CORPORATE FINANCE AND STATE OWNERSHIP IN VIETNAM: CAPITAL STRUCTURE, INVESTMENT BEHAVIOR AND PROFITABILITY OF LISTED COMPANIES

by

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Introduction

Motivation and aims of the thesis

In 1986, Vietnam started the *Doi moi* which is a comprehensive reform programme of the Vietnamese economy along with many other fields such as culture, society, foreign affairs, etc. It marked the end to the central planning economic mechanism, and opened up a new era for the Vietnamese economy – an era of socialist-oriented market economy, including diverse forms of ownership, industrialization and an opening up of the economy. An important component of the economy reform was the reform of state-owned companies (SOCs). The aim of these reforms is to improve performance and competitive capability and to reduce the number of SOCs. Among other measures, equitization has been one of main instruments for reforming the SOCs effectively and quickly. During the 22 years of implementation, a total of 3,875 SOCs has been equitized. The Ho Chi Minh Stock Trading Centre (HoSTC) was opened in July 2000 and renamed the Ho Chi Minh Stock Exchange (HOSE) in 2007. The Hanoi Stock Exchange (HASE) was opened in 2005. The stock market has grown rapidly though not stably. By the end of 2011, there were 393 firms listed on the HOSE and 301 firms listed on the HASE. Total market capitalization reached its peak at the end of 2007 and equal to nearly 44 per cent of GDP.

This dissertation investigates the capital structure and its impacts on investment behaviors and profitability of listed companies in Vietnam, with an emphasis on identifying the characteristics of the state-controlled companies in order to assess the effects of the economic and corporate reforms in Vietnam since the *Doi moi.* Whether the corporate sector, as a major domestic investor, can mobilize funds efficiently or not is a critical factor in facilitating the transition to a market economy. In particular, because listed companies are surrounded by a more developed institutional environment in comparison with other companies, studying these companies helps to evaluate the effectiveness of the reforms in Vietnam. Moreover, a feature of equitization in Vietnam is that the state still holds decisive voting rights in many equitized SOCs. As such, finding out the characteristics of corporate finance of such state-controlled companies is also an interesting topic in order to assess the reforms inVietnam.

Outline of the thesis

The thesis is organized into seven chapters. Chapter 1 overviews the reform of state-owned companies (SOCs) as well as the stock markets, listed companies and the banking sector in the context of the economic reform under the *Doi moi* policy in Vietnam, which comprise the context for the objectives to be analyzed in the rest of the thesis. Chapter 2 introduces the characteristics of the ownership structure, corporate finance and corporate governance of listed companies in Vietnam, which relate to the analyses in the following chapters. Chapter 3 reviews both the theoretical and empirical literature on capital structure and its impacts on investment, performance and growth opportunities for companies in the context of corporate reform, which provides the background for the empirical study of these issues, to be conducted in chapter 4, 5 and 6. It also sets up the hypotheses and models for the empirical analyses conducted in these following three chapters. Chapter 4, 5 and 6 investigate on the basis of three models: (1) Capital structure and investment; (2) Capital structure and profitability; and (3) Capital structure, growth opportunities and investment, respectively, by using three estimation methods of OLS, 2SLS and 3SLS for panel data covering the six-year period of 2006-2011 to find out the characteristics of the capital structure of listed companies in Vietnam and its impacts on investment, profitability and growth opportunity. Chapter 7 summarizes the main contents of the prior chapters, discusses the findings of the study as well as their implications and indicates some limitations of the thesis which suggest some topics for future researches.

Outline of chapter 1

Chapter 1 overviews the reforms to economic and state-owned companies (SOCs), as well as the stock markets, listed companies and the banking sector in the context of the *Doi moi* policy in Vietnam.

The equitization programme in Vietnam, which started in 1992, can be divided into three stages, namely the pilot stage (from 1992 to 1996), the expansion stage (from 1996 to 2010) and the speed-up stage (from 2011 to present). By the end of 2011 about 4,000 SOCs had been equitized. Ho Chi Minh Stock Exchange (HOSE) and Hanoi Stock Exchange (HASE) were established in 2000 and 2005 respectively, with the listing norms of the

HOSE being stricter than those of the HASE.

The main characteristics of the economic reform and SOC reform in Vietnam are (1) most of the equitized SOCs are small in size, while the remaining 1,300 (which are also the largest on the exchange) are fully state-owned companies; (2) the development of stock markets in Vietnam is linked with the equitization process; (3) institutional investors are under-represented in the stock markets in Vietnam; (4) the proportion of loans by state-owned commercial banks (SOCBs) in the economy has been falling year by year, to 51.7 per cent in 2011, while the proportion of total outstanding loans to SOCs has also been declining steadily, to 16.7 per cent in September 2012; (5) The participation of foreign investors both in term of foreign direct investment (FDI) and in stock market plays an important part in the reform process in Vietnam.

Outline of chapter 2

Chapter 2 introduces the characteristics of the ownership structure, corporate finance and corporate governance of listed companies in Vietnam, which sets the basis for the empirical analyses in Chapters 4, 5 and 6.

One of the significant feature of the ownership structure of listed companies in Vietnam is that the state continues to be a dominant shareholder, which has affects on the corporate activities and corporate governance of these companies. Such companies may be in a privileged position compared to other companies in raising funds, due to the fact that the four big state-owned or state-controlled commercial banks still provide most of the loans to the whole economy, but they may be less active in investment or less effective in operation. Information asymmetry may be significant among listed companies, especially among state-controlled companies due to the lack of corporate information disclosure.

The policy of opening the economy is encouraging foreign investors to invest in Vietnam, not only in the form of FDI but also in the stock markets, and foreign investors are now allowed to own up to 50 per cent of a listed company. Along with the high contributions to development of the Vietnamese economy, the penetration of foreign investors into the stock markets is another characteristic of the ownership structure of listed companies in Vietnam, which also has affects on these companies' activities.

Outline of chapter 3

Chapter 3 reviews both the theoretical and empirical literature on capital structure and its impacts on investment, performance and growth opportunities of companies in the context of corporate reform. It also describes hypotheses, models and data set for empirical analyses to be conducted in the following three chapters.

Corporate finance is a hot topic among developing and transitional countries as a means to assess the effectiveness of economic reforms and corporate reforms of these countries. Most of the empirical studies on the issue of transitional countries concentrate on Eastern Europe countries and China, though there are still few empirical studies on Vietnam. The modern corporate finance theories which well explain the capital structures of companies in developed countries, including trade-off theory, pecking order theory and agency cost theory, are frequently used in these studies.

This chapter also formulates hypotheses to assess the results of economic reforms and corporate reforms in Vietnam based on these modern corporate finance theories. As for the determinants of capital structure, according to the trade-off approach, corporate tax is expected to have a positive relation, non-debt tax shields are expected to have a negative relation and bankruptcy risk is expected to have a positive relation to companies' debt ratios. According to the agency cost approach, collateral can reduce the agency cost of procuring debt funds, thus a positive relation to corporations' debt ratios is expected, while internal funds have lower agency cost than other sources of funds and thus a negative relation to the debt ratios is expected. Regarding the relation between capital structure and investment, listed companies in Vietnam may cope with overinvestment because of the easy lending of banks in the boom period or underinvestment because of the cautious lending of banks in the after-boom period. As for the relation between leverage and profitability, there are two possiblities. In Vietnam, the creditor's monitoring of a company's business operations is not sufficient and the corporate governance of the borrowing company is inadequate. Thus, the company may use the loans ineffectively, and an increase in debt may worsen the profitability of the company. Regarding the impacts of leverage on investment and growth opportunities, there are possiblitites of underinvestment, overinvestment or soft budget constraints among listed companies in Vietnam.

This chapter also introduces other hypotheses about the impacts of state ownership and

foreign ownership on capital structure, investment, profitability and growth opportunities. State-controlled companies may have weaker incentives to adjust their debt ratios to attain tax savings, lower bankruptcy risk due to implicit guarantees of the state and easier access to state-owned bank loans regardless of their collateral due to their closer relationships with state-owned banks. State-controlled companies may be more active in investing than other companies due to their function as tools for implementing government policies or they make less use of good investment opportunities due to their less profit-oriented characteristic. They also may have higher profitability due to their advantages in raising funds from state-owned or state-controlled banks or less profitability due to their lower level of independence from the state in terms of business management. These companies may have a more severe problem of soft budget constraint, which is often observed among companies in transitional countries. Foreign-affiliated companies are assumed to have less debt ratios, higher invesment ratio and better performance due to the strict requirement of information disclosure and strict monitoring of business operations.

This thesis use 3 models: (1) Capital structure and investment; (2) Capital structure and profitability; (3) Capital structure, growth opportunities and investment, which are formed from four equations related to capital structure, investment, profitability and growth opportunities. The three estimation methods of OLS, 2SLS and 3SLS are used to estimate these three models. Cragg-Donald statistic and Durbin-Wu-Hausman Test are conducted to check the weak instrument variables and endogeneity for using 2SLS and 3SLS method.

Outline of chapter 4

Chapter 4 investigates the capital structure and investment activities of listed companies in Vietnam, using panel data covering the six-year period 2006-2011 of 435 companies listed on the HOSE and on the HASE.

The empirical analysis identifies some key features of fundraising structure and their effects on investment behaviors of listed companies in Vietnam. In terms of fund mobilization and corporate financing, the economic reform regime (*Doi moi*) implemented by the Vietnamese government, which aims to create an economic system based on market mechanisms, have achieved some of their goals. However, the economic reforms still have several limitations, such as the opaque relationship between state-controlled companies and

government banks and inactive investment on the part of state-controlled companies.

Outline of chapter 5

Chapter 5 conducts an empirical analysis on the capital structure and its impacts on profitability of 435 listed companies in Vietnam, using panel data for the two periods of 2006–2008 and 2009-2011.

The estimation results show that, first, compared to Vietnamese small- and medium-sized enterprises, the capital structures of listed companies better matched the features of standardized corporate financing theories. Second, on the other hand, weak corporate governance and insufficient monitoring by creditors influenced the listed companies to excessively borrow in both periods, before and after the Lehman shock. Third, the state-controlled companies listed on HOSE are likely to have an advantage over other companies in accessing loans and earning profits even after the boom period. Forth, while foreign-affiliated companies were not conspicuous in terms of profitability during the boom period, they showed their superiority through better production technology and management in the period after the boom.

These findings suggest that reforming the Vietnamese market requires the development of a system that ensures information transparency and independent corporate governance, enhances financial opening and increases privatization of state-owned companies, including those in the banking sector.

Outline of chapter 6

Chapter 6 examines the influence of capital structure on investment activities and growth opportunities of listed companies in Vietnam, using panel data covering the six-year period of 2006–2011 for the companies listed on the HOSE.

The estimation analysis revealed two major findings. First, in general, there is an over-investment problem among listed companies in Vietnam and debt financing plays a role in minimizing this problem. Second, the state-controlled companies face a soft budget constraint problem, which is common in transition economies.

These results imply that state-owned banks in Vietnam seem to impose fewer restrictions or lower levels of monitoring on loans to state-controlled companies. Therefore,

further reform in the banking sector and in state-controlled companies and further disclosure of corporate information are needed to resolve the opaque collusion between state-controlled companies and state-owned banks and to protect outside creditors.

Outline of chapter 7

Chapter 7 summarizes the main contents of the previous chapters, discusses the findings of the study as well as their implications and indicates some limitations of the thesis which suggest some topics for future researches.

According to the empirical analyses, the overall picture of corporate finance for these companies seems obvious. First, financing structures of non state-controlled listed companies in Vietnam have features that conform well to economic theory and a market economy. Second, the state still remains a controlling shareholder in many former state-owned companies and has controlling rights in these firms' activities, which enables these companies to make use of their close relationship with the government to access loans with preferable conditions, although their fund-using activities remain inefficient. Third, the five big state-owned or state-controlled commercial banks are still supplying loans to most of the domestic demand, and still impose preferable conditions and less strict monitoring of loans to state-controlled companies. Fourth, fund-raising through the stock market is still underdeveloped, and the fund-raising activities of listed firms in Vietnam still relies on debt financing such as bank loans.

These empirical analyses have some notable implications. Contrary to what is suggested by the analysis on Vietnamese small- and medium-sized enterprises (SMEs) in Nguyen (2006) and Biger et al. (2008), the capital structures of listed companies in Vietnam are relatively well matched to the features of standardized corporate financing theory. However, the market environment surrounding Vietnamese listed companies still has many problems which need to be improved, such as information asymmetry, need for institutional reforms including the development of a system that ensures independent corporate governance and transparency of information and the accelation of privatization of state-owned companies and banks.

The thesis still has several limitations relating to the data set which suggest need for further researches in the future. The data set of the empirical study was unbalanced panel

data for the period of 2006-2011 of companies listed before 2009. Companies listed after that and data for the period after 2011 should be added to the data set in order to investigate the effectiveness of the economic reform and corporate reform over a longer period.

Chapter 1

Economic reform and corporate reform in Vietnam

This chapter provides an overview of the reform of state-owned companies (SOCs) in the context of the economic reform in Vietnam. In 1986, Vietnam officially started the *Doi moi* policy, which is a reform program of not only economic but also of many other fields such as culture, society, foreign affairs, etc. The general objectives of the economic reform under the *Doi moi* are to eliminate the central planning mechanism, to apply a socialist-oriented market economy mechanism, to allow multiple forms of possession, and to industrialize and open the economy. The specific objectives are decided in each period under five-year plans. Under the *Doi moi*, the economic structure has changed greatly. Goods subsidization has reduced rapidly. Trade has been liberalized gradually. Vietnam has become an exporter of many goods, and has joined several free trade agreements. Apart from SOCs, private-owned companies and companies of other possession forms are accepted and encouraged. Many laws have been created or revised to support domestic and foreign investment.

The development of companies is a decisive factor for the sucess of economic transition. Thus, corporate reform is put as a central issue of the economic reform. In a transition economy like Vietnam, there are many SOCs which are inefficient and have been obstacle to the development of the economy. Therefore, restructuring these companies has been considered as a main component of the economic reform and corporate reform programme. Some comprehensive measures which focused on enhancing the performance, competitive capability and reducing the number of SOCs have been launched. Among these measures, equitization has been a main instrument to reform the SOCs effectively and quickly. Accordingly, many joint-stock companies have been born, which accelerated the establishment and development of stock markets. Besides, the banking sector is also reformed to support the development of the economy, such as the equitization of state-

owned commercial banks, the liberalization of interest rate, the openning of the banking sector to the foreign investment.

Chapter 1 is structured as follows. Section 1 summarizes the contents of the economic reform under the *Doi moi* policy in Vietnam. Section 2 briefs the corporate reforms in Vietnam, including reforms of SOCs, formation and development of stock markets, and reforms of banking sector. Section 3 describes the reform of SOCs in detail, with an emphasis on the equitization of these companies. Section 4 introduces the stock markets in Vietnam with a focus on the listed companies. Section 5 provides an overview of the banking sector and the reform of this sector. Section 6 concludes the chapter.

1.1 Economic reform in Vietnam

1.1.1 Context of economic reform in Vietnam

After the unification of the country in 1975, Vietnam countinued the central planning mechanism[1] in a nation-wide scale and started a five-year plan[2] for the 1976-1980 period under the Fourth National Congress of the Vietnam Communist Party[3]. The targets of this plan were to achieve annual growth rates of 13-14 per cent for GDP, 8-10 per cent for agricultural production, 16-18 per cent for industrial production, 7.5-8 per cent for social productivity. However, by 1979 this five-year plan clearly failed to solve the serious

[1] Central planning mechanism is an economic mechanism in which decisions regarding production, distribution, pricing and investment are embodied in a plan formulated by a central authority, usually by a public body such as a government agency, upon a macro-economic plan.

[2] Five-year plans are a series of economic development initiatives, which start after each National Congress of the Vietnam Communist Party. A five-year plan decides the objectives, orientation and methods for the development of Vietnam economy in that five-year period. The first five-year plan was for the 1961-1965 period and applied for the North Vietnam only. Since unification of the country in 1975, the five-year plan was for the entire country for every five-year period afterward. The recent five-year plan is for the period of 2011-2015.

[3] The National Congress is the supreme organ of the Communist Party of Vietnam. Since the Foundation Conference of the Communist Party of Vietnam in 1930, the first three congresses were not fixed to a common time schedule during the time of wars against France and the United States. It has been held every five years since the 4th National Congresses in 1976. The latest one is the 11th National Congresses which have been held in January 2011. The National Congress elects the Central Committee which is the highest authority within the Communist Party of Vietnam. The Central Committee usually meets twice a year.

problems facing the newly unified economy. Vietnamese economy remained facing with small-scale production, low labor productivity, unemployment, shortage of materials and technology, and insufficiency of foods and consumer goods. Vietnamese government started to reconsider the recent economic model. The decree 25/CP which was issued on January 21, 1981 partly gave the factories the autonomy in establishing and implementing their production plans by the so-called Three-Plan System[4]. However, the economy as a whole was still in the central planning mechanism. In general, the targets of this five-year plan were too high to reach. Besides, the political and economic isolation and the bad agricultural harvest[5] in Vietnam also affected. Thus, none of the targets of the plan were met. The average growth rates of GDP, agricuture and industry were only 0.4 per cent, 1.9 per cent and 0.6 per cent, respectively which were much lower than the targeted rates. The economy was in a serious strain during the late of 1970s.

In the context of big failures of the prior five-year plan which led the economy to face with the threat of economic crisis, the fifth National Congress of the Communist Party of Vietnam was held in March 1982 and a five-year plan was started for the 1981-1985 period with an attempt to address those problems. The plan's highest priority was to develop agriculture by integrating the collective and individual sectors into an overall system which emphasizes intensive cultivation and crop specialization and by employing science and technology. Economic policy encouraged the development of the "family economy" which is the peasants' personal use of economic resources, including land, not being used by the

[4] This system requires a state-owned factory to have three plans which are different in the ability of the factory in acquiring inputs, caculating costs, deciding and disposing outputs, and using profits. The first plan is mandatory. Under this plan, the factory has to use inputs provided by the state to produce and supply low-price outputs to the state, while the profits have to be transferred to the state budget. When the factory has surplus capacity, it could use a second plan under which the factory freely mobilizes inputs by itself to produce the products specified in the first plan. Outputs of this plan are regularly sold to trading SOEs, and also are disposed in the free market. Third plan is non-compulsory and is established by the factory. Under this plan, inputs are freely acquired and outputs are freely disposed in the free market. Outputs usually concerned minor products that are made through the factory's own attempts at diversification. Profits under the second and third plan could be retained by the factory with a predetermined proportion.

[5] Aids from other countries which included such important goods as rices, sugar, milk, clothes, medicines, etc reduced, while expenditures for defense increased rapidly since the conflicts with Cambodia in the Southern border and with China in the North border, and Mekong delta which was an important agricutural area suffered big flood.

cooperative. The plan also stressed the development of small-scale industry to meet needs of materials of Vietnam, create goods for exporting, and lay the foundation for the development of heavy industry. The industrial sector received a larger share of state investment during this period[6]. Production autonomy was granted at the factory and farm levels. Government expenditures was tried to reduce by ending state subsidies on foods and certain consumer goods for state employees. All relevant costs to the national government were included in production costs and the state stoped compensating for losses of state-owned companies. As a result, there were some considerable achievements such as the average growth rates of GDP, agricuture and industry were 6.4 per cent, 4.9 per cent and 9.5 per cent respectively, which were much higher than those of the prior period. However, they were not able to rescue the economy thoroughly because these measures were a mix of old and new models, and the economy was still stagnating with high state budget deficit and high inflation.

In order to revive the economy and control inflation, a policy package of price, wage and monetary reform was launched in September 1985. This reform required to caculate all rational costs to the production, apply the single price machanism in price system, assure that employees can live by the salary and give the financial autonomy right to every industry and economy entity. However, this policy package was a failure because the prices of inputs were decided to reduce to 70 per cent of the planed prices, while salary were decided to increase 100 per cent of the planned level, which resulted in a substantial state budget deficit. The deficit could only be financed by printing money, which strongly contributed to the pre-existing inflationary tendency. The consumer price index was 453.54 per cent in 1986. Employees had no salary. Inputs and goods were scarced. Agricultural production and investment in industry declined.

The unexpected macroeconomic impacts of the policy package urged the Goverment to take more drastic economic reform measures. The Sixth National Party Congress in December 1986 marked an important shift in the economic reforms when the government decided to make changes thoroughly. The central planning mechanism was decided to be

[6] For example, in 1982, the approximate proportion was for industry and agriculture was 53 per cent and 18 per cent, respectively.

removed completely and replaced by a socialist-oriented market economy mechanism. This economic reform is often referred to as *Doi moi* in Vietnamese.

Doi moi is a comprehensive reform program, in which economic reform is basic. The general objectives of the economic reform under the *Doi moi* are to eliminate the central planning mechanism, apply a socialist-oriented market economy mechanism, multiply forms of possession, industrialize and open the economy. The specific objectives are decided in each period under five-year plans.

1.1.2 Economic reform in Vietnam under the *Doi moi*

The economic reform in Vietnam under the *Doi moi* has been implemented in many fields. Table 1.1 summarizes important events of economic reform in Vietnam, and Table 1.2 shows some main indicators of Vietnamese economy in the period of 1985-2013.

(a) Agricultural development

Before the *Doi moi*, Vietnam was an agricultural and underdeveloped country. Although approximately 75 per cent of the labor force was engaged in agricultural production, the country still faced a serious shortage of foods. Under the *Doi moi,* agricultural and rural development was prioritized as it was crucial to poverty reduction and a sound agriculture sector could be a driving force for economic growth. Various measures were implemented, such as erasing collective farming by Land Law in 1987 and resolution 10 in 1988; maintaining a fairly egalitarian system of land-holding which ensured the access to farm land by rural households; applying new technology in agriculture; diversifying from rice to other higher value agricultural production; making agricultural input and output markets more competitive and efficient, etc.

As a result, agricultural productivity was boosted and labor was shifted from the traditional agricultural sector to industrial, construction, and service sectors[7]. From a food-imported country, Vietnam became a major exporter of rice in 1989 and a strong exporter of many other agricultural products, such as coffee, cashew nuts, rubber, pepper, etc.

[7] The share of employment in non-agriculture sectors was 45 per cent in 2008, compared with 25 per cent in 1985.

(b) Liberalization of trade

Before the *Doi moi,* goods was not traded freely inside Vietnam. Foreign trade transactions were almost with other socialist countries and not under the market mechanism. Under the *Doi moi,* commodity check hubs were removed since 1987 in order to encourage domestic trading. Vietnam also integrated actively into the world economy. In 1995, Vietnam became an official member of the Association of South East Asia Nations (ASEAN) and the ASEAN Free Trade Area (AFTA) which requires Vietnam to liberalize trade step by step. Especially, Vietnam signed US-Vietnam Bilateral Trade Agreement in 2001 and joined the World Trade Organization (WTO) in 2006.

As a result, the exports as a ratio of gross domestic product (GDP) rose from 24 per cent in 1989 to nearly 84 per cent in 2013, while the ratio of imports to GDP also increase to about 80 per cent in 2013 from 34 per cent in 1989.

(c) Encouragement of domestic and foreign investment

Before 1988, there were no private enterprises operating in Vietnam. Law on Domestic Investment was first issued in 1998 to encourage the investment of domestic investors. Foreign investment was encouraged through the first issuance of the Law on Foreign Investment in 1987 and its amendment in 1990. A new Law on Foreign Investment was issued in 1996, stand for the 1987 Law on Foreign Investment and it then was amended in 2000 in oder to create a more open investment environment to the foreign investors. The new issuance of Competition Law in 2004 and Investment Law in 2005 standing for the 1996 Law on Foreign Investment and the 1998 Law on Domestic Investment also created an environment where domestic and foreign entities are equally treated.

FDI has played an important role in the development of Vietnamese economy. Its ratio to GDP was high during the period of 1993-1997, about 8-12 per cent, and during 2007-2010 period of 7-10 per cent. FDI sector helped creating jobs and boosted the development of the manufacturing sector in Vietnam which linked with the increase of exports as well as the structural changes of exports. In the late 1980s, about 80 per cent of exports were accounted for by primary commodities, such as rice, coffee, crude oil, and coal, but by 2005, along with the expansion of manufactured exports, that share had declined to about 50 per cent.

Especially, the Ho Chi Minh Stock Exchange Center was established in 2000 for the companies to raise medium-long-term funds. The Ha Noi Stock Trading Center was established in 2005, with less strict listing conditions than the Ho Chi Minh Stock Exchange for more companies being able to raise funds on the stock markets. Law on Securities was newly issued in 2006 and then amended in 2010 in order to make a good environment for the development of stock markets in Vietnam.

(d) Corporate sector reform

By 1986, Vietnam applied a central planning mechanism to the economy under which private-owned companies were prohibited while state-owned companies made big losses and were not efficient. Under the *Doi moi*, various forms of ownership were allowed. The start of equitization process of state-owned companies in 1990, the issuance of Company Law for limited liability company and equitized company as well as the issuance of Private Company Law in 1990 were very first steps of recognizing non-state possession forms in the economy. In 1995, State-owned Company Law was issued. In 1999, a new Company Law was issued to stand for the 1990 Company Law and the 1990 Private Company Law, which regulated on non-state owned companies. In 2003, State-owned Company Law was issued to stand for the 1995 State-owned Company Law. After that, the issuance of a new Company Law in 2005 standing for the 1999 Company Law, the 2003 State-owned Company Law and the regulations on foreign-affiliated companies of the 1996 Foreign Investment Law showed that companies of every possession forms in the economy are treated equally under the same law. Companies of every forms of possession were encouraged to develop regardless of scales. Administration reforms were also promoted in order to simplize administrative procedures.

Before the *Doi moi*, the state decided both inputs, outputs and prices of the production of SOCs. Under the *Doi moi,* SOCs were given the autonomy to formulate and implement their own long-term, medium-term and short-term operating plans based on socio-economic development guidelines set by the Government. SOCs could directly sell their products to other trading companies or even to final consumers. Profits computed on the basis of real costs were retained by the SOC and used at their own discretion, except for compulsory transfers to the state budget. However, SOCs were still not efficient. Since

1991, the restructuring of SOCs has started in order to improve the performance of these companies. Among forms of restructuring and reforming SOCs, equitization has been the main instrument. A pilot plan of equitization for several SOCs started in 1990, and then an equitization programme was officially launched from mid-1992.

(e) Reform in banking sector

Before the *Doi moi*, the banking system in Vietnam was mono-bank where the State Bank of Vietnam (SBV) functioned as both a central bank and a commercial bank. Since the 1990 Ordinance on the State Bank of Vietnam, the SBV acted as a central bank. Beside the two existing state-owned commercial banks (SOCBs), other two state-owned commercial banks, were newly created and Joint-stock commercial banks (JSCBs), joint-venture banks (JVBs) and foreign bank branches were permitted. Wholly foreign-owned banks (FFOBs) was permitted since 2007. In 2006, the government announced the equitization or partial privatization of SOCBs and the reduction of government ownership to 51 per cent by 2010.

Under the centrally planned economy, interest rate was imposed by subsidized policy and independent from the international interest rate. Since the economic reform, interest rate has been liberalized gradually.

(f) General achievements of economic reform under the *Doi moi*

After nearly 30 years implementing the *Doi moi,* Vietnam had made some remarkable achievements.

First, Vietnam experienced high and stable economic growth rate of around 8-9 per cent during the period of 1992-1997. Affected by the Asia crisis, the GDP growth rate reduced to 4-5 per cent in 1998-1999, but increased again to 7-8 per cent during the 2000-2007 period.

Second, inflation has been controlled and turned from three-digit to two-digit levels in 1989, and declined further to one-digit levels since 1996 (it increased again to two-digit levels only in 2008 due to the affects of the Lehman shock).

Third, the ratio of poverty population has declined rapidly, from about 70 per cent at the end of the 1980s to about 10 per cent since 2004. According to the World Bank's

classification, Vietnam has been able to escape the poverty trap and emerge as a lower middle-income economy in 2008, when the country's per capita gross national income surpassed the threshold of US$1,000.

Table 1.1: Summary of important events of economic reform process in Vietnam

Period	Objectives	Trade	(Domestic and foreign) Investment	Company	Finance and Banking
1986-1990	Economic reform, openning the economy, transition to market economy. Satisfy the domestic demand on food and comsumer goods, and create some strong export goods.	1987: Removal of commodity check hubs on the roads in order to encourage trading	1987: Issuance of Foreign investment Law 1990: 1st amendment of the 1987 Foreign investment Law	1988: Removal of agricultural cooperatives 1990: Issuance of Company Law (for Limited liability company and equitized company) 1990: Issuance of Private Company Law 1990: Start of equitization of state-owned companies	1990: Issuance of Ordinance on the State bank of Vietnam: eliminate mono-bank, separate the functions of state bank and commercial bank
1991-1995	- continue to control the inflation - increase the effectiveness of production - improve people's life level	1995: become an official member of the ASEAN 1995: become a member of AFTA	1992: 2nd amendment of the 1987 Foreign investment Law	1995: Issuance of State-owned Company Law	1992: Allowance of the establishment of foreign bank branch and joint-venture bank 1993: Normalization of financial relationship with international financial institutes

Table 1.1 (continue)

1996-2000	- boost the industrialization and modernization - continue to develop the market economy with multiple forms of possession - accelate the growth rate of the economy.	1996: become a member of ASEM 1998: become a member of APEC	1996: Issuance of new Foreign investment Law 1998: Issuance of Law on domestic Investment 2000: Amendment of 1996 Foreign investment Law 2000: Establishment of Hochiminh Stock Trading Center	1999: Issuance of new Company Law (stand for 1990 Company Law and 1990 Private Company Law)	1997: Issuance of Law on State Bank of Vietnam 1997: Issuance of Law on Credit Institutions
2001-2005	- high and stable economic growth - promote industrilization and mordernization of the economy - expanding foreign sector - stabilize and impove people's life.	2001: US-Vietnam Bilateral Trade Agreement	2004: Issuance of Competition Law 2005: Issuance of Invesrment Law (stand for 1996 Foreign Investment Law and 1998 Law on domestic investment) 2005: Establishment of Hanoi Stock Trading Center	2003: Issuance of new State-owned Company Law 2005: Issuance of new Company Law (stand for 1999 Company Law and 2003 State-owned Company Law)	2002: Liberalization of VND lending interest rate of financial institutes 2003: Amendment of 1997 Law on State Bank of Vietnam 2004: Amendment of the 1997 Law on Credit Institutions (allowance of the establishment of wholly foreign-owned banks)
2006-2010	Make Vietnam get out of the list of low developing country.	2006: Become a member of World Trade Organization	2006: Issuance of Law on Securities 2010: Amendment of the 2006 Law on Securities		2006: Start of equitization of state-owned commercial banks 2010: Issuance of new Law on Credit Institutions 2010: Issuance of new Law on State Bank of Vietnam

Table 1.2: Main indicators of Vietnamese economy (1985-2013)

Year	GDP growth rate (%)	Inflation rate (%)	GDP per person (USD)	Agriculture (% GDP)	Industry (% GDP)	Services (% GDP)	Exports (%GDP)	Imports (%GDP)	Current account balance (%GDP)	Fiscal balance (%GDP)	FDI inflow (%GDP)	Notes
1985	5.62	91.60	251	40.17	27.35	32.48			-0.94			
1986	3.36	453.54	556	38.06	28.88	33.06	6.62	16.60	-1.48		0.00015	Starting Doimoi
1987	2.55	360.36	674	40.56	28.36	31.08	6.00	14.80	-1.39		0.028	
1988	5.10	374.35	365	46.30	23.96	29.74	3.95	15.01	-0.77		0.030	
1989	7.80	95.77	97	42.07	22.94	34.99	23.85	34.06	-0.58		0.064	Soviet collapsed
1990	5.05	36.03	98	38.74	22.67	38.59	36.04	45.28	-0.26		2.781	
1991	5.81	81.82	113	40.49	23.79	35.72	30.92	36.03	-0.13		3.902	
1992	8.70	37.71	144	33.94	27.26	38.80	34.75	38.83	-0.01		4.803	
1993	8.08	8.38	189	29.87	28.90	41.23	28.72	37.49	-1.4		7.027	
1994	8.83	9.48	230	27.43	28.87	43.70	34.01	43.46	-1.87		11.939	
1995	9.54	16.93	288	27.18	28.76	44.06	32.81	41.91	-2.65		8.585	Joining AFTA
1996	9.34	5.59	337	27.76	29.73	42.51	40.87	51.84	-2.02		9.713	Joining ASEM
1997	8.15	3.10	361	25.77	32.07	42.15	43.10	51.24	-1.53		8.270	Asia crisis
1998	5.77	8.11	360	25.78	32.49	41.73	44.85	52.15	-1.37	-0.13	6.141	Joining APEC
1999	4.77	4.11	374	25.43	34.49	40.07	49.97	52.82	1.18	-1.58	4.922	
2000	6.79	-1.77	401	22.73	34.20	43.07	49.97	53.28	0.85	-2.04	3.858	
2001	6.90	-0.31	413	21.52	35.46	43.02	51.00	52.69	0.92	-2.78	3.683	US-Vietnam BTA
2002	7.08	4.08	440	21.28	35.70	43.02	50.58	57.25	-0.63	-2.36	3.689	
2003	7.34	3.30	489	20.87	36.67	42.45	52.47	62.64	-1.93	-3.25	3.394	
2004	7.79	7.90	603	20.04	37.45	42.51	54.90	67.36	-1.59	-0.19	3.257	
2005	7.55	8.39	699	19.30	38.13	42.57	63.70	67.02	-0.56	-1.21	3.390	
2006	6.98	7.50	796	18.73	38.58	42.69	67.72	70.60	-0.16	0.25	3.616	Joining WTO
2007	7.13	8.35	920	18.66	38.51	42.83	70.52	84.09	-6.99	-2.01	8.654	
2008	5.66	23.12	1,154	20.41	37.08	42.51	70.34	83.98	-10.79	-0.49	9.663	Lehman shock
2009	5.40	6.72	1,181	19.17	37.39	43.44	62.97	73.34	-6.61	-6.02	7.168	
2010	6.42	9.21	1,297	18.89	38.23	42.88	72.00	80.22	-4.28	-2.76	6.900	
2011	6.24	18.68	1,532	20.08	37.90	42.02	79.39	83.52	0.23	-1.06	5.481	
2012	5.25	9.10	1,752	19.67	38.63	41.70	80.03	76.53	9.06	-4.79	5.370	
2013	5.42	6.60	1,901	18.38	38.31	43.31	83.88	79.79	11.33	-5.69	5.192	

Source: IMF (World Economic Outlook Databases), World Bank (World Development Indicators)

1.2 Corporate reform in Vietnam

1.2.1 Corporate sector reform

(a) Corporate reform before *Doi moi*

After the defeat of the French in 1954, Vietnam was temporarily divided into two parts, the North and the South. In the North the government adopted a Soviet-style central-planning model to complete the tasks of economic reconstruction and social development. The main elements of the model are quick industrialisation, collectivization of agriculture and strong central control of the economy. In order to achieve these objectives the Vietnamese leaders at that time claimed that SOCs should play a leading role in the economy. Consequently, the SOC sector was rapidly established through both a comprehensive nationalisation programme of existing privately-owned companies and creating new ones. Under the central planning, the SOCs were directly controlled and managed by corresponding ministries of the central government or departments of the local governments. They were seen as pure production units and could not decide freely either what they produced or for whom they produced. Indeed, their tasks are simply to receive inputs and implement production plans formulated by the various related ministries and departments. Regardless of their quality, finished products are directly transferred to the ministries and departments. Operating profits, which were also pre-determined in the plan, were transferred to the government budget, and losses were compensated for from the government's budget.

After the unification of the country in 1975, many private and public companies under the former government in the South were quickly and forcefully transformed into northern-style SOCs through a nationalisation programme. In the beginning of 1978, 1,500 private enterprises, which employed 130,000 workers or 70 per cent of the workforce in this sector, were nationalised and converted into 650 SOEs (Nguyen, 1980). The state's investment in heavy and light industry accounted for 21.4 and 10.5 per cent of the total state's investment in 1976 respectively (Vu, 2002).

In the period of 1980-1985, Decree 25/CP of January 21, 1981 required a so-called Three-Plan System, under which a state-owned factory must have three plans. Under the first plan, which is mandatory, the factory has to produce and supply output at low prices to the state, using inputs provided by the state. Pofits obtained from this plan have to be

transferred to the state budget. If the factory has surplus capacity, it could use the second plan, under which the factory could freely acquire inputs by itself, but it could only produce the products specified in the first plan. Output of this plan is regularly sold to trading SOCs, and the factory could also dispose of its products in the free market. The third plan is non-compulsory and to be established by the factory. Under this plan, output usually concerned minor products that are made through the factory's own attempts at diversification. This production is absolutely free in both acquiring inputs and disposing of outputs in the free market. Profits under the second and third plan could be retained by the factory with a predetermined proportion.

(b) Corporate reform policy in *Doi moi*

The Sixth National Party Congress in December 1986 marked an important shift in the economic reforms. Decision 217/HDBT of November 1987 virtually eradicated all elements of the old planning mechanism on the SOCs. SOCs were now given the autonomy to formulate and implement their own long-term, medium-term and short-term operating plans based on socio-economic development guidelines set by the Government. SOCs could directly sell their products to other trading companies or even to final consumers. Profits computed on the basis of real costs were retained by the SOC and used at their own discretion, except for compulsory transfers to the state budget. Prices of products were determined on the basis of supply and demand conditions in the market in the case of non-price controlled products. For the case of price-controlled products, the SOCs had to refer to price tables (floor and ceiling prices) before setting prices for their products. However, the number of price-controlled products was rapidly reduced.

The changes in management mechanism of the SOCs under Decision 217/HDBT, combined with other policies, for instance the issuance of the Law on Foreign Direct Investment in 1987, resulted in a large number of SOCs facing difficulties and incurring losses. To deal with this problem, the government issued Decree 388/HDBT on 20 November 1991, which provides a legal framework for restructuring the SOCs. Under this Decree, conditions for establishing new SOCs and closing existing SOCs are clearly defined. Specifically, an SOC could be forced to be dissolved or to merge with another if

they are in one of the following categories: (1) poor performance (continuous loss-making), (2) lack of capital or technology, (3) insufficient market demand for its products.

Since then, there have been many forms for restructuring and reforming the SOCs, as below:

- SOCs that suffer from losses and ineffectiveness are classified, merged, consolidated, dissolved, bankrupted, and transferred to another authorized agency.
- Several SOCs are equitized
- Some losses-making, ineffective and non-core SOCs are sold
- Some SOCs are transformed into one-member limited liability companies
- Some SOCs are transformed to the model of holding-branch companies, and sever economic corporation are established
- Financial restructure are carried out in SOCs in form of restructuring debts, assets, chartered capital, equity, and working capital

Among these forms for restructuring and reforming the SOCs, equitization has been the main instrument. According to the Cabinet Decision No. 143/HDBT in May 1990, the government decided to undertake a pilot plan of equitization for several SOCs, and based on a resolution of the tenth session of the Eighth National Assembly, the Prime Minister issued Decision No. 202/HDBT in June 1992 to launch an equitization programme from mid-1992.

The SOCs were further restructured following the issuance of Decision 90 and 91 in 1994 on the establishment of General Corporations, namely General Corporation 90 and 91. Specifically, Decision 90 called for the establishment of state corporations with at least five voluntary SOC members and minimum legal capital of VND 100 billion while Decision 91 called for formation of much larger corporations with at least seven SOC members appointed by the state and minimum legal capital of VND 1,000 billion. With respect to management, the General Corporation 90 belongs to corresponding ministries or provincial governments while the General Corporation 91 is directly under the control of the Prime Minister. The reason behind the establishment of state corporations is to enhance the competitive capacity of the Vietnamese SOCs in the context of globalisation of the economy.

The SOCs have been significantly reorganized after the enactment of the Law on SOCs in 1995. According to the Law, SOCs are classified into two groups. The first group refers to profit-seeking SOCs, the primary objective of which is making profit while the second group is defined as non-profit SOCs, which produce and distribute public services or take responsibilities on national defence or security activities. Moreover, the roles of ministries and provincial governments in controlling the SOCs (controlling agencies) are clearly defined in the Law. Specifically, the controlling agencies have the authority to restructure or dissolve SOCs as well as appoint senior positions in the SOCs (the Chairman and other members of the board of directors, the manager and chief accountant). Furthermore, the responsibilities of the Ministry of Finance (MOF) in managing the state's capital in the SOCs, the relationship between MOF and other controlling agencies of the SOCs are determined in the Law. Importantly, the SOCs are allowed to decide what, how and for whom to produce. Additionally, they are free to do business with each other and with non-SOCs, including foreign companies in the form of joint ventures or business contracts. Also, the SOCs are almost independent in using their capital and assets received from the government, borrowing and investing, except for big projects or important equipment that requires the approval of the finance authority. Finally, net income fully belongs to the SOCs and is distributed into three funds, namely a welfare, reward, and business development fund.

1.2.2 The formation and development of stock markets

The formation and development of the stock markets in Vietnam was closely linked to the equitization process of state-owned companies. In 1998, stock exchanges were decided to be established in Hanoi City and Ho Chi Minh City for joint-stock companies to raise mid- and long-term funds. The Ho Chi Minh Securities Trading Center (HoSTC) was opened in 2000 and then renamed as Ho Chi Minh Stock Exchange (HOSE) in 2007. The Hanoi Stock Exchange (HASE) was opened in 2005. The listing conditions of the HOSE are stricter than those of the HASE with a higher level of capital, better business performance, and a more dispersed stockholding structure. By the end of 2011, there were 393 firms listed on the HOSE and 306 firms listed on the HASE.

The stock markets in Vietnam had a peak development in 2007 when the aggregate market value acounted for nearly 44 per cent of the GDP. The development of the stock markets in turn accelarated the equitization process of state-owned companies. The participation of foreign investors (institutions and individuals) in a listed firm was limited to 30 per cent of a firm's equity at first and then increased to 50 per cent since 2007.

1.2.3 Banking sector reform

Before the *Doi moi*, the banking system in Vietnam was mono-bank where the State Bank of Vietnam (SBV) functioned as both a central bank and a commercial bank. Since the 1990 Ordinance on the State Bank of Vietnam, the SBV acted as a central bank. Beside the two existing state-owned commercial banks (SOCBs), namely the Bank for Investment and Development of Vietnam (BIDV) and the Bank for foreign trade of Vietnam (Vietcombank), other two state-owned commercial banks, namely Vietnam Industrial and Commercial Bank (formerly Incombank, now Vietinbank), Vietnam Bank for Agriculture and Rural Development (Agribank) were newly created. Moreover, the establishment of Joint-stock commercial banks (JSCBs), joint-venture banks (JVBs) and foreign bank branches was permitted. The share of foreign investment in a JVB was limited to 30 per cent at first and then increased to 49 per cent since 2005. From 2007, the establishment of wholly foreign-owned banks (FFOBs) was permitted. From 2010, foreign banks and domestic banks were treated equally. In 2006, the government announced the equitization or partial privatization of SOCBs and reduction of government ownership to 51 per cent by 2010. In fact, Vietcombank, Vietinbank and BIDV had successfully sold their shares to private investors in 2008, 2009, and 2012 respectively. Recently, the banking sector in Vietnam is divided into five types of institutions in term of ownership. As of the end of 2012, there are three SOCBs, three partially equitized SOCBs, thirty seven JSCBs, six JVBs, five FFOBs and nine foreign bank branches in Viet Nam. SOCBs accounted for the largest share of lending, with 79.0 per cent of total loans in 2001 and 51.7 per cent in 2011.

Under the centrally planned economy, interest rate was imposed by subsidized policy and independent from the international interest rate. Since the economic reform, interest rate has been liberalized step by step. From 1989 to May 1992, fixed interest rate policy was implemented. Interest rate was adjusted according to the change of price index. From

June 1992 to 1995, State Bank of Vietnam (SBV) used interest rate frame policy. Commercial banks decided their interest rate based on the floor interest rate of deposit and the ceiling interest rate of loan which were fixed by the SBV. From 1996 to 2000, SBV managed by ceiling interest rate policy. And from 2000 until now, SBV has been using basic interest rate policy. Basic interest rate is decided based on the interest rate of interbank market, the interest rates of open market operations of the SBV, the interest rate of deposit of credit institutions and trends of supply and demand of capital.

1.3 Equitization of state-owned companies in Vietnam

1.3.1 Definition and objectives of equitization

"Equitization (*co phan hoa* in Vietnamese) Programme" in Vietnam started in 1992 as a part of the State-Owned Company Reform Programme, in the context of overall economic reforms. Equitization is defined as a process of selling part of the equity of an SOE or SOCB to the public or strategic investors. In recent years, equitization in Vietnam has mostly taken place through an Initial Public Offering (IPO) followed by listing of the company in the stock exchange (World Bank, 2012).

"Equitization" differs from "privatization". "Equitization" does not necessarily mean that the government looses its ultimate control over the company. In the case of "equitization" of Vietnamese SOCs, the government still holds decisive voting rights in many cases. Besides, in equitization process of Vietnamese SOCs, employees and managers of the SOCs acquire a substantial portion of the shares in the equitized companies.

The following issues are defined as objectives of the SOC equitization programme in Vietnam:

- improving the performance and competitiveness of companies by ownership diversification;
- mobilising capital from employees and outside investors, including domestic and foreign investors, for renewing technologies and developing companies' business;
- balancing interests of the state, employees and shareholders in the equitized companies.

1.3.2 Forms of equitization

According to Decree 64/2002/ND-CP, in order to convert the SOCs into equitized companies, the companies can choose one of the following forms of equitization depending on their characteristics:

- maintaining the existing capital of the SOC and issuing shares to mobilise more capital for developing their business;
- selling a part of the existing state capital of the SOC;
- selling the entire existing state capital of the SOC;
- partially or entirely selling the existing state capital of the SOC and concurrently issuing shares to mobilise more capital.

The process of "privatization" in Vietnam is defined as "divestment", which is a process by which the government sells a part of or all of its equity to the public or to the private sector after the initial equitization. In Vietnam, most SOCs are first equitized and then gradually divested by the State Capital Investment Corporation (SCIC) (World Bank, 2012).

1.3.3 Stages of equitization

Equitization process in Vietnam has experienced a pilot stage, an expansion stage and a speed-up stage. Table 1.3 summerizes regulations on equitization of state-owned companies.

(a) The pilot stage of the equitization programme (1992 -1996)

In May 1990, under the Cabinet Decision No. 143/HDBT, the Vietnamese government decided to select some of small and medium SOCs to try to convert into joint stock companies. And then, an equitization programme was launched from mid-1992 under the Decision No. 202/HDBT. According to this Decision, each central ministry and each province were required to select 1-2 SOCs, which are small or medium-sized and profitable or at least potentially profitable companies, but should not be in industries that the state needs to hold 100 per cent ownership, to undertake pilot equitization. After the pilot programme of equitizing SOCs, many SOCs were successfully equitized. The state could raised much capital through equitizing and equitized SOCs did better after being equitized.

(b) The expansion stage of the equitization programme (1996 –2010)

In 1996, the goverment issued Decree 28/ND-CP to end the pilot stage and start the expansion stage of the equitization process by extending the scope of equitization to all small and medium-sized SOCs that the state does not need to remain 100 per cent ownership. The government required SOCs' controlling agencies (ministries, People's Committees of provinces and state corporations) to select companies for equitization by 1997. Once again, the expansion stage of the equitization gained significant achievement and the govement decided to accelerate the equitization process by providing a fairly clear and comprehensive framework for transforming SOCs into equitized companies in the Decree 44/1998/ND-CP in 1998. After 10 years of implementing, 588 SOCs was equitized. However, the objectives of the equitization were only small and medium-sized SOCs. Decission No.58/2002/QD-Ttg in 2002 listed 41 fields that the state would remain 100 per cent ownership (including 27 for business enterprises and 14 for public welfare enterprises), and 30 fields that the state would remain more than 50 per cent ownership (including 24 for business enterprises and 6 for public welfare enterprises).

Regulations in firm-valuation methods, initial public-offering requirements, founders' obligation, etc were changed according to Decree 64/2002/ND-CP in 2002 and created a new period of equitization. This had helped speeding up the pace of the equitization process. The number of SOCs were equitized in 2003 and 2004 rapidly increased, reached 621 SOCs in 2003 and 856 SOCs in 2004.

In 2004, Decission 155/2004/QĐ-Ttg revised fields that the state would remain 100 per cent ownership and fields that the state would remain more than 50 per cent ownership. According that, The state would remain 100 per cent ownership in 28 fields and more than 50 per cent ownership in 17 fields.

The scope of equitization was extended according to Decree 187/2004/ND-CP to all the member companies of the state-owned general companies and even the state-owned general companies that the state does not need to dominate. This decree also renewed regulation on the sale of IPO shares and strategic investors. The sale of IPO shares must be made through auction at Stock Exchanges if the company has a capital of more than 10 billion dong, at the intermediary finance organizations if the company has a capital of more than 1 billion and not more than 10 billion, and at the company if the company has a capital

Table 1.3: Summary of regulations on equitization of State-owned companies in Vietnam

Decision	Date	Highlights
Decision 143/HDBT	10/5/1990	- Selected some of small and medium SOCs to try to convert into joint stock companies
Decision 202/HDBT	8/6/1992	- Required each central ministry and each province to select 1-2 SOCs, which are small or medium-sized and profitable or at least potentially profitable companies, but should not be in industries that the state needs to hold 100 per cent ownership, to try equitization. - Stipulated that employees of equitized SOCs have a first right to buy the shares at preferential terms.
Decree 28/ND-CP	7/5/1996	- Ended the pilot stage and starts the expansion stage of the equitization process by extending the scope of equitization to all small and medium-sized SOCs that the state does not need to remain 100 per cent ownership. - Required SOCs' controlling agencies (ministries, People's Committees of provinces and state corporations) to select companies for equitization by 1997.
Decree 44/1998/ND-CP	29/6/1998	- Accelerated the equitization process by providing a fairly clear and comprehensive framework for transforming SOCs into equitized companies.
Decission No.58/2002 /QD-Ttg	26/4/2002	- 41 fields that the state would remain 100 per cent ownership (including 27 for business enterprises and 14 for public welfare enterprises) - 30 fields that the state would remain more than 50 per cent ownership (including 24 for business enterprises and 6 for public welfare enterprises).
Decree 64/2002/ND-CP	19/6/2002	- Had about 10 major changes compared with the former regulation, such as firm-valuation methods, initial public-offering requirements, founders' obligation, etc. - Had a strong effect on speeding up the pace of the equitization process.
Decission 155/2004/QĐ-TTg	24/8/2004	- 28 fields that the state would continue 100 per cent ownership - 17 fields that the state would continue more than 50 per cent ownership
Decree 187/2004/ND-CP	16/11/2004	- Extended the scope of equitization to all the member companies of the state-owned general companies and even the state-owned general companies that the state does not need to dominate. - The sale of IPO shares must be made through auction at Stock Exchanges if the company has a capital of more than 10 billion dong, at the intermediary finance organizations if the company has a capital of more than 1 billion and not more than 10 billion, and at the company if the company has a capital of not more than 1 billion. - strategic investor can buy at a share price 20 per cent lower than average auction's price.

Table 1.3 (continue)

Decission 38/2007/QĐ-TTg	20/3/2007	- 19 fields that the state would continue 100 per cent ownership - 26 fields that the state would continue more than 50 per cent ownership (including 9 for business enterprises and 17 for public welfare enterprises).
Decree 109/2007/ND-CP	26/6/2007	- Equitized object is extented to parent company of economic corporation, parent company of parent company and subsidiary complex, limited company with 100 per cent charter capital of state. - Strategic investor not only included domestic investors but also extended to foreign investors. - Strategic investors have the right to buy shares with the price not lower than average successful auction's price. - Strategic investors were not allowed to sell the shares within three years from the management registration date of the equitized SOCs, except for the special case obtained the approval of the general meeting of shareholders. - Added underwriting and direct negotiation as new modes of first time selling shares, besides auction mode. - Required enterprises with enough conditions of listing and registering transaction on stock exchange to list and register transaction at stock exchange department, stock exchange center in equitization process
Decree 59/2011/ND-CP	18/7/2011	- Equitized object is extented to single Limited Liability Companies (LLC) with 100 per cent state-owned capital being a holding company of an state-owned Economic Group or state-owned General Company; single LLCs with 100 per cent state-owned capital under the management of the ministries, ministerial-level agencies, Government agencies, People's Committees of provinces; enterprises with 100 per cent state-owned capital which have not been converted into single LLCs. - Strategic investors were not permitted to transfer their purchased shares for a minimum 05 years from the registration date of the shareholding company. - The maximum number of strategic investors permitted to purchase shares in each equitizing enterprise was three investors (instead of unlimited number as currently regulated).
Decision No.14/2011 /QD-TTg		- 19 fields that the state would continue 100 per cent ownership (- 26 fields that the state would continue more than 50 per cent ownership (including 10 for business enterprises and 16 for public welfare enterprises).
Decision 37/2014/QĐ-TTg	18/6/2014	- 16 fields that the state would hold 100 per cent ownership - 7 fields that the state would hold from 75 per cent to under 100 per cent ownership - 8 fields that the state would hold from 65 per cent to under 75 per cent ownership - 9 fields that the state would hold from 50 to under 65 per cent ownership

of not more than 1 billion. Strategic investors from now can buy at a share price 20 per cent lower than average auction's price. In this period, the development of the stock markets in Vietnam also stimulated the equitization of SOCs in Vietnam. In 2005, 813 SOCs was equitized. But from 2006, the speed of equitization became slower with only 359 and 116 SOCs being equitized in 2006 and 2007, respectively.

In 2007, Decission 38/2007/QĐ-TTg reduced the number of fields that the state would continue to hold 100 per cent ownership to 19, and number of fields that the state would continue to hold more than 50 per cent ownership to 26 (including 9 for business enterprises and 17 for public welfare enterprises). The equitized objectives were extensed to parent company of economic corporation, parent company of parent company and subsidiary complex, limited company with 100 per cent charter capital of state according to Decree 109/2007/ND-CP. Regulation on strategic investors also changed. Strategic investors not only included domestic investors but also extended to foreign investors. Strategic investors have the right to buy shares with the price not lower than average successful auction's price. And they were not allowed to sell the shares within three years from the management registration date of the equitized SOCs, except for the special case obtained the approval of the general meeting of shareholders. Besides, according to this decree, underwriting and direct negotiation were added as new modes of first time selling shares, besides auction mode. Moreover, enterprises with enough conditions of listing and registering transaction on stock exchange were required to list and register transaction at stock exchange department, stock exchange center in equitization process. However, only 117 SOCs were equitized in the period of 2008-2010.

After 20 years of implementing equitization of SOCs, nearly 4,000 SOCs were equitized. However, most of them were small and medium SOCs. Large-scale SOCs remained unequitized.

(c) The speed-up stage of the equitization programme (2011 – present)

The Prime Minister issued a proposal of restructuring SOCs in the period of 2011-2015 which are focus on economic groups and general companies. Decree 59/2011/ND-CP extensed the equitized objects to single Limited Liability Companies (LLC) with 100 per cent state-owned capital being a holding company of an state-owned Economic Group or

state-owned General Company; single LLCs with 100 per cent state-owned capital under the management of the ministries, ministerial-level agencies, Government agencies, People's Committees of provinces; enterprises with 100 per cent state-owned capital which have not been converted into single LLCs. This decision also stated that strategic investors were not permitted to transfer their purchased shares for a minimum 05 years from the registration date of the shareholding company. The maximum number of strategic investors permitted to purchase shares in each equitizing enterprise was three investors (instead of unlimited number as currently regulated).

Decision No.14/2011/QD-Ttg was issued to regulate fields that the state would continue 100 per cent ownership or retain dominant shares. According to this decision, number of fields that the state would continue 100 per cent ownership reduced to 19, and number of fields that the state would retain dominant shares reduced to 26 (including 10 for business enterprises and 16 for public welfare enterprises).

The latest regulations on fields that the state would remain ownership is Decision 37/2014/QĐ-TTg. This decision regulates 16 fields that the state would hold 100 per cent ownership, 7 fields that the state would hold from 75 per cent to under 100 per cent ownership, 8 fields that the state would hold from 65 per cent to under 75 per cent ownership and 9 fields that the state would hold from 50 per cent to 65 per cent ownership. Table 1.4 and Table 1.5 summarize these two decisions.

In the period of 2011-2013, 99 SOCs were equitized and 81 SOCs were restructured by other forms.

Table 1.4: Summary of Decision No.14/2011/QD

19 fields that the state would continue 100 per cent ownership	(1) production and supply of explosives (2) production and supply of toxic chemical (3) production and supply of radiation materials (4) production and supply of weapons, defense equipment, confidential information (5) being responsible for national defense and security mission; existing in the important regions of economic and national defense. (6) national electric transmission system (7) management of country or urban railway, airport and large-scale seaport (8) operating aviation, country or urban railway (9) maritime security (10) public postal (11) TV and radio (12) construction lottery (13) publication and newspapers (14) money mintage (15) tobaco production (16) management and use of the breakwater and irrigation equipment (17) management of embankment (18) planting and maintenance of policy forests (19) policy loans (20) member companies that general corporates need to hold 100 per cent ownership in order to implement tasks assigned by the government

Table 1.4 (continue)

26 fields that the state would remain more than 50 per cent ownership	Business enterprises (Enteprises that produce and supply products or services of public interest)	(1) Maintenance of national railway system (2) Maintenance of roads, internal waterlines, management of sea-port (except for cases of continuing 100 per cent state onwership) (3) Map production (4) Production of scientific films, newsreels, documentaries and films for children (5) Drainage in cities (6) Environment (7) Public lighting in cities (8) Basic geological and meteorological surveys (9) Surveys of water, mineral and natural sources (10) Production and preservation of plant varieties, animal breeds and frozen sperms, production of vaccines
	Enteprises that guarantee the needs for developing production and improving the material and spiritual life of ethnic minorities in mountainous and remote areas	
	Public welfare enterprises (Enteprises that play role of guaranteeing macroeconomic balance and market stability)	(1) generation of electricity with capacity of 500 MW or more (2) exploration of important minerals such as coal, bauxit (3) exploration and processing of crude oil and nature gas (4) building and repairing of means of air transportation (5) providing infrastructure of information transmission (6) production of pig iron and steel with capacity of 300,000 tons per year (7) production of ciment with capacity of 1.5 million tons per year and more (8) production of basic chemicals, chemical fertilizer and plant protection drugs (9) planting and processing rubber and coffee (10) manufacture of newsprint anf haigh-quality writing paper (11) wholesale of food (12) wholesale of petroleum (13) wholesale of drug (14) exploration, purifing and providing pure water (15) international marine transportation, railway and airway transportation (16) finance, credit, assurance

Table 1.5: Summary of Decision 37/2014/QĐ-TTg

I. 16 fields that the state would hold 100 per cent ownership	(1) being responsible for national defense and security mission (2) production and supply of explosives (3) production and supply of toxic chemical (4) national electric transmission, multiple-purpose hydro-power, nuclear power that are important to national defense and security (5) management and operation of country or urban railway (6) management and operation of airports that are important to national defense and security (7) maritime (8) public postal (9) construction lottery (10) publication (11) money mintage (12) cartography for national defense and security (13) management and operation of the breakwater and irrigation (14) planting and maintenance of policy forests (15) policy loans (16) member companies that general corporates need to hold 100 per cent ownership in order to implement tasks assigned by the government
II. 7 fields that the state would hold from 75 per cent to under 100 per cent ownership	(1) management and operation of airports (excluding those in I) (2) management and operation of sea ports (3) management and maintenance of roads, internal waterlines (4) Maintenance of national railway system (5) providing infrastructure of information transmission (6) large-scale mineral exploration (7) oil and nature gas exploration

Table 1.5 (continue)

III. 8 fields that the state would hold from 65 per cent to under 75 per cent ownership	(1) processing of crude oil and nature gas (2) production of tabaco (3) Enteprises that guarantee the needs for developing production and improving the material and spiritual life of ethnic minorities in mountainous and remote areas (4) planting and processing rubber and coffee, management of forest in strategic areas (5) Enteprises that play roles of guaranteeing macroeconomic balance and market stability: wholesale of drug, wholesale of food, wholesale of petroleum. (6) finance, banking (excluding inssurance, securities, fund management, financial companies) (7) Airway transportation (8) Electricity distribution
IV. 9 fields that the state would hold from 50 per cent to under 65 per cent ownership	(1) Drainage in cities (2) Environment (3) Public lighting in cities (4) exploration, purifing and providing pure water (5) Basic geological and meteorological surveys (6) Production and preservation of plant varieties, animal breeds and frozen sperms, production of vaccines (7) production of basic chemicals, chemical fertilizer and plant protection drugs (8) planting and processing rubber and coffee, management of forest in areas excluding those in III. (9) international marine transportation, railway transportation

1.3.4 Results of equitization

Among measures of reforming SOCs, equitization has been seen to be most effective to reach such objectives as improving the performance and reducing the number of SOCs. As shown in Table 1.6, among 5,200 SOCs which were reformed by the end of 2013, about 3,900 SOCs (about 74 per cent) were equitized. The number of SOCs reduced from 6,500 in 1992 to 1,300 in 2011. However, almost all equitized SOCs are small and medium sized, and the remained SOCs are medium and large companies. Table 1.6 and 1.7 show the number of SOCs, reformed SOCs and equitized SOCs in Vietnam from 1990 – 2011.

Table 1.6: Number of equitized SOCs

Year	1990-2000	2001	2002	2003	2004	2005	2006	2007	2008-2010	2011-2013	Total
Number of reformed SOCs	617				4757					180	5,194
Number of equitized SOCs	588	305	201	621	856	813	359	116	117	99	3,875

Source: Ministry of Finance

Table 1.7: Number of SOCs

Year	1992	2001	2011
Number of SOCs	6,545	5,655	1,309

Source: Ministry of Finance

Regarding the ownership structure of equitized SOCs, in 2011, the state holds 57 per cent, insiders (employees and management board) control 30 per cent, and outside investors hold 14 per cent, on average, of the total shares. Table 1.8 provides a comparison of the ownership structure of equitized companies in Vietnam with privatised firms in other transition countries. With the exception of Georgia, the share of outsiders in Vietnamese equitized SOCs is lower than other transition economies. Furthermore, companies in which

the state owns more than 50 per cent of the total shares account for 36 per cent of the total number of equitized SOCs (Table 1.9).

Table 1.8: Ownership structure of privatized firms in Vietnam and other transition countries (per cent)

Country (year)	The state	Insiders	Outsiders
Vietnam (2011)	57	29	14
Georgia (1997)	23.3	64.4	12.4
Kazakstan (1997)	16.1	37.6	46.3
Kyrgyz Republic (1997)	5.6	70.8	23.6
Moldova (1997)	23.8	38.0	38.2
Russia (1997)	14.7	59.6	25.7
Ukraine (1997)	15.4	61.5	23.1

Source: Vu (2012) for Vietnam and Truong et al. (2006) for the other transition countries

Table 1.9: Level of state ownership of equitized SOCs in the period of 2001-2011

Level	Dominant	Non-dominant	No ownership
Number of equitized SOCs	1,217	1,558	613
Ratio (%)	36	46	18

Source: Vu (2012)

1.3.5 Characteristics of equitization of state-owned companies in Vietnam

The equitization of state-owned companies in Vietnam has some characteristics. First, most of equitized SOCs are small sized. The remaining 1,300 fully state-owned companies are the largest ones. Second, the state still holds decisive voting rights in many equitized SOCs and the ownership of the state in these companies reduced gradually after equitization. Third, equitization is assessed to make the equitized SOCs more effective and listing is proved to be associated with better management in equitized SOCs. Forth, the SOCs equitization process is linked with the development of Vietnamese stock markets. More than 700 fully state-owned SOCs which are scheduled to be equitized soon, are expected to continue stimulating the development of the stock markets.

In comparision of the SOC equitization in Vietnam with China and East Europe countries, there are similar as well as different characteristics. First, similar to China, at the start of privatization, the Vietnamese economy was much less state-owned and industrialized than the European transition economies used to be, privatizing SOCs to much

less degree than in Europe countries (World Bank 2006). In Vietnam and China, the state sector's share of GDP in Vietnam has remained approximately 40 per cent at least from 1995 to 2002, while the share of the state sector in Hungary decreased sharply from 70 per cent in 1991 to 20 per cent in 2003. Second, similar to China, in Vietnam, the state is playing an important role as a shareholder or investor in the economy and many joint stock companies (World Bank, 2006). Third, a difference between Vietnam and China is that the decrease of number of SOCs in Vietnam was due to equitization, divestment, mergers, acquisitions, and liquidation, while in China many SOCs were reorganized as subsidiaries of large SOCs rather than "equitized" or "divested." (World Bank, 2006).

1.4 Stock markets in Vietnam

1.4.1 Establishment of stock markets

Under the economic reform in Vietnam, state-owned companies were restructured. Equitization has been a main instrument to reform the SOCs effectively and quickly, which resulted in the appearance of many equitized companies. Besides, according to the policy of multiplying possession forms and encouraging domestic investment, many companies have been newly established in the form of joint-stock companies. This accelerated the establishment and development of stock markets where joint-stock companies can raise medium- and long-term funds. Thus, in this section, I introduce an overview of the stock markets in Vietnam with an emphasizing in listed companies, which are the objectives of empirical analysis of my thesis.

The initial development of the stock market was closely linked to the equitization process. Stock exchanges were decided to be established in Hanoi City and Ho Chi Minh City for joint-stock companies to raise mid- and long-term funds according to the Decision 127/1998/QD-TTg of 11 July 1998. The Ho Chi Minh Securities Trading Center (HSTC) was opened in 2000 and was renamed as Ho Chi Minh Stock Exchange (HOSE) in 2007. The Hanoi Stock Exchange (HASE) was opened in 2005. The listing conditions of the HOSE are stricter than are those of the HASE (Table 1.10). The listing norms for the HOSE specify a higher level of capital, better business performance, and a more dispersed stockholding structure than the norms for the HASE.

Table 1.10: Listing conditions for the Hanoi and Ho Chi Minh stock exchanges

Conditions	Ha Noi Stock Exchange	Ho Chi Minh Stock Exchange
Minimum capital	10 billion VND	80 billion VND
Business performance	have made a profit in the year before listing (excluding privatized state-owned companies, newly established companies of infrastructure industry and high-tech industry).	have made profits in two years before listing
Voting shares	Have to be possessed by at least 100 shareholders.	At least 20 per cent of voting shares have to be possessed by at least 100 shareholders.

Source: Vietnam Securities Law (2007)

1.4.2 Listed companies, trading volume and trading value

For a long period after their establishment, these two exchanges had very few listed companies, although the government offered preferential treatment to newly listed firms. The number of listed firms increased rapidly from the end of 2006, when the government announced the removal of preferential policies for newly listed firms from the beginning of 2007. Vietnam attracted significant investment from foreigners because of its participation in the World Trade Organization (WTO). By the end of 2011, there were 694 firms listed on both HOSE and HASE. Table 1.11 shows the number of listed companies, the trading volume, the trading value on the HOSE and the HASE, and the aggregate market value of the stock markets in recent years. The stock markets in Vietnam had a peak development in 2007 when the aggregate market value acounted for nearly 44 per cent of the GDP.

1.4.3 Foreign investor participation

Foreign investors (institutions and individuals) can buy or sell shares on the Stock exchanges through securities companies. However, their ownership (aggregation ownership of all foreign investors) in a listed firm is limited to 30 per cent of the firm's equity at first and then increased to 50 per cent since 2007. In addition, foreign investors who wish to participate on the Stock exchanges are required to register through a licensed custodian who holds securities on behalf of foreign investors. Once registered, a securities transaction code is issued to the foreign investor who may then open a trading account with securities companies for trading securities on the Stock exchanges.

Table 1.11: The Major Indices of Stock Exchange Markets

	Number of Listed Companies		Trading Volume (million shares)		Trading Value (trillion VND)		Aggregate Market Value	
	HASE	HOSE	HASE	HOSE	HASE	HOSE	Tril. VND	%GDP
2000	0	5	0	0.3	0	0.90	na	na
2001	0	11	0	1.9	0	0.96	na	na
2002	0	20	0	3.5	0	0.96	na	na
2003	0	22	0	2.8	0	0.50	na	na
2004	0	28	0	7.3	0	1.97	4	0.6
2005	6	35	20	9.4	0.26	2.78	10	1.2
2006	81	106	95	538.5	3.91	35.47	221	22.7
2007	110	141	612	1,817.0	63.42	217.83	491	43.7
2008	168	172	1,531	2,978.0	57.12	124.57	210	17.0
2009	257	200	5,765	10,432.0	197.52	423.30	620	38.0
2010	366	280	8,733	11,595.0	254.25	379.25	726	39.0
2011	393	301	7,944	8,303.0	95.84	160.40	539	21.0

Source: Homepages of Hanoi and Ho Chi Minh Stock Exchanges
Note: All are shown in year-end value. HASE means Hanoi Stock Exchanges, HOSE means Ho Chi Minh Stock Exchanges

1.4.4 Characteristics of stock markets in Vietnam

Stock markets in Vietnam have some characteristics. First, the initial development of the stock market was closely linked to the equitization process of SOCs. Equitized SOCs will continue to be the backbone of the Vietnamese stock market in the near future because in 2011 about 1,300 SOCs were still fully state owned, of which about 550 SOCs are bound to remain fully owned by the state, but the remaining 750 are to be equitized. Second, the number of listed companies which do not have state capital is growing steadily. In other words, state ownership in listed companies is reducing stably. Third, the stock market has its ability to mobilize new capital, rather than just serve as support for secondary. Forth, institutional investors are still under-represented in the Vietnamese market.

1.5 Banking system in Vietnam

1.5.1 Types of banks in Vietnam

Credit from commercial banks has been one of the main sources of finance in Vietnam, and the transition to a market economy has been associated with a sustained increase in its

volume, relative to GDP (World Bank, 2009). Thus, in this section, I introduce an overview of the banking system in Vietnam.

Before the *Doi moi*, the banking system in Vietnam was mono-bank where the State Bank of Vietnam (SBV) functioned as both a central bank and a commercial bank. Since the 1990 Ordinance on the State Bank of Vietnam, the SBV acted as a central bank. Beside the two existing state-owned commercial banks (SOCBs), namely the Bank for Investment and Development of Vietnam (BIDV) and the Bank for foreign trade of Vietnam (Vietcombank), other two state-owned commercial banks, namely Vietnam Industrial and Commercial Bank (formerly Incombank, now Vietinbank), Vietnam Bank for Agriculture and Rural Development (Agribank) were newly created.

In 1991, only the establishment of foreign bank branches was permitted. However, in 2004, the government amended the 1998 Law on Credit Institutions to set the stage for the establishment of wholly foreign-owned banks by investors from any country. In 2006, the government issued a decree specifying the requirements for establishing wholly foreign-owned banks and regulating the general operation of foreign bank branches and joint-venture banks. The decree required foreign banks applying for a wholly foreign-owned banking license to have at least USD 20 billion in assets in the year prior to application and required a single parent bank to own at least 50 per cent of the new bank's capital. The decree also relaxed restrictions on foreign investment via foreign bank branches and joint-venture banks by extending their license periods and by expanding foreign branch service transaction points to include ATMs. Vietnam further leveled the playing field for foreign banks on January 1, 2011, by granting foreign branches equal treatment as domestic banks. Foreign branches and domestic banks are now subject to the same deposit and lending rules and are permitted to provide the same banking services.

To complement opening local banking markets to foreign players, the government recognized the need to strengthen the competitiveness of domestic banks. The government's plans include the May 2006 announcement to "equitize," or partially privatize, the SOCBs and reduce state ownership to 51 per cent by 2010. To help facilitate this process, in 2007 the government raised the maximum stake a single strategic foreign investor could hold in a domestic commercial bank, including SOCBs, from 10 per cent to 15 per cent of the bank's chartered capital. The SBV may grant an exception to individual

strategic foreign investors “in special cases”, allowing investment of up to 20 per cent of chartered capital in an SOCB. Whatever the level of investment, strategic foreign investors must commit in writing to assisting the domestic bank in developing products and services and in improving managerial and technological capacity. The government capped nonstrategic foreign financial institutions’ ownership of a domestic commercial bank at 10 per cent and all other foreign investors’ ownership at 5 per cent. Total foreign ownership of a domestic commercial bank was capped at 30 per cent, and the state required investors to hold shares for at least five years to curb share speculation and ensure these investors’ commitment to Vietnam. Despite the government’s goal of equitizing all SOCBs by 2010, by the end of 2012, only three SOCBs — Vietcombank (in 2008), Vietinbank (in 2009) and BIDV (in 2012) — had successfully sold shares to private investors.

In 2008, the Prime Minister of Vietnam required the SBV to review the requirements of establishing new joint-stock commercial banks, thus the new establishment of joint-stock commercial banks has been stopped then. Recently, the M&A among joint-stock commercial banks in Vietnam has been active.

Recently, the banking sector in Vietnam is divided into five types of institutions in term of ownership. As of the end of 2012, there are three SOCBs, three partially equitized SOCBs, thirty seven JSCBs, six JVBs, five FFOBs and nine foreign bank branches in Viet Nam. SOCBs accounted for the largest share of lending, with 79.0 per cent of total loans in 2001 and 51.7 per cent in 2011.

Table 1.12: Number of banks in Vietnam by ownership (as of the end of 2012)

Type of bank	Number
Policy bank	2
State-owned commercial bank	3
Partially equitized SOCB	3
Joint-stock commercial bank	37
Joint-venture bank	6
Fully foreign owned commercial bank	5
Foreign bank branch	9

Source: State Bank of Vietnam

Table 1.13 expresses the ownership of banking sector in some transition economies. According this, the privatization of banking sector in Vietnam is slowest, and even slower than China, with the state ownership still remained 71 per cent in 2003.

Table 1.13 Ownership of banking sectorin some transition economies (per cent)

	1993		2003	
	State	Non-state	State	Non-state
Poland	86,2	13,8	25,2	74,8
Hungary	74,9	25,1	7,0	93,0
Czech	11,9	88,1	3,0	97,0
Slovakia	70,7	29,3	19,0	81,0
China	83,8	16,2	67,6	32,4
Vietnam	>90,0	<10,0	71,0	29,0

Source: State Bank of Vietnam

SOCBs are majority state-owned institutions that the government initially established to fulfill a specialized policy lending function. SOCBs' traditional customer base has been state-owned companies (SOCs), although they are increasingly expanding into more traditional commercial banking activities and are no longer considered formal policy institutions. SOCBs accounted for the largest share of lending, with 51.7 per cent of total loans as of year-end 2011, down from 79.0 per cent in 2001 (Table 1.14). JSCBs specialize in lending to small- and medium-sized enterprise clients and in retail finance. JSCBs' market share has grown in recent years, due mainly to market share captured from the SOCBs. Together with joint-venture and wholly foreign-owned banks, they account for slightly 44 per cent of total domestic lending as of end-2011. The share of loans to SOCs in total outstanding loans has been declining steadily, from nearly 40 per cent in 2002 to 31.1 per cent in March 2008 and to 16.7 per cent in September 2012.

Table 1.14: Share of credit to the economy by type of institutions

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
SOCB	79.0	79.0	78.0	76.0	70.8	65.0	55.0	52.0	54.1	51.3	51.7
JSCB	9.0	10.0	11.0	12.0	15.0	21.0	29.0	32.0	32.0	35.3	35.1
JV&FFCB	10.0	9.0	9.0	10.0	10.0	9.0	9.0	10.0	9.2	8.9	8.6
Others	2.0	2.0	2.0	2.0	2.0	5.0	7.0	6.0	4.7	4.5	4.7

Source: State Bank of Vietnam

1.5.2 Interest rate regime

Interest rate was imposed by subsidized policy under the centrally planned economy independently from the international interest rate. The inflation was higher than the norminal interest rate. As a result the real interest rate became negative. Since the economic reform, monobank model was eliminated, central bank's functions were separated, and interest rate has been liberalized step by step. From 1989 to May 1992, fixed interest rate policy was implemented. Interest rate was adjusted according to the change of price index. Interest rate of foreign currency was that of international market. As a result, real interest rate was turned to positive. From June 1992 to 1995, State Bank of Vietnam (SBV) used interest rate frame policy. Commercial banks decided their interest rate based on the floor interest rate of deposit and the ceiling interest rate of loan which were fixed by the SBV. From 1996 to 2000, SBV managed by ceiling interest rate policy. And from 2000 until now, SBV has been using basic interest rate policy. Basic interest rate is decided based on the interest rate of interbank market, the interest rates of open market operations of the SBV, the interest rate of deposit of credit institutions and trends of supply and demand of capital. Under the Civil Law, the credit institution may not provide loans with interest rates higher than 150 per cent of the basic interest rate. Table 1.15 summarizes the liberalization of interest rate in Vietnam.

Table 1.15: Liberalization of interest rate in Vietnam

Period	Interest rate mechanism
Before 1988	Subsidized interest rate policy
1989 – May 1992	Fixed interest rate policy
June 1992 - 1995	Interest rate frame policy
1996 – 2000/7	Ceiling interest rate policy
2000/8 – 2002/5	Basic interest rate policy
2002/6-2008/4	Negotiation interest rate policy
2008/5-nay	Basic interest rate policy

Source: State bank of Vietnam

1.5.3 Characteristics of banking system in Vietnam

One of the main characteristic of the banking system in Vietnam is the domination of state-owned and state-controlled commercial banks and the piority ability to access to the

loans of SOCs. However, according to the reforms of this sector, the portion of SOCBs loans to the economy has been falling year by year, to 51.7 per cent in 2011, and the portion of total outstanding loans to SOCs also has been declining steadily, to 16.7 per cent in September 2012. Another feature is that foreigners are allowed to invest in banking sector, up to 30 per cent of the chartered capital of the listed banks. The interest rate in Vietnam has been liberalized step by step and now under the basic interest rate policy.

1.6 Remarks

This chapter provided an overview of the reform of state-owned companies (SOCs) as well as a summary of stock markets, listing companies and banking sector in the context of the economic reform under the *Doi moi* policy in Vietnam, which relate to the analyses in the next chapters of the thesis.

The Vietnamese government initiated remarkable economic reforms *(Doi moi)* in 1986, which ended the central-planning era and adopted the market economy. Subsequently, the country's economy showed impressive results in such terms as economic growth and inflation, especially since 1989. Over more than 20 years of economic reform, the average growth rate of Vietnamese economy was 7.2 per cent, GDP increased 4 times, poverty popullation ratio deceased from ¾ to about ¼[8]. Vietnam actively integrated to the world economy, with an emphase of becoming an offical member of WTO since 2007. These achievements resulted from continuous and timely reforms which created stimulating factors for the economy development. First, reforms in argriculture in the late 1980s made Vietnam became a world second rice exporter and a world top exporter of coffee, tea, etc. Second, reforms in trade led to the strong development of foreign trade of Vietnam, with annual growth rate was 23 per cent, export value increased sharply from 500 million dollars in 1986 to nearly 40 billion dollars in 2006. This is an important source of foreign currency for importing consuming goods and investing goods. Third, Vietnam succeed in luring foreign capital such as FDI, ODA, remittance with a total amount of 70 billion dollars, equaled to 13 per cent of GDP, and accounted for 50 per cent of total investment capital. Forth, the development of private sector since the implementation of Corporate Law since 2000 also contributed to these achievement, in the context that the state sector

[8] According to UNDP Vietnam

was in difficulty and needed to be reformed. These were as the same as the reform process of China, which also started from the reforms in argriculture sector, then promotion of foreign trade and attraction of FDI.

Along with the economic reforms, some comprehensive measures to restructure SOCs have been launched since 1986. Among other measures, equitization has been seen as the best way to restructure the SOCs effectively and quickly. Over 20 years of implementation of state-owned company equitization, by the end of 2011 about 4,000 SOCs have been equitized. Most of equitized SOCs are small sized. The remaining 1,300 fully state-owned companies are the largest ones. Another feature of equitized SOCs is that the government still holds decisive voting rights in many cases and the ownership of the state in these companies reduced gradually after being equitized. Equitization is assessed to make the equitized SOCs more effective and listing is proved to be associated with better management in equitized SOCs.

There are two stock markets in Vietnam, Hochiminh Securities Exchange (HOSE) and Hanoi Securities Exchange (HASE), which were established in 2000 and 2005 respectively, with the listing norms of the HOSE being stricter than those of the HASE. The development of Vietnamese stock markets is linked with the equitization process. There remains more than 700 SOCs scheduled to be equitized soon, which will continue to be the backbone of the Vietnamese stock market in the near future. One of the main strengths of the stock market is its ability to mobilize new capital, rather than just serve as support for secondary. Another characteristic of the stock markets in Vietnam is the under-representation of institutional investors in the markets.

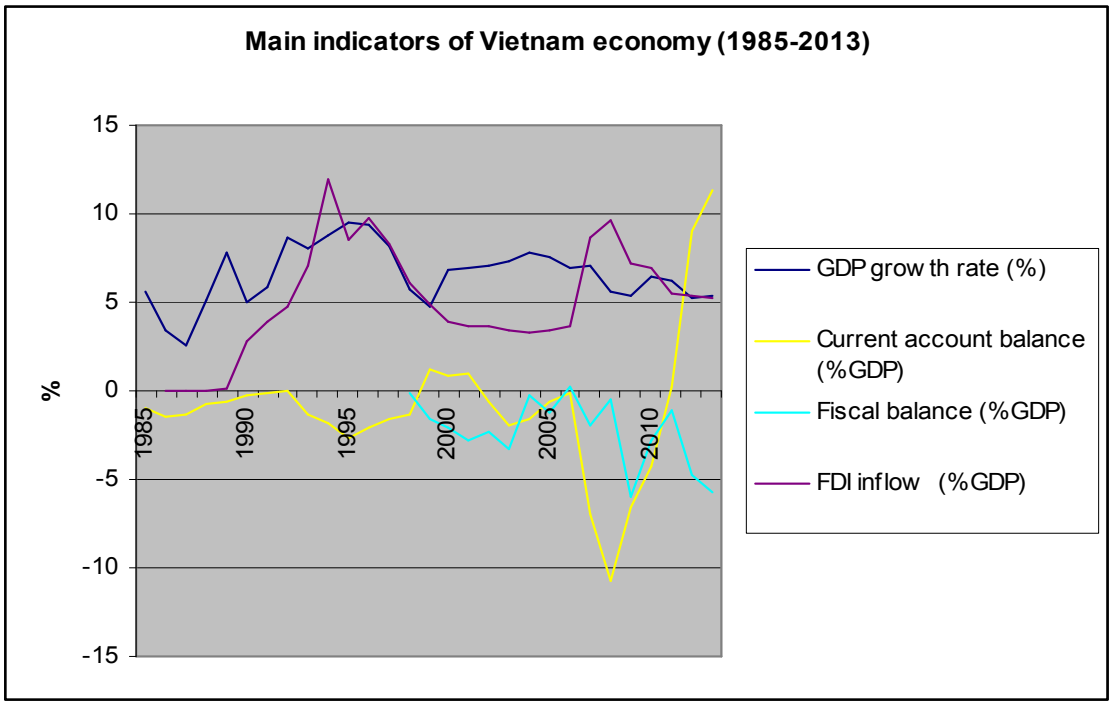
Banking sector was also reformed to support the corporate sector in providing credit for investment. Although, the state still remained a large ownership in the banking sector, the portion of loans from SOCBs in total loans to the economy fell from 79 per cent of as of year-end 2001 to 51.7 per cent in 2011. Most banking credit still went to SOCs, but their share in total outstanding loans has been declining steadily, from nearly 40 per cent in 2002 to 16.7 per cent in September 2012.

The participation of foreign investors plays an important part in the reform process in Vietnam. In term of FDI, FDI sector has been distributting to the development of the Vietnamese economy through creating jobs, encourging exporting, penetration of mordern

technical and management skill. In stock market, both individual and institutional foreign invetors also have been acting actively.

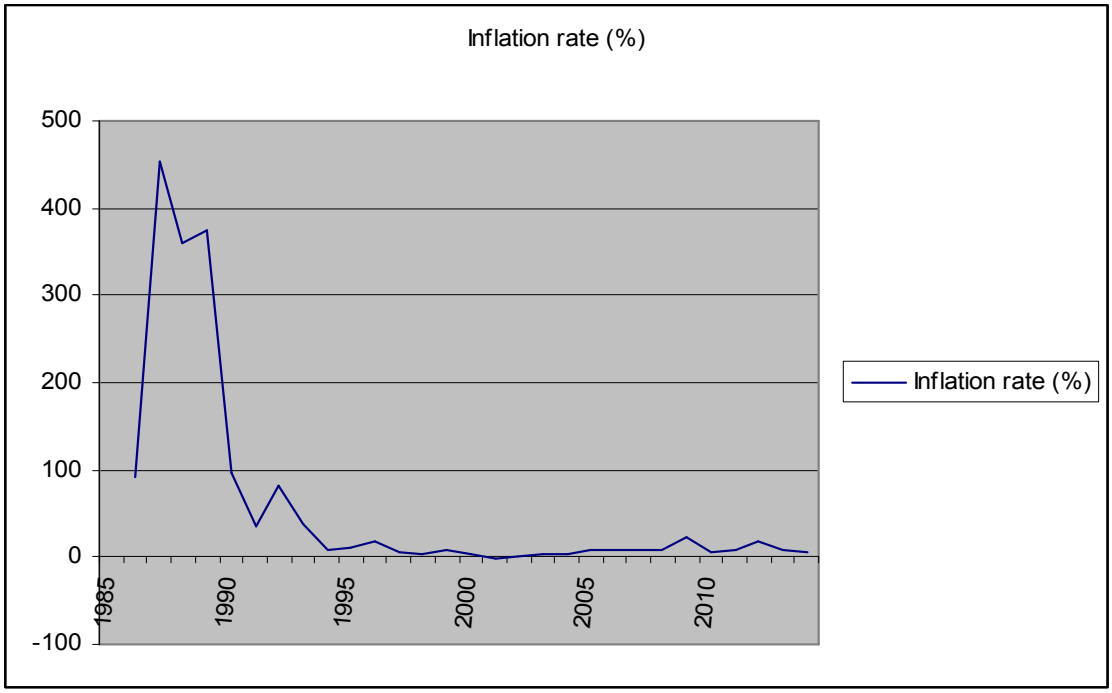
Despite above mentioned achievements of the economic reform, there remains some issues that need to be addressed. First, the equitization of SOCs has been slow down since 2007 while the remaning fully state-owned comapanies that need to be equitized are large and important ones. Second, equitized SOCs seem to have privileged access to credit from state-owned commercial banks due to their historical relationship with the SOCBs since before equitizing as well as their implicit support from the state as a dominant stockholder. In order to address these problems, Vietnamese government should accelate the equitization process as well as the reform of banking sector. Third, although interest rate was liberalized, banks still can choose the borrowers according to the policies of the state. These implies that more reforms are needed, both in corporate sector and in banking sector, in order to make Vietnamese economy access nearer to the market economy.

Figure 1.1: Main indicators of Vietnamese economy (1985 -2013)



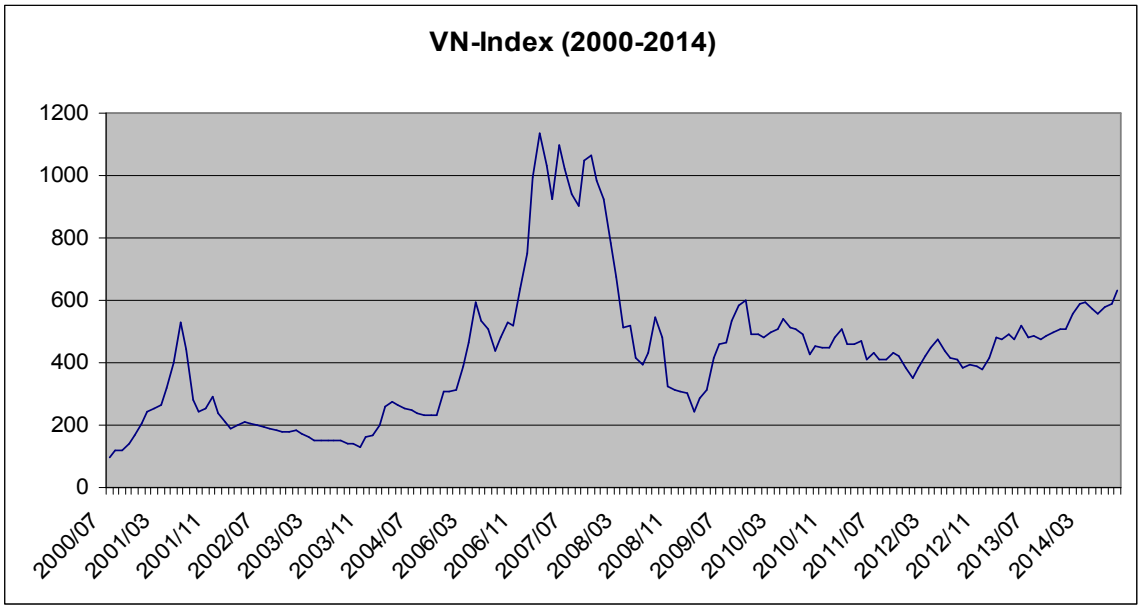
Source: IMF (World Economic Outlook Databases)

Figure 1.2: Inflation rate in Vietnam (1985-2013)



Source: IMF (World Economic Outlook Databases)

Figure 1.3: VN-index (2000-2014)



Source: Homepage of Ho Chi Minh Stock Exchange (http://www.hsx.vn/)

An example of SOC reformed under the *Doi moi*
(Refrigeration Electrical Engineering Corporation - REE)

(1) Profile:

1977: Mechanical and Electrical state-owned company was established
1993: Being equitized under the pilot equitization programme as the first in the country.
2000: Volunteering to be listed in the Ho Chi Minh Stock Trading Centre as one of the first two listed companies at the Centre.

(2) Business activities

- M&E engineering and contracting for industrial, commercial and civil projects
- Manufacturing Reetech air-conditioners, home appliances, electrical panels and industrial mechanical products
- Developing and operating real estate
- Investing in joint-stock companies and banks

(3) The development:

- Registered capital is raised from VND 16,000 million in 1993 to VND 150,000 million in 1998 and VND 225,000 million in 2001.
- The number of employees increased from 334 in 1993 to 798 in 1998 and 851 in 2001.
- The ownership structure of REE Corp. is state (30 per cent) , insiders (50 per cent), outside investors (20 per cent) in 1993; state (25.1 per cent), insiders (23.9 per cent), outside investors (20 per cent) in 1999; state (10 per cent), insiders (39 per cent), outside investors (25 per cent) in 2002. Foreign investors held 16.3 per cent in 1999 and 25 per cent in 2002.

Chapter 2

Corporate finance and corporate governance of listed companies in Vietnam

Chapter 1 overviews the Vietnamese stock markets and listed companies in Vietnam, which are the results of economic reform and corporate reform according to the *Doi moi*. This chapter describes the characteristics of the ownership structure, corporate finance, and corporate governance of the listed companies in Vietnam, which relate to the objectives of the empirical analysis in Chapters 4, 5, and 6 of this thesis.

Chapter 2 is organized as follows. Section 1 introduces the ownership structure and the corporate finance of listed companies in Vietnam. Section 2 overviews the corporate governance of listed companies in Vietnam and Section 3 summarizes the chapter.

2.1 Listed companies in Vietnam and features of their corporate finance

2.1.1 Listed companies in Vietnam and the characteristics of ownership structure

Before the *Doi moi* policy in 1986, the Vietnamese economy followed a central planning mechanism with all private economy disallowed. Since the *Doi moi* policy came into effect, the Vietnamese government has eliminated the central planning mechanism, applied a socialist-oriented market economy mechanism, multiplied forms of possession, industrialized and opened the economy. In particular, private economy was legally allowed and encouraged by the issuance of the 1990 Company Law for limited liability companies and joint-stock companies and the 1990 Private Company Law for private companies[9]. Joint-stock companies were allowed through the equitization of existing state-owned companies or new establishment. The equitization of state-owned companies began in June 1992 and subsequently was promoted by the "Government Ordinance on

[9] By the 31st December 1996, there were 17,535 private companies, 6,883 limited liabilities companies, 153 joint-stock companies in Vietnam (General Statistics Office of Vietnam http://www.gso.gov.vn) .

the Equitization of State-owned Companies" promulgated on November 16, 2004. The equitization occurred sequentially, starting with relatively small-sized state-owned companies that achieved a reasonable level of management efficiency, but excluded specific industrial sectors that require state control.

There are two stock markets in Vietnam, the HOSE and the HASE, which were founded in Ho Chi Minh city in 2000 and in Ha Noi in 2005, respectively, and these allow listed companies to procure medium- and long-term funds. Listing conditions for the HOSE are stricter than those for the HASE; the former asks companies for higher minimum capital, higher standards of sales excellence, and a stock ownership structure in which stocks must be dispersed among many more shareholders. 694 companies were listed on the two markets by the end of 2011.

Most of listed companies in Vietnam are in manufacturing and construction, accounting for approximately 39 per cent and 25 per cent of the total, respectively (Table 2.1). The remainder is in industries such as agriculture, forestry and fisheries, mining, electric power, service, transportation, finance, communications, real estate, and commerce. In the HOSE, there is a high proportion of manufacturing companies (42.5 per cent), with construction and transportation also having a significant presence (13 per cent and 11.5 per cent, respectively). In the HASE, the largest proportions belong to the manufacture sector (36.17 per cent) and the construction sector (35.74 per cent), leaving other sectors far behind.

The Vietnamese government still has a strong influence on the corporate sector. Despite the conversion of many state-owned companies to joint stock companies, the state remains the dominant shareholder and controls corporate activities. My sample includes 435 companies listed on the HOSE or the HASE. Among these, 111 are state-controlled companies[10], which accounts for about 25.5 per cent of the sample.

The foreign institutional investor is underdeveloped in stock markets in Vietnam, where individual investors represent around 70 per cent of the total trading volume. Foreign institutional investors invest with a long-term perspective while individual Vietnamese investors make comparatively small and short-term investments.

[10] A state-controlled company is defined as a company where the state holds more than 50 per cent of the ownership of the company.

Table 2.1: Numbers and proportions of listed companies by industry

Industry	HOSE		HASE		All	
	Number of companies	Ratio (%)	Number of companies	Ratio (%)	Number of companies	Ratio (%)
AGRI	17	8.50	4	1.70	21	4.83
CONS	26	13.00	84	35.74	110	25.29
MANU	85	42.50	85	36.17	170	39.08
MIN	6	3.00	12	5.11	18	4.14
POWE	10	5.00	6	2.55	16	3.68
SERV	6	3.00	19	8.09	25	5.75
CARR	23	11.50	12	5.11	35	8.05
COM	1	0.50	3	1.28	4	0.92
REAL	15	7.50	2	0.85	17	3.91
COMM	11	5.50	8	3.40	19	4.37
All	200		235		435	

Note:

1) Agriculture industry (AGRI), construction industry (CONS), manufacturing industry (MANU), mining industry (MIN), electricity industry (POWE), services (SERV), transportation industry (CARR), communications (COM), real estate (REAL), and commerce (COMM).

2) Caculated from the website of the HOSE (http://www.hsx.vn/) and the HASE (http://www.hnx.vn/)

2.1.2 Funds procurement issues of listed companies in Vietnam

Listed companies, which are regarded as adhering to all of corporate reforms in Vietnam, are expected to be able to procure funds from the stock markets efficiently. However, the companies' financial environment is problematic despite the rapid economic reforms of recent years.

One issue is the continued strong influence of the Vietnamese government on the corporate sector (IFC, 2010). The state remains the dominant shareholder in many companies; it has maintained corporate control over these companies even after the equitization of the latter. State-controlled companies account for more than 30 per cent of all companies listed on both stock exchanges.[11] Although these companies are likely to be able to procure funds on favorable terms through their close relationship with the government, they also carry the risk of inefficient fund-raising, such as excessive debt accumulation.

[11] Based on the sample data used for empirical analyses in this thesis

The second problem is incomplete banking reform (Akiba, 2010). In Vietnam, banking reform has proceeded in tandem with corporate reform through the steady segregation of functions of state banks and commercial banks and the liberalization of interest rates. As a result, the implementation of the market economy in the banking sector has advanced, and the selection of loan customers and financing terms and conditions are becoming more reasonable, with loans reflecting the loan companies' profitability and risks. However, four major state-owned or state-controlled commercial and development banks dominate the banking sector, which accounts for most of the domestic funds supply; also, the close relationship between state-controlled companies and state-owned banks continues. In other words, state-controlled companies may be in a better position compared to other companies due to the former's preferential procurement of funds, irrespective of economic rationality.

The third issue is the insufficient information disclosure of companies, which instills fear and affects the financing of the listed companies (World Bank, 2006). Stock markets in Vietnam were established to facilitate the procurement of medium- and long-term funds of the blue-chip companies. However, appropriate allocation of funds in the markets requires the sufficient disclosure of corporate information to the investors. Nguyen (ibid.) and Biger et al. (ibid.) argue that a significant information asymmetry may result due to this lack of corporate information disclosure. Listed companies may be affected by the same problem (World Bank, 2012).

The fourth issue is the underdevelopment of institutional investors in stock markets in Vietnam. If the markets are to supply medium- and long-term funds, they require institutional investors with a long-term perspective (IFC, 2007). In stock exchanges in Vietnam, significant liberalization has led to increasing foreign investor participation. However, institutional investors such as life insurance companies and pension funds are still lacking. As a result, funding through the stock markets is underdeveloped, which in turn forces companies to procure funds through debt financing methods such as bank loans.

2.2 Corporate governance of listed companies in Vietnam

2.2.1 Corporate governance of listed companies in Vietnam

OECD (2004) defines that "Corporate governance involves a set of relationships between a company's management, its board, its shareholders and other stakeholders. Corporate governance also provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined."

According to IFC (2011), better corporate governance may (1) enhance market stability, (2) increase investor confidence and trust, (3) lead to the transparency of company activities and operations, (4) encourage investment into Vietnamese markets from local and foreign sources, and (5) reduce the cost of capital for companies. However, the concept of corporate governance is still new to companies in Vietnam. Since 2010, the IFC has employed the corporate governance scorecard as one mechanism to encourage corporate governance improvements.

The recent legal framework for corporate governance of listed companies in Vietnam consists of the Enterprise Law 2005[12], the Securities Law 2006 and its amendment in 2010, the Code of Corporate Governance of Listed Companies 2007[13] and its amendment in 2012, and the listing rules of the Ho Chi Minh and Hanoi Stock Exchanges.

The corporate governance structure of a listed company in Vietnam includes a General Meeting of Shareholders (GMS), a Board of Management (BOM), a Director or General Director (CEO) and a Control Board. Figure 2.1 outlines this structure.

(a) Shareholders and rights of shareholders

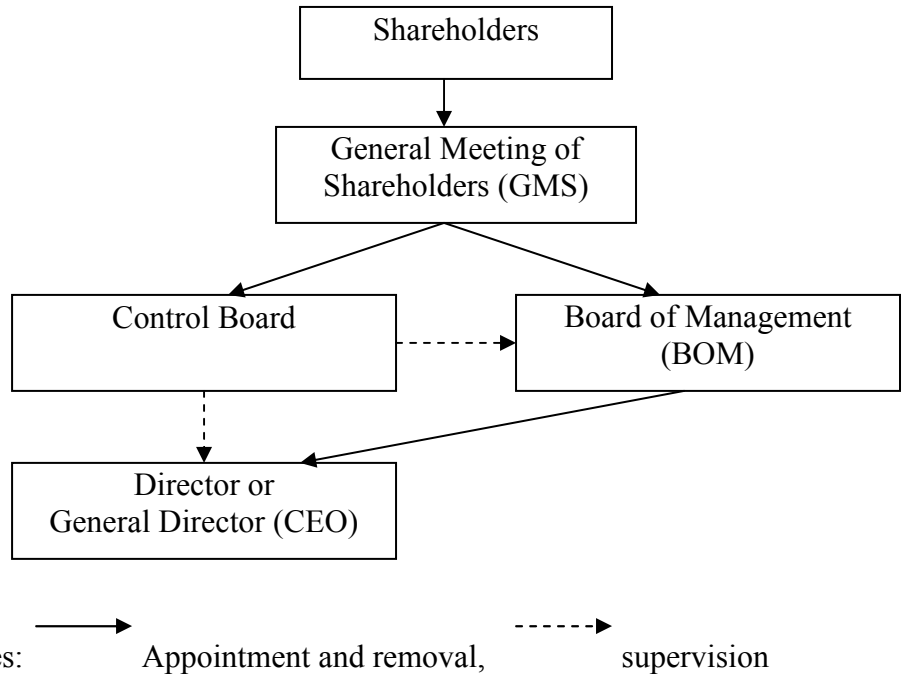
The 2005 Enterprise Law in Vietnam divides shares into two classes: ordinary shares and preference shares. Preference shares are further divided into sub-groups, such as voting preference shares. Each share class has its own characteristics and rights, and owners of shares of the same class have the same rights.

Ordinary shareholders have the right to attend the General Meeting of Shareholders (GMS), the shareholding company's highest decision-making authority under Vietnamese laws. At the GMS, shareholders express their opinions about company matters and vote on resolutions. Each ordinary share carries one vote. Ordinary shareholders have the right to freely assign their shares, though certain restrictions may

[12] The latest is the Enterprise Law 2014 that will come into effect on 1 July 2015.
[13] Issued by the MOF under the Decision 12/2007/QD-BTC dated 13 March 2007.

apply to founding shareholders following a company's incorporation. Generally, ordinary shareholders do not have the right to bind the company vis-à-vis third parties, unless a shareholder also acts as the company's legal representative. Importantly, shareholders bear personal liability for committing certain acts in the name of the company, such as conducting personal business or breaching the law. In other words, even if the shareholder has the authority to bind the company (such as a legal representative), if the act is in furtherance of a personal business transaction, or is in breach of the law, the shareholder, and not the company, bears the liability.

Figure 2.1: Corporate governance structure of a listed company in Vietnam



Preference shareholders have a variety of rights depending on the type of share. Voting shares, for example, carry more votes than ordinary shares. The ownership of voting shares is limited, however, to organizations authorized by the Vietnamese government and founding shareholders. Voting preference shareholders have the same rights as ordinary shareholders, except that they may not assign their shares to other

persons. The rights attached to preference shares belonging to a listed company must be approved by the GMS.

(b) General Meeting of Shareholders (GMS)

According to the 2005 Enterprise Law, the GMS must include all shareholders holding voting shares (including ordinary shareholders and voting preference shareholders) and it is the highest management body of a shareholding company that is responsible for macro-level company decisions, including the company's overall development direction, hiring and dismissing members of the Board of Management (BOM) and Control Board, and major investment decisions. If a shareholder is a corporate entity, it must appoint one or more authorized representative(s) to participate in the GMS.

The GMS is required to hold a meeting at least once a year, within the territory of Vietnam[14] and no later than four months since the end of the financial year. Shareholders with more than 10 per cent of the total ordinary shares (or a smaller percentage if stipulated in the charter) for at least six consecutive months (called the "Shareholder Block") have the right to request the BOM to call an additional meeting (referred to as an "extraordinary meeting") of the GMS. If the BOM fails to call the extraordinary GMS meeting, the Supervision Board is required to do so. If the Control Board does not call the meeting, the shareholders themselves may convene the meeting and ask the relevant government authorities to supervise.

A regular meeting of the GMS considers the following matters: (a) annual financial statements; (b) the report of the BOM assessing the efficiency of the company's business management; (c) the report of the Control Board regarding company management by the BOM and the CEO; (d) the amount of dividends payable on each class of share; and (e)

[14] The GMS is conducted when the number of attending shareholders represents at least 65 per cent of the voting shares (Enterprise Law 2014 reduces this to 51 per cent). If the first meeting cannot take place because this condition is not satisfied, the meeting may be convened for a second time within 30 days of the intended opening of the first meeting. When the second meeting is conducted, the number of attending shareholders must represent at least 51 per cent of the voting shares (Enterprise Law 2014 reduces this to 33 per cent). The specific percentage in the first and second meetings is stipulated in the charter of the company.

other matters within its authority. The issues covered at the GMS are set out in an agenda. Generally, the GMS's agenda is prepared by the meeting's convener. However, shareholders exercise some authority over the agenda's contents in the form of recommendations. A Shareholder Block may recommend items to be included in the agenda. The recommendations can be refused, but only on limited grounds, such as being untimely or outside the GMS's authority. If the recommendations are not refused, they must be agreed by the entire GMS and added to the agenda. The GMS may pass resolutions that fall within its power by way of voting in the meeting or collecting written opinions. A resolution of the GMS is passed in a meeting when it is approved by a number of shareholders representing at least 65 per cent (the Enterprise Law 2014 reduces this to 51 per cent) of the total voting shares of all attending shareholders; the specific percentage shall be stipulated in the charter of the company. The minutes of the GMS meeting must be written in Vietnamese and other foreign languages.

(c) Board of Management (BOM)

According to the Enterprise Law 2005, the BOM is the body managing the company and has full authority to make decisions in the name of the company and to exercise the rights and discharge the obligations of the company that do not belong to the GMS. The BOM comprises 3 to 11 members that are appointed and dismissed by the GSM [15] and one third of the members of the BOM must be non‐executive independent members. The members of the BOM of a shareholding company must be individual shareholders or representatives of institutional shareholders owning at least 5 per cent of the total ordinary shares; or others (including non-shareholders and shareholders holding less than 5 per cent of the total ordinary shares) who have expert qualifications or actual experience in business management; or as stipulated in the company charter. BOM members are appointed for a maximum five-year term, but may be re-appointed for

[15] Shareholders or a group of shareholders holding less than 10 per cent of the voting shares for a consecutive period of at least six months are entitled to nominate one member; shareholders holding from 10 per cent to less than 30 per cent are entitled to nominate two members; shareholders holding from 30 per cent to less than 50 per cent are entitled to nominate three members; shareholders holding from 50 per cent to less than 65 per cent are entitled to nominate four members; and shareholders holding from 65 per cent upwards shall be entitled to nominate all members.

additional terms. The remuneration, salary, and bonus of members of the BOM are decided by the GMS based on the business results of the company. A member of the BOM must not concurrently be a member of the BOM of more than five other companies.

The head of the BOM is a chairperson who is appointed by the GMS or the BOM in accordance with the charter[16]. The chairperson of the BOM can concurrently hold the position of the CEO. In a survey at the end of 2007 by the Central Institute for Economic Management (CIEM), 85 per cent of the total surveyed companies have their chairman of the BOM concurrently as their (general) director.

(d) Director or General Director (CEO)

Vietnamese laws in general as well as the Enterprise Law 2005 in particular does not differentiate between the terms "director" and "manager", the terms "managing director", "executive director", "non‐executive director" and "independent directors". The term "independent directors" was first introduced in the Amendments in 2012 of the Code of Corporate Governance of Listed Companies 2007.

According to the Enterprise Law 2005, the director or general director of a shareholding company must be a shareholder owning at least 5 per cent of the ordinary shares; or a non-shareholder having expert qualifications or actual experience in business management; or being stipulated in the company charter. State officials and employees; leading officers and managers of SOEs (except for those who are appointed as representatives of state capital in companies) cannot be appointed as a company director/manager. The CEO of a shareholding company must not concurrently be the CEO of another company. The office-term of the CEO of a shareholding company is no more than five years. The CEO of a shareholding company must have a service contract with a company that is subject to the Enterprise Law 2005 and the Labor Code 1994. Accordingly, there are very few opportunities for the company to dismiss the CEO before the expiration of the service contract.

Under the Enterprise Law 2005, the remuneration, salary, and bonus of company managers/directors are decided by the BOM based on the business results of the company.

[16] The Enterprise Law 2014 abrogated the right of the GMS to appoint the head of the BOM.

The Enterprise Law 2005 necessitates that directors/managers act in the best interests of the company and for proper purposes, and they must disclose personal interests to avoid conflicts of interests. However, there are some shortcomings in the provisions regarding the directors/managers' duties under the law such as not prescribing a duty to prevent insolvent trading; not requiring directors/managers to notify creditors when the company cannot pay debts due and payable in full; lack of necessary penalties to force directors to fulfill their duties.

The Enterprises Law 2005 stipulates that the legal representative of a shareholding company is either the chairperson of the BOM or the CEO. Although these provisions appear to be flexible, they are inappropriate because the powers of the CEO are restricted by the chairperson and the CEO may have no authority to approve contracts and sign documents on behalf of the company.

(e) Control Board

The Enterprises Law 2005 requires that a Control Board must be established in a joint-stock company with more than 11 individual shareholders or having organizations owning more than 50 per cent of the total shares of the company. A Control Board has from 3 to 5 members, which are elected by the GMS and distinct from the BOM. The term of the Control Board can be no more than five years. Members of the Control Board may be re-appointed for additional terms. The members of the Control Board elect one member to be the head of the Control Board. The rights and duties of the head of the Control Board are stipulated in the company Charter. More than half of the members of the Control Board must permanently reside in Vietnam and at least one member must be an accountant or auditor. Company managers and their relatives cannot become a member of the Control Board. Members of the Control Board do not need to be shareholders or employees of the company.

The Control Board has rights and duties (1) to supervise the BOM and the CEO in managing and running the company; (2) to inspect the reasonableness, legality, truthfulness and prudence in the management and administration of business activities, in the organization of statistical and accounting work and the preparation of financial statements; (3) to evaluate reports on the business, including semi-annual or annual

financial statements and reports on evaluation of the management of the Board of Management; (4) to review books of accounts and other documents of the company, the management and administration of the activities of the company at any time deemed necessary or pursuant to a resolution of the GMS or as requested by the Shareholder Block; (5) to recommend to the BOM or the GMS regarding changes and improvements of the organizational structure, management and administration of the business operations of the company. The Control Board may use an independent consultant to perform the assigned rights and duties.

(f) Conflict of interest between BOM and CEO

The current structure of corporate governance of shareholding companies in Vietnam has led to authority concentration in few persons who are often majority shareholders and concurrently senior managers as members of the board of management and/or directors. Supervision within the company is relatively weak and formalistic, especially in equitized state-owned companies. These weaknesses may create a large space for majority shareholders and managers to make use of the company assets and opportunities to serve their own benefits.

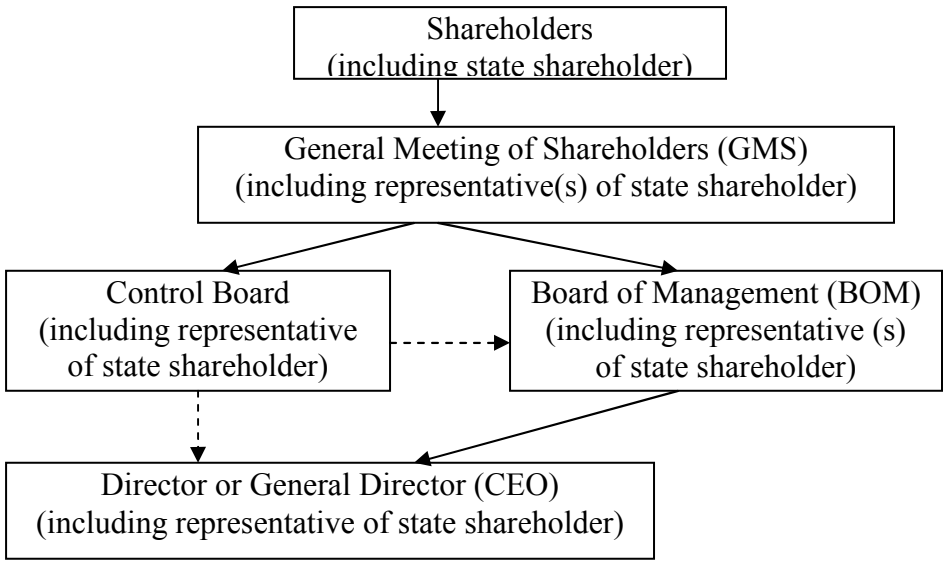
2.2.2 Corporate governance of listed companies with a state shareholder

As discussed in Chapter 1, there are many equitized state-owned companies in Vietnam, and state ownership is still high even after listing on the stock markets. The corporate governance structure of these companies is different to other companies. Figure 2.2 outlines these differences.

If the state is a shareholder of a joint-stock company, the state body that is authorized to exercise state ownership rights at the company will appoint one or more specific individuals to be representatives of the state shareholder. Such state bodies are numerous, ranging from ministry, provincial people's committee and relevant department, state-owned general corporation, state holding company and state-owned enterprise. The rights of the state shareholder are exercised by specific individuals who are representatives of the state shareholder. The representatives of the state shareholder can be members of the BOM, and the number of representatives of the state shareholder in the BOM depends on

the proportion of state ownership in the company. If the state is a controlling shareholder, the representatives of the state shareholder can be appointed as the chairman of the BOM or/and the CEO.

Figure 2.2: Corporate governance structure of a listed company with a state shareholder



Notes: ——▸ Appointment and removal, - - - - - -▸ supervision

There is no separation between ownership, business management and business supervision in exercising rights of the state shareholder. According to the survey conducted at the end of 2007 by the CIEM, individual representatives of the state shareholders that act as chairman of the BOM accounted for 60 per cent, of which 30 per cent is concurrently a (general) director and 9 per cent is a vice (general) director; 7 per cent are members of the supervision board and 33 per cent are members of the BOM.

Authority is concentrated in the individual representative of the state shareholder without sufficient supervision. As a result, the individual representative as an agent of the state shareholder has its own interests that may contradict those of the state shareholder.

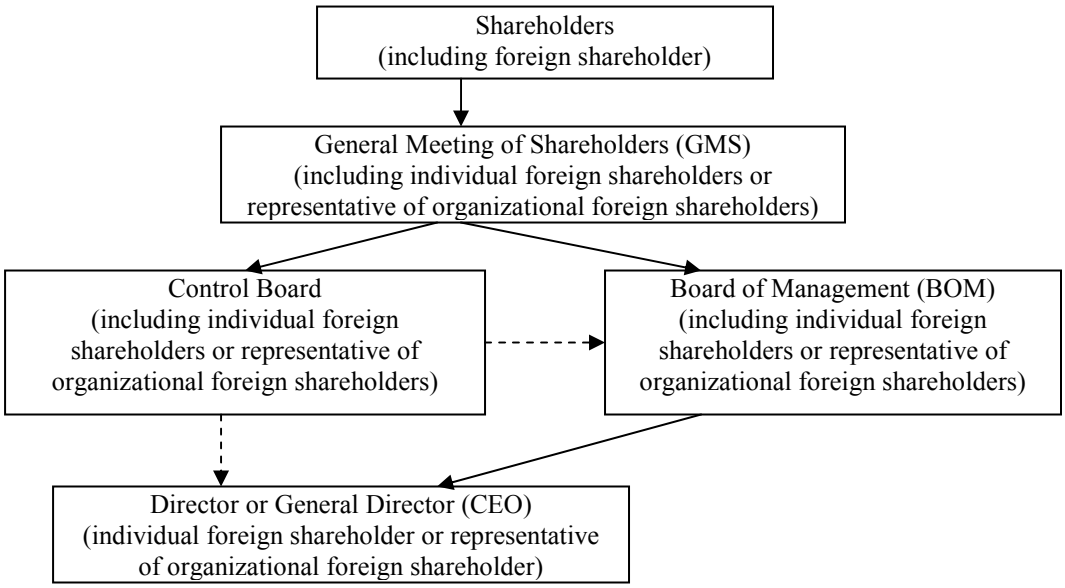
Sometimes a change of the individual representative of the state shareholder also occurs. However, the reasons for that change are mainly retirement, job shift or shifting of the state shareholder. There are only a few cases where the individual representative of a state shareholder is changed because of failure to fulfill his assigned duties. The state

body that is assigned as the state shareholder measures the performance of its individual representative mostly by financial performance of the enterprise.

2.2.3 Corporate governance of listed companies with foreign shareholders

Figure 2.3 outlines the corporate governance of listed companies with foreign shareholders.

Figure 2.3: Corporate governance structure of a listed company with foreign shareholders



Notes: ⟶ Appointment and removal, - - - - - -▸ supervision

If an individual or organizational foreign shareholder holds more than 5 per cent of the ownership of a joint-stock company, it can be a member or appoint a representative to act as a member of the BOM. The number of representatives of the organizational foreign shareholder in the BOM depends on the proportion of its ownership in the company. The individual foreign shareholder or the representatives of the organizational foreign shareholder can also be appointed as the chairman of the BOM or/and the CEO.

According to the scorecard by the IFC in 2012, foreign ownership indicates a better chance of better corporate governance relative to other companies. This may reflect the influence of foreign ownership demanding better corporate governance practices or

indeed it may reflect the fact that foreign investors target their investment at companies that already demonstrate better corporate governance.

2.2.4 Impacts of corporate governance on the capital structure, investment and profitability of listed companies in Vietnam

From the above-stated characteristics of the corporate governance structure of the listed companies in Vietnam, such corporate governance structure may affect capital structure, investment and profitability of listed companies in Vietnam as follows.

First, the state still retains controlling rights in many listed companies that may affect the fund-raising activities of these companies. Four major state-owned or state-controlled commercial and development banks dominate the banking sector, accounting for most of the domestic fund supply. Companies with a state shareholder may have a close relationship with these banks because they both serve the policy of the Vietnamese government, or the individual representative of the state shareholder of the company has a good relationship with the individual representative of the state shareholder of the bank. Thus they may be in a better position compared to other companies due to their preferential procurement of funds, irrespective of economic rationality.

Second, the state still retains the controlling rights in many listed companies that may affect the investment and profitability of these companies. State-controlled companies are under the strong influence of the government and in some cases function as tools for implementing government policies. Therefore, state-controlled companies are expected to be more active in investing than companies that are not state-controlled. On the other hand, since state-owned companies are under the strong influence of the government, they are less profit-oriented than private companies. Therefore, state-controlled companies are less likely to make use of good investment opportunities and to be inactive in investing.

Third, the state still retains controlling rights in many listed companies that affects the monitoring activities of banks towards these companies. State-controlled companies seem to access bank loans more easily than other companies because the former implement policy projects of the government and state-owned commercial banks are forced to lend to them with priority and preference. Therefore, state-owned commercial banks may not

be normal external creditors of state-controlled companies, and their monitoring activities may be less stringent toward state-controlled companies.

2.3 Remarks

This chapter reviewed the characteristics of the ownership structure, corporate finance, and corporate governance of the listed companies in Vietnam. The development of listed companies in Vietnam is concurrent with the equitization of SOCs. Thus, one of the significant features of the ownership structure of listed companies in Vietnam is that the state remains a dominant shareholder, which has effects on corporate activities and corporate governance of these companies. Such companies may have greater privilege over other companies in raising funds in the context that the four major state-owned or state-controlled commercial banks still provide most of the loan to the entire economy, but may be less inactive in investment or less effective in operation. Information asymmetry may be significant among listed companies, especially among state-controlled companies due to the lack of corporate information disclosure.

Moreover, with the policy of opening the economy, foreign investors are encouraged to invest in Vietnam, not only in the form of FDI but also in the stock markets, with space for foreign investors of up to 50 per cent of the ownership of a listed company. In tandem with the high development of the Vietnamese economy, the penetration of foreign investors into the stock markets is another characteristic of the ownership structure of listed companies in Vietnam, which also has effects on these companies' activities.

Chapter 3

Literature review, hypotheses and models

In developing and transition countries, reforms in corporate sector which includes privatizating state-owned companies, opening the economy to the foreign investors and reforming banking sector in order to improve microeconomic efficiency, boost economic growth and reduce public debt through the elimination of unnecessary subsidies (Sheshinski and López-Calva, 2003) are key components of economic reform. In the period of transition, companies are no longer subsided as in the planned economy, but have to make financial and investment decisions by themselves. Thus, such issues as the impacts of the state ownership, foreign ownership and banks on corporate's fund-raising, investment and performance after the reforms are much concerned. This chapter aims at reviewing both the theoretical and empirical literatures on capital structure and its impacts on investment and performance of companies in the context of corporate reform, which is a background for the empirical study on this issue to be conducted in Chapter 4, 5, 6 as well as building the hypotheses and models for these analyses.

This chapter is organized as follows. Section 1 summerizes studies on corporate reform of transition economies. Section 2 presents theorical framework in analysing capital structure of companies in modern corporate finance as well as related empirical studies. Section 3 reviews theorical and empirical literatures on the impacts of capital structure on investment decisions of the companies. Section 4 states theories and empirical analyses on the impacts of companies' capital structure on their performances. Section 5 states theories and empirical analyses on the relation of companies' capital structure, investment and growth opportunities. Section 6 introduces empirical analyses on capital structure issues of companies in Vietnam under the context of corporate reform. Section 7 states the hypotheses on corporate finance of listed companies in Vietnam based on modern corporate finance theories which are introduced in section 2, 3, 4, 5 as well as the case of Vietnam which are explained in Chapter 1, 2. Section 8 describes the

models as well as methods and data set for empirical analyses which will be conducted in Chapter 4,5,6. Section 9 is the summary of the chapter.

3.1 Literatures on corporate reform of transition economies

Although reforms in corporate sector have been actively implemented in developing and transition countries in last decades, there are numerous empirical studies on corporate reform in developed countries, while few for developing countries and transition economies. For transition economies, empirical studies focus much on Eastern Europe countries and China, while there are few studies on Vietnam. This section summerizes empirical studies on corporate reform of transition economies, including Central and East Europe countries, China and Vietnam. Empirical studies focus on find out the determinants of capital structure of companies in transition economies by using advanced corporate finance theories which are well applied to developed countries. Some studies also investigate the relation between leverage and investment behavior, leverage and profitability of companies in transition countries. Table 3.1 lists up studies on corporate reform of transition economies.

3.1.1 Literatures on Central and East Europe countries

Since the first study on capital structure of companies in transition economies (Cornelli, Portes, and Schaffer (1996)), there have been many studies on this issue in these countries, for example Hussain and Nivorozhkin (1997) examined the capital structure of listed companies in Poland during the 1991-1994 period; Nivorozhkin (2002) investigated the determinants of the capital structure of listed companies in Hungary; Bauer (2004) analyzed listed companies of the Czech Republic; Delcoure (2007) analyzed listed companies in the Czech Republic, Poland, Russia, and Slovakia; Ebaid, I. E. (2009) investigated the impacts of capital structure on performance of non-financial Egyptian listed firms from 1997 to 2005.

3.1.2 Literatures on Asia countries

Studies on Asian corporate finance issues have focused on China, for example Chen (2004) and Huang and Song (2006) analyzed the determinants of the financing structures

of Chinese listed companies; Firth (2008) investigated the relationship between capital structure and investment of 1203 firms listed on the Shanghai Stock Exchange or the Shenzen Stock Exchange between 1991 and 2004.

Very few econometric analyses have been conducted on corporate finance sector of Vietnam. Nguyen (2006) is a pioneering research in this field, using data on SMEs in the 1998 – 2001 period for investigating the determinants of leverage of those companies; Biger et al. (2008) used a corporate survey conducted by the General Statistics Office of Vietnam in 2002 and 2003 to analyze corporate fund-procurement structures. Vo (2013), Vu (2013) and Do (2014) investigated the impacts of capital structure on performance of listed firms in Vietnam.

Table 3.1 List of literatures on corporate reform of transition economies

		Capital Structure	Invest-ment	Firm Growth	Firm Perfor-mance
Central and East Europe Countries	Cornelli, Portes, and Schaffer (1996)	○			
	Hussain and Nivorozhkin (1997)	○			
	Colombo (2001)	○			
	Nivorozhkin (2002)	○			
	Bauer (2004)	○			
	Delcoure (2007)	○			
	Ebaid, I. E. (2009)	○			○
China	Chen (2004)	○			
	Huang and Song (2006)	○			
	Firth (2008)	○	○	○	
Vietnam	Nguyen (2006)	○			
	Biger (2008)	○			
	Akiba (2010)		○		
	Vo (2013)				○
	Vu (2013)				○
	Do (2014)	○			○
	Phan (2014)				○

Source: Author

3.2 Fundraising behaviors and capital structure

3.2.1 Theory

According to Modigliani and Miller's (1958) theory (hereafter referred to as the "MM theory"), corporate value does not depend on capital structure; thus, corporate financing

has no impact on corporate value when the following conditions exist together: a complete capital market, perfect information, no corporate taxes, no transaction costs, and no economic externalities.

However, the full set of preconditions of the MM theory is not likely to exist in the real world; therefore, an adjusted MM theory (also called the trade-off theory) is required. According to the trade-off approach, companies choose the optimal capital structure that minimizes the cost of capital so as to maximize the value of the company, while considering the impact of corporate tax and the risk of bankruptcy.

Corporation tax: In the real world, there is a corporate tax. If a company procures funds by issuing corporate bonds or by availing of bank loans, instead of raising funds through equity, corporate value can be enhanced by saving on corporate taxes. However, using tax credits and non-tax incentives such as depreciation and investment tax incentives ("non-debt tax reductions") weakens the tax-saving effect. Therefore, it is expected that companies whose corporate taxes are higher will have their debt ratios raised and that companies that can use non-debt tax reductions will have their debt ratios lowered.

Bankruptcy risk: The higher a company's debt ratio, the lower its average capital cost. However, when the debt ratio is high, the risk of bankruptcy is also high, resulting in a higher risk premium. The optimal debt ratio is the one that is associated with maximum corporate value. The higher a company's bankruptcy risk, the more expensive is its procurement of debt funds; it is therefore expected that companies' debt ratios will be lowered. Generally, the larger a company is, the smaller its exogenous shocks and thus the lower its bankruptcy risk. Therefore, the larger a company is and the smaller its risk of bankruptcy, the higher its debt ratio is expected to be.

Besides corporate taxes and business risk, when an information asymmetry exists, agency cost has an important influence on the determination of corporate value, namely the decision of the most suitable capital structure for a company. Since Jensen and Meckling (1976), Myers (1977), and Myers and Majluf (1984), the problem of the conflict among the benefits of related parties such as stockholders, managers, and creditors, which are factors of the agency cost, have attracted much attention. The agency cost approach helps determine the optimal capital structure of a company.

Internal funds: When the agency problem between large shareholders (or corporate owners) and external creditors is serious, the risk premium for the procurement of external debt funds will be larger, and the agency cost of procuring debt funds will be higher. It is therefore expected that companies with abundant internal funds will tend to maintain lower debt ratios to prevent a dependence on debt.

Collateral: The agency cost for procuring debt funds can be reduced by providing collateral to creditors. Thus, companies that can provide more collateral can reduce the agency cost of procuring debt funds, and their corporate debt ratios are expected to be higher.

3.2.2 Empirical analysis

Several empirical studies on corporate financial structures in transitional economies have been conducted on East European countries and China (Table 3.2). They examine corporate behaviors using the modified MM, agency costs, and pecking-order approaches, with a focus on government influence on the markets and companies peculiar to transitional economies. In the Eastern European context, the first study on capital structure of companies in transition economies was Cornelli, Portes, and Schaffer (1996). They estimate a simple static leverage regression, where the explanatory variables are tangibility, size, profitability and a dummy for state ownership by using data of Czech, Hungarian and Polish companies in the early 1990s. They find that the level of leverage of these transition economies is lower than that of Western economies and that the fraction of short-term debts is higher than long-term debts. They also find that in contrast to studies on Western data, collateral is negatively related to leverage in the case of these transition countries. They offer two explanations for this: first, that pre-transition firms financed their fixed assets with equity and therefore the relationship to debt is negative; second, that the book value of fixed assets might differ from the market values. The authors thus report that Eastern European companies behave differently from Western European companies.

Hussain and Nivorozhkin (1997) examines the capital structure of listed companies in Poland during the early years of the establishment of the Warsaw Stock Exchange (1991-1994). As the same as Cornelli, Portes, and Schaffer (1996), they also find a extremely

low leverage level of listed companies in Poland. Besides, they find that shareholder concentration, where banks, investment companies and the state are dominant shareholders, has a neutral of even a beneficial influence on leverage of listed companies. Moreover, they find that leverage level of large, newly established, foreign-owned companies and companies with strong cash positions tend to be higher.

Nivorozhkin (2002) investigates the determinants of the capital structure of companies listed on the Budapest Stock Exchange by using data of 1992-1995 period, and confirms the very low leverage ratios of Hungarian listed companies. He also finds a negative relationship between leverage and collateral, and he explains this cause by the lack of long-term debt financing. Besides, he finds that manufacturing companies and companies with the state among their major shareholders have higher levels of debt financing relative to other companies.

Bauer (2004) analyzed listed companies in the Czech Republic and concluded that the determinants of their asset structures could be explained by using the economic factors of advanced countries, as applied to the G7 industrialized countries.

Delcoure (2007) analyzed listed companies in the Czech Republic, Poland, Russia, and Slovakia to show that their financing structures can be explained by using the modified pecking-order trade-off theory, with priority placed on internal reserves, the issuance of common stock, bank loans, and the issuance of corporate bonds, in that order.

Studies on Asian corporate finance have focused on China. Chen (2004) analyzed the determinants of the financing structures of Chinese listed companies, showing that the pecking-order theory was applicable to them, with priority placed on internal reserve funds, the issuance of common stocks, and long-term debt, in that order.

Huang and Song (2006) showed that the determinants of corporate funding in advanced and developing countries were equally applicable to listed companies in China, while also finding that government ownership did not affect corporate financing structures in China and that the tax system could have a strong impact on the long-term debt of Chinese companies.

3.3 Impacts of capital structure on the investment decisions

3.3.1 Theory

The impact of leverage on the investment decisions and growth opportunities of a company is a central issue in corporate finance. Modigliani and Miller (1958) argue that in a complete market, leverage is irrelevant to the investment decision and value of a company. However, in a world with an incomplete market and a significant agency problem, leverage may affect the investment decisions of a company.

Underinvestment problem: Myers (1977) discusses how firms with large debts are discouraged from investing in opportunities with positive net present value (NPV) when there are conflicts between shareholders, managers, and creditors, because the benefits from investment may partially or fully accrue to the debt-holders; this gives rise to an underinvestment problem (i.e., a debt-overhang problem). Reducing debt ratio may facilitate such underinvestment problem, which suggests a negative relationship between leverage and investment.

Overinvestment problem: Jensen (1986) argues that when conflicts between managers and shareholders exist, managers are encouraged to undertake even negative NPV investments to enlarge the scale of the firm, which leads to an overinvestment problem. Constraining the availability of free cash flow, including increasing debt financing, may constrain managers' ability to undertake such policies, which also suggests a negative relationship between leverage and investment.

3.3.2 Empirical analysis

There are many empirical studies considering the relevance of leverage on investment of firms for developed economies but still few for transitional economies (Table 3.3). Firth et al. (2008) used a sample of 1203 firms listed on the Shanghai Stock Exchange or the Shenzen Stock Exchange between 1991 and 2004 to investigate the relationship between leverage and investment of listed firms in China, a state-owned bank lending environment. Their empirical analysis suggested that there is a negative relationship between leverage and investment among listed firms in China and that this negative relationship is weaker in firms with high growth opportunities and good operating performance. They also argue that in such a transitional economy characterized by its nascent stock market, the absence of public debt markets, and the Chinese economy's reliance on bank borrowing, the negative relationship between leverage and investment is

weaker in firms with higher levels of state shareholding than in firms with lower levels of state shareholding. They concluded that the state-owned banks in China impose fewer restrictions on the capital expenditures of low growth and poorly performing firms, as well as on firms with greater state ownership. This creates an overinvestment bias in these firms.

3.4 Impact of capital structure on profitability

3.4.1 Theory

Regarding debt ratios' impact on profitability, the operation of information asymmetry presents two possibilities (Myer, 1977).

The first possibility relates to the mornitoring of the creditors and the corporate governance of the company. If the creditors' monitoring towards a company's business operations is sufficiently good, an increase in debt will inhibit wasteful investment and improve corporate profitability. In this case, the relation between leverage and the return on assets (ROA) is positive. However, if neither the creditors' monitoring nor the corporate governance of the borrowing company is good, the company may use loans ineffectively. In this case, an increase in debt may worsen the profitability of the company, causing a negative relation between leverage and ROA.

The second possibility relates to excessive debt problem. Even if an investment project to enhance a company's discounted present value is ongoing, the company may not execute an investment for fear that procuring funds through debts will send investment profits to creditors, thus reducing corporate value. If such an excessive debt problem occurs, reducing the debt ratio is expected to promote investments, thereby increasing corporate profits, which leads to a negative relation between leverage and ROA.

3.4.2 Empirical analysis

There are few studies on the relationship between leverage and firms' performance using data sets of transitional countries (Table 3.5). Ebaid, I. E. (2009) uses a data set of non-financial Egyptian listed firms from 1997 to 2005 to investigate the effect of capital structure on various measures of firm performance and finds that capital structure has a weak-to-no impact on firm's performance.

3.5 Relation of capital structure, investment and growth opportunities

3.5.1 Theory

There are four possibilities of the relation of capital structure, investment and growth opportunities of a company.

Underinvestment problem: In a world where the market is incomplete, information is asymmetric, and agency costs exist, capital structure may induce an underinvestment or over-investment problem. Myers (1977) discusses how conflicts between shareholders, managers, and creditors discourage firms with large debts from investing in opportunities with positive NPV, because the benefits from investment may partially or fully accrue to the debt-holders; this creates an under-investment problem (i.e., a debt-overhang problem). In this case, reducing the debt ratio may encourage firms to invest more, and thus, increase the value of the firms. Therefore, if debt financing facilitates underinvestment (i.e., a debt-overhang problem), then the relationship between leverage and investment is negative, and the relationship between the debt ratio and a firm's growth opportunities is negative.

Overinvestment problem: Jensen (1986) argues that when conflicts between managers and shareholders exist, managers are encouraged to undertake even negative NPV investments to enlarge the scale of the firm. Constraining the availability of free cash flow, including the increase of debt financing, may constrain the managers' ability to undertake such policies, and thus, improve the value of firms. Thus, if debt financing restrains overinvestment, then the relationship between leverage and investment is negative, and the relationship between debt ratio and the firm's growth opportunities is positive.

Financial constraints problem: In order to finance their investment projects, companies can use either internal funds (e.g., retained earnings) or external funds (e.g., debt and issuance of new shares). The financial constraints problem arises when the company faces a shortage of funding sources to finance their investment projects. In this case, increasing debt may provide a company more chances to invest and more opportunities for growth. Thus, both of the relationships between the debt ratio and investment, as well as the relationship between debt ratio and growth opportunities,

become positive.

Soft budget constraints problem: The term “soft budget constraint” was introduced by Kornai (1979, 1980). He argues that although state-owned firms were vested with a moral and financial interest in maximizing their profits, the chronic loss-makers among them were not allowed to fail. They were always bailed out with financial subsidies or other instruments, and hence, these firms could survive even after chronic losses. For example, some sort of constraint on liquidity, solvency, or debt may set the upper limit on the sustainability of the financial deficit of state-owned firms. A soft budget constraint is suggested to be especially pervasive in socialist economies, particularly in those economies intent on “reform.”

Table 3.2 Summary of empirical studies on capital structure

Study	Sample discription	Methodology	Main findings
Cornelli, Portes, and Schaffer (1996)	Czech, Hungarian and Polish companies in the early 1990s	The regression is a reduced-form equation with a measure of leverage as the dependent variable, and the independent variables are measures of tangibility, size, and profitability	Eastern European companies behave differently from Western European companies: - the level of leverage of these transition economies is lower than that of Western economies; - the fraction of short-term debts is higher than long-term debts; - collateral is negatively related to leverage in the case of these transition countries
Hussain and Nivorozhkin (1997)	listed companies in Poland during the 1991-1994 period		- listed companies in Poland have a extremely low leverage level. - shareholder concentration, has a neutral of even a beneficial influence on leverage of listed companies. - leverage level of large, new, foreign-owned companies and companies with strong cash positions are higher.
Nivorozhkin (2002)	25 non-financial companies listed on Budapest Stock Exchange during the period 1992–95		- listed companies in Hungary have very low leverage ratios - leverage and collateral have a negative relationship; - manufacturing companies and companies with the state among their major shareholders have higher levels of debt financing relative to other companies.

Table 3.2 (continue)

Study	Sample discription	Methodology	Main findings
Bauer (2004)	listed companies of the Czech Republic		determinants of their capital structures could be explained by using the economic factors of advanced countries
Delcoure (2007)	listed companies in the Czech Republic, Poland, Russia, and Slovakia		financing structures can be explained by using the modified pecking-order trade-off theory, with priority placed on internal reserves, the issuance of common stock, bank loans, and the issuance of corporate bonds.
Chen (2004)	Chinese listed companies		pecking-order theory was applicable to theese companies, with priority placed on internal reserve funds, the issuance of common stocks, and long-term debt.
Huang and Song (2006)	Chinese listed companies		- determinants of corporate funding in advanced and developing countries were equally applicable to listed companies in China, - government ownership did not affect corporate financing structures in China - tax system could have a strong impact on the long-term debt of Chinese companies.

Table 3.3 Summary of empirical studies on the impacts of capital structure on investment

Study	Sample discription	Methodology	Main findings
Firth (2008)	1203 firms listed on the Shanghai Stock Exchange or the Shenzen Stock Exchange between 1991 and 2004		- there is a negative relationship between leverage and investment among listed firms in China - this negative relationship is weaker in firms with high growth opportunities and good operating performance. - negative relationship between leverage and investment is weaker in firms with higher levels of state shareholding than in firms with lower levels of state shareholding. - state-owned banks in China impose fewer restrictions on the capital expenditures of low growth and poorly performing firms, as well as on firms with greater state ownership. This creates an overinvestment bias in these firms.

Table 3.4 Summary of empirical studies on the impacts of capital structure on performance

Study	Sample discription	Methodology	Main findings
Ebaid, I. E. (2009)	non-financial Egyptian listed firms from 1997 to 2005	- Dependent variables: ROE, ROA, gross profit margin - Estimation method: Multiple regression analysis	Capital structure has a weak-to-no impact on firm's performance.

3.6 Empirical analyses on capital structure of companies in Vietnam under the *Doi moi*

Vietnam started the economic reform since 1986 under the *Doi moi* policy. Since then, the state-owned companies have been equitized, the stock exchanges have been established, foreign investors have been encouraged, banking sector has been reformed, etc. Only a few emperical analyses have been conducted on corporate finance of Vietnam. Nguyen (ibid.), a pioneering researcher in this field, used data on 558 SMEs (with 300 employees or fewer and capital of 10 billion Dong or less) covering the period from 1998 to 2001, to estimate the determinants of corporate debt ratios, short-term debt ratios, and short-term debt ratios (excluding bank loans). He found that government-owned companies had higher debt ratios than other companies. He also found that there was a positve correlation between the size of a company, as well as its growth rate and management risk on the one hand and its debt ratio on the other, whereas there was a negative correlation between fixed assets and debt ratio. Further, he discovered that corporate profitability did not influence the debt ratio, and that corporate owners' stronger ties with banks and networks facilitated the procurement of funds.

Biger et al. (ibid.) used a corporate survey on 3,778 companies with ten employees or more collected by the General Statistics Office of Vietnam in 2002 and 2003 to analyze corporate fund-procurement structures. The authors found that the long-term debt ratios of Vietnamese companies were low and their long-term investments were small, that their debt ratios were positively correlated with business size, growth opportunities, and the owners' corporate occupancy ratios but negatively correlated with profitability rates, depreciation amortization ratios, fixed assets, and corporate tax rates.

Vo (2013), Vu (2013) and Do (2014) investigated the impacts of capital structure on performance of listed firms in Vietnam. Vo (2013) conducted questionaires of 790 state-owned companies and privatized state-owned companies which are located in Ho Chi Minh city and used Ordinary Least Square method to estimate the profitablity of these companies. They used productivity, sales, profits, ROA, ROE as the proxies for firms' performance. Their empirical results revealed that only organizationalintegration significantly affects the performance of privatized firms. Besides, employee and customer satisfactions are among the most important drivers of corporate performance. Moreover,

privatized firms with less state ownership perform better than those with more state ownership. In particular, privatized firms with a state ownership proportion less than 30 per cent perform better than privatized firms with the proportion ranging from 30 to 50 per cent.

Vu (2013) used a data base of 465 non-financial companies on HOSE and HASE for the period of 2007-2010 to investigate the relationship between capital structure and profitability by fix effect method. The emperical results suggest that the more number of bank relationships firms increase, the more firm performance decrease. Besiges, if a firm establishes strongly short-term credit financing relationship with banks, the firm's performance reduces. On the contrary, if a firm has strongly long-term credit financing relationship with banks, its performance increases. Moreovere, the effectiveness of using total assets is worse as a firm has strongly overall credit financing relationship with banks.Asset tangibility structure has negative relationship with firm's ROE, while assets have negative association with ROA. Turnover has positive association with firm performance. Firms with higher state shares (more than 35 per cent state ownership) have less effective.

Do (2014) used a data base of 134 non-financial companies of HOSE for the period of 2009-2012 to investigate the effect of capital structure on firs' performance by random effect method. The emperical analysis reveals that capital structure has a negative impact with statistical significance on financial performance. Besides, the higher level of state ownership in ownership structure of a firm is, the better financial performance it has.

Table 3.5 Summary of empirical studies on capital structure of companies in Vietnam under the *Doi moi*

Study	Sample discription	Methodology	Main findings
Nguyen (2006)	SMEs in the 1998 – 2001 period		- government-owned companies had higher debt ratios than other companies - there was a direct correlation between the size of a company, growth rate and management risk on the one hand and its debt ratio on the other - there was an inverse correlation between fixed assets and debt ratio. - corporate profitability did not influence the debt ratio - corporate owners' stronger ties with banks and networks facilitated the procurement of funds.
Biger (2008)	corporate survey conducted by the General Statistics Office of Vietnam in 2002 and 2003		- the long-term debt ratios of Vietnamese companies were low and their long-term investments were small - debt ratios were positively correlated with business size, growth opportunities, and the owners' corporate occupancy ratios but negatively correlated with profitability rates, depreciation amortization ratios, fixed assets, and corporate tax rates.
Vo (2013)	Questionaires of 790 state-owned companies and privatized state-owned companies which are located in HCMC	- Dependent variables: productivity, sales, profits, ROA, ROE - Estimation method: OLS	- only organizationalintegration significantly affects the performance of privatized firms. - employee and customer satisfactions are among the most important drivers of corporate performance. - privatized firms with less state ownership perform better than those with more state ownership (Privatized firms with a state ownership proportion less than 30 per cent perform better than privatized firms with the proportion ranging from 30 to 50 per cent.)

Table 3.5 (continue)

Study	Sample discription	Methodology	Main findings
Vu (2013)	465 non-financial companies on HOSE and HASE (2007-2010)	- Dependent variables: ROA, ROE - Estimation method: Fix effect	- The more number of bank relationships firms increase, the more firm performance decrease - If a firm establishes strongly short-term credit financing relationship with banks, the firm's performance reduces. On the contrary, if a firm has strongly long-term credit financing relationship with banks, its performance increases. - The effectiveness of using total assets is worse as a firm has strongly overall credit financing relationship with banks. - asset tangibility structure has negative relationship with firm's ROE, while assets have negative association with ROA. - Turnover has positive association with firm performance. firms with higher state shares (more than 35 per cent state ownership) have less effective.
Do (2014)	134 non-financial companies of HOSE (2009-2012)	- Dependent variables: ROA,ROE - Estimation method: random effect	- Capital structure has a negative impact with statistical significance on financial performance (measured by ROA, ROE). - The higher level of state ownership in ownership structure of a firm is, the better financial performance it has.

3.7 Hypotheses on corporate finance of listed companies in Vietnam

This section states hypotheses on the capital structure, investment, profitability and growth opportunity of listed companies in Vietnam, based on the modern corporate finance theories which are introduced in the previous sections and based on the environment of economic reform and corporate reform of Vietnam as well as the characteristics of the ownership, corporate finance, corporate governance of the listed companies in Vietnam which were explained in Chapter 1 and 2.

3.7.1 Hypotheses on general

(a) Hypotheses on capital struture

- Factors associated with trade-off theory

Corporate tax: According to the adjusted MM theory, when a company's corporate tax is higher, the company should raise funds by debts such as bank borrowing or bonds rather than equities in order to avoid the payment of an amount of corporation tax which allows it to raise the company value by that amount. Vietnam extends preferential corporate tax treatment to companies that were listed before 2007 and stipulates additional preferential treatment in the Corporation Tax Law of 2003.[17] Thus, the corporate tax may be different among listed companies. The higher the corporate tax of the company is, the higher its debt ratio is.

Non-debt tax shields: When the corporate tax is high, company can also save tax payment by using a non-debt tax savings shield, such as depreciation. This effect is opposite with the effect of saving taxes by using debt. The larger the shield is, the less necessary to save tax through debt, thus reducing the debt ratio. Companies with large tax-saving effects are expected to have their debt ratios lowered.

Bankruptcy risk: The larger a company is and the smaller its risk of bankruptcy because of the diversification of its business as well as the reductions of exogenous shocks, thus the higher its debt ratio would be.

- Factors associated with agency costs

[17] See Table 4.7 in Appendix of chapter 4 for detail.

In Vietnam, ownership concentration is high even in listed companies, which makes hostile takeovers rare. On the other hand, the rights of small shareholders are inadequately protected, and the disclosure of corporate information is not thorough. Under these circumstances, an agency problem is deemed to occur among the shareholders and external creditors of the listed companies in Vietnam.

Profitability: When an agency problem between large shareholders and external creditors is serious, the risk premium for the procurement of external debt funds will be larger, and the agency cost of procuring debt funds will be higher. Therefore, it is expected that companies with abundant internal funds will tend to maintain lower debt ratios to avoid dependence on debt.

Tangibility: The agency cost of procuring debt funds can be reduced by providing collateral to creditors. Thus, companies that can provide more collateral can reduce the agency cost of procuring debt funds and can expect their corporate debt ratios to be higher.

(b) Hypotheses on the impacts of capital struture on investment

Overinvestment problem: In Vietnam, in the boom period (2006-2008), companies borrowed and invested much because every investment seemed to be profitable (World Bank, 2009), while banks also lent easily. Such easy lending and borrowing may cause overinvestment problem among listed companies.

Underinvestment: In the period after the boom, banks were more cautious in lending and started recovering debts, while companies had to pay both interest and principle of the debts borrowed in the previous period but found it difficult in borrowing more to invest more. The underinvestment problem may be occur.

(c) Hypotheses on the impacts of capital struture on profitability

In the boom period (2006-2008) of Vietnamese economy, companies borrowed and invested much because every investment seemed to be profitable (World Bank, 2009), while banks also lent easily. Such easy lending and borrowing without strict monitoring caused companies to invest wastefully and decreased their profitability. Besides, the corporate governance of listed companies in Vietnam is not good, thus affects the

performance of the companies (IFC, 2012).

(d) Hypotheses on the relation of capital struture, investment and growth opportunities

Listed companies in Vietnam may be cope with problem of underinvestment or overinvestment as discussed in section 3.7.1(b). If debt financing facilitates underinvestment, the relationship between leverage and investment is negative, and the relationship between the debt ratio and a firm's growth opportunities is negative. If debt financing restrains overinvestment, then the relationship between leverage and investment is negative, and the relationship between debt ratio and the firm's growth opportunities is positive.

Vietnam is a transitional economy, and thus, the soft budget constraint problem may be observed among firms in Vietnam. If firms are in a soft budget constraint problem, the relationship between the debt ratio and investment is positive, whereas the relationship between the debt ratio and a firm's growth opportunities is negative.

3.7.2 Hypotheses on state ownership

(a) Hypotheses of the impact of state ownership on Capital struture

Many of the listed companies in Vietnam remain state-controlled, with a state ownership ratio of more than 50 per cent, and have different fund procurement structures from other companies.

- State-controlled companies may have weaker incentives to adjust their debt ratios to attain tax savings because, unlike non-state investors, the state can earn tax revenues from companies as income, and thus the corporate value evaluated by the state (i.e., the discounted present value of future corporate income) does not change, regardless of whether there is corporate tax. [18] Therefore, compared with non-state-controlled companies, state-controlled companies probably have less influence on tax savings and non-debt tax-saving effects. In addition, state-controlled companies are the government's source of revenue, and avoiding taxes is difficult for such companies. On the other hand, non-state-controlled companies have a strong incentive to avoid taxes; a delay in

[18] If a company is 100% government-owned, corporate tax has no effect on corporate value.

corporate information disclosure, which deprives the state of the ability to collect taxes, may lead to tax evasion. When taxes are easily evaded, the non-debt tax-saving effect will be smaller for non-state-controlled companies.

- State-controlled companies may have higher debt ratios than those of other companies because they have lower bankruptcy risk due to implicitly guarantees of the state.
- State-controlled companies may have higher debt ratios than those of other companies because of their easier access to state-owned bank loans, regardless of their collateral due to their closer relationships with state-owned banks than other companies. In fact, the loans made by Vietnam's four major state-owned banks accounted for about 80 per cent of all bank loans, the majority of which was supplied to state-owned companies (Nguyen, 2006). Therefore, the effect of the collateral magnitude on their debt ratios should be smaller than that on the ratios of the other companies.

(b) Hypotheses of the impact of state ownership on investment

- State-controlled companies are under the strong influence of the government and in some cases function as tools for implementing government policies. Therefore, state-controlled companies are expected to be more active in investing than companies that are not state-controlled.
- On the other hand, since state-owned companies are under the strong influence of the government, they are less profit-oriented than private companies. Therefore, state-controlled companies are likely to make less use of good investment opportunities and to be inactive in investing.
- State-controlled companies seem to access bank loans more easily than other companies because they implement policy projects of the government and state-owned commercial banks are forced to lend to them with priority and preference. Therefore, state-owned commercial banks may not be normal external creditors of state-controlled companies, and their monitoring activities may be less stringent toward state-controlled companies.

(c) Hypotheses of the impact of state ownership on profitability

- State-controlled companies have both low management risk and close relationships with state-owned banks; hence, they may enjoy fund mobilization advantages and higher profitability.
- On the other hand, state-controlled companies are less independent from the state in terms of business management; this leads to the risk of lower profitability because of state exploitation.

(d) Hypotheses of the impact of state ownership on the relation of capital structure, investment and growth opportunities

The soft budget constraint problem may be observed among firms in a transitional economy such as Vietnam. I assume that this problem may be more severe in state-controlled companies than in other companies, because this problem is considered a characteristic of a socialist economy.

3.7.3 Hypotheses on foreign ownership

- Companies upon which foreign investors with funding abilities and wide investment experience exert influences are required to disclose more extensive corporate information, and their business operations are more strictly monitored. This reduces information asymmetry, which, in turn, is expected to facilitate the procurement of funds through the issuance of corporate shares, and help the company to invest more.
- Foreign ownership in listed companies has some potential gains in improving the corporate governance and performance of listed firms through the importation of foreign management, technology, and business capacities (World Bank, 2006). Thus the profitability and growth opportunities of foreign-affiliated companies is expected to be higher than that of other companies.

3.8 Models, empirical methods and data set

In order to investigate the characteristics of capital structrure and its impacts on investment behavior, profitability and growth opportunities of listed companies in Vietnam, I use 3 models: (1) Capital structure and investment; (2) Capital structure and profitability; (3) Capital structure, growth opportunities and investment. I use 4 equations

of capital structure, investment, profitability and growth opportunities for these 3 models. Because there are many common terms among these models, I will not describe the 3 models separately along with their estimation as often done in other academic papers, but I will explain the 4 equations and the estimation methods of the 3 models in this section of chapter 3. In chapter 4, 5,6, I only explain the estimation results of the 3 models, respectively.

Below is the description of 4 estimation equations (1) capital structure, (2) investment, (3) profitability and (4) growth opportunity as well as the estimation methods that will be used to conduct empirical anlysis in the following chapters to check the hypotheses stated in the previous section. The variables and their caculation or proxies as well as their predicted signs will be explained in detail.

3.8.1 Estimation of capital structure of listed companies in Vietnam

(a) Estimation equation

$$CS_{it} = \alpha_{cs} + \Sigma\beta_j X_{jit} + \delta_{cs} STATE + \Sigma\gamma_j STATE^* X_{jit} + \partial_{cs} FOR + \varepsilon_{it} \qquad (1)$$

CS_{it} is the explained variables

X_{jit} is the explanatory variables, j = 1, 2, 3, 4

STATE is the state-controlled company dummy variable.

FOR is the foreign-affiliated company dummy variable.

α_{CS} is a constant

β_j are coefficients of the explanatory variables, j = 1, 2, 3, 4

δ_{cs} is coefficient of *STATE*

γ_j are coefficients of the crossterms of *STATE* and explanatory variables, j = 1, 2, 3, 4

∂_{cs} is coefficient of *FOR*

ε_{it} is the matrix of the error terms

i denotes the individual company

t denotes time.

This equation will appear in the estimation of all 3 models, which will be conducted in chapter 4, 5, 6. There are some minor differences in the equation used in each model.

(b) Variables and predicted signs

- Explained variables

I use 3 debt ratios, debt ratio (*DR*), long-term debt ratio (*LDR*) and long-term bank loan ratio (*LBR*), as explained variables to investigate the capital structure of listed companies in Vietnam.

Debt ratio (*DR*), which is caculated by dividing the amount of total debts by the amount of total assets, is the most basic index of capital structure. It indicates the percentage of a company's debt over its total assets. Because that the effects of saving tax payments and bankruptcy risk on capital structure relates to the whole debt, using the debt ratio is considered appropriate for observing the influences of these factors on fundraising structure.

Long-term debt ratio (*LDR*), which is caculated by dividing the total amount of long-term debt (for which the maturity period exceeds one year) by the total amount of assets, is another index of capital structure. Long-term debts are often used for long-term investments like equipment, and the information asymmetry between the company and the creditors of long-term debt is larger than the case of short-term debt. Thus the impact of the agency cost caused by that information asymmetry on the capital structure is stronger for long-term than for short-term debt.

Banks are considered to have an information production function as well as creditor protection and debt collection capacities. Therefore, I considered bank loans with a maturity of more than one year as long-term debt, calculated the ratio of long-term bank loans to total assets, and used this long-term bank loan ratio (*LBR*) as a dependent variable.

- Explanatory variables

The explanatory variables include economic variables such as corporate tax rate (*TAX*), non-debt tax shields (*NDTS*), business scale (*SIZE*) which are based on the adjusted MM theory (trade-off theory), and fixed assets ratio (*TANG*), operating income ratio (*ROA*) which are based on the agency cost approach; variables representing the characteristics of Vietnamese companies such as state-controlled company dummy variable (*STATE*),

foreign-affiliated companies dummy variable (*FOR*), the Ho Chi Minh Securities Exchange listed company dummy variable (*HOSE*), and other control variables such as year dummy variables, industry dummy variables.

The effective tax rate (*TAX*) is calculated by the ratio of the amount of corporation tax payment to the amount of operating income.[19] This variable is used to investigate the tax savings effect by using debt of listed companies in Vietnam. The predicted sign of *TAX* is positive as explained in section 3.7.1(a).

Non-debt tax shield (*NDTS*) is used to investigate the effect of saving taxes by using a non-debt tax savings shield, such as depreciation. This effect is opposite with the effect of saving taxes by using debt. Depreciation ratio, which is a ratio of depreciation to the amount of fixxed assets, is used as a proxy for the non-debt tax savings shield. The predicted sign of *NDTS* is negative as explained in section 3.7.1(a).

I do not use both *TAX* and *NDTS* in an equation. I use *TAX* in the equation of capital structure in the model with investment, but I use *NDTS* in the other 2 models.

Business scale (*SIZE*) is used as a proxy for the a company's bankcruptcy risk. *SIZE* is measured as the natural logarithm of the company's total assets.[20] The predicted sign of *SIZE* is positive as explained in section 3.7.1(a).

The operating income ratio (*ROA*), which is calculated as the ratio of the amount of operating income (the total amount of profit before interest payments and tax payments) to the amount of total assets,[21] is used as a proxy for the free cash flow or the profitability of the company. Interest payments was added to the pre-tax profits to caculate the operating profit because there is no operating profit term in the financial report of listed companies in Vietnam. The predicted sign of *ROA* is negative as explained in section 3.7.1(a).

The fixed assets ratio (*TANG*), which is the ratio of total assets to the amount of fixed assets,[22] is used as a proxy variable for collateral ability. Monitoring and screening fixed

[19] Guihai and Frank (2006) used the same variables. For information on the tax system in Vietnam, see Table 4.7 in the Appendix of Chapter 4.
[20] For example, see Chen (2004). The logarithm of sales is also often used as a proxy for firm size.
[21] As in Huang and Song (2006) and Yupana (1999).
[22] See Rajan and Zingales (1995) and Yupana (1999). Fixed assets refer to the sum of intangible assets and tangible fixed assets.

assets is relatively easy; hence, compared to other assets, fixed assets are more appropriately used as collateral. Using fixed assets as collateral reduces the agency costs associated with debt financing and allows a company to mobilize debt easily. The predicted sign of *TANG* is positive.

The state-controlled company dummy (*STATE*) takes a value of 1 for companies with state stock holdings exceeding 50 per cent and 0 otherwise.

The foreign-affiliated company dummy (*FOR*) takes a value of 1 if foreign ownership exceeds 20 per cent.

STATE, *FOR*, and the cross-terms of *STATE* and the explanatory variables are used to investigate the effects of state ownership and foreign ownership on companies' capital structure. The effects of tax-saving by debt or non-debt tax savings may be smaller, and the effects of bankcrutcy and collateral on debt ratios may be higher for the case of state-controlled companies, as discussed in section 3.7.2(a). The predicted sign of *FOR* is negative, as discussed in section 3.7.3.

The Ho Chi Minh Securities Exchange listed company dummy (*HOSE*) takes 1 for companies listed on the Ho Chi Minh Securities Exchange and 0 for companies listed on the Hanoi Securities Exchange.

Industry dummy variables include construction industry (*CONS*), manufacturing industry (*MANU*), mining industry (*MIN*), electricity industry (*POWE*), services (*SERV*), communications (*COMM*), real estate *(REAL),* and commerce *(COM).*

Year dummy variables include *YD2007, YD2008, YD2009, YD2010*.

3.8.2 Estimation of investment of listed companies in Vietnam

(a) Estimation equation

$$I_{it}/K_{it} = \alpha_{INV} + \Sigma\beta_j X_{jit} + \delta_{INV} STATE + \gamma_{INV} STATE^* CS_{it} + \partial_{INV} FOR + \varepsilon_{it} \qquad (2)$$

I_{it}/K_{it} is explained variable;

X_{jit} is the explanatory variables, j = 1, 2, 3;

STATE is the state-controlled company dummy variable;

FOR is the foreign-affiliated company dummy variable;

α_{INV} is a constant term;

β_j is coefficients of the explanatory variables, j = 1, 2, 3*;*

δ_{INV} is coefficient of *STATE*;

γ_{INV} is coefficient of the crossterm of *STATE* and debt ratios;

∂_{INV} is coefficient of *FOR*;

ε_{it} is the matrix of error items;

i denotes individual company;

t denotes time.

This equation will appear in the estimation of the model of capital structure and investment which will be conducted in chapter 4, and the model of capital structure, growth opportunity and investment which will be conducted in chapter 6.

(b) Variables and predicted signs

- Explained variables

The investment ratio I_{it}/K_{it} was used as the explained variable[23]. The net investment of an individual company (I_{it}) is calculated by $I_{it} = K_{it} - K_{it-1}CPI_t$ + depreciation$_{it}$, where K_{it} is the company's fixed asset at each time t and CPI_t is the consumer price index at time t.

- Explanatory variables

Q, cash flow (*CF*), total debt ratio (*TDR*), long-term debt ratio (*LDR*) and long-term bank loan ratio (*LBR*) are used as the control variables, where *TDR, LDR* and *LBR* are taken into the estimation in turn.

Q is calculated as the ratio of the total amount of debt and the present value of stocks to the book value of total assets and is used as a proxy variable for the business growth opportunities of a company. The higher the growth opportunity of the company is, the more the company invests. The predicted sign of *Q* is positive.

Cash flow (*CF*) is used as a proxy for the internal reserves of the companies and is calculated using the ratio of earnings before interest payments and taxes (EBIT) to fixed assets. If the company has much internal reserves, it may be more ready for investment. The predicted sign of *CF* is possitive.

TDR, *LDR*, and LBR are used as proxies for leverage and are calculated by dividing

[23] The same as Aivazian et al. (2005),

the sums of total debt, long-term debt, and long-term bank loans (for which the maturity period exceeds one year), respectively, by the total amount of total assets. If debt financing plays an active role in restraining overinvestment or facilitating underinvestment (i.e., a debt-overhang problem) among the listed companies in Vietnam, the signs of the leverage variables will be negative.

The state-controlled company dummy (*STATE*) takes a value of 1 for companies with state stock holdings exceeding 50 per cent and 0 otherwise.

The foreign-affiliated company dummy (*FOR*) takes a value of 1 if foreign ownership exceeds 20 per cent.

STATE, *FOR*, and the cross-terms of *STATE* and the leverage variables are used to investigate the effects of state ownership and foreign ownership on companies' investment activities. State-controlled companies may invest more or less than other companies, and debt financing's role of restraining overinvestment or facilitating underinvestment may be weaker in state-controlled companies, as discussed in section 3.7.2(b). The predicted sign of *FOR* is positive, as discussed in section 3.7.3.

The Ho Chi Minh Securities Exchange listed company dummy (*HOSE*) takes 1 for companies listed on the Ho Chi Minh Securities Exchange and 0 for companies listed on the Hanoi Securities Exchange.

Industry dummy variables are used to control the characteristics of industries on each listed company and year dummy variables are used to control the influences of macroeconomic circumstances.

Industry dummy variables include construction industry (*CONS*), manufacturing industry (*MANU*), mining industry (*MIN*), electricity industry (*POWE*), services (*SERV*), communications (*COMM*), real estate *(REAL),* and commerce *(COM).*

Year dummy variables include *YD2007, YD2008, YD2009, YD2010*.

3.8.3 Estimation of profitability of listed companies in Vietnam

(a) Estimation equation

$$ROA_{it} = \alpha_{ROA} + \Sigma\beta_j X_{jit} + \delta_{\mathrm{ROA}} STATE + \Sigma\gamma_j STATE^* X_{jit} + \partial_{ROA} FOR + \varepsilon_{it} \qquad (3)$$

ROA_{it} is a dependent variable representing the company's profitability;

X_{jit} are explanatory variables, j = 1, 2, 3, 4;

STATE is the state-controlled company dummy;

FOR is the foreign-affiliated company dummy;

α_{ROA} is a constant term;

β_j is coefficients of the explanatory variables, j = 1, 2, 3, 4;

δ_{ROA} is coefficient of *STATE*;

γ_{ROA} is coefficient of the crossterm of *STATE* and explanatory variables, j = 1, 2, 3, 4;

∂_{ROA} is coefficient of *FOR*;

ε_{it} is the matrix of error items;

i denotes individual company;

t denotes time.

This equation will appear in the estimation of the models of capital structure and profitability, which will be conducted in chapter 5.

(b) Variables and predicted signs

- Explained variables

ROA, which is calculated by dividing the operating profit (the total amount of profit before interest payments and tax payments) to the amount of total assets, is used as the proxy variable for the profitability of a company. Interest payments was added to the pre-tax profits to caculate the operating profit because there is no operating profit term in the financial report of listed companies in Vietnam.

- Explanatory variables

Explanatory variables include economic variables such as business scale (*SIZE)*, firm growth rate (*GROWTH)*, investment ratio (*INV)*, debt ratios; variables representing the characteristics of Vietnamese companies such as state-controlled company dummy (*STATE)*, foreign-affiliated company dummy (*FOR*), and other controlled variables such as industry dummies and year dummies.

Business scale (*SIZE*) is calculated as the natural logarithm of the firm's total assets.[24]

[24] For example, see Chen (2004). The logarithm of sales is also often used as a proxy for

The larger the business scale of the company is, the more its ability of influencing the market and thus the higher its profitability will be. The predicted sign of *SIZE* is positive.

Firm growth rate (*GROWTH*) is calculated as the growth of sales year after year. The higher the growth rate of the company is, the higher its profitability will be. The predicted sign of *GROWTH* is positive.

The investment ratio (*INV*) is calculated by deviding the net investment of the company $I_t = K_t - K_{t-1}CPI_t$ + depreciation$_{it}$ by the company's fixed asset K_t (where CPI_t is the consumer price index at time *t)*. The more the company invests, the more opportunity its profitability may increase. The predicted sign of *INV* is positive.

Three debt ratios were used. They are the total debt ratio (*TDR*), long-term debt ratio (*LDR*), and long-term bank loan ratio (*LBR*). When debt is excessive, overdebt problems (i.e., debt overhang) and undesirable effects on business efficiency may occur. The sign of debt ratios may be negative, as discussed in section 3.7.1(c).

The state-controlled company dummy (*STATE*) takes a value of 1 for companies with state stock holdings exceeding 50 per cent and 0 otherwise.

The foreign-affiliated company dummy (*FOR*) takes a value of 1 if foreign ownership exceeds 20 per cent.

STATE, *FOR*, and the cross-terms of *STATE* and the explanatory variables are used to investigate the effects of state ownership and foreign ownership on companies' profitability. State-controlled companies may have higher or lower profitability, as discussed in section 3.3.2(c). Foreign-affiliated companies are expected to be highly profitable because of their high technical capacities and strong management skills, as discussed in section 3.7.3.

Industry dummy variables include the construction industry (*CONS*), manufacturing industry (*MANU*), mining industry (*MIN*), electricity industry (*POWE*), services (*SERV*), communications (*COMM*), real estate *(REAL),* and commerce *(COM)*.

Year dummy variables include *YD2007, YD2008, YD2009*, YD2010.

3.8.4 Estimation of growth opportunities of listed companies in Vietnam

(a) Estimation equation

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business scale.

$$Q_{it} = \alpha_Q + \Sigma\beta_{Qj} X_{jit} + \delta_Q STATE + \Sigma\gamma_{Qj} STATE^* X_{jit} + \partial_Q FOR + \varepsilon_{it} \qquad (4)$$

X_{jit} represents the explanatory variables, j = 1, 2, 3;

STATE is the state-controlled company dummy;

FOR is the foreign-affiliated company dummy;

α_Q is a constant term;

β_{Qj} is coefficients of explanatory variables, j = 1, 2, 3;

δ_Q is coefficient of *STATE*;

γ_Q is coefficient of the crossterm of *STATE* and explanatory variables, j = 1, 2, 3;

∂_Q is coefficient of *FOR*;

ε_{it} is the matrix of error items;

i denotes individual company;

t denotes time.

This equation will appear in the estimation of the models of capital structure, growth opportunity and investment, which will be conducted in chapter 6.

(b) Variables and predicted signs

- Explained variables

Q is used as the explained variable. *Q* is calculated as the ratio of the total amount of debt and the present value of stocks to the book value of total assets and is used as a proxy variable for the business growth opportunities of a company.

- Explanatory variables

Business scale (*SIZE)*, profitability (*ROA)* and TDR, LDR, LBR, are used as controlled variables.

Business scale (*SIZE)* is calculated by taking the natural logarithm of total assets. Companies with large business scale have a strong effect on the market, and their growth opportunities are expected to be higher. Profitability (*ROA)* is calculated as the ratio of the operating profit to total assets. If the business scale or the profitability of a company has grown recently, it is expected to have good growth opportunities. The predicted signs of both *SIZE* and *ROA* are positive.

TDR, *LDR* and *LBR* are used as proxies for leverage and are introduced one-by-one into the model. If debt financing facilitates underinvestment (i.e., a debt-overhang problem) or the company is in soft budget constraints, then the relationship between the debt ratio and the growth opportunities of the company will be negative. Otherwise, if debt financing restrains overinvestment, then the relationship between the debt ratio and a firm's growth opportunities will be positive, as discussed in section 3.7.1(d).

The state-controlled company dummy (*STATE*) takes a value of 1 for companies with state stock holdings exceeding 50 per cent and 0 otherwise.

The foreign-affiliated company dummy (*FOR*) takes a value of 1 if foreign ownership exceeds 20 per cent.

STATE, *FOR*, and the cross-terms of *STATE* and the explanatory variables are used to investigate the effects of state ownership and foreign ownership on companies' profitability. As discussed in section 3.3.2(b) and (d), the underinvestment problem or overinvestment problem may be more significant among state-controlled companies; or the soft budget constraint problem may be more severe in state-controlled companies than in other companies. Foreign-affiliated companies are expected to have higher growth opportunity because of their high technical capacities and strong management skills, as discussed in section 3.7.3.

Industry dummy variables include the construction industry (*CONS*), manufacturing industry (*MANU*), mining industry (*MIN*), electricity industry (*POWE*), services (*SERV*), communications (*COMM*), real estate *(REAL),* and commerce *(COM)*.

Year dummy variables include *YD2007, YD2008, YD2009*, YD2010.

3.8.5 Empirical methods

In order to investigate the characteristics of the capital structure of listed companies in Vietnam and its impacts on investment, profitability and growth opportunity, I use many estimation methods in estimating 3 models: (1) Capital structure and investment; (2) Capital structure and profitability; (3) Capital structure, growth opportunities and investment.

First, I apply the Ordinary Least Square (OLS) method for all these 3 models to estimate the each equation separately. Next, I use the 2-step Least Square (2SLS) method

for all of 3 models to estimate the equations one by one, using instrument variables. If the instrument variables (IV) are only marginally valid, known as weak instrument variables, they can lead to biased inferences based on the IV estimates. Thus, testing for the validity of the instrument variables in an IV regression is important. I check the presence of weak instrument variables by using Cragg-Donald statistic.

Theoretically, there may be endogeneity problem between capital structure and investment, between capital structure and profitability, as well as among capital structure, investment, and growth opportunities. I check the endogeneity of these variables by using Durbin-Wu-Hausman Test. And because in order to address the endogeneity problem, simultaneously estimating equations of endogeneity variables as a system is preferred to estimating them using a single equation (Driffield, 2007), I use the 3-stage Least Squares (3SLS) method in estimating 3 models by using 3 systems of simultaneous equations: (1) system of capital structure equation and investment equation, (2) system of capital structure equation and profitability equation, (3) system of capital structure equation, investment equation, and growth opportunities equation. The 3SLS method also use instrument variables, thus I also check the weak instrument variables by using Cragg-Donald statistic.

3.8.6 Data set

The samples used in the analysis are the non-financial companies listed on the HOSE or the HASE before 2009 for which we could get the necessary data for at least two continuous years from 2006 to 2011. Financial institutions were excluded from the sample because the determinants of their capital structure are different from that of non-financial institutions. The data from 2005 and before were excluded from the sample because they were too small in comparison with the data from 2006 onward, and thus made estimation results biased. The necessary data were acquired from the annual financial reports of listed companies that were disclosed by the HOSE and the HASE.

There were 200 companies listed on the HOSE and 257 companies listed on the HASE before 2009. 435 non-financial companies were included in the sample. Table 3.6 shows the characteristics of the main variables used in the analysis using the sample of 435 companies.

Table 3.6 Comparison of State-controlled companies and foreign-affiliated companies

	Ho Chi Minh stock exchange			Hanoi stock exchange		
	All companies	State-controlled companies	Foreign - affiliated companies	All companies	State-controlled companies	Foreign - affiliated companies
Total debt ratio	0.471	0.472	0.406	0.562	0.613	0.442
Long-term debt ratio	0.109	0.167	0.101	0.109	0.127	0.079
Long-term bank loan ratio	0.060	0.097	0.053	0.060	0.072	0.047
Investment ratio	0.446	0.300	0.448	0.577	0.464	0.974
Tax ratio	0.151	0.088	0.123	0.123	0.110	0.120
Depreciation rate	0.034	0.049	0.032	0.041	0.051	0.046
Sales	26.94	27.00	27.48	25.97	26.25	26.55
Fix assets ratio	0.307	0.415	0.318	0.296	0.318	0.313
ROA	0.120	0.135	0.148	0.105	0.104	0.158
Cash flow	1.251	1.054	1.287	2.357	1.252	2.497
Q	1.789	1.963	2.076	1.449	1.377	2.029

Source: Homepages of the Hanoi stock exchange (http://www.hnx.vn/) and the Ho Chi Minh stock exchange (http://www.hsx.vnnx.vn)
Note 1: Average value from 2006 to 2011 (Q is average value from 2006 to 2010)
Note 2: Sales are in natural logarithm values.

First, the HASE had a higher total debt ratio than the HOSE; while long-term debt and long-term bank loan ratios of the two markets are about the same. This result suggests that companies listed on the HASE are more dependent on short-term debt. Besides, companies listed on the HOSE had higher sales, operating profit and fixed assets ratios than those listed on the HASE. This result indicates the superiority of corporate size, profitability, and collateral ability of companies listed on the HOSE, where has stricter listing norms. However, companies listed on the HASE had higher investment ratio, depreciate ratio and cash flow than those listed on the HOSE.

Second, a comparison of the companies' capital structures shows that in both markets, state-controlled companies tend to be more highly reliant on debt than foreign-affiliated companies are. In addition, on both stock exchanges, foreign-affiliated companies have higher operating profit ratios, while state-controlled companies had higher fixed assets ratios. Moreover, foreign-affiliated companies on both markets have higher investment rates, which indicate active investment.

Table 3.7 displays the basic statistics of the main variables. The average debt ratio of listed companies in Vietnam is 51.2 per cent, which is approximately the same as that of

listed companies in China (50 per cent) as reported by Guihai and Frank (2006). However, the variance of the debt ratio among listed companies in Vietnam is high (22.42 per cent). The average long-term debt ratio of listed companies in Vietnam is under 11 per cent, higher than that of listed companies in China (7 per cent) as reported by Jean (2004). The average fixed assets rate of listed companies in Vietnam is 30 per cent, which is slightly lower than that of listed companies in China (34 per cent) as reported by Guihai and Frank (2006). In contrast, the average operating income ratio of listed companies in Vietnam is 11.1 per cent, which is higher than the ratio of 5.7 per cent of listed companies in China (Guihai and Frank, 2006). Finally, the average effective corporate tax rate of listed companies in Vietnam is 14.2 per cent, which is much lower than the official rate of 28 per cent, meaning that most listed companies in Vietnam enjoy tax preferences.

Table 3.7 Basic statistics of the variables

	TDR	LDR	LBR	INV	TAX	NDTS	SIZE	TANG	Q	ROA	GROWTH	CF
Mean	0.512	0.108	0.064	0.516	0.142	0.036	26.49	0.298	1.593	0.111	1.279	1.899
Median	0.540	0.040	0.008	0.121	0.108	0.026	26.46	0.251	1.246	0.098	1.173	0.567
Maximum	1.134	0.754	0.746	30.49	43.71	0.427	31.20	1.921	17.51	1.876	15.93	763.1
Minimum	0.000	0.000	0.000	-1.137	-0.142	0.001	22.20	0.001	0.208	-0.745	0.052	-74.56
Std. Dev.	0.224	0.147	0.116	1.820	1.025	0.035	1.40	0.217	1.100	0.096	0.792	19.30
Observations	1905	1905	1905	1905	1905	1905	2336	1905	1544	1905	1913	1905

3.9 Remarks

This chapter reviewed both the theoretical and empirical literatures on capital structure and its impacts on investment and performance of companies in the context of corporate reform, which is a background for the empirical study on this issue to be conducted in Chapter 4, 5, 6. Only a few emperical analyses have been conducted on Vietnam's corporate finance.

This chapter also built the hypotheses and models for these empirical analyses. I use 3 models: (1) Capital structure and investment; (2) Capital structure and profitability; (3) Capital structure, growth opportunities and investment. I use 4 equations of capital structure, investment, profitability and growth opportunities for these 3 models. I use many estimation methods in estimating 3 models: (1) Capital structure and investment; (2) Capital structure and profitability; (3) Capital structure, growth opportunities and investment. First, I apply the Ordinary Least Square (OLS) method for all these 3 models

to estimate the each equation separately. Next, I use the 2-step Least Square (2SLS) method for all of 3 models to estimate the equations one by one, using instrument variables. After that, I use the 3-stage Least Squares (3SLS) method in estimating 3 models by using 3 systems of simultaneous equations: (1) system of capital structure equation and investment equation, (2) system of capital structure equation and profitability equation, (3) system of capital structure equation, investment equation, and growth opportunities equation. I check the presence of weak instrument variables by using Cragg-Donald statistic. I also check the endogeneity of these variables by using Durbin-Wu-Hausman Test.

Chapter 4

Capital structure and investment behavior of listed companies in Vietnam: An estimation of the influence of state ownership[25]

This chapter investigates the characteristics of the capital structure and its impact on the investment behavior of listed companies in the Hanoi Stock Exchange (HASE) and the Ho Chi Minh Stock Exchange (HOSE) in Vietnam. As explained in Chapter 3, I conduct three estimation methods for the analysis of capital structure and investment: ordinary least squares (OLS), two-stage least squares (2SLS), and three-stage least squares (3SLS).

The estimation analysis, using panel data covering the six-year period from 2006 to 2011, implies that the *Doi moi* economic reforms implemented by the Vietnamese government have achieved some of their goals in terms of fund mobilization and corporate finance. The analysis also illustrates several limitations of the economic reforms, such as the opaque relationship between state-controlled companies and government banks, and inactive investment by state-controlled companies.

4.1 Correlation coefficients of explanatory variables

In this analysis, I use a sample set of all 435 companies listed on the HOSE or the HASE for the six-year period 2006–2011. As the two markets have different listing norms, I use a HOSE listed company dummy variable (*HOSE*) to see any differences between companies listed on the HOSE and those listed on the HASE.

Tables 4.1 and 4.2 display the correlation coefficients of the explanatory variables of the two estimation equations of capital structure and investment. In both estimation equations, none of the explanatory variables are highly correlated with each other.

[25] This chapter is based on part of my co-study with Prof. Hidenobu Okuda, which was published as "Capital Structure and Investment Behavior of Listed Companies in Vietnam: An Estimation of the Influence of Government Ownership" in *International Journal of Business and Information*, 7(2), December 2012.

Table 4.1: Explanatory variable correlation coefficients of the capital structure equation

Correlation	TAX	SIZE	TANG	PROF	STATE	FOR	HOSE
TAX	1						
SIZE	0.0160	1					
TANG	-0.0342	0.0591	1				
PROF	-0.0140	-0.0924	-0.0455	1			
STATE	-0.0256	0.0453	0.1641	0.0607	1		
FOR	-0.0094	0.3046	0.0374	0.1126	-0.1716	1	
HOSE	0.0180	0.4188	0.0416	0.0574	-0.1838	0.3795	1

Table 4.2: Explanatory variable correlation coefficients of the investment equation

Correlation	Q	CF	TDR	LDR	LBR	STATE	FOR	HOSE
Q	1							
CF	0.0793	1						
TDR	-0.2692	-0.0950	1					
LDR	-0.1102	-0.1084	0.4567	1				
LBR	-0.1023	-0.1188	0.3567	0.7788	1			
STATE	-0.0032	-0.0292	0.1719	0.1639	0.1519	1		
FOR	0.1771	-0.0010	-0.1986	-0.0361	-0.0470	-0.1714	1	
HOSE	0.1123	-0.0161	-0.2110	0.0050	-0.0002	-0.1963	0.3790	1

4.2 Estimation results of the OLS method

First, I estimate the capital structure and investment equations separately using the OLS method. The OLS estimation results are summarized in Table 4.3.

Table 4.3: Estimation results of debt ratios and investment using the OLS method

Variable (Predicted sign)		TDR	LDR	LBR
		Coef. Prob.	Coef. Prob.	Coef. Prob.
C		-0.8761***	-0.587***	-0.511***
TAX	(+)	-0.078	0.109***	0.025
SIZE	(+)	0.064***	0.021***	0.016***
TANG	(+)	0.069***	0.333***	0.263***
PROF	(−)	-0.953***	-0.280***	-0.154***
STATE	(+/−)	0.040***	0.035***	0.019***
STATE*TAX	(−)	-0.129	-0.236***	-0.139***
FOR		-0.081***	-0.024***	-0.026***
HOSE	(+/−)	-0.098***	-0.008	-0.005
Year dummies		Yes	Yes	Yes
Industry dummies		Yes	Yes	Yes
R-squared		0.424	0.375	0.382
Adjusted R-sq.		0.417	0.367	0.375
S. E. of regression		0.171	0.120	0.094
Obs.		1721	1720	1714

		INV	INV	INV
C		-0.160	0.139	0.152
Q	(+)	0.065	0.037	0.031
CF	(+)	0.061***	0.058***	0.057***
Leverage	(+)	0.432	-0.417	-1.589***
STATE	(−)	-0.110	-0.144	-0.227**
STATE*Leverage	(+/−)	-0.142	-0.017	1.201
FOR	(−)	-0.015	-0.024	-0.030
HOSE		-0.131	-0.136	-0.134
Year dummies		Yes	Yes	Yes
Industry dummies		Yes	Yes	Yes
R-squared		0.051	0.050	0.054
Adjusted R-sq.		0.039	0.038	0.041
S. E. of regression		1.692	1.693	1.692
Obs.		1472	1472	1465

Note:
* indicates significance at 10% level.
** indicates significance at 5% level.
*** indicates significance at 1% level.

4.3 Tests for weak instruments and endogeneity

Next, I estimate the capital structure and investment equations separately using the 2SLS method, then estimate the two equations together as a system using 3SLS. Both estimation methods use instrumental variables, thus I check the validity of the instruments using the Cragg-Donald statistic.[26] The two equations are also estimated as a system under the assumption that the capital structure is endogenous in the investment

[26] I use the exogenous variables of both equations as the instrumental variables.

equation. Thus, I check the endogeneity of these variables using the Durbin-Wu-Hausman test.

The results of the tests for weak instruments and endogeneity are summarized in Table 4.4. The tests reject the hypotheses that the estimation includes weak instrument variables and that the capital structure is exogenous.

Table 4.4: Tests for weak instruments and endogeneity

	TDR	LDR	LBR
	Coef. Prob.	Coef. Prob.	Coef. Prob.
Estimation of INV			
Cragg-Donald F-stat.	8.814 *	7.600 15%	8.994 *
Durbin-Wu-Hausman Chi2 (2)	6.549 **	32.122 ***	30.450 ***

Note:
* indicates significance at 10% level.
** indicates significance at 5% level.
*** indicates significance at 1% level.

4.4 Estimation results of the 2SLS method

The estimation results of the 2SLS method are summarized in Table 4.5.

Table 4.5: Estimation results of debt ratios and investment using the 2SLS method

Variable (Predicted sign)		TDR Coef.	Prob.	LDR Coef.	Prob.	LBR Coef.	Prob.
C		-1.888***		-0.598***		-0.673***	
TAX	(+)	0.068		0.114		0.052	
SIZE	(+)	0.094***		0.023***		0.023***	
TANG	(+)	0.166***		0.333***		0.275***	
PROF	(−)	-0.577***		-0.267***		-0.084	
STATE	(+/−)	-0.009		0.037***		0.014	
STATE*TAX	(−)	-0.288*		-0.283***		-0.189***	
FOR		-0.588***		-0.042		-0.105	
HOSE	(+/−)	0.011		-0.007		0.010	
Year dummies		Yes		Yes		Yes	
Industry dummies		Yes		Yes		Yes	
R-squared		-0.113		0.382		0.338	
Adjusted R-sq.		-0.128		0.373		0.329	
S. E. of regression		0.238		0.117		0.095	
Obs.		1474		1473		1467	

		INV		INV		INV	
C		1.803***		0.863***		0.712***	
Q	(+)	0.147**		0.042		0.018	
CF	(+)	0.064***		0.0437***		0.042***	
CS	(+)	-3.245**		-8.189***		-10.274***	
STATE	(−)	-4.429***		-1.200*		-0.830*	
STATE*TDR	(+/−)	7.838***		9.606*		10.999*	
FOR	(−)	-1.777***		-0.543		-0.147	
HOSE		0.429*		0.020		-0.071	
Year dummies		Yes		Yes		Yes	
Industry dummies		Yes		Yes		Yes	
R-squared		-0.287		-0.185		-0.089	
Adjusted R-sq.		-0.303		-0.199		-0.102	
S. E. of regression		1.973		1.892		1.817	
Obs.		1470		1470		1463	

Note:
* indicates significance at 10% level.
** indicates significance at 5% level.
*** indicates significance at 1% level.

4.5 Estimation results of the 3SLS method

The estimation results of the 3SLS method are summarized in Table 4.6.

Table 4.6: Estimation results of debt ratios and investment using the 3SLS method

Variable (Predicted sign)		TDR Coef.	Prob.	LDR Coef.	Prob.	LBR Coef.	Prob.
C		-1.776	***	-0.596	***	-0.673	***
TAX	(+)	0.073		0.118		0.056	
SIZE	(+)	0.089	***	0.022	***	0.023	***
TANG	(+)	0.191	***	0.342	***	0.278	***
PROF	(−)	-0.625	***	-0.230	***	-0.069	
STATE	(+/−)	0.001		0.038	***	0.015	
STATE*TAX	(−)	-0.341	**	-0.313	***	-0.208	***
FOR		-0.551	***	-0.062		-0.114	
HOSE	(+/−)	0.006		-0.001		0.013	
Year dummies		Yes		Yes		Yes	
Industry dummies		Yes		Yes		Yes	
R-squared		-0.039		0.375		0.327	
Adjusted R-sq.		-0.053		0.366		0.317	
S. E. of regression		0.230		0.117		0.096	
Obs.		1474		1473		1467	

		INV		INV		INV	
C		1.882	***	0.892	***	0.721	***
Q	(+)	0.162	**	0.062		0.030	
CF	(+)	0.055	***	0.030	***	0.034	***
CS	(+)	-3.407	***	-8.551	***	-10.502	***
STATE	(−)	-4.580	***	-1.240	**	-0.839	**
STATE*TDR	(+/−)	8.113	***	9.949	*	11.138	**
FOR	(−)	-1.854	***	-0.580		-0.152	
HOSE		0.440	**	0.017		-0.077	
Year dummies		Yes		Yes		Yes	
Industry dummies		Yes		Yes		Yes	
R-squared		-0.314		-0.207		-0.096207	
Adjusted R-sq.		-0.330		-0.222		-0.109871	
S. E. of regression		1.993		1.910		1.822779	
Obs.		1470		1470		1463	

Note:
* indicates significance at 10% level.
** indicates significance at 5% level.
*** indicates significance at 1% level.

4.6 Discussion on estimation results

The estimation results from the three estimation methods are similar, and no contradictory results are observed. According to the estimation results, the capital structure and investment behavior of listed companies in Vietnam have the following characteristics. First, in general, the estimation results of the debt ratios are consistent with the corporation finance theories explained in Chapter 3: profitability is negatively related to the debt ratios; and tax payment, business scale, and collateral ability are positively related to the debt ratios. In all estimations of the total debt ratio, long-term

debt ratio, and long-term bank loan ratio, none of the explanatory variables have coefficients with signs that are both contrary to the theoretical expectations and statistically significant. This suggests that standard corporate finance theories could be appropriate for explaining the capital structure of listed companies in Vietnam.

Second, we find differences between the fundraising determinants of state-controlled companies and companies that are not state controlled. The coefficient of the state-controlled company dummy (*STATE*) is significantly positive in the estimation of the long-term debt ratio. This suggests that state-controlled companies possess an advantage in reducing the agency costs accompanied with tapping external borrowed funds. The coefficient of the cross term of the state-controlled company dummy (*STATE*) and the tax ratio is significantly negative in all of the estimations. This agrees with the hypothesis that state-controlled companies have less incentive to save tax payments by using debt.

Third, the fundraising structure of the companies listed on the HOSE is the same as for those listed on the HASE. In the estimations of the total debt ratio, long-term debt ratio, and long-term bank loan ratio, the HOSE listed company dummy coefficient (*HOSE*) is not significant. This suggests that there was no statistical difference in the capital structures of the companies listed on the two stock markets.[27]

Fourth, the relationship between investment and leverage for listed companies in Vietnam is significantly negative—as it is in developed economies and other transitional economies, such as China—which implies that debt financing has the role of restraining overinvestment or facilitating underinvestment.

Fifth, the negative relationship between leverage and investment is weaker for the case of state-controlled companies because the coeffecients of the cross term of the state-controlled company dummy (*STATE*) and leverage are significantly positive. This implies that the role of borrowing in restraining overinvestment or facilitating underinvestment is weaker for state-controlled companies. State-owned banks and state-controlled banks tend to give priority to state-controlled companies in lending funds, and they also monitor these companies' use of funds less strictly than they do for other companies because state-controlled companies are guaranteed by the government.

[27] Recently, many companies have met the listing conditions of the HOSE but have remained listed on the HASE. It is thought that there is almost no difference between listing on the HOSE and the HASE.

Sixth, the negative relationship between investment and leverage is much stronger for long-term bank loans than for long-term debt. This implies that bank loans play a more active role in restraining overinvestment or facilitating underinvestment than other forms of credit.

Finally, the coefficients of the dummy for state-controlled companies (*STATE*) are significantly negative. This means that state-controlled companies are less active in investing than other companies.

4.7 Conclusion

This analysis used data from 2006 to 2011 of companies listed on the Ho Chi Minh Stock Exchange and the Hanoi Stock Exchange in order to investigate the fundraising determinants and effects of capital structure on the investment behavior of companies in Vietnam. The estimation results revealed some interesting findings.

First, compared with studies by Nguyen (2006) and Biger et al. (2008) on the capital structure of small and medium-sized unlisted companies under an underdeveloped institutional environment, this analysis showed that the capital structure of listed companies can be better explained by standard corporate financing theory based on agency cost theory. In addition, the debt ratios of the listed companies were higher than those of the small-to-medium-sized companies examined by Nguyen (2006). These observations suggest that the development of market infrastructure surrounding the listed companies successfully mitigated the agency cost problems accompanied with tapping external funds and, at the same time, made their capital structure more consistent with the theoretically predicted one.

Second, similarly to Nguyen (2006), this study found that state-controlled companies had higher debt ratios than other companies, which implies that state-controlled companies had an advantageous position in reducing the agency costs associated with tapping borrowed funds. This brings about the suspicion that state-controlled, listed companies maintained the privilege to borrow easily from state-controlled banks even after they were formally privatized and listed on the stock markets.

Third, the analysis found a negative relationship between leverage and investment, as has been found in other studies of transitional countries. This implies that debt financing

plays a role in preventing underinvestment and overinvestment. This negative relationship is weaker for state-controlled companies. However, state-controlled companies were less active as investors than companies that were not state controlled. These findings imply that although state-controlled companies borrow more, they are less strictly monitored by state-controlled banks in their use of debt funds, and thus invest less than other companies.

This study identified the key features of the fundraising structure and the effects on the investment behavior of listed companies in Vietnam. In terms of fund mobilization and corporate financing, the *Doi moi* economic reforms, implemented by the Vietnamese government with the aim of creating an economic system based on market mechanisms, have achieved some of their goals. However, the findings illustrate several limitations of the reforms, such as the opaque relationship between state-controlled companies and state-owned and state-controlled banks, and inactive investment by state-controlled companies.

Appendix

Table 4.7: Corporate taxes on listed companies in Vietnam

Corporate tax law (17 June 2003) (1) Tax rate: 28 per cent (2) Preferential tax rate: (1) Application of tax rates of 20 per cent, 15 per cent, and 10 per cent to companies that have been newly established in preferred industries or areas; (2) Application of tax exemptions (for at most four years) and half reductions (for at most the next nine years) for companies that have moved to preferred areas; (3) Application of tax exemptions (for at most four years) and half reductions (for at most the next seven years) of the increase in profit of companies that apply for a new production line or new technology.
Regulations on tax preferences for listed companies (20 October 2004) (1) Application of tax exemption for the next two years for newly listed companies; (2) If listing is not done at the beginning of the year, tax exemption can be calculated from the next year; (3) If corporate tax law preferences are being applied, this preference can be applied after applying those preferences.
Nullification of regulations on tax preferences for listed companies (8 September 2006) (1) For companies listed after 1 January 2007, the preferences of the above regulations are not applied; (2) For companies listed before 1 January 2007, the preferences of the above regulations are applied.

Source: Websites of the Hanoi Stock Exchange (http://www.hnx.vn/) and the Ho Chi Minh Stock Exchange (http://www.hsx.vnnx.vn).

Chapter 5

Effects of the Vietnamese government's institutional reforms on companies' capital structure and profitability: before and after the Lehman shock[28]

This chapter investigates the capital structure and profitability of listed companies in the Ho Chi Minh Stock Exchange (HOSE) and the Hanoi Stock Exchange (HASE) in Vietnam by estimating their debt ratios and return rates using the samples of 435 listed companies for 2006-2011 period. As explained in Chapter 3, I use three estimation methods for the analysis of capital structure and profitability: ordinary least squares (OLS), two-stage least squares (2SLS), and three-stage least squares (3SLS).

The estimation results show that, firstly, the capital structures of listed companies matched the features of standardized corporate financing theories better than those of Vietnamese small- and medium-sized enterprises. Secondly, weak corporate governance and insufficient monitoring by creditors led the listed companies to borrow excessively in both periods before and after the boom. Thirdly, the state-controlled companies listed on the HOSE are likely to have an advantage over other companies in accessing loans and earning profits, even after the boom period. Fourthly, while foreign-affiliated companies were not substantially more profitable during the boom period, they were more profitable in the period after the boom because of better production technology and management.

These findings suggest that reforming the Vietnamese market requires the development of a system that ensures information transparency and independent corporate governance, enhances financial openness, and increases the privatization of state-owned companies, including those in the banking sector.

[28] This chapter is based on part of my co-study with Prof. Hidenobu Okuda which was published as "Effects of the state ownership on companies' capital structure and profitability: Estimation Analysis Before and After the Lehman Shock" in *Journal of Asia Economics*, 38, 2015.

5.1 Correlation coefficients of explanatory variables

In this model, I divide the sample set into 2 periods of before and after Lehman shock (2006-2008 and 2009-2011), and estimate separately the companies listed on the HOSE and the HASE to see the differences between these two periods and among companies listed on these two markets.

Table 5.1 and Table 5.2 display the correlation coefficients of the explanatory variables of the two estimation equations of capital structure and profitability. In both estimation equations, none of the explanatory variables are highly correlated with each other.

Table 5.1 Correlation coefficients of explanatory variables of capital structure equation

	NDTS	SIZE	TANG	ROA	STATE	FOR	GDPGROWTH
NDTS	1						
SIZE	-0.120	1					
TANG	0.446	0.057	1				
ROA	0.085	-0.090	-0.043	1			
STATE	0.246	0.046	0.162	0.062	1		
FOR	-0.025	0.305	0.038	0.112	-0.171	1	
GDPGROWTH	-0.011	-0.009	-0.039	0.011	0.034	0.045	1

Table 5.2: Correlation coefficients of the explanatory variables of profitability equation

	SIZE	GROWTH	INV	TDR	LDR	LBR	STATE	FOR
SIZE	1							
GROWTH	0.048	1						
INV	0.008	0.038	1					
TDR	0.274	0.033	0.059	1				
LDR	0.368	0.013	0.052	0.446	1			
LBR	0.277	0.022	0.016	0.360	0.780	1		
STATE	0.039	-0.031	-0.042	0.156	0.152	0.151	1	
FOR	0.310	-0.001	-0.008	-0.194	-0.030	-0.042	-0.175	1

5.2 Estimation results of OLS method

First, I estimate the capital structure equation and profitability equation separately using OLS method. The OLS estimation results are summarized in Tables 5.3 and Table 5.4 for listed companies on the HOSE and the HASE, respectively.

Table 5.3: Estimation results of debt ratios and profitability for companies listed on the HOSE using OLS method

	2006-2008			2009-2011		
	TDR	LDR	LBR	TDR	LDR	LBR
	Coef. Prob	Coef. Prob.	Coef. Prob.	Coef. Prob.	Coef. Prob.	Coef. Prob.
Constant	-0.746 **	-0.182	-0.177	-0.930 ***	-0.168	-0.107
NDTS	-0.149	-0.170	-0.655 ***	-0.093	-0.041	-0.576 ***
SIZE	0.039 ***	0.007	0.004	0.054 ***	0.008	0.003
TANG	0.161 **	0.292 ***	0.245 ***	0.118 ***	0.248 ***	0.223 ***
ROA	-0.733 ***	-0.269 ***	-0.132 ***	-0.423 ***	-0.149 ***	-0.033
STATE	-0.378	-0.411	-0.508 **	-0.867 ***	-0.648 ***	-0.527 ***
STATE·SIZE	0.012	0.012	0.016 *	0.028 **	0.022 ***	0.016 ***
STATE·TANG	0.168	0.297 ***	0.150 ***	0.138 *	0.189 ***	0.269 ***
FOREIGN	-0.093 ***	-0.022 *	-0.026 ***	-0.109 ***	-0.017	-0.020 **
GDPGROWTH	0.021	0.002	0.002	-0.006	-0.007	-0.006
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.304	0.526	0.482	0.343	0.462	0.563
Adjusted R-sq	0.261	0.497	0.450	0.321	0.444	0.548
S.E. of reg	0.188	0.100	0.080	0.176	0.119	0.088
Obs.	297	297	293	523	523	521

	ROA	ROA	ROA	ROA	ROA	ROA
Constant	0.083	0.171	0.166	-0.521 ***	-0.372 ***	-0.400 ***
SIZE	0.002	-0.002	-0.002	0.024 ***	0.015 ***	0.016 ***
GROWTH	0.005	0.005	0.005	0.038 ***	0.041 ***	0.037 ***
INV	-0.001	-0.001	-0.002	0.002	0.003	0.003
TDR	-0.146 ***	-0.166 ***	-0.199 ***	-0.179 ***	-0.148 ***	-0.079 *
STATE	0.577 **	0.575 **	0.553 **	0.465 **	0.525 **	0.644 ***
STATE·SIZE	-0.022 **	-0.021 **	-0.022 **	-0.022 ***	-0.023 ***	-0.028 ***
STATE·GROWTH	0.066 *	0.059	0.084 **	0.154 ***	0.150 ***	0.162 ***
STATE·INV	-0.006	-0.006	0.001	0.004	-0.002	0.001
FOREIGN	-0.001	0.010	0.009	0.014	0.035 ***	0.036 ***
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.239	0.189	0.180	0.255	0.211	0.193
Adjusted R-sq	0.191	0.138	0.128	0.230	0.185	0.166
S.E. of reg	0.082	0.085	0.086	0.110	0.113	0.115
Obs.	287	287	287	522	522	520

Note: *, **, *** indicate significance at 10%, 5%, 1%, respectively.

Table 5.4: Estimation results of debt ratios and profitability for companies listed on the HASE using OLS method

	2006-2008						2009-2011					
	TDR		LDR		LBR		TDR		LDR		LBR	
	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.
Constant	-1.073	***	-0.225		-0.636	***	-1.494	***	-0.480	***	-0.509	***
NDTS	-0.324		-0.748	***	-0.560	***	-0.358	*	-0.463	***	-0.328	***
SIZE	0.061		0.011		0.021	***	0.088	***	0.022	***	0.018	***
TANG	0.201	**	0.423	***	0.401	***	0.119	***	0.388	***	0.297	***
ROA	-0.680	***	-0.147	*	-0.024		-0.752		-0.164		-0.049	
STATE	0.224		-0.631	**	-0.133		0.722	***	-0.270		-0.178	
STATE·SIZE	-0.002		0.024	**	0.005		-0.024	***	0.010		0.006	
STATE·TANG	-0.332		0.018		0.008		-0.135	**	-0.017		0.030	
FOREIGN	-0.056		-0.085		-0.086	**	-0.056		-0.009		-0.002	
GDPGROWTH	0.004		0.003		0.005		-0.042	***	-0.013		-0.003	
Year dummies	Yes		Yes		Yes		Yes		Yes		Yes	
Industry dummies	Yes		Yes		Yes		Yes		Yes		Yes	
R-squared	0.409		0.412		0.439		0.489		0.415		0.446	
Adjusted R-sq	0.369		0.373		0.402		0.475		0.399		0.431	
S.E. of reg	0.181		0.117		0.090		0.162		0.112		0.082	
Obs.	272		272		272		671		670		667	

	ROA		ROA		ROA		ROA		ROA		ROA	
Constant	0.196		0.337	**	0.312	**	-0.194	**	0.064		0.063	
SIZE	-0.001		-0.008		-0.007		0.014	***	0.002		0.001	
GROWTH	0.003		0.003		0.004		0.012	**	0.017	***	0.018	***
INV	-0.001		-0.001		-0.002		0.001		0.001		0.001	
TDR	-0.125	***	-0.064	*	-0.023		-0.165	***	-0.118	***	-0.114	***
STATE	0.075		0.037		0.093		0.266	**	0.121		0.144	
STATE·SIZE	-0.003		-0.001		-0.003		-0.009	**	-0.003		-0.004	
STATE·GROWTH	0.004		0.001		0.001		-0.010		-0.015		-0.015	*
STATE·INV	0.001		0.002		0.001		-0.002		-0.001		-0.001	
FOREIGN	-0.044		-0.046		-0.044		0.052	***	0.070	***	0.072	***
Year dummies	Yes		Yes		Yes		Yes		Yes		Yes	
Industry dummies	Yes		Yes		Yes		Yes		Yes		Yes	
R-squared	0.152		0.082		0.071		0.197		0.115		0.096	
Adjusted R-sq	0.091		0.016		0.004		0.176		0.091		0.073	
S.E. of reg	0.076		0.079		0.080		0.075		0.079		0.080	
Obs.	254		254		254		670		669		666	

Note: *, **, *** indicate significance at 10%, 5%, 1%, respectively.

5.3 Tests for weak instruments and endogeneity

Next, I estimate the capital structure and profitability equations separately using the 2SLS method, and then estimate the two equations together as a system using 3SLS. Both

estimation methods use instrumental variables[29], thus I check the validity of the instruments using the Cragg-Donald statistic. The two equations are also estimated as a system under the theorical assumption that the capital structure is endogenous in the profitability equation, and vice versa. Thus, I check the endogeneity of these variables using Durbin-Wu-Hausman test.

The results of the tests for weak instruments and endogeneity are summarized in Table 5.5 and Table 5.6 for listed companies on the HOSE and the HASE, respectively. The tests reject the hypothesis that the estimation includes weak instrument variables but did not reject the hypothesis that the capital structure is exogenous. However, capital structure and profitability are theorically endogenously decided, thus I still conduct the estimation of capital structure and profitability equations as a system.

Table 5.5 Tests for weak instrument variables and endogeneity for companies listed on the HOSE

	2006-2008						2009-2011					
	TDR		LDR		LBR		TDR		LDR		LBR	
	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.
Estimation of LEV												
Cragg-Donald F-stat	25.757	***	25.757	***	25.468	***	39.075	***	39.075	***	38.068	***
Durbin Wu-Hausman Chi2 (1)	4.137	**	0.108		0.470		14.220	***	1.494		1.778	
Estimation of ROA												
Cragg-Donald F-stat	24.791	***	25.913	***	89.129	***	19.118	***	82.250	***	412.726	***
Durbin Wu-Hausman Chi2 (1)	0.053		0.062		0.027		0.142		0.069		5.475	***

Note: *, **, *** indicate significance at 10%, 5%, 1%, respectively.

[29] I use the exogenous variables of both equations as instrument variables.

Table 5.6: Tests for weak instrument variables and endogeneity for companies listed on the HASE

	2006-2008						2009-2011					
	TDR		LDR		LBR		TDR		LDR		LBR	
	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.
Estimation of LEV												
Cragg-Donald F-stat	7.960	20%	7.960	20%	7.960	20%	132.207	***	131.777	***	131.481	***
Durbin Wu-Hausman Chi2 (1)	3.539	***	0.0661		0.038		8.546	***	0.670		0.011	
Estimation of ROA												
Cragg-Donald F-stat	38.002	***	62.561	***	62.934	***	374.688	***	3339.335	***	257.470	***
Durbin Wu-Hausman Chi2 (1)	0.601		0.0291		0.049		0.109		0.130		0.585	

Note: *, **, *** indicate significance at 10%, 5%, 1%, respectively.

5.4 Estimation results of 2SLS method

The estimation results are summarized in Tables 5.7 and Table 5.8 for listed companies on the HOSE and the HASE, respectively.

Table 5.7: Estimation results of debt ratios and profitability for companies listed on the HOSE using 2SLS method

	2006-2008						2009-2011					
	TDR		LDR		LBR		TDR		LDR		LBR	
	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.
Constant	-0.821	***	-0.102		-0.165		-1.170	***	-0.202		-0.134	
NDTS	0.162		-0.220		-0.560	***	-0.150		-0.043		-0.572	***
SIZE	0.042	***	0.004		0.004		0.065	***	0.010	*	0.005	
TANG	0.162	*	0.301	***	0.238	***	0.111	**	0.246	***	0.223	***
ROA	-1.288	***	-0.398	***	-0.203	**	-0.861	***	-0.239	***	-0.108	
STATE	-0.026		-0.290		-0.593	**	-0.703	*	-0.820	***	-0.621	***
STATE·SIZE	0.000		0.007		0.019	**	0.023		0.029	***	0.020	***
STATE·TANG	0.180		0.323	***	0.184	***	0.112		0.187	***	0.261	***
FOREIGN	-0.103	***	-0.023	*	-0.031	***	-0.096	***	-0.014		-0.018	**
GDPGROWTH	0.029	*	0.004		0.003		-0.011		-0.007		-0.008	
Year dummies	Yes		Yes		Yes		Yes		Yes		Yes	
Industry dummies	Yes		Yes		Yes		Yes		Yes		Yes	
R-squared	0.280		0.560		0.506		0.290		0.461		0.554	
Adjusted R-sq	0.231		0.530		0.472		0.266		0.443		0.539	
S.E. of reg	0.193		0.097		0.080		0.183		0.117		0.087	
Obs.	265		265		265		515		515		513	

	ROA		ROA		ROA		ROA		ROA		ROA	
Constant	0.297	*	0.405	**	0.384	**	-0.518	***	-0.377	***	-0.411	***
SIZE	-0.006		-0.011	*	-0.011	*	0.023	***	0.015	***	0.016	***
GROWTH	0.007		0.005		0.005		0.038	***	0.044	***	0.039	***
INV	-0.002		-0.002		-0.004		0.003		0.005		0.004	
TDR	-0.147	***	-0.137	**	-0.182	**	-0.151	***	-0.143	***	-0.119	**
STATE	0.462		0.538	*	0.492		0.549	**	0.561	**	0.658	***
STATE·SIZE	-0.020		-0.023	**	-0.022	**	-0.025	***	-0.025	***	-0.029	***
STATE·GROW	0.122		0.126	***	0.147	***	0.158	***	0.152	***	0.164	***
STATE·INV	0.003		0.004		0.010		0.004		-0.003		-0.001	
FOREIGN	0.002		0.018		0.015		0.021	*	0.039	***	0.039	***
Year dummies	Yes		Yes		Yes		Yes		Yes		Yes	
Industry dummies	Yes		Yes		Yes		Yes		Yes		Yes	
R-squared	0.295		0.233		0.227		0.257		0.214		0.194	
Adjusted R-sq	0.237		0.170		0.164		0.2300		0.185		0.165	
S.E. of reg	0.084		0.088		0.088		0.112		0.115		0.117	
Obs.	225		225		225		485		485		483	

Note: *, **, *** indicate significance at 10%, 5%, 1%, respectively.

Table 5.8: Estimation results of debt ratios and profitability for companies listed on the HASE using 2SLS method

	2006-2008						2009-2011					
	TDR		LDR		LBR		TDR		LDR		LBR	
	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.
Constant	0.376		0.143		-0.451	*	-1.437	***	-0.468	***	-0.526	***
NDTS	0.817		-0.497		-0.520	**	-0.222		-0.411	***	-0.300	***
SIZE	0.015		-0.001		0.015		0.088	***	0.022	***	0.018	***
TANG	0.024		0.462	***	0.423	***	0.095	**	0.383	***	0.299	***
ROA	-1.892	***	-0.339		-0.116		-0.997	***	-0.223	***	-0.047	
STATE	-0.529		-0.809	***	-0.245		0.770	***	-0.291		-0.199	
STATE·SIZE	0.025		0.032	***	0.009		-0.025	***	0.011		0.007	
STATE·TANG	-0.295	**	-0.074		-0.006		-0.142	**	-0.021		0.022	
FOREIGN	-0.047		-0.083		-0.085	*	-0.038		-0.005		-0.002	
GDPGROWTH	-0.001		0.001		0.004		-0.043	***	-0.013		-0.001	
Year dummies	Yes		Yes		Yes		Yes		Yes		Yes	
Industry dummies	Yes		Yes		Yes		Yes		Yes		Yes	
R-squared	0.172		0.478		0.463		0.470		0.415		0.448	
Adjusted R-sq	0.103		0.435		0.418		0.456		0.399		0.433	
S.E. of reg	0.202		0.109		0.092		0.164		0.113		0.082	
Obs.	224		224		224		653		652		649	

	ROA		ROA		ROA		ROA		ROA		ROA	
Constant	0.652	***	0.841	***	0.770	***	-0.194	**	0.008		0.003	
SIZE	-0.018	**	-0.026	***	-0.024	***	0.014	***	0.004		0.003	
GROWTH	0.023		0.018		0.019		0.015	**	0.019		0.020	***
INV	-0.001		-0.002		-0.002		0.001		8.51E-05		-0.001	
TDR	-0.166	***	-0.133	**	-0.090		-0.148	***	-0.119	***	-0.124	***
STATE	-0.352		-0.404		-0.314		0.231	*	0.116		0.137	
STATE·SIZE	0.014		0.016		0.012		-0.007		-0.003		-0.004	
STATE·GROW	-0.013		-0.016		-0.016		-0.013		-0.017	*	-0.017	*
STATE·INV	0.002		0.004		0.004		-0.001		-0.004		-0.003	
FOREIGN	-0.029		-0.042		-0.040		0.050	***	0.066	***	0.068	***
Year dummies	Yes		Yes		Yes		Yes		Yes		Yes	
Industry dummies	Yes		Yes		Yes		Yes		Yes		Yes	
R-squared	0.176		0.132		0.105		0.180		0.112		0.091	
Adjusted R-sq	0.084		0.035		0.005		0.155		0.085		0.063	
S.E. of reg	0.083		0.086		0.087		0.075		0.079		0.080	
Obs.	170		170		170		588		587		583	

Note: *, **, *** indicate significance at 10%, 5%, 1%, respectively.

5.5 Estimation results of 3SLS method

The estimation results are summarized in Tables 5.9 and Table 5.10 for listed companies on the HOSE and the HASE, respectively.

Table 5.9: Estimation results of debt ratios and profitability for companies listed on the HOSE using 3SLS method

	2006-2008						2009-2011					
	TDR		LDR		LBR		TDR		LDR		LBR	
	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.
Constant	-0.833	**	-0.107		-0.168		-1.179	***	-0.206		-0.137	
NDTS	0.188		-0.212		-0.556	***	-0.184		-0.054		-0.580	***
SIZE	0.042	***	0.004		0.004		0.066	***	0.010		0.005	
TANG	0.153	*	0.299	***	0.237	***	0.109	**	0.245	***	0.223	***
ROA	-1.306	***	-0.402	***	-0.204	**	-0.903	***	-0.254	***	-0.119	**
STATE	-0.021		-0.289		-0.592	**	-0.675	*	-0.810	***	-0.613	***
STATE·SIZE	0.001		0.007		0.019	**	0.022		0.028	***	0.019	***
STATE·TANG	0.187		0.327	***	0.185	***	0.114		0.188	***	0.262	***
FOREIGN	-0.103	***	-0.023	*	-0.031	***	-0.095	***	-0.014		-0.018	**
GDPGROWTH	0.031	**	0.005		0.004		-0.012		-0.007		-0.009	
Year dummies	Yes		Yes		Yes		Yes		Yes		Yes	
Industry dummies	Yes		Yes		Yes		Yes		Yes		Yes	
R-squared	0.277		0.559		0.506		0.278		0.460		0.553	
Adjusted R-sq	0.227		0.529		0.472		0.254		0.441		0.537	
S.E. of reg	0.194		0.097		0.080		0.184		0.118		0.088	
Observations	265		265		265		515		515		513	
Constant	0.284	*	0.403	***	0.379	**	-0.548	***	-0.379	***	-0.412	***
SIZE	-0.005		-0.011	*	-0.011	*	0.025	***	0.015	***	0.016	***
GROWTH	0.003		0.005		0.004		0.027	***	0.040	***	0.036	***
INV	-0.003		-0.002		-0.004		0.007		0.007		0.006	
TDR	-0.152	*	-0.139	***	-0.184	**	-0.164	***	-0.151	***	-0.128	***
STATE	0.454		0.536	*	0.489	*	0.545	***	0.551	**	0.650	***
STATE·SIZE	-0.020	*	-0.023	**	-0.022	**	-0.025	***	-0.024	***	-0.028	***
STATE·GROW	0.120	***	0.128	***	0.146	***	0.155	***	0.150	***	0.162	***
STATE·INV	0.003		0.004		0.010		0.003		-0.004		-0.001	
FOREIGN	0.001		0.018		0.015		0.019		0.039	***	0.039	***
Year dummies	Yes		Yes		Yes		Yes		Yes		Yes	
Industry dummies	Yes		Yes		Yes		Yes		Yes		Yes	
R-squared	0.294		0.233		0.227		0.254		0.213		0.193	
Adjusted R-sq	0.236		0.170		0.163		0.227		0.185		0.164	
S.E. of reg	0.085		0.088		0.088		0.112		0.115		0.117	
Observations	225		225		225		485		485		483	

Note: *, **, *** indicate significance at 10%, 5%, 1%, respectively.

Table 5.10: Estimation results of debt ratios and profitability for companies listed on the HASE using 3SLS method

	2006-2008						2009-2011					
	TDR		LDR		LBR		TDR		LDR		LBR	
	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.
Constant	0.406		0.159		-0.441	*	-1.428	***	-0.464	***	-0.525	***
NDTS	0.715		-0.512		-0.527	**	-0.184		-0.397	***	-0.294	***
SIZE	0.014		-0.001		0.015	*	0.088		0.022	***	0.018	***
TANG	0.046		0.462	***	0.423	***	0.081		0.378	***	0.297	***
ROA	-1.950	***	-0.362	*	-0.131		-1.071	***	-0.253	***	-0.061	
STATE	-0.530		-0.815	***	-0.248		0.779	***	-0.286		-0.197	
STATE·SIZE	0.025		0.032	***	0.009		-0.026	***	0.010		0.007	
STATE·TANG	-0.296	**	-0.072		-0.006		-0.133	**	-0.018		0.024	
FOREIGN	-0.051		-0.083		-0.086	**	-0.033		-0.003		-0.001	
GDPGROWTH	-0.003		0.001		0.004		-0.042	***	-0.013		-0.001	
Year dummies	Yes		Yes		Yes		Yes		Yes		Yes	
Industry dummies	Yes		Yes		Yes		Yes		Yes		Yes	
R-squared	0.155		0.476		0.461		0.465		0.414		0.448	
Adjusted R-sq	0.085		0.433		0.417		0.451		0.398		0.433	
S.E. of reg	0.205		0.109		0.092		0.165		0.113		0.082	
Obs.	224		224		224		653		652		649	
Constant	0.647	***	0.846	***	0.769	***	-0.188	**	0.010		0.004	
SIZE	-0.018		-0.026	***	-0.024	***	0.013	***	0.004		0.003	
GROWTH	0.024		0.019		0.019		0.019	***	0.020	***	0.021	***
INV	-0.001		-0.002		-0.002		0.001		0.001		-0.001	
TDR	-0.170	***	-0.142	***	-0.091		-0.147	***	-0.121	***	-0.126	***
STATE	-0.360		-0.415		-0.316		0.229	*	0.115		0.137	
STATE·SIZE	0.014		0.016		0.012		-0.007		-0.003		-0.004	
STATE·GROW	-0.014		-0.017		-0.016		-0.015	*	-0.017	*	-0.018	*
STATE·INV	0.003		0.005		0.004		-0.001		-0.003		-0.003	
FOREIGN	-0.028		-0.042		-0.040		0.051	***	0.066	***	0.068	***
Year dummies	Yes		Yes		Yes		Yes		Yes		Yes	
Industry dummies	Yes		Yes		Yes		Yes		Yes		Yes	
R-squared	0.175		0.131		0.105		0.179		0.111		0.090	
Adjusted R-sq	0.083		0.034		0.005		0.155		0.085		0.063	
S.E. of reg	0.083		0.086		0.087		0.075		0.079		0.080	
Obs.	170		170		170		588		587		583	

Note: *, **, *** indicate significance at 10%, 5%, 1%, respectively.

5.6 Discussion on estimation results

5.6.1 Estimation results for listed companies in the HOSE

The estimation results from the three estimation methods are similar, and no contradictory results are observed.

(a) The estimation results of capital structure equation

Regarding the determinants of capital structure, there is no coefficient that was significantly opposite to the hypotheses. The capital structures of companies listed on the HOSE and HASE are relatively better matched to the features of standardized corporate financing theories; this explains the capital structure of developed countries well.

In the periods before and after the Lehman shock, the coefficients of firm size and fixed assets ratio were significantly positive, and the coefficients of non-debt tax shield and return on assets were significantly negative, as theoretically expected. An interesting finding is that the significance of the coefficients in the period after the boom was slightly higher than that in the previous period.

Differences between state-controlled and other companies were observed in the impact of state ownership on capital structures. The coefficient of the state-controlled dummy is significantly negative in the periods before and after the Lehman shock. The coefficients of the cross-terms of the state-controlled dummy and firm size or fixed assets are significantly positive in both periods. This indicates that given the same conditions of business stability and tangibility, state-controlled companies can raise external funds more easily than other companies. This may be because the state implicitly secures these companies, which have strong ties with state-owned banks.

Regarding the impact of foreign ownership, companies with more than 20 per cent foreign ownership tend to have lower debt ratios than other companies in both the 2006–2008 period and the 2009–2011 period.

(b) The estimation results of profitability equation

As for the determinants of profitability, in both periods, an increase in debt ratios lead to a decrease in profitability in the estimation of all debt ratios. This proves the hypothesis of the weak mornitoring of banks and the weak corporate governance of listed companies.

The coefficients of companies' size are significantly negative during the 2006–2008 period but are significantly positive during the 2009–2011 period. This implies that in the boom period, small-sized companies were more profitable and that during the recession,

large-sized firms were more stable.

State-controlled companies had higher profitability than other companies. The coefficient of the state-controlled dummy and the coefficients of the cross-terms of the state-controlled dummy and growth rates are significantly positive, while the coefficients of the cross-terms of the state-controlled dummy and business scale are significantly negative. This implies that apart from companies' size and growth, state-controlled companies have structural superiority in term of profitability. That state-controlled companies can use advantageous loans from state-controlled banks is one possible reason.[30] State-controlled companies are reputed to enjoy easy access to low-interest loans from state-owned banks. My data indicate that the average interest rates of state-controlled companies (i.e., interest payments divided by total debt) is lower than those of other companies.

A trend of higher profitability for foreign-affiliated companies was observed during the 2009–2011 period, while during the 2006–2008 period, the profitability of these companies was the same as that of other companies. This implies that in the boom period, other companies performed very well and foreign companies were not conspicuous. However, during the recession, it became obvious that foreign-affiliated companies had better production technology and management.

5.6.2 Estimation results for listed companies in the HASE

(a) The estimation results of capital structure equation

No difference in the determinants of capital structure was observed between the two periods. However, the estimation results for the HASE companies conform less closely to theoretical expectations than those of the HOSE companies. The coefficients of companies' business scale are significantly positive only in the period after the shock. Fixed assets ratio are significantly positive for the estimation of long-term debt ratios and long-term bank loan ratios. The coefficients of return on assets are significantly negative for the estimation of total debt but are not significant for the estimation of long-term debt ratios and long-term bank loan ratios. These imply that the procurement of short-term

[30] This paper considers the differences among industries using industrial dummy variables.

debt funds depends on cash flow while the procurement of long-term debt funds depends heavily on collateral.

No difference in the impact of state control on debt ratios for the HASE samples between the two periods was observed.

Companies with more than 20 per cent of foreign ownership had lower debt ratios than other companies in terms of long-term bank borrowing.

(b) The estimation results of profitability equation

Similiar to the results observed for the HOSE, in the estimations of all debt ratios in both periods, an increase in debt ratios leads to a decrease in profitability. This proves the hypothesis of the weak mornitoring of banks and the weak corporate governance of listed companies.

The coefficients of companies' size are significantly negative during the boom period but significantly positive during the recession period. This implies that during the boom period, small companies were more profitable, but during the recession, large firms were more stable.

Regarding the profitability of state-controlled companies, no difference between the two periods was observed.

A trend of higher profitability for foreign-affiliated companies was observed during the 2009–2011 period, while during the 2006-2008 period, the profitability of foreign-affiliated companies was the same as that of other companies. This implies that during the boom period, other companies performed very well and that foreign-affiliated companies were not conspicuous. However, during the recession, it is obvious that foreign-affiliated companies had better production technology and management techniques.

5.6.3 Discussion

The estimation results revealed that contrary to what was suggested by the analyses of Vietnamese small and medium-sized enterprises (SMEs) in Nguyen (2006) and Biger et al. (2008), the capital structures of companies listed on the HOSE and the HASE are relatively well matched to the features of standardized corporate financing theory. In addition, in both the boom period of 2006–2008 and the 2009-2011 period after the boom,

the companies listed in the HOSE, which pioneered many institutional reforms in Vietnam, conform more closely to theoretical expectations than their counterparts listed in the HASE. While these companies were influenced by excessive borrowing under weak corporate governance and weak creditor mornitoring during both the boom period of 2006–2008 and the 2009–2011 period after the boom, Nguyen (2006) and Biger et al. (2008) found that small- and medium-sized companies have low levels of information disclosure and significant information asymmetry between themselves and their external creditors and investors, which significantly distort their fund procurement structures. The listed companies analyzed in this paper could make use of favorable institutional environments conducive to economically rational fund procurement behaviors.

However, the estimation results show that the market environment surrounding listed Vietnamese companies still has many problems. First, while the procurement of short-term debt funds depends on cash flow, the procurement of long-term debt funds depends heavily on collateral. In addition, a comparison of the two stock exchanges reveals that companies listed on the HASE face stronger constraints on their use of internal funds than those listed on the HOSE. These findings suggest that information asymmetry, accompanied by the long-term funds loaned by external creditors to companies, needs to be improved. On the other hand, companies listed in both stock exchanges borrowed excessively for investments that were wasteful because of weak corporate governance during the boom period; these companies faced excessive debt and underinvestment problems during the recession periods. Companies with low profitability or with losses may have higher debt ratios because they have to compensate for their losses.

Second, it has been observed that state-controlled companies on the HOSE and the HASE are less affected by their ability to provide collateral in the procurement of external funds than other companies are. In addition, state-controlled companies listed on the HOSE have superior profit-making ability compared to other companies. It is often pointed that there are informal links between state-controlled companies and state-owned banks and that the lend use rights of state-controlled companies are seriously underestimated (World Bank, 2009). These facts show that, as with other economies in transition, Vietnam's state-owned companies have corporate governance issues.

On the other hand, the good profitability of foreign-affiliated companies was obvious

during the recession period, while it was inconspicuous in the boom period because the profitability of other companies was also good. Foreign-affiliated companies tend to excel in management skills and production technology, and they disclose a great deal of information, which grants them a high degree of market confidence. They therefore have an advantage in the procurement of funds in terms of capital investment and profitability. These findings support further reforms to promote foreign participation in the development of Vietnam's corporate sector. This should include not only foreign participation in companies but also foreign penetration in the banking sector.

5.7 Conclusion

As the Vietnamese government promotes the transition to a market economy by continually implementing institutional reforms under the *Doi moi* policy, many issues are yet to be resolved. This chapter investigated the extent to which companies listed on the HOSE and the HASE, whose listing is regarded as proof of adherence to all of Vietnam's corporate reforms, have displayed corporate behaviors that conform to a market economy by simultaneously estimating the debt ratios and profitability of the listed companies using 3SLS. The samples used are unbalanced panel data from 435 companies listed on the two stock exchanges from 2006 to 2011.

The estimation results revealed the following: unlike the analyses of Vietnamese SMEs in Nguyen (2006) and Biger et al. (2008), the financing structures of non-state-controlled companies listed on the HOSE and the HASE have features that conform well to economic theory and a market economy. While they were influenced by excessive borrowing under weak corporate governance during the boom period of 2006–2008, they were normalized and better fitted to rationally expected financing behaviors during the 2009–2011 post-boom period. However, while the procurement of short-term debt funds depends on cash flow, the procurement of long-term debt funds depends heavily on collateral. These companies are now facing excessive debts that limit their fundraising capacities. On the other hand, in both the HOSE and the HASE, state-controlled companies enjoy an advantageous credit rating position and are able to procure funds with relative ease, while in the HOSE, some state-controlled companies enjoy superior profit-making ability to that of other companies. As foreign-affiliated companies tend to

excel in management skill and production technology and disclose information widely, they have gained the strong confidence of the market and fund procurement advantage in terms of capital investment and profitability. The study also found that companies listed on the HASE face stronger constraints on the use of internal funds than those listed on the HOSE.

Three policy implications can be drawn from these results. First, this chapter showed that the market environment surrounding Vietnamese companies still has many problems. The estimation results suggest that even for companies listed on the HOSE, the magnitude of collateral is still the most important determining factor in the procurement of long-term funds and that the information asymmetry between external creditors and companies needs to be improved, as does creditor protection. Internal funds are clearly superior to external funds for companies listed on the HASE; this indicates that there is further room for institutional improvement.

Second, this chapter showed that, as with other economies in transition, Vietnam's state-owned companies have corporate governance issues. Even among the most institutionally advanced firms, state-controlled companies have advantages in terms of external debt fund and profitability, which strongly suggests that there is a need for further institutional reforms. These reforms should include the development of a system that ensures independent corporate governance and transparency of information. They should also include the increased privatization of state-controlled companies and the banking sector and should provide a strong market presence for the state-controlled banks.

Third, foreign-affiliated companies tend to excel in management skills and production technology and they disclose a great deal of information, which, in turn, gains them a high degree of confidence from the market. They therefore have an advantage in procuring funds in the form of capital investment and profitability. These findings support further reforms to promote foreign participation in the development of Vietnam's corporate sector. This should include not only foreign participation in companies but also foreign penetration in the banking sector.

Chapter 6

The impact of leverage on investment and growth of state-controlled companies in Vietnam

This chapter investigates the influence of capital structure on investment activities and growth opportunities of listed companies in Vietnam where state-owned and state-controlled banks lend more than one-half of domestic demand, and determines the variation in influence between state-controlled companies and other listed companies. Estimation analysis uses panel data covering the 6-year period of 2006–2011 by three estimation methods of OLS, 2SLS and 3SLS to the model of capital structure, investment and growth opportunities.

The estimation results reveal two major findings. First, in general, there is an over-investment problem among listed companies in Vietnam and debt financing minimizes this problem. Second, the state-controlled companies face a soft budget constraint problem, which is common in transition economies.

These results imply that state-owned banks in Vietnam seem to impose fewer restrictions or lower levels of monitoring on loans to state-controlled companies. Therefore, further reform in the banking sector and in state-controlled companies and further disclosure of corporate information are needed to resolve the opaque collusion between state-controlled companies and state-owned banks and to protect outside creditors.

6.1 Correlation coefficients of explanatory variables

This model uses a sample of companies listed on the HOSE. Table 6.1, Table 6.2 and Table 6.3 display the correlation coefficients of the explanatory variables of the three estimation equations of capital structure, investment and growth opportunities. No variable is highly correlated with other explanatory variables in each estimation equation.

Table 6.1 Correlation coefficients of explanatory variables of capital structure equation

	NDTS	SIZE	TANG	ROA	STATE	FOR
NDTS	1					
SIZE	-0.174	1				
TANG	0.474	0.066	1			
ROA	0.208	-0.238	0.015	1		
STATE	0.238	0.037	0.143	0.062	1	
FOR	-0.051	0.302	0.045	0.025	-0.197	1

Table 6.2 Correlation coefficients of explanatory variables of investment equation

	SIZE	ROA	TDR	LDR	LBR	STATE	FOR
SIZE	1						
ROA	-0.090	1					
TDR	0.282	-0.318	1				
LDR	0.367	-0.176	0.450	1			
LBR	0.278	-0.114	0.362	0.782	1		
STATE	0.046	0.063	0.161	0.160	0.157	1	
FOR	0.304	0.114	-0.189	-0.031	-0.042	-0.171	1

Table 6.3 Correlation coefficient of explanatory variables of growth opportunity equation

	CF	Q	TDR	LDR	LBR	STATE	STATE
CF	1						
Q	0.079	1					
TDR	-0.095	-0.269	1				
LDR	-0.108	-0.110	0.457	1			
LBR	-0.119	-0.102	0.357	0.779	1		
STATE	-0.029	-0.003	0.172	0.164	0.152	1	
FOR20	-0.001	0.177	-0.199	-0.036	-0.047	-0.171	1

6.2 Estimation results of OLS method

First, the capital structure equation, investment equation and growth opportunity equation are estimated separately by using the OLS method. The estimation results of the OLS method are summarized in Tables 6.4.

Table 6.4: Estimation results of debt ratios, investment and growth opportunities using OLS method

Variables (Predicted signs)		TDR Coef.	Prob.	LDR Coef.	Prob.	LBR Coef.	Prob.
Constant		-0.760	***	-0.053		-0.051	
NDTS	(+)	0.053		-0.122		-0.254	*
FIRMSIZE	(+)	0.049	***	0.004		0.002	
TANG	(+)	0.074	*	0.221	***	0.188	***
ROA	(−)	-0.778	***	-0.249	***	-0.115	***
FOR	(+/−)	-0.096	***	-0.012		-0.019	***
STATE	(−)	-0.726	***	-0.809	***	-0.454	***
STATE*NDTS		-0.429		-0.232		-0.556	***
STATE* FIRMSIZE	(+/−)	0.020	**	0.027	***	0.013	***
STATE*TANG		0.260	***	0.251	***	0.319	***
STATE*ROA		0.606	***	0.163	**	0.087	**
Year dummies		Yes		Yes		Yes	
Industry dummies		Yes		Yes		Yes	
R-squared		0.324		0.444		0.541	
Adjusted R-sq		0.307		0.431		0.530	
S.E. of regression		0.180		0.115		0.084	
Obs.		820		820		814	

		Q		Q		Q	
Constant		-0.828		0.047		0.336	
FIRMSIZE	(+)	0.056		0.016		0.008	
ROA	(+)	3.635	***	4.119	***	4.079	***
Leverage	(+)	-0.179		0.471		-0.494	
FOR	(−)	0.219	***	0.254	***	0.253	***
STATE	(+/−)	0.789	***	0.344	***	0.222	**
STATE*Leverage	(−)	-1.161	***	-0.854	*	0.378	
Year dummies		Yes		Yes		Yes	
Industry dummies		Yes		Yes		Yes	
R-squared		0.442		0.432		0.430013	
Adjusted R-sq		0.427		0.417		0.415038	
S.E. of regression		0.926		0.934		0.935822	
Obs.		628		628		626	

		INV		INV		INV	
Constant		0.108		0.329	**	0.530	**
CF	(+)	-0.010		-0.009		-0.008	
Q	(+)	0.085		0.064		0.064	
Leverage	(+)	0.876	***	2.883	***	1.085	
FOR	(−)	-0.015		-0.056		-0.066	
STATE	(+/−)	-0.108		-0.052		-0.236	
STATE* Leverage	(−)	-0.196		-1.818	**	0.001	
Year dummies		Yes		Yes		Yes	
Industry dummies		Yes		Yes		Yes	
R-squared		0.055		0.085		0.049	
Adjusted R-sq		0.030		0.060		0.024	
S.E. of regression		1.502		1.479		1.507	
Obs.		623		623		623	

Note: ***, **, * indicate significance at 1%, 5%, 10% levels

6.3 Tests for weak instrument variables and endogeneity

Next, the capital structure equation, investment equation and growth opportunity are estimated separately by using the 2SLS method, and estimate these three equations as a system by using 3SLS. Both estimation methods use instrument variables[31], thus the validity of the instrument variables is checked by using Cragg-Donald statistic. Besides, the equations are estimated as a system under the assumption that the capital structure is an endogenous variable in the investment equation, and capital structure and investment are endogenous variables in the growth opportunity equation. Thus, the endogeneity of these variables is checked by using Durbin-Wu-Hausman Test.

The test results for weak instrument variables and endogeneity are summarized in Tables 6.5. The tests reject the hypotheses that weak instrument variables were used in the estimation and that capital structure is an exogenous variable in the investment equation, and capital structure and investment are exogenous variables in the growth opportunity equation.

Table 6.5: Tests for weak instrument variables and endogeneity

	TDR		LDR		LBR	
	Coef.	Prob.	Coef.	Prob.	Coef.	Prob.
Estimation of Q						
Cragg-Donald F-stat	242.6095	***	289.9683	***	172.0325	***
Durbin Wu-Hausman Chi2 (2)	31.6046	***	33.8365	***	4.8836	*
Estimation of INV						
Cragg-Donald F-stat	27.1245	***	32.2431	***	32.8691	***
Durbin Wu-Hausman Chi2 (3)	21.2163	***	48.0835	***	29.5079	***

Note: ***, **, * indicate significance at 1%, 5%, 10% levels

6.4 Estimation results of 2SLS method

The estimation results of the 2SLS method are summarized in Tables 6.6

6.5 Estimation results of 3SLS method

The estimation results of the 3SLS method are summarized in Tables 6.7.

[31] The exogenous variables of both equations are used as instrument variables.

Table 6.6: Estimation results of debt ratios, investment and growth opportunities using 2SLS method

Variables (Predicted signs)		TDR Coef.	Prob	LDR Coef.	Prob.	LBR Coef.	Prob.
Constant		-0.888	***	-0.029		-0.058	
NDTS	(+)	0.140		-0.119		-0.254	*
FIRMSIZE	(+)	0.054	***	0.003		0.002	
TANG	(+)	0.075	*	0.218	***	0.186	***
ROA	(−)	-0.794	***	-0.253	***	-0.122	***
FOR	(+/−)	-0.103	***	-0.012		-0.021	***
STATE	(−)	-0.767	***	-0.926	***	-0.581	***
STATE*NDTS		-0.529		-0.231		-0.480	**
STATE* FIRMSIZE	(+/−)	0.021	*	0.031	***	0.018	***
STATE*TANG		0.281	***	0.266	***	0.330	***
STATE*ROA		0.643	***	0.182	***	0.107	**
Year dummies		Yes		Yes		Yes	
Industry dummies		Yes		Yes		Yes	
R-squared		0.3381		0.450		0.547	
Adjusted R-sq		0.320		0.436		0.535	
S.E. of regression		0.179		0.114		0.084	
Obs.		780		780		778	

		Q		Q		Q	
Constant		-13.72	***	-10.94	*	-4.123	
FIRMSIZE	(+)	0.448	***	0.370	*	0.156	
ROA	(+)	1.4230		3.322	***	3.847	***
Leverage	(+)	4.874	**	15.103	**	11.87	
FOR	(−)	0.2670		0.274		0.232	
STATE	(+/−)	10.936	***	4.496	**	1.610	
STATE*Leverage	(−)	-23.231	***	-34.545	**	-19.52	
Year dummies		Yes		Yes		Yes	
Industry dummies		Yes		Yes		Yes	
R-squared		-2.327		-3.291		-0.362	
Adjusted R-sq		-2.416		-3.406		-0.402	
S.E. of regression		2.268		2.576		1.470	
Obs.		614		614		563	

		INV	INV	INV	
Constant		1.227	1.136	1.088	**
CF	(+)	0.004	0.001	-0.016	
Q	(+)	0.274	0.313	0.053	
Leverage	(+)	-2.218	-10.85	-17.65	*
FOR	(−)	-0.279	-0.262	-0.174	
STATE	(+/−)	-3.916	-3.161	-2.057	
STATE*Leverage	(−)	8.197	24.41	26.652	
Year dummies		Yes	Yes	Yes	
Industry dummies		Yes	Yes	Yes	
R-squared		-0.281	-1.617	-1.093	
Adjusted R-sq		-0.321	-1.699	-1.159	
S.E. of regression		1.670	2.388	2.139	
Obs.		256	526	524	

Note: ***, **, * indicate significance at 1%, 5%, 10% levels

Table 6.7: Estimation results of debt ratios, investment and growth opportunities using 3SLS method

Variables (Predicted signs)		TDR Coef.	Prob.	LDR Coef.	Prob.	LBR Coef.	Prob.
Constant		-0.890	***	-0.031		-0.060	
NDTS	(+)	0.143		-0.115		-0.247	*
FIRMSIZE	(+)	0.054	***	0.003		0.002	
TANG	(+)	0.076	*	0.219	***	0.186	***
ROA	(−)	-0.792	***	-0.250	***	-0.121	***
FOR	(+/−)	-0.103	***	-0.012		-0.021	***
STATE	(−)	-0.766	***	-0.925	***	-0.579	***
STATE*NDTS		-0.530		-0.233		-0.486	**
STATE* FIRMSIZE	(+/−)	0.021	*	0.031	***	0.018	***
STATE*TANG		0.280	***	0.266	***	0.330	***
STATE*ROA		0.642	***	0.181	***	0.108	**
Year dummies		Yes		Yes		Yes	
Industry dummies		Yes		Yes		Yes	
R-squared		0.338		0.450		0.547	
Adjusted R-sq		0.320		0.436		0.535	
S.E. of regression		0.179		0.114		0.084	
Obs.		780		780		778	

		Q		Q		Q	
Constant		-14.03	***	-11.581	**	-4.726	
FIRMSIZE	(+)	0.459	***	0.390	**	0.176	
ROA	(+)	1.150		3.031	***	3.749	***
Leverage	(+)	5.012	**	16.215	**	13.561	
FOR	(−)	0.276		0.285		0.230	
STATE	(+/−)	11.26	***	4.797	***	1.807	
STATE*Leverage	(−)	-23.931	***	-36.917	**	-22.285	
Year dummies		Yes		Yes		Yes	
Industry dummies		Yes		Yes		Yes	
R-squared		-2.506		-3.836		-0.589	
Adjusted R-sq		-2.600		-3.966		-0.636	
S.E. of regression		2.329		2.735		1.588	
Obs.		614		614		563	

		INV		INV		INV	
Constant		1.033		0.739		0.490	
CF	(+)	-1.38E-05		-0.008		-0.022	
Q	(+)	0.293	*	0.339		0.347	*
Leverage	(+)	-1.807		-6.287		-8.104	
FOR	(−)	-0.269		-0.246		-0.247	
STATE	(+/−)	-3.266		-1.945		-1.062	
STATE*Leverage	(−)	6.745		14.231		11.669	
Year dummies		Yes		Yes		Yes	
Industry dummies		Yes		Yes		Yes	
R-squared		-0.192		-0.618		-0.265	
Adjusted R-sq		-0.229		-0.669		-0.305	
S.E. of regression		1.611		1.878		1.663	
Obs.		526		526		524	

Note: ***, **, * indicate significance at 1%, 5%, 10% levels

6.6 Discussion on estimation results

The estimation results by using the three estimation methods are almost the same. No contradictory results are observed. According to the estimation results, debt ratios are significantly and negatively related to investment and positively related to growth opportunities. As discussed in Chapter 3, this suggests that an over-investment problem exists among companies listed on the HOSE, and that debt financing may be used as a tool to restrain this overinvestment problem.

However, the impact of leverage on investment and growth opportunities of state-controlled companies is reversed. In the estimation of investment, the coefficients of the cross-terms of the state-controlled company dummy *STATE* and debt ratios are significantly positive and sufficiently large that the effect of the debt ratios on investments of state-controlled companies becomes positive. In the estimation of growth opportunities, the coefficients of the cross-terms of the state-controlled company dummy *STATE* and debt ratios are significantly negative and sufficiently large that the total effect of the debt ratios on growth opportunities of state-controlled companies becomes negative. As stated in Chapter 3, these estimation results imply that the soft budget constraint problem is especially significant to state-controlled companies in the HOSE.

The coefficients of *STATE* are significantly negative in the estimation of investment, whereas they are significantly positive in the estimation of growth opportunities. This suggests that state-controlled companies listed in the HOSE seem to invest less, but have better growth opportunities, than other companies.

No significant effect of foreign ownership was observed in the estimation results of investment or growth opportunities.

As mentioned in Chapter 2, among the remaining problems of corporate finance in Vietnam, the five big state-owned or state-controlled commercial banks lend more than half of the domestic demand. In addition, the state-controlled companies continue to maintain close relationships with state-owned banks and can access bank loans with preferable conditions regardless of efficiency. These problems may explain the estimation results stated previously. The state-controlled companies listed on the HOSE seem to use their relationships with state-owned banks to get significant funding but invest in

ineffective projects, leading to the reduction of the growth opportunities of these firms.

By contrast, although there are effective projects, non-state-controlled companies may find it difficult to access bank loans to finance these projects. The relevant policy implication is that further reforms, both in the banking sector and in state-controlled companies, are needed to resolve the opaque collusion between state-controlled companies and state-owned banks.

In addition, information asymmetry among listed firms in Vietnam may be significant, and, thus, managers may freely invest in ineffective projects, creating an overinvestment problem. This implies that further disclosure of corporate information should be implemented to protect outside creditors.

6.7 Conclusion

This chapter investigated the influence of capital structure on investment activities and growth opportunities of listed companies in Vietnam where state-owned banks and state-controlled banks lend more than half of the domestic demand. Estimation analysis using panel data covering the 6-year period of 2006–2011 for companies listed on the HOSE revealed two major findings. First, in general, there is an overinvestment problem among listed companies in Vietnam and debt financing plays the role of restraining this overinvestment problem. Second, state-controlled companies face a soft budget constraint problem, which is common in transition economies.

These results imply that state-owned banks in Vietnam seem to impose fewer restrictions or lower levels of monitoring on loans to state-controlled companies. This suggests that further reforms, both in the banking sector and in state-controlled companies, as well as further disclosure of corporate information, are urgently needed to resolve the opaque collusion between state-controlled companies and state-owned banks and to protect outside creditors.

Chapter 7

Conclusion

7.1 Introduction

This dissertation investigates the capital structure and its impacts on investment behavior as well as the profitability of listed companies in Vietnam with an emphasis of identifying the characteristics of state-controlled companies in order to assess the effects of the economic and corporate reforms in Vietnam since the *Doi moi.* This chapter summarizes the main contents of the previous chapters, discussing the findings of the study as well as their implications, and indicating some limitations of the thesis, which suggest some topics for future research. The rest of this chapter is structured as follows. Section 2 summarizes the chapters of the dissertation. Sections 3 and 4 discuss the findings of the study and the implications. Section 5 suggests further researches in the future based on the limitations of this dissertation.

7.2 Summary of the chapters

7.2.1 Summary of Chapter 1: Economic reform and state-owned company reform in Vietnam

Chapter 1 overviews the reform of state-owned companies (SOCs) as well as the stock markets, listing companies and banking sector in the context of the economic reform under the *Doi moi* policy in Vietnam, which relate to the analyses in the following chapters of the thesis.

The Vietnamese government initiated remarkable economic reforms *(Doi moi)* in 1986, which ended the era of central-planning and adopted a market economy. Subsequently, the country's economy showed impressive results in terms of economic growth and inflation, especially since 1989. Along with the economic reforms some comprehensive measures to restructure SOCs have been launched since 1986. Among other measures, equitization has been seen as the best way to restructure the SOCs

effectively and quickly. The equitization programme in Vietnam, which started in 1992, can be divided into three stages, namely the pilot stage (from 1992 to 1996) and the expansion stage (from 1996 to 2010) and the speed-up stage (from 2011 to now). Following 20 years of implementation of state-owned company equitization, by the end of 2011 about 4,000 SOCs had been equitized. Most equitized SOCs are small sized. The remaining 1,300 fully state-owned companies are the largest ones. Another feature of equitized SOCs is that the state still holds decisive voting rights in many cases and the ownership of the state in these companies reduced gradually after being equitized. Equitization is assessed to make the equitized SOCs more effective and listing is proved to be associated with better management in equitized SOCs.

There are two stock markets in Vietnam, Hochiminh Stock Exchange (HOSE) and Hanoi Stock Exchange (HASE), which were established in 2000 and 2005 respectively, with the listing norms of the HOSE being stricter than those of the HASE. The development of Vietnamese stock markets is linked with the equitization process. There remains more than 700 SOCs scheduled to be equitized soon, which will continue to be the backbone of the Vietnamese stock market in the near future. One of the main strengths of the stock market is its ability to mobilize new capital, rather than just serve as secondary support. Another characteristic of the stock markets in Vietnam is the under-representation of institutional investors in the markets.

The banking sector was also reformed to support the corporate sector in providing credit for investment. SOCBs accounted for 79 per cent of total loans to the economy as of year-end 2001, and this portion fell year by year, to 51.7 per cent in 2011. Most banking credit went to SOCs, but their share in total outstanding loans declined steadily, from nearly 40 per cent in 2002 to 16.7 per cent in September 2012.

The participation of foreign investors plays an important role in the reform process in Vietnam. The FDI sector has been contributing to the development of the Vietnamese economy, creating jobs, and encouraging exports. In stock markets, both individual and institutional foreign investors have been active.

Despite the above-mentioned achievements of the economic reforms, there remain some issues that need to be addressed. Firstly, the equitization of SOCs has slowed down since 2007 while the remaining fully state-owned companies that need to be equitized are

large and important ones. Secondly, equitized SOCs seem to have privileged access to credit from state-owned commercial banks due to their historical relationship with the SOCBs since before equitizing as well as their implicit support from the state as a dominant stockholder. In order to address these problems, the Vietnamese government should accelerate the equitization process as well as the reform of the banking sector.

7.2.2 Summary of Chapter 2: Corporate finance and corporate governance of listed companies in Vietnam

Chapter 2 introduces the characteristics of the ownership structure, corporate finance and corporate governance of listed companies in Vietnam, which are the objectives of the empirical analysis in Chapters 4, 5 and 6.

One significant feature of the ownership structure of listed companies in Vietnam is that the state remains a dominant shareholder, which has affects on the corporate activities and corporate governance of these companies. Such companies may be in a privileged position compared to other companies in raising funds in the context that the four big state-owned or state-controlled commercial banks still provide most of the loans to the whole economy, but may be less inactive in investment or less effective in operation. Information asymmetry may be significant among listed companies, especially among state-controlled companies due to the lack of corporate information disclosure.

The policy of opening the economy is encouraging foreign investors to invest in Vietnam, not only in the form of FDI but also in the stock markets, and foreign investors are now allowed to own up to 50 per cent of a listed company. Along with the high development of the Vietnamese economy, the penetration of foreign investors into the stock markets is another characteristic of the ownership structure of listed companies in Vietnam, which also has effects on these companies' activities.

7.2.3 Summary of Chapter 3: Literature review, hypotheses and models

Chapter 3 reviews both the theoretical and empirical literature on capital structure and its impacts on investment and performance of companies in the context of corporate reform as well as describes hypotheses, models and data set for empirical analyses which will be conducted in Chapters 4, 5 and 6.

Corporate finance is a hot topic among developing countries and transitional countries in order to assess the effectiveness of economic reforms and corporate reforms of these countries. According to Modigliani and Miller's (1958) theory ("MM theory"), corporate value does not depend on capital structure; thus, corporate financing has no impact on corporate value when the following conditions exist together: a complete capital market, perfect information, no corporate taxes, no transaction costs, and no economic externalities. However, the full set of preconditions of the MM theory is not likely to exist in the real world. Modern corporate finance theories that explain the capital structure of companies in developed countries include trade-off theory, pecking order theory and agency cost theory. Several empirical studies on corporate financial structures in transitional economies have been conducted on East European countries and China. They examine corporate behavior using the modified MM, agency costs, and pecking-order approaches, with a focus on government influence on the markets and companies peculiar to transitional economies. These studies found evidence that the level of leverage of companies in transition economies is low (Cornelli, Portes, and Schaffer (1996), Hussain and Nivorozhkin (1997), Nivorozhkin (2002)). While some studies concluded that the determinants of the asset structures of transition economies could be explained by using the economic factors of advanced countries (Bauer (2004), Delcoure (2007), Chen (2004), Huang and Song (2006)), some provided different evidence with modern corporate finance theories, for example Cornelli, Portes, and Schaffer (1996) and Nivorozhkin (2002) found that collateral is negatively related to leverage. Some found that government ownership did not affect corporate financing structures (Huang and Song (2006)).

Regarding the impact of debt ratios on profitability, there are two possible relations between leverage and ROA. If the creditors' monitoring of a company's business operations is strict and adequate, an increase in debt will inhibit wasteful investment, and improve corporate profitability. In this case, the relation between leverage and ROA is positive. However, if the creditors' monitoring is inadequate, and the corporate governance of the borrowing company is also inadequate, the company may use the loans ineffectively. In this case, an increase in debt may worsen the profitability of the company, which causes a negative relation between leverage and ROA. There is another

possibility of a negative relation between leverage and ROA. A company may not execute an investment for fear that procuring funds through debts will send investment profits to creditors, even if the investment project may enhance the company's discounted present value. If such debt overhang problem has occurred, reducing the debt ratio is expected to promote investments, thereby increasing corporate profits. (Myer, 1977).

There are few studies on the relationship between leverage and firms' performance using data sets of transitional countries. Ebaid, I. E. (2009) found that capital structure has a weak-to-no impact on the performance of Egyptian listed firms.

The impact of leverage on the investment decisions and growth opportunities of a company is also a central issue in corporate finance. Modigliani and Miller (1958) argue that in a complete market, leverage is irrelevant to the investment decision and the value of a company. However, with an incomplete market and a significant agency problem, leverage may affect the investment decisions and growth opportunities of a company. There are four possible impacts of leverage on investment and growth opportunities: underinvestment, overinvestment, financing restraints and soft budget constraints. Myers (1977) discusses how conflicts between shareholders, managers, and creditors discourage firms with large debts from investing in opportunities with positive NPV because the benefits from investment may partially or fully accrue to the debt-holders; this creates an underinvestment problem (i.e., a debt-overhang problem). In this case, the relationship between leverage and investment is negative, and the relationship between the debt ratio and a firm's growth opportunities is negative. Jensen (1986) argues that when conflicts between managers and shareholders exist, managers are encouraged to undertake even negative NPV investments to enlarge the scale of the firm. Constraining the availability of free cash flow, including the increase of debt financing, may constrain the managers' ability to undertake such policies, and thus, improve the value of firms. Thus, if debt financing restrains overinvestment, then the relationship between leverage and investment is negative, and the relationship between the debt ratio and the firm's growth opportunities is positive. In order to finance their investment projects, companies can use either internal funds (e.g., retained earnings) or external funds (e.g., debt and issuance of new shares). The financial constraints problem arises when the company faces a shortage of funding sources to finance their investment projects. In this case, increasing debt may

provide a company more chances to invest and more opportunities for growth. Thus, both of the relationships between the debt ratio and investment, as well as the relationship between debt ratio and growth opportunities become positive. Kornai (1979, 1980) suggested that soft budget constraints are especially pervasive in socialist economies, particularly in those economies intent on "reform." If firms have a soft budget constraint problem, the relationship between the debt ratio and investment is positive, whereas the relationship between the debt ratio and a firm's growth opportunities is negative.

There are many empirical studies on the relevance of leverage on the investment of firms in developed economies but few on that in transitional economies. Firth et al. (2008) suggested that there is a negative relationship between leverage and investment among listed firms in China and that this negative relationship is weaker in firms with high growth opportunities and good operating performance as well as in firms with higher levels of state shareholding.

As for Vietnam, only a few empirical analyses have been conducted on Vietnam's corporate finance. Nguyen (ibid.), who is a pioneering researcher in this field, investigated the determinants of capital structure of SMEs in Vietnam. This study found some evidence of differences from other transitional economies, for example government-owned companies had higher debt ratios than other companies; fixed assets has a negative correlation with debt ratio; corporate profitability did not influence the debt ratio; corporate owners' stronger ties with banks and networks facilitated the procurement of funds. Biger et al. (ibid.) investigated the fund-procurement structure of companies in a census of the General Statistics Office of Vietnam in 2002 and 2003 and also found some differences with modern corporate finance such as a negative correlation between debt ratio and fixed assets. Okuda and Lai (2012) present an empirical study on the determinants of capital structure and its impact on investment of listed companies in Vietnam. The paper also found that government-owned companies had higher debt ratios than other companies and that debt financing plays a role in preventing under-investment and over-investment; although government-controlled companies borrow more, they are less strictly monitored by the government-controlled banks in their use of debt funds than other companies, and the problem of under-investment may be crucial among these companies.

This chapter also builds hypotheses to assess the results of economic reforms and corporate reforms in Vietnam based on these modern corporate finance theories. As for the determinants of capital structure, according to the trade-off approach, corporate tax is expected to have a positive relation, non-debt tax shields is expected to have a negative relation, and bankruptcy risk is expected to have a positive relation with companies' debt ratios. According to the agency cost approach, collateral can reduce the agency cost of procuring debt funds, thus a positive relation with corporate' debt ratios is expected, while internal fund has lower agency cost than other sources of funds thus a negative relation to the debt ratios is expected. Regarding the relation between capital structure and investment, listed companies in Vietnam may cope with overinvestment because of the easy lending of banks in a boom period or underinvestment because of the cautious lending of banks in the post-boom period. As for the relation between leverage and profitability, there are two possibilities. In Vietnam, the creditors' monitoring on a company's business operations is not sufficient and the corporate governance of the borrowing company is inadequate, thus the company may use the loans ineffectively, and an increase in debt may worsen the profitability of the company. Regarding the impacts of leverage on investment and growth opportunities, there are possibilities of underinvestment, overinvestment, or soft budget constraints among listed companies in Vietnam.

This chapter also presents other hypotheses about the impacts of state ownership and foreign ownership on capital structure, investment, profitability and growth opportunities. State-controlled companies may have weaker incentives to adjust their debt ratios to attain tax savings, lower bankruptcy risk due to implicit guarantees of the state, and easier ability to access state-owned bank loans regardless of their collateral due to their closer relationships with state-owned banks. State-controlled companies may be more active in investing than other companies due to their function as a tool for implementing government policies, or make less use of good investment opportunities due to their less profit-oriented characteristic. They also may have higher profitability due to their advantages in raising funds from state-owned or state-controlled banks, or less profitability due to being less independent from the state in terms of business management. These companies may have a more severe problem of soft budget

constraints, which is often seen among companies in transitional countries. Foreign-affiliated companies are assumed to have lower debt ratios, higher investment ratios and better performance due to their high requirement of information disclose and strict monitoring over business operations.

This thesis uses 3 models: (1) Capital structure and investment; (2) Capital structure and profitability; (3) Capital structure, growth opportunities and investment, which are formed from 4 equations of capital structure, investment, profitability and growth opportunities. Three estimation methods of OLS, 2SLS and 3SLS are used to estimate these three models. Cragg-Donald statistic and Durbin-Wu-Hausman Test are conducted to check the weak instruments and endogeneity for using the 2SLS and 3SLS method.

7.2.4 Summary of Chapter 4: Capital structure and investment behavior of listed companies in Vietnam

Chapter 4 investigates the capital structure and investment activities of listed companies in Vietnam, using panel data covering the six-year period 2006-2011 of 435 companies listed on the HOSE and on the HASE.

This study identified some key features of fundraising structures and their effects on investment behavior of listed companies in Vietnam. In terms of fund mobilization and corporate financing, the economic reforms (*Doi moi*) implemented by the Vietnamese government, which aims to create an economic system based on market mechanisms, have achieved some of their goals. The capital structure of listed companies could be better explained by the standard corporate financing theory based on trade-off theory and agency cost theory. However, the economic reforms still have several limitations, such as the opaque relationship between state-controlled companies and government banks, financial restrictions on investment activities, and inactive investment of state-controlled companies.

7.2.5 Summary of Chapter 5: Capital structure and investment behavior of listed companies in Vietnam

This chapter presents an empirical analysis on the capital structure and its impacts on the profitability of 435 listed companies in Vietnam, using panel data of two periods of 2006–2008 and 2009-2011.

The estimation results show that, firstly, compared to Vietnamese small- and medium-sized enterprises, the capital structures of listed companies matched better the features of standardized corporate financing theories. Secondly, however, weak corporate governance and insufficient creditors' monitoring influenced the listed companies to excessively borrow in both periods before and after the boom. Thirdly, the state-controlled companies listed on HOSE are likely to have an advantage over other companies in accessing loans and earning profits even after the boom period. Fourthly, while foreign-affiliated companies were not conspicuous in terms of profitability during the boom period, they showed their superiority through better production technology and management in the period after the boom.

These findings suggest that reforming the Vietnamese market requires the development of a system that ensures information transparency and independent corporate governance, enhances financial openings, and increases privatization of state-owned companies, including those in the banking sector.

7.2.6 Summary of Chapter 6: The impact of leverage on investment and growth of state-controlled companies in Vietnam

This chapter examines the influence of capital structure on investment activities and growth opportunities of listed companies in Vietnam where state-owned and state-controlled banks lend more than one-half of the domestic demand, and determines the variation in influence between state-controlled companies and other listed companies, using panel data covering the six-year period of 2006–2011 of companies listed on the HOSE.

Estimation analysis revealed two major findings. Firstly, in general, there is an over-investment problem among listed companies in Vietnam and debt financing minimizes this problem. Secondly, the state-controlled companies face a soft budget constraint problem, which is common in transitional economies. These results imply that state-owned banks in Vietnam impose fewer restrictions or lower levels of monitoring on loans

to state-controlled companies. Therefore, further reform in the banking sector and in state-controlled companies and further disclosure of corporate information are needed to resolve the opaque collusion between state-controlled companies and state-owned banks and to protect outside creditors.

7.3 Overall picture of corporate finance of listed companies in Vietnam

According to the empirical analyses on the capital structure and its impacts on investment, growth opportunities and profitabilities of listed firms in Vietnam, the overall picture of corporate finance of these companies has become clearer.

Firstly, financing structures of non-state-controlled listed companies in Vietnam have features that conform well to economic theory and the market economy.

Secondly, the state remains the controlling shareholder in many former state-owned companies and has controlling rights over these firms' activities, which helps these companies to make use of their close relationship with the government to access loans under preferable conditions, although their fund-using activities remain inefficient.

Thirdly, the five big state-owned or state-controlled commercial banks are still lending to most of the domestic demand, and they still impose preferable conditions and less strict monitoring on loans to the state-controlled companies.

Fourthly, fund-raising through the stock market is still undeveloped, and the fund-raising activities of listed firms in Vietnam still rely on debt financing such as bank loans.

7.4 Implications

Contrary to what is suggested by the analysis of Vietnamese small and medium enterprises (SMEs) in Nguyen (2006) and Biger et al. (2008), the capital structures of listed companies in Vietnam are relatively well matched to the features of standardized corporate financing theory. Nguyen (ibid.) and Biger et al. (ibid.) analyzed small- and medium-sized companies and concluded that these companies have a low level of information disclosure and a wide information asymmetry between them and their external creditors and investors, thereby significantly distorting their fund procurement structures. The listed companies analyzed in this paper enjoy favorable institutional environments that are conducive to achieving economically rational funds procurement

behavior.

However, Vietnamese listed companies still face a problematic market environment. Firstly, information asymmetry needs to be improved as the procurement of debt funds depended heavily on collateral. Secondly, further institutional reforms are needed including the development of a system that ensures independent corporate governance and transparency of information, the acceleration of privatization of government-owned companies and the banking sector, given the strong market presence of government-controlled banks because government-controlled companies were observed to be less affected by their ability to provide collateral in the procurement of external funds than are other companies.

7.5 Suggestion for further research

The contribution of this dissertation is that it investigated the capital structure, investment behavior, growth opportunity and profitability of listed companies in Vietnam. The empirical analyses revealed many interesting findings on corporate finance of a transitional economy such as Vietnam. However, the dissertation itself has limitations, which suggests areas for further research in the future. The data set of the empirical study was unbalanced panel data of companies listed before 2009. After that, many companies listed on both the HOSE and the HASE should be added to the data set. The data used in the dissertation was for the period of 2006-2011, which also should be extended to include more recent data in order to investigate the effectiveness of the economic reforms and corporate reforms over a longer period.

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