. Vol. 2 No. 1, 5-30.
- Rock, R. 1986. Why new issues are underpriced. *Journal of Financial Economics*. Vol. 15 No. 1-2, 187-212.

Saunders, M., Lewis, P. & Thornhill, A. 2009. Research methods for business students. 5<sup>th</sup> edition. Essex: Prentice Hall.

Spindler, J.C. 2010. IPO Underpricing, Disclosure, and Litigation Risk. USC Center in Law, Economics and Organization Research Paper. No. C09-9, 1-38.

Su, D. & Fleisher, B.M. 1999. An empirical investigation of underpricing in Chinese IPOs. Pacific-Basin Finance Journal. Vol. 7 No. 2., 173-202.

Tian, L.G. 2005. Financial regulations, investment risks, and determinants of Chinese IPO underpricing. Working paper of Peking University. 1-59.

Tinic, S.M. 1988. Anatomy of IPOs of Common Stock. The Journal of Finance. Vol. 43 No. 4, 789-822.

Uddin, H. 2008. An Empirical Examination of Intended and Unintended IPO Underpricing in Singapore and Malaysia. International Research Journal of Finance and Economics. Vol. 20, 56-74.

Yong, O. 2009. Winner's curse, bandwagon effect and size effect in IPOs: Evidence from private placement IPOs in Malaysia. Discussion Paper of the Faculty of Economics and Business. University of Kebangsaan Malaysia.

Yu, T. & Tse, Y.K. 2006. An empirical examination of IPO underpricing in the Chinese A-share market. China Economic Review. Vol. 17 No. 4, 363-382.

Zingales, L. 1995. Insider Ownership and the Decision to Go Public. Review of Economic Studies. Vol. 62, 425-448.

### **Unpublished references**

Hamza, O. & Kooli, M. Does venture capitalists reputation improve the survival profile of IPO firms? European Financial Management Symposium 2010  
Accepted papers.

## Electronic references

ACMF's ASEAN and Plus Standards 2011 [referenced 16 Feb 2011]. Available at: <http://www.sc.com.my/index.asp?pageid=628&menuid=314>

Agribank 2011. [referenced 8 March 2011]. Available at:  
<http://www.agribank.com.vn/101/782/gioi-thieu/thong-tin-chung.aspx>

CIA 2011. The World Factbook [referenced 17 Jan 2011]. Available at:  
<https://www.cia.gov/library/publications/the-world-factbook/fields/2012.html>

Ho Chi Minh Stock Exchange 2011a. Hochiminh Stock Exchange Establishment & Development [referenced 2 Feb 2011]. Available at:  
[http://www.hsx.vn/hsx\\_en/Modules/Gioithieu/Lichsu.aspx](http://www.hsx.vn/hsx_en/Modules/Gioithieu/Lichsu.aspx)

Ho Chi Minh Stock Exchange 2011b. [referenced 3 Feb 2011]. Available at:  
<http://www.hsx.vn/hsx/Uploaded/2008/12/25/tb%20kq%20vietinbank.pdf>

Ho Chi Minh Stock Exchange 2011c. [referenced 5 Feb 2011]. Available at:  
[http://www.hsx.vn/hsx/Uploaded/quy\\_dinh\\_file/4.Bien%20do%20dd%20gia,%20gia%20tham%20chieu,gia%20dong%20cua..pdf](http://www.hsx.vn/hsx/Uploaded/quy_dinh_file/4.Bien%20do%20dd%20gia,%20gia%20tham%20chieu,gia%20dong%20cua..pdf)

HOSE 2011 [referenced 5 Jan 2011]. Available at:  
<http://www.hsx.vn/hsx/Modules/Quydingh/Dauthau.aspx>

IOSCO 2011. International disclosure standards for cross-border offerings and initial listings by foreign issuers [referenced 27 Jan 2011]. Available at:  
<http://www.iosco.org/library/pubdocs/pdf/IOSCOPD81.pdf>

Ljungqvist, A. 2006. IPO Underpricing [referenced 7 Feb 2011]. Available at:  
<http://mba.tuck.dartmouth.edu/Pages/Faculty/Espen.Eckbo/PDFs/Handbookpdf/C H7-IPO%2005-24-06.pdf>

Loughran, T., Ritter, J. R. & Rydqvist, K. 2010. IPOs: International Insights. Pacific-Basin Finance Journal [referenced 7 Feb 2011]. Available at:  
<http://bear.warrington.ufl.edu/ritter/Int2011feb.pdf>

MHB 2011. [referenced 8 March 2011]. Available at:  
<http://www.mhb.com.vn/vi/?p=gioithieu.asp>

Neste 2011 [referenced 25 Mar 2011]. Available at:  
<http://www.nesteoil.com/binary.asp?GUID=2681F4A6-B23D-494A-8920-30AF126FF021>

PV Oil 2011. [referenced 8 March 2011]. Available at:  
<http://www.pvoil.com.vn/vi-vn/zone/113-qua-trinh-phat-trien.aspx>

PVEP 2011. [referenced 8 March 2011]. Available at:  
<http://pvep.com.vn/Default.aspx?pageid=26>

Ranjan, N. & Madhusoodanan, T.P. 2004. IPO Underpricing, Issue Mechanisms, and Size [referenced 2 Feb 2011]. Available at: <http://ssrn.com/abstract=520744>

Renaissance Capital 2010. All Time Largest Global IPOs [referenced 8 February 2011]. Available at:  
<http://www.renaissancecapital.com/IPOHome/Rankings/biggest.aspx>

Stockbiz 2011a [referenced 9 Feb 2011]. Available at:  
<http://stockbiz.vn/Stocks/bvh/MajorHolders.aspx>

Stockbiz 2011b [referenced 9 Feb 2011]. Available at:  
<http://stockbiz.vn/Stocks/ctg/MajorHolders.aspx>

Stockbiz 2011c [referenced 9 Feb 2011]. Available at:  
<http://stockbiz.vn/Stocks/dpm/MajorHolders.aspx>

Stockbiz 2011d [referenced 9 Feb 2011]. Available at:  
<http://stockbiz.vn/Stocks/eib/MajorHolders.aspx>

Stockbiz 2011e [referenced 9 Feb 2011]. Available at:  
<http://stockbiz.vn/Stocks/hag/MajorHolders.aspx>

Stockbiz 2011f. [referenced 9 Feb 2011]. Available at:  
<http://stockbiz.vn/Stocks/msn/MajorHolders.aspx>

Stockbiz 2011g [referenced 9 Feb 2011]. Available at:  
<http://stockbiz.vn/Stocks/stb/MajorHolders.aspx>

Stockbiz 2011h [referenced 9 Feb 2011]. Available at:  
<http://stockbiz.vn/Stocks/vcb/MajorHolders.aspx>

Stockbiz 2011i [referenced 9 Feb 2011]. Available at:  
<http://stockbiz.vn/Stocks/vic/MajorHolders.aspx>

Stockbiz 2011j [referenced 9 Feb 2011]. Available at:  
<http://stockbiz.vn/Stocks/vnm/MajorHolders.aspx>

US Commercial Service 2011 [referenced 10 Feb 2011]. Available at:  
[http://www.buyusa.gov/vietnam/en/best\\_prospects.html](http://www.buyusa.gov/vietnam/en/best_prospects.html)

Vietbao 2011. [referenced 8 March 2011]. Available at: <http://vietbao.vn/Kinh-te/Thanh-lap-Cong-ty-Loc-Hoa-dau-Binh-Son/75180343/176/>

Vietinbank 2011a. [referenced 4 Feb 2011]. Available at:  
[http://www.vietinbank.vn/web/export/sites/default/vn/investors/info/files/ipo\\_cbtt.pdf](http://www.vietinbank.vn/web/export/sites/default/vn/investors/info/files/ipo_cbtt.pdf)

Vietinbank 2011b. [referenced 4 Feb 2011]. Available at:  
<http://stockbiz.vn/Handlers/DownloadFinancialStatement.ashx?FileName=CTG-09-Y-Prospectus.pdf>

Vietnam Airlines 2011. [referenced 8 March 2011]. Available at:  
[http://www.vietnamairlines.com/wps/portal/vn/site/about\\_us/our\\_background/!ut/p/c5/hY7LDoIwFAW\\_hS\\_oobalLBuhpcrDmKDAxrAwBiPgwwj9giuFoPcuJ5Mz](http://www.vietnamairlines.com/wps/portal/vn/site/about_us/our_background/!ut/p/c5/hY7LDoIwFAW_hS_oobalLBuhpcrDmKDAxrAwBiPgwwj9giuFoPcuJ5Mz)



pCLDd\_WzudSPpu\_qGylIJU5royLmxUAmuADVgb81q8A11h14-  
 cEl9UPQNMbObhRkzr9sE-  
 iRKsnDg6bZzDZJokG9XHr7MHUB\_mf7ONYurjOwn\_xdN3IsnMLEnxbQCZ\_3  
 p1Hfnsn9zQs09sqU47wAl\_dT3g!!/dl3/d3/L2dBISEvZ0FBIS9nQSEh/

Vietnam Steel 2011. [referenced 8 March 2011]. Available at:  
<http://www.vnsteel.vn/about.asp?id=1>

Vinacorp 2011. [referenced 8 March 2011]. Available at:  
<http://www.vinacorp.vn/stock/otc-nvojsc/ctcp-loc-hoa-dau-nam-viet>

World Bank 2011. Market capitalization of listed companies (% of GDP)  
 [referenced 16 Jan 2011]. Available at:  
<http://data.worldbank.org/indicator/CM.MKT.LCAP.GD.ZS>

### **Laws, statutes, decrees**

109/2007/ND-CP. Vietnamese Government. Hanoi 26 June 2007.

55/2009/QD-TTg. Prime Minister. Hanoi 15 April 2009.

69/2007/ND-CP. Vietnamese Government. Hanoi 20 April 2007.

### **List of interviews**

Huy, P.D. 2010. Associate Director-Investment Banking. Saigon Securities  
 Incorporation. Interview 15 Oct 2010.

Thuy, T.M. 2010. Analyst-Investment Banking. Saigon Securities Incorporation.  
 Interview 08 Dec 2010.

