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Financial Performance of the Vietnam Banking Industry: State-owned banks vs. Joint Stock Commercial banks 2005-2012

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Financial Performance of the Vietnam Banking Industry: State-owned banks vs. Joint Stock Commercial banks 2005-2012

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THESIS ACCEPTANCE CERTIFICATE

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Financial Performance of the Vietnam Banking Industry: State-owned banks vs. Joint Stock Commercial banks 2005-2012

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Abstract

The aim of this study is to examine how internal determinants and external determinants affect the profitability of the two bank group in Vietnam namely state-owned banks and joint stock commercial banks. Measuring the profitability in term of return on asset (ROA) for a panel of tow banks group can give a general idea about the effects of these factors to banking system.

For this analysis, a panel regression methodology will be applied to investigate the performance of these state-owned banks and joint stock commercial banks within Vietnam's banking system empirically in a period between 2005 and 2012. The result shows that it is true that the banks in Vietnam have been experiencing profitability over the last eight years. Besides, profitability of the joint stock commercial banks was only influenced by four internal determinants and one external determinant namely capital adequacy ratio, deposit, non-interest income, bank size and GDP. Meanwhile, the profitability of state-owned banks during these years has been mainly influenced by internal determinant namely bank size.

Keywords: bank profitability, state-owned banks, joint stock commercial banks, Vietnam

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Acronyms

GDP: Gross Domestic Product

SBV: State Bank of Vietnam

ASEAN: Association of South East Asian Nations

WTO: World Trade Organization

AFTA: ASEAN free trade agreement

ROA: Return on Asset

SOBs: State-owned banks

JSCBs: Joint stock commercial banks

Fully FOBs: Fully foreign-owned banks

FOCBs: Foreign owned commercial branches

SWIFT: Society for Worldwide Interbank Financial Telecommunication

Chapter I. Introduction

1.1 Brief Introduction

The banking sector in Vietnam plays a vital role in regulation and management of capital. It is an essential tool to regulate the financial intermediary market. Therefore, banks' activities affect the economy at the macroeconomic level. Well-developed, smoothly operating financial markets play an important role in promoting the health and efficiency of an economy. There is a strong positive relationship between financial market development and economic growth (Demirgüç-Kunt and Levine, 1998; Rajan & Zingales, 1998). Therefore, it is important to define and clarify determinants of banks' profitability since it has significant policy implication for banks themselves as well as policy makers such as central banks, government and other financial agencies.

Since the economy reform in 1984, through which the Vietnamese economy became deregulated, liberalized and integrated into the international economy, banking sectors have gone through substantial changes and reforms. At the macroeconomic level, the State Bank of Vietnam (SBV) has played and is still playing a leading role in the overall financial reform, promoting domestic capital sources as an alternative source for the country's capital. It is particularly noted that the State Bank of Vietnam has allowed the establishment of Joint Stock Commercial banks, Foreign Banks, Joint Venture Banks in the Vietnamese capital market by granting permission for quasi-banking functions. In addition, at the regional level, ASEAN Free Trade Agreement (AFTA), which was signed in the Association for the South East Asian Nations (ASEAN), promoted trade in banking services among the regional member countries. Besides, Vietnam officially became the 150th member of the WTO in 2006. Following the commitments with the WTO, opening market for the banking sector

had been in effect since 2008. As a result, Joint Venture Banks and Fully Foreign Owned Banks were allowed to be established in Vietnam, which has been strictly banned in the entire history of Vietnam before the accession to the WTO. It is reasonable to observe that these changes bring great difficulties to the banking sector in Vietnam as the economic environment swiftly changed.

1.2 Aim of Study

The study aims to identify the major factors that determine bank profitability in Vietnam from 2005 to 2012, based on a quantitative analysis on 18 major banks (5 state owned banks and 13 joint stock commercial banks). In order to study the profitability of these 18 banks, return on asset (ROA) is used as a representative indicator for banks profitability and is considered as the dependent variable in the regressional analysis. For independent variables, the analysis considers several major indicators such as capital adequacy ratio, deposits ratio, non-interest income, non-interest expenses, bank size represented by total bank asset, GDP growth and inflation rate.

1.3 Research Questions

The present study examines the differences in determinants in the profitability of two banking groups which are joint stock commercial banks and state-owned banks for the period 2005-2012. However, in order to identify these differences, a number of questions have to be answered:

- Which of the two banking groups was able to perform comparatively better?
- What factors influence the profitability of state-owned banks and commercial banks within the period of 2005-2012?

- How WTO implementation commitments on banking sector impact on banking systems since 2008?

1.5 Structure of the Thesis

The analysis is composed of five major parts. Following the introduction, section two gives an overview of the Vietnamese banking sector, section three focuses on the literature review related to previous studies, section four presents the selected data and methodology, and section five explains the finding results. and finally, in the last section, concludes and suggests for further study.

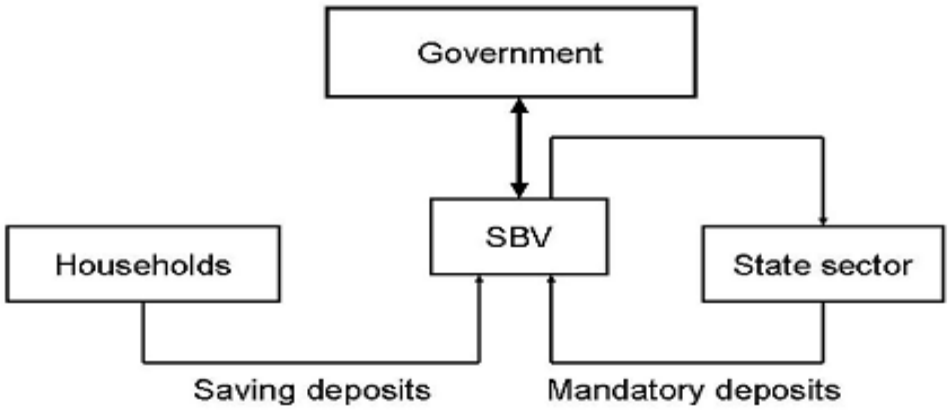
CHAPTER II. OVERVIEW OF VIETNAM BANKING SECTOR

2.1 History development of Vietnam banking sector

Before the implementation of 'Doi Moi (Renovation)' in 1986, the Vietnamese economy as well as its banking system was not market-oriented. The State Bank of Vietnam (SBV) which had been under the control of the government (The SBV was established on 06/05/1951 under the Order 15/SL) and it was the only institution in the financial system at the time which had the authority to virtually control the financial resources.

The banking sector in Vietnam before the 1986 economy reform was operated as a one-tier system (Figure 1). After its establishment, the state bank received saving deposits from households in order to serve state sectors. The State Bank of Vietnam (SBV) had been established not only to issue banknotes but also to practice other duties such as currency revaluation, budget distribution, and the provision of loans, in order to achieve its main tasks of allocating state funds and serving the state sector (Tran, 2001).

Figure 1. Vietnam one-tier banking system



Source: Tran (2001)

Despite a number of successes in supporting the government in operating financial policy during the period 1975-1986, the State Bank of Vietnam (SBV) confronted a number of challenges such as hyperinflation (The inflation reached its peak of 774 percent in 1986 (Abuza, 2002), lack of human resources in the banking sector, and the collapse of people's credit unions. Policy-makers who were under high pressure due to such difficulties decided to transfer the SBV from a one -tier system into a two-tier system (July 1987 and March 1988).

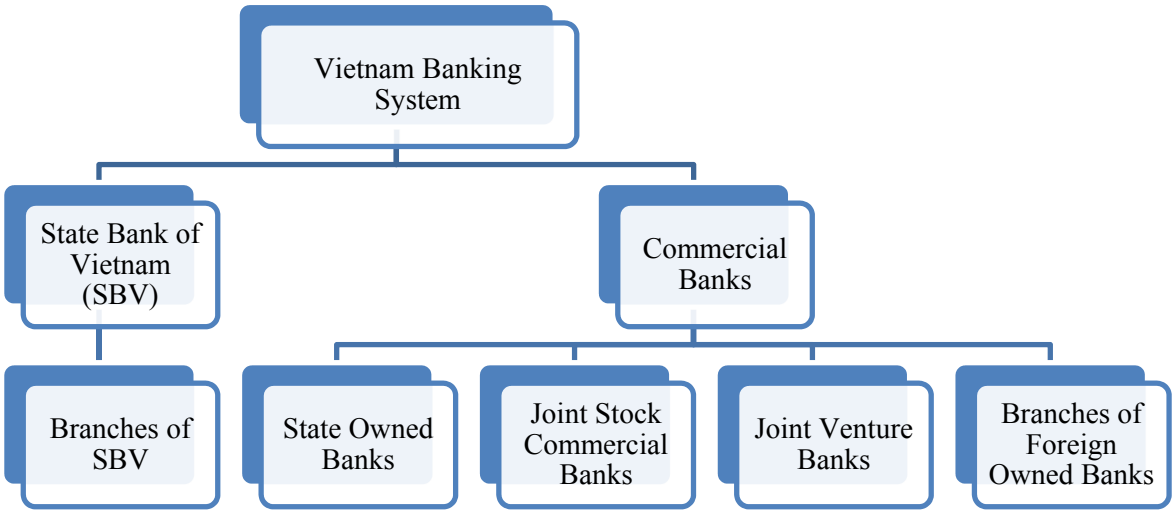
Banking system operations were changed in its mechanism with the implementation of important decrees which were adopted in 1990 and went into force in 1991. The enactment of two decrees, the "Ordinance on the State Bank" and the "Ordinance on Banks, Credit Cooperatives, and Financial Companies" in May 1990 effected the formation of the two-tier banking system (Figure 2). Due to this reform, commercial banks started to exercise monetary transactions and provide banking services while the State Bank of Vietnam (SBV) exercised the state regulatory function as a central bank.

In fact, the legislation facilitated the establishment of commercial banks and paved the way for the establishment of foreign bank branches and representative offices as well as joint venture banks.

The current legal framework for banking activities was basically completed with the enactment of the 'Law on the State Bank' and the 'Law on Credit Institutions' in December 1997. These measures not only helped recognizing and protecting business operations by the state-owned commercial banks (SOCBs), but also encouraged the development of joint-stock commercial banks (JSCBs), joint-venture banks (JVBs) and branches of foreign-

owned banks (BFOBs) on the basis of equal treatment to create a competitive environment, transparency, and publicity in banking operations.

Figure 2. The two-tier banking system of Vietnam



Source: Ngo (2011), Performance of Vietnam banking: Measurement using DEA

After the enactment of two decrees, the "Ordinance on the State Bank" and the "Ordinance on Banks, Credit Cooperatives, and Financial Companies", joint stock commercial banks and branch of foreign owned banks.

As can be seen from table 1, the number of joint stock commercial banks expanded nearly 9-fold from 5 in 1991 to 44 in 1993 while foreign-owned banks did not exist before 1991 and subsequently increased to eight institutions until 1993.

The number of joint stock commercial banks reached its peak in 1997, but the number of this group has been declining thereafter due to the bankruptcy of some joint stock commercial banks after the Asian financial crisis in 1997.

From 2000 to 2007, there was a major restructuring of joint stock commercial banks under the government initiative to enhance their financial management ability. Also, mergers and acquisitions took place directed at weak banks. As a result, the number of joint stock commercial banks in this period decreased from the period before 1999.

Notably, following the implementation of the WTO commitment from 2008 onwards, five fully foreign-owned banks, which are commercial banks 100% owned by foreign banks, were established. This marked as a milestone in the history of the Vietnamese banking system.

From table 1, by the end of 2011, the number of banks in the system was totaling 99, including five state-owned banks (SOCBs), 39 joint stock commercial banks (JSCBs), five fully foreign-owned banks (FFOBs), and 50 foreign bank branches (FBBs).

Table 1. Number of banks in development

Year	1991	1993	1995	1997	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010	2011
SOCBs	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5
JSCBs	5	44	52	55	52	43	40	40	42	39	39	45	42	42	39
FFOBs	0	0	0	0	0	0	0	0	0	0	0	5	5	5	5
FBBs	0	8	18	24	26	27	27	28	31	31	41	39	40	48	50

Source: The State Bank of Vietnam annual reports

2.2 Features of the Vietnam Banking Sector

Over two decades, the banking system in Vietnam gradually developed not only in terms of the total number of banking institutions but also in terms of the size of the banking sector in the economy, amount of credit for the economy, and proportion of total liquidity on a broad money (M2) basis over GDP. This resulted in a rapid rise of domestic credit and total liquidity as proportion to GDP, both of them reaching more than 120 percent of GDP in 2009. Table 2 summarizes the detailed development of Vietnam's banking system.

Table 2. Some developments of Vietnamese banking systems

Index	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Total Liquidity growth rate	25.6	39.3	56.2	25.5	17.6	24.9	29.5	29.7	33.6	46.1	20.3	29	33.3
Domestic credit/GDP	22.44	22.39	35.15	39.73	44.78	51.65	60.75	69.8	74.96	95.9	70.71	123	181.11
Total Liquidity/GDP	28.4	35.7	50.5	58.1	61.4	67	74.4	82.3	94.7	118	109.2	126.2	140.8
Finance/GDP	1.74	1.87	1.84	1.82	1.82	1.77	1.78	1.8	1.81	1.81	1.37	1.91	2.52
Deposit/GDP	14.23	15.98	22.71	25.93	30.10	36.44	41.05	47.70	57.93	75.99	53.25	82.74	130.27
Cash/Total Liquidity	26.33	29.13	23.42	23.7	22.56	22.03	20.49	19	17.21	16.4	14.6	14.01	12.12

Source: ADB Key Development Indicators, The State bank of Vietnam Annual Report

The share of deposit and credits between the different bank-owned types has gradually changed from 2004 to 2008. As shown in Table 3, before 2004, state-owned banks was considered as the dominate group within the banking sector with their market share of deposit and credit constituting account for more than 75%. Until 2008, there had been a significant increase in joint stock commercial banks. Before 2004, the market share of deposit and credit of this bank group was fluctuating from 11% to 13% and from 9%to 12% respectively. Until 2008, the share of deposit and credit in joint stock banks were 29% and 32% correspondingly.

It can be noted that joint stock banks have taken the market share of state-owned banks. Significant changes have taken place since 2005. For example, commercial banks have experienced robust growth in networks, capital scale, total asset scale, diversified services and utilities as well as strengthened capital mobilization. In 2008, the shares of both deposit and credit in stated-owned banks have considerably declined to 60% and 52% respectively.

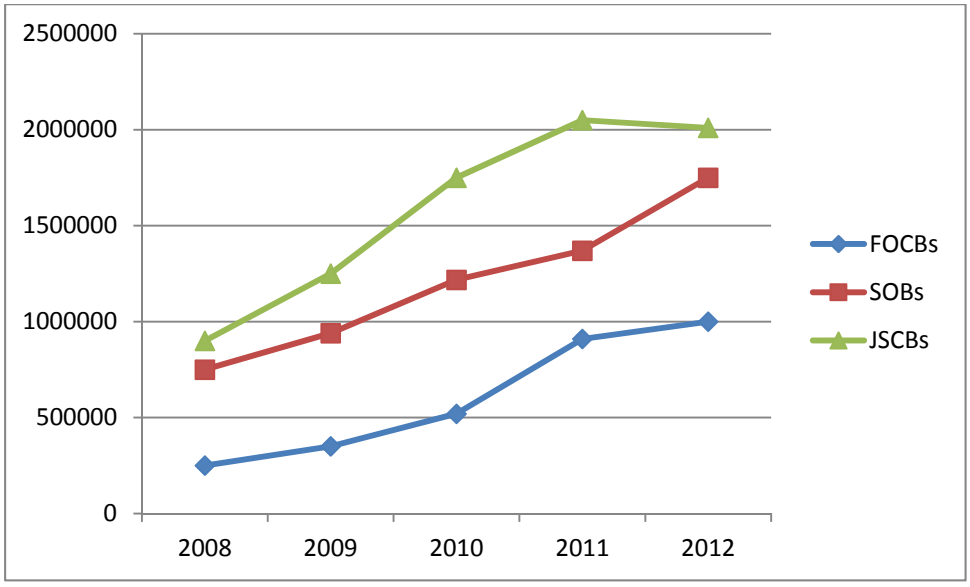
Table 3. Share of banks following bank owned type

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008
Share of Deposits (%)									
SOBs	77	80	79	78	75	74	69	59	60
JSCBs	11	9	10	11	13	17	22	30	29
Bank JVs and FBBs	11	10	10	10	10	8	8	9	9
Others	1	1	1	1	2	2	1	2	2
Share of Credits									
SOBs	77	79	79	78	76	71	65	55	52
JSCBs	9	9	10	11	12	15	21	29	32
Bank JVs and FBBs	12	10	9	9	10	10	9	9	10
Others	2	2	2	2	2	2	5	7	6

Source: The State bank of Vietnam Annual Report

As shown in figure 1, from 2008 to 2011, equity of state-owned banks and joint stock commercial banks have noticeably increased. It can be explained that surplus funds from stocks and high growth of profit pulled the expansion in charter capital and reserve funds. However, in 2012, equity of these two bank-owned type groups has slightly decreased in comparison to 2011 due to the raise in non-performing loans. It can be said that equity is a measure of a bank capital adequacy ratio and minimum leverage ratio. Low level of equity creates more risks for banks, especially when bad debt increase exceeds the scale of owner's equity. In such cases, as a result of being eroded equity, banks are more vulnerable and face high risk of bankruptcy. In order to meet the capital adequacy requirement under the Basel II rules, the central bank has demanded commercial banks to increase chartered capital from 70 billion VND up to 3000 billion VND starting from 2007 and implemented since at the end of 2011. Therefore, the equity of the banking groups is also expanding respectively because charter capital is the main component of equity capital.

Figure 3. Equity of bank owned type groups



From a situation where the banking system was overwhelmingly dominated by a few state-owned banks, Vietnam's banking sector has diversified quite rapidly. Currently, in 2012, Vietnam has five major state-owned banks which control around 43.5 per cent of the total banking sector assets; joint stock banks occupying another 42 per cent of the market share, with the remaining 11.7 per cent and 2.94 per cent spread among foreign bank branches and five joint-venture banks respectively.

2.3 Stated-owned banks and joint stock commercial banks

2.3.1 State-owned bank development

State-owned banks which are government owned institutions are originally formed to supply loans to state owned enterprises. Despite the fact that state-owned enterprises have been targeting lending customers of the state-owned banks, nowadays, state-owned banks also aim to increase activities for commercial banking, and therefore, they are no longer regarded as pure public policy institutions. Nevertheless, heavy lending to state-owned enterprises by state-owned banks notably prior to the 1997 Asian financial crisis has led to relatively

higher levels of non-performing loans (NPLs) than with other financial institutions. State-owned banks accounted for the largest share of lending, with 49.3% of total loans as of 2010 which reflected a decrease from 58.4% in 2007 (The State Bank of Vietnam 2011 report).

2.3.2 Joint stock commercial banks

The target clients of commercial joint stock banks are small and medium sized enterprises (SMEs) in the private sector. While state-owned banks belong to the government, joint stock commercial banks vary in their shareholding structures, including both public and private shareholders. Joint stock commercial banks' market share has grown in recent years, mainly due to the market share captured from the state-owned banks. Together with joint venture and wholly foreign-owned banks, they account for slightly more than a half of the total domestic lending as of end 2010 (The State Bank of Vietnam, 2011).

In recent years, the autonomy and accountability of commercial banks have been gradually institutionalized and enhanced. Commercial banks have the right to decide on deposit and lending interest rates as well as to select their own method of loan security. Neither institutions nor individuals can illegally intervene in the operation of the commercial banks. Directed credit or policy-oriented lending is strictly separated from commercial credit.

The international principles and standards for commercial banking (e.g., accounting and auditing, risk management, credit analysis, investment, foreign exchange, and loan classification and provisioning) have been gradually introduced to Vietnam's banking system. As a result, banking products and services have become more diverse. Some commercial banks have built e-banking trusted computing base to ensure fast access. By prioritizing the introduction of modern technology, especially information technology, banks, both state-owned and commercial banks, are providing more services to their customers.

These efforts have resulted in substantial improvement in the depth and quality of the overall banking payment system. Money transfer and payment through banks in the country now takes only a few seconds while such transactions used to take hours or even days in the past.

The remarkable progress in the banking payment system was further underpinned by Vietnam's participation in the Society for Worldwide Interbank Financial Telecommunication (SWIFT) system in March 1995 and the introduction of the interbank electronic payment system in May 2002, both of which allowed the development of wholesale and retail banking throughout Vietnam and enabled the linking of the domestic system and the international payment system. Thus, the payment system of Vietnam has been gradually catching up to the level of other countries in South East Asia region (World Bank 2012, country report).

2.3.3 WTO commitments in Vietnam banking sector

Since the beginning of the 2000s, the US bilateral trade agreement (2001) and Vietnam's accession to WTO have provided opportunities for more reforms in the banking sector. Notably, under the framework of the US-BTA, the Vietnamese authorities committed themselves to liberalize the banking system by 2010. The scope of Vietnam's obligations is extended to all WTO member countries, according to the most favored nation principle. These reforms grant foreign banks the right and opportunity to expand the scope of their activities in the Vietnamese banking sector, especially because it enables foreign banks to access a greater share of the capital of Vietnamese banks. The agenda has been formally set up by the Vietnamese authorities in a road map for the 2006-2010 periods. It anticipated a major reform of the State Bank of Vietnam (SBV) and the banking sector regulation, which

enabled the implementation of the Basel I prudential indicators. It also includes a partial privatization of the state-owned banks and further privatization of other banks (under the current regulation, a foreign bank standing alone and a pool of banks are limited to owning respectively no more than 15 and 30% of a Vietnamese bank's capital).

With the intention to improve banks' management standards and the quality of their portfolios, around 2000 the Vietnamese authorities began recapitalizing the public bank balance sheets while simultaneously setting up defeasance structures, in order to reduce the share of non-performing loans (NPLs). The banks should now be progressively privatized in part, so as to benefit from the credibility and the financial strength of international banks and from their better management standards.

CHAPTER III. LITERATURE REVIEW

3.1 Literature review on measuring efficiency of the banking system

3.1.1 Performance Measure

Following Ben Naceur and Goaied (2008), Kosmidou (2008), and Abbasoglu, Aysan and Gunes (2007) among others, this study uses ROA as the dependent variable. ROA shows how profitable a bank is relative to its total assets. ROA gives an idea as to how efficient management is at using its assets to generate earnings. Calculated by dividing a bank's annual earnings by its total assets, ROA is displayed as a percentage.

$$ROA = \frac{Net\ Income}{Total\ Assets}$$

ROA is determined by not only the bank's management policies, the so-called internal factors, but also by external factors relating to macro economy indicators and government regulations. In Rivard and Thomas research (1997), the authors suggest that ROA is the best indicator to measure bank profitability since ROA is not distorted by high equity multipliers and represents a better measure of the ability of a firm to generate profits on its assets portfolio.

3.1.2 Variables

Bank profitability is mostly divided into two components: external and internal determinants. The internal determinants are usually separated into two subgroups: financial statement variables and non-financial statement variables. Both are under the control of bank management policy. Financial statement variables are depending on decisions with direct effect on balance sheet and income statement, while non-financial statement variables depend on factors unrelated to financial statements. Non-financial variables include, for

instance, the number of branches, branch range of business, location and size of the bank. All these variables can be considered under the control of the bank management, therefore each entity policy will determine those characteristics.

External variables are those out of the control of the management's decisions, such as competition, local regulations, inflation, money flow or the market itself (Haron, 2004).

The Effects of Internal Determinants

Several researchers have studied the effects of internal determinants on bank profitability (.Hester and Zoellner, 1966; Haslem, 1968, 1969; Fraser and Rose, 1971; Fraser et al., 1974; Heggested, 1977; Mullineaux, 1978; Kwast and Rose, 1982; Smirlock, 1985; Bourke, 1989;Molyneux and Thornton, 1992; Stienherr and Huveneers, 1994). Most of them have based their analysis results on American data, except for the studies by Bourke (1989), Molyneux and Thornton (1992) and Stienherr and Huveneers (1994) who have based their studies on international data.

Hester and Zoellner' (1996) study examines how balance sheet items and the earnings affect each other among 300 banks in America. They noticed that changes in balance sheet items have impact on bank's earnings. Asset items generally have positive impact whereas liability items such as demand, time and saving deposits usually adversely affect banks' profits. Haslem (1968) used 64 operating ratios in order to measure the effects of management, size, location and time on profitability of commercial banks. Haslem's results indicate that all variables tested are significantly related to profitability. Fraser and Rose (1971) found that loan rate, time deposit rate, loan-to-deposit ratio, service charges and portfolio selection have no effect on profitability.

Fraser et al. (1974) consider operating costs, deposit and loan compositions as factors under the control of bank management. They conclude that bank costs, followed by bank's deposit

and loan composition, have the biggest influence on bank performance. On the other hand, Mullineaux (1978) uses a profit-function approach in his study and determines that balance sheet structure has an important impact on profitability while the relationship can either be negative or positive, depending on the nature of the balance sheet items.

With regards to deposit structure, Heggested (1977) states that the profit of banks which heavily depend on savings deposits is considerably lower than the profit of banks which depend less on saving deposits. Smirlock (1985) finds that demand deposits are a cheaper source of funds and have a positive impact on bank profits. Kwast and Rose's (1982) study, however, claims that operating efficiency has nothing to do with profitability.

Bourke (1989) was the first researcher who included internal variables in a profitability study involving cross-country data.

For the internal variables capital ratios, liquidity ratios and staff expenses were used, while the dependent variables consisted of the net profit before taxes against total capital ratio and net profit before taxes against total assets ratio.

Bourke reports that all internal variables are positively related to profitability. Molyneux and Thornton (1992) duplicated Bourke's study based on all European banks data as their sample and find similar results. Stienherr and Huveneers (1994) studied the performance of banks in the US, UK, Western Europe and Japan. From the findings of their study, they conclude that overhead expenditure is positively and significantly correlated with profitability. On the other hand, the liquidity relationship is significant in only some of the countries. At the same time, investment in equity is positively correlated in certain samples but had an adverse relationship with others.

Hester and Zoellner (1966) included the number of branches as one of the independent variables in their profitability study. They found that number of branches had no effect on profitability. Emery (1971) studied the relationship between the range of business of the branch and profitability. He divided his sample into three categories: unit branch, limited

branch and state-wide branch. He discovered a significant difference in terms of return among these three categories of branches. Vernon (1971) included location as one of the profitability determinants in his study and found that location had a significant relationship with profitability. Kwast and Rose (1982) also included location as one their independent variables. The findings of Kwast and Rose reveal that location has a significant relationship with profitability, and their results confirm the finding of Vernon (1971).

The Effects of External Determinants

Conventionally, competition has been identified as one of the main determinants of profit for conventional banks, but in fact, the academic debate surrounding the determinants of profit has not been fully resolved. Philips (1964) argues that other factors such as public regulation, as well as private and institutional market characteristics made industry performance insensitive to differences in market structure and thus, competition difficult to observe. Given the difficulties of measuring the impact of competition, banking researchers usually prefer to incorporate this aspect within the scope of market structure or regulations.

Emery (1971) was one of the first researchers who measured the effect of competition on bank profitability. He used 'entry into the market' as a proxy for competition and concluded that competition had no significant impact on profits. Rhoades (1980) examined the effect of new entry on competition. His findings indicated no relationship between entry and competition.

Steinherr and Huveneers (1994) studied the impact of foreign banks on the profitability of domestic banks. They found that the presence of foreign banks in the domestic market produced a steady impact on the profitability of various types of banks.

The banking industry is one of the most strictly regulated businesses in the world. The main

reason for regulation is to ensure a stable and healthy financial system. Peltzman (1968) was one of the first researchers who empirically tested the effects of regulation on the performance of banks. His research outcome stated that a prohibition on interstate branching and a legal restriction to new entry had a significant impact on the market value of a bank's capital.

Fraser and Rose (1972) examined whether the opening of new institutions had any significant negative effects on the growth and profitability of competing institutions. They concluded that despite some evidence of slowing growth rate of deposit, the opening of new branches by competitors did not negatively affect the profitability of existing institutions. The findings of Fraser and Rose, however, were not supported by McCall and Peterson (1977). Same as Mullineaux (1978) found that regulations on the setting-up of banks had a significant impact on profitability. The results of McCall and Peterson (1977) and Mullineaux (1978) basically confirmed the earlier studies of Vernon (1971) and Emery (1971).

Smirlock's (1985) results, using similar methodology, confirmed both Vernon's and Emery's outcomes. Concentration is defined as the number and size of firms in the market. This concept derives from the structure conduct performance theory which is based on the premise that market concentration generates collusion among the firms. The basic assumption is that the level of concentration in a market becomes a direct influence on the degree of competition among its firms. Highly concentrated markets will reduce the cost of collusion and will make it easier to facilitate implicit or explicit collusion on the part of firms. As a result of this collusion, all firms in the market will earn monopoly rents. This theory was initially confirmed by using data of manufacturing firms and became more popular among banking researchers in the 1960s.

Result of concentration on the banking structure was further studied during 1970s and 1980s. Heggested (1979), in his literature survey from 1961 to 1976, found that concentration had either a significant or a small effect on dependent variables such as profitability, loan rates, deposit rates and the number of bank offices in only 26 among 44 banks studied. Gilbert (1984) summarized the response of bank performance measures to a change in market concentration and found that in only 27 of 56 studies reviewed reported that concentration significantly affected performance in their trends.

Market share is commonly considered as a profitability determinant under the premise that firms will obtain a wider market share and increase their profitability due to their efficiency improvement. A bigger market share also means more decision-making power for the bank on prices and services which are likely to secure customers' loyalty. Heggested and Mongo (1976) found that the greater the market share, the greater is a bank's control over its prices and the services it offers. However, Heggested (1977) and Mullineaux (1978), independently of each other found that market share had an adverse relationship with profitability.

Short (1979) theorized that some banks might sacrifice current profits by growing at a faster rate or expanding their market share with the purpose of increasing the profits in the long-term. Based on the growth of assets rate as a proxy for measuring the effect of market share on profitability, he found that growth of assets does not have an important effect on profit. Smirlock (1985) not only argued that market share affected the profitability but also that growth in the market created more opportunities for a bank, and thus, able to generate more profits. His findings indicated that growth had a significant positive relationship with profits.

The effect of ownership on bank profitability is not fully concluded in the available literature. In his study, Vernon (1971) examined the performance of management-controlled

banks and owner-controlled banks.

The findings suggest that owner-controlled banks do not earn higher rates of return on invested capital in comparison to management-controlled banks. Mullineaux (1978) divided his sample of banks into two groups: only-bank holding company banks and multi-bank holding company banks. His study concluded that only-bank holding company banks were more profitable than their counterparts.

Short (1979) asserted that government ownership tends to have a negative impact on profitability, assuming that government banks were non-profit oriented banks. He found that the government ownership variable was significantly and adversely related to profits.

It is suggested that as the amount of bank's capital owned by government increases, the lower the profits generated by those banks. The findings confirmed this hypothesis.

Both Bourke (1989) and Molyneux and Thornton (1992) included government ownership in their studies. Bourke's findings indicated a weak adverse relationship, whereas a significant positive relationship was found by Molyneux and Thornton.

Bourke (1989) also argued that market expansion could have a positive effect for earning increased profits. In his study, Bourke used the annual growth in money supply as a proxy for growth in the market. He found that money supply had a positive relationship with profits. In addition, Molyneux and Thornton (1992), who replicated Bourke's study, came to similar results.

The effect of inflation on bank profitability was firstly discussed by Revell (1980). Revell presumed that inflation could be a factor in the variations in bank's profitability. His hypothesis was later empirically tested by Bourke (1989) and Molyneux and Thornton (1992). By using the consumer price index (CPI) as a proxy for inflation, both studies found that inflation had an important relationship with profit. Although the first empirical testing

on inflation was done by Bourke (1989), Heggested (1977) tried to quantify the effect of inflation on profitability in his study. Heggested used per capita income as the independent variable instead of the consumer price index, but his results did not indicate any relationship between per capita income and a bank's profitability. Economies of scale are commonly defined as reductions in the cost per unit of a product. The theory suggests that if an industry is subject to economies of scale, larger institutions will be more efficient since they can provide services at a lower cost, ceteris paribus. Hence, since larger banks are assumed to enjoy economies of scale, they are able to produce their output or services cheaper and more efficiently than smaller banks. Therefore, large banks will earn higher rates of profit than smaller ones, if entry is impeded. However, the effect of economies of scale on profitability has not been fully resolved by researchers in banking so far.

Emery (1971) and Vernon (1971) were pioneering researchers on linking bank size with profitability. Emery classified his sample according to total assets and found that larger banks had greater returns. Similarly, Vernon used total assets as a proxy for size but found that there was no significant relationship between size and profitability. Vernon's result was confirmed by Heggested (1977), Kwast and Rose (1982) and Smirlock (1985). Short (1979) found that the relationship between the profit rates of 60 banks and the growth of assets was significant but inverse. Molyneux et al. (1994), who examined the competitive conditions of European banking for a four year period (from 1986 to 1989), also included bank assets as an independent variable. However, their regression results produced inconsistent results among different countries as well as within countries from one year to another. Stienher and Huverneers (1994) also included the size of banks as an independent variable in their profitability study and found that it had mixed effect on the performance of various groups of banks.

3.2 Literature review on measuring efficiency of banking system in Vietnam

As to our best knowledge, there are no similar researches on banking profitability for Vietnam so far, and our study fills, therefore, an important gap in the literature review.

The annual reports from the State Bank of Vietnam (SBV), the World Bank (WB), the International Monetary Fund (IMF), and the Asian Development Bank (ADB) are major references for the official statistics of a country's financial system viewed from a macroeconomic view. Despite the fact that indicators such as inflation, employment, monetary policy, and domestic production covered in those reports might be useful for the analysis of this paper, these reports still lack evaluation on profitability of both the banking system in Vietnam as a whole and individual banks in the country.

Nevertheless, several studies carried out by individual researchers or non-profit institutions are noteworthy and highly relevant for this study. These researchers usually looked at the liberalization process of the Vietnamese financial system as well as the banking sector (Le, 2006); Ngo, 2004) or focused on measuring the efficiency of the Vietnamese commercial banks (Ngo, 2010; Nguyen, 2007) or even tried to use bootstrapping techniques to improve the Malmquist productivity index for the quantitative analysis on these banks (Nguyen and DeBorger, 2008).

In 2007, Nguyen conducted a research on 13 commercial banks in Vietnam for the 2001-2003 period. Nguyen's research focused on the efficiency performance of these 13 Vietnamese commercial banks in terms of efficiency change, productivity growth, and technological change. In conclusion, the author found that these banks were inefficient in both regulatory and managerial capacity matter, in which the technical inefficiency was more serious. It means the problem of increasing the efficiency in using inputs of

Vietnamese banks is more important than the problem of increasing efficiency in choosing the right mix of these inputs (Nguyen, 2007).

In a discussing paper, Nguyen and DeBorger (2008), examine the efficiency and productivity of 15 commercial banks in Vietnam. . The paper shows that there is a decreasing trend of the productivities of these banks. However, they concluded that their bootstrapping results prove that this trend is not significant, and stressed that more studies are needed.The studies above show that it is necessary to study the profitability measurement of the banking sector in Vietnam and specifically differentiate between internal factor and external determinant of the two major banking groups: state-owned banks and joint stock commercial banks.

CHAPTER IV. DATA AND METHOD

4.1 Data

The data used in this study are divided into two categories: internal variables and external variables. The former variables are collected from the balance sheets and income statements of 18 banks (Table 4 below) that are provided from annual financial reports for the period 2005 - 2012. The external variables are collected from ADB (Asian Development Bank), WB (World Bank), International Monetary Fund (IMF) and GSO (General Statistic Office of Vietnam) statistics and databases.

The data was reorganized and inserted into excel spreadsheets in order to calculate the ratios needed for the empirical study. It is important to underline that the data are panel one. In addition to the five state-owned banks, instead of studying all commercial joint stock banks, this study will mainly concentrate on the thirteen commercial joint stock banks due to facing data collection from all commercial banks. Besides the fact is that it was hard to find both financial statements and income statements for any bank from 2005 onwards.

Table 4. List of banks in observation

No.	Banks	Ownership
1	Joint Stock Commercial Bank for Foreign Trade	State-owned
2	Vietnam Bank for Industry and Trade	State-owned
3	Bank for Investment and Development of Vietnam	State-owned
4	Vietnam Bank for Agriculture and Rural Development	State-owned
5	Housing Bank of Mekong Delta	State-owned
6	An Binh Commercial Joint Stock Bank	Joint Stock Commercial
7	Asia Commercial Joint Stock Bank	Joint Stock Commercial

8	Eastern Asia Commercial Joint Stock Bank	Joint Stock Commercial
9	Maritime Commercial Joint Stock Bank	Joint Stock Commercial
10	Military Commercial Joint Stock Bank	Joint Stock Commercial
11	Nam A Commercial Joint Stock Bank	Joint Stock Commercial
12	Sai Gon Thuong Tin Commercial Joint Stock Bank	Joint Stock Commercial
13	Saigon bank for Industry & Trade	Joint Stock Commercial
14	Saigon-Hanoi Commercial Joint-stock Bank	Joint Stock Commercial
15	Southeast Asia Commercial Joint Stock Bank	Joint Stock Commercial
16	Viet Nam Export - Import Commercial Joint Stock Bank	Joint Stock Commercial
17	Technological and Commercial Joint Stock Bank	Joint Stock Commercial
18	Vietnam International Commercial Joint Stock Bank	Joint Stock Commercial

4.2 The Variables

Referring to previous studies, the present study will employ two categories of variables in order to examine the profitability of the selected 18 banks. These categories are classified as dependent variables and independent variables as shown in the following table. Different variables will be chosen in the consideration of testing different regressions.

Table 5. Variable summaries

	Measure	Notation	Hypothesized relationship with profitability
Dependent Variables	Returns on assets (ROA)=Net income to total asset ratio	ROA	NA
Independent Variables			
Internal	Equity to total assets ratio	CAR	+/-

factors	Total loan, advance and financing to total assets ratio	ASQ	+
	Deposits to total assets ratio	DETA	+
	Liquidity assets/total assets	LQR	+/-
	Loans to deposit ratio	LIQ	+
	Non-interest income to total assets ratios	NII	+
	Non-interest expenses to total assets	NETA	+/-
	Loan loss provision to total assets	PRTO	-
	Natural logarithm of total assets	LSIZE	+/-
External factors	Annual average base lending rate of all banks	BLR	+
	The growth of money supply as measure by currency in circulation	MSG	+
	Natural logarithm of gross domestic products	RGDP	+
	Annual inflation rate	IFR	+/-

4.2.1 Dependent Variables

According to the important role played by return on asset (ROA) in regard to banking profitability, these dependent variables are utilized in almost all the bank performance research.

ROA:

Return on Asset (ROA) ratio is indicated in percentage and defined as the division of the net income by the total assets. It is a key indicator of profit and asset management efficiency. Therefore, it indicates how well the bank's assets are managed to generate profit for each one dollar of asset that has been invested in the company or the bank (Gul, 2011).

4.2.2 Independent Variables

Capital ratio (CAR):

Capital ratio (CAR), also known as capital to risk weighted asset ratio, is a ratio of a bank's capital to its risk and calculated by the division of equity to total asset. Capital ratio is estimated as a percentage of the bank riskiness or ability to protect its depositors from bank failure. Molyneux (1993) conducted a study on European banking and indicated that there is a positive relation between equity and bank profitability in the case of lowering the cost of capital.

Deposit ratio (DETA):

It is said that deposits are one of the most important sources for banks to offer customers considering they are the cheapest source. In this context, if banks provide more loans to customers, the more deposits banks can offer to their customers, the higher is the profitability banks can gain. However, it is necessary to notice that when demand for loans is low, attracting more deposits might result in lower bank earnings since the cost of having more deposits or interest fees increases(Rasiah,2010). This conclusion is also supported by empirical findings of Vong and Chan (2009) in determinants of bank profitability in Macao.

Non-Interest Income (NII):

Non-interest income is any type of income generated from the application of fees, commissions, brokerage charge, and returns on investment from banks services rather than from interest that is applied to the outstanding balance of a financial account.

In a study of Malaysian commercial banks profitability, Rasiah (2010) found that as a result of financial globalization and liberalization, traditional commercial banks activities have been gradually shifted to supplying other financial services. Given the growth and diversification of financial services, banks are still able to generate profits. In finding results

of Karkrah and Ameyaw (2010), it was found that non-interest income has significant positive impact on commercial banks profitability. However, Vong and Chan (2009) pointed out that as a result of generating more competition than traditional income activities such as loans interest, non-interest income creating services has negative relation with bank's profitability.

Non-Interest Expense (NETA):

Non-interest expense is measured by the ratio of non-interest expense and the total assets which show banks fixed operating cost including employee salaries and benefits, equipment and property leases, taxes, loan loss provisions and professional service fees. Non-interest expense might have a negative impact on bank profitability since banks have gradually aimed at decreasing their operating costs. Additionally, banks are likely to utilize progress in technology to deliver their services which might lead to the fall in labor costs.

Gross Domestic Product (GDP)

Usually economic growth is measured by using the real GDP growth rate. There is a general assumption that there should be a positive relationship between bank profitability and high GDP growth based on the idea that default risk may follow an increasing trend rather than a decreasing trend. Furthermore, higher economic growth may lead to a higher demand for both interest and non-interest activities which would constitute an improvement of the profitability of banks.

The real GDP growth rate is expected to affect profitability in a positive way by including it in the profit determinants model. There is a common perception that loan defaults are normally lower in times of favorable economic growth and vice versa. As mentioned above,

higher economic growth may lead to a greater demand for loans which may result in both interest and non-interest income and therefore, an increase of bank profits. However, empirical studies have shown that the causality of the relationship between economic growth rate and bank profitability may vary from positive to negative. effects. .

Inflation rate (IFR):

Inflation rate is measure as annual average increase in Vietnam's consumer price index: a rise in inflation causes banks to increase the lending rate in order to offset any costs and to maintain or generate higher income.

According to Revell (1979) and Rasiah (2010) research, inflation can be used to explain bank profitability. Central banks with their ability to control inflation increase the cost of borrowing and reduce the credit creating capacity. Thus, the funds provided to the banks as loans are reduced as well. As a result, the cost of borrowing becomes higher and banks adopt stricter lending policies which will automatically lead to lower demand for funds and a fall in the overall volume of spending. Such a situation may adversely affect the profitability of banks because banks earn their revenue primarily from the provision of loans to customers. Consequently, an increasing demand for loans due to the higher cost of borrowing is likely to reduce earnings and bank profits. Inflation is generally expected to have a negative effect on bank profitability due to the decrease of the real value of bank's assets compared to their liabilities. The reason for this is that banks' nominal assets might be larger than their nominal liability since they are monetary creditors. Moreover, in times of high inflation the value of the nominal assets tends to decrease more relative to the increase in the value of nominal liability.

Bank Size (LSIZE)

Bank size is measured by the natural logarithm of a bank's total assets. One of the most important underlying bank profitability is which size of banks optimizes their profit. Generally, because of economy in scale, the larger the market share banks enjoy, the more profitable the banks. Thus, the bank size variable is, this variable is predicted to have a positive relation to bank profitability. Bank size is close to bank's capital adequacy. According to Short's (1979) findings, a relatively large bank size tends to cause less expensive in capital.

Dummy variables

Dummy is introduced in the regression as another variable indicator of profitability especially during a period of WTO effectiveness to indicate whether the financial institutions have been affected by the crisis or not. In the present study, the dummy variable is given the value zero (0) for the period before the implementation WTO commitments and the value one (1) for the period after WTO commitments were introduced.

4.3 Method

4.3.1 Correlation Coefficient Test

The aim of this study is to analyze factors affecting Vietnam's banking industry by analyzing bank specific. A regression analysis is employed to the panel data which was collected from the balance sheets and income statements through their financial annual reports. Panel data is defined as the combination of cross-section and time series data. Before running the regression analysis, a test has been done in order to see whether the data are stationary or not, by doing so, a correlation coefficient has confirmed a rejection of the null hypothesis.

4.3.2 Proposed Model

In order to empirically investigate the effects of internal and external factors on bank profitability as well as refer to the dependent variables (ROA) involved in this thesis, the econometric of the Panel Regression will be as the following:

- $Yjt = \delta j + \alpha' Xijt + \beta' Xejt + Dij$

Where:

- Yj: refers to the dependent variable of the function
- Xij: refers to the internal factors (determinants) of a financial institution;
- Xej: refers to the external factors (determinants) of a financial institution;
- δj: refers to the intercept of the model;
- Dij: refers to the dummy variables

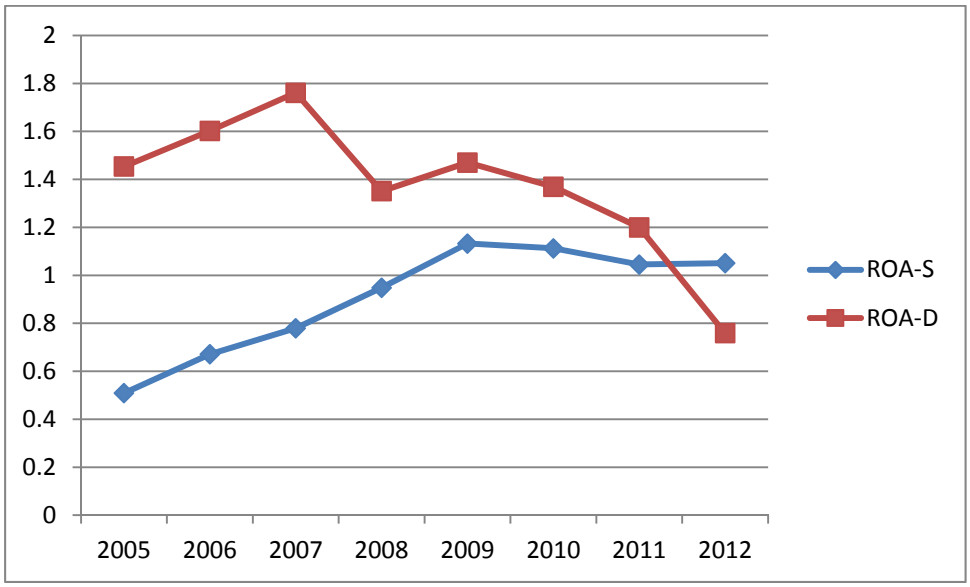
In respect to the model above, the regression analysis of this study is the following:

$ROAjt=\delta 0+\alpha 1CAR+\alpha 2DETAjt+\alpha 3NETA+\alpha 4NII+\alpha 5LSIZEjt+\beta 2WTO+\beta 3IFR+\beta$ BOT

CHAPTER V. EMPIRICAL ANALYSIS AND RESULTS

This part of the paper presents the analysis of study of profitability and the key value drivers of profitability of state-owned banks and joint stock commercial banks in Vietnam over the last decade. In figure 4 below, and the discussion of profitability of the banks followed by analysis of eviews outputs with regards to the key value drivers of the both type of bank owned groups' banks profitability in period of 2005- 2012.

Figure 4. Return on asset trend



Note: ROA-S: Rate of return on assets state-owned banks
ROA-D: Rate of return on joint stock commercial banks

The figure above shows the performance of the selected 18 Vietnamese banks regarding profitability measured as return on assets (ROA) during the eight years period. From the figure it can be easily seen that over the period of eight years the performances of the two banking groups have shown opposite trends. State-owned banks tend to increase their profits while for the group of joint stock commercial banks, this indicator displays a diminishing trend for the same period from 2005 to 2012. Moreover, the average profit in the joint stock

commercial bank group is higher than in the state-owned bank group. However, state-owned banks have caught up and slightly higher compare with joint stock commercial banks regarding profitability in 2011 and 2012, respectively. This is somewhat surprising given the fact that state-owned banks are undergoing a long-needed recapitalization program while, at the same time, needing to increase general provisions for expansion in lending. Meanwhile, joint stock banks are also undergoing a restructuring program concerning non-performing loans (IMF country report, 2012).

The results displayed in figure 4 are supported by several research results. Micco (2007) found that bank ownership influences bank performance. According to these results, state-owned banks operating in developing countries tend to display lower profitability, lower margins and higher overhead costs than comparable private-owned banks. Iannotta, Nocera and Sironi (2007) point out that state-owned banks exhibit a lower profitability than privately owned banks. Furthermore, Beck (2005) controlled for the age of the bank in his study since longer established banks might enjoy performance advantages over relative newcomers. Their results for the Nigerian market indicate that older banks performed worse since new entrants into the market were better able to exploit new profit opportunities.

As stated above, the main objective of this paper is to examine the key value drivers of profitability of two bank groups: State-owned banks and joint stock commercial banks in Vietnam during an eight years period, by focusing on the eighteen banks. In order to investigate the impact of the recent WTO commitment on banks' profitability determinants, the time period under observation was split up into two periods: the period before the implementation of WTO regulations (before 2008) and the years during and after the implementation (after 2008). An evaluation of the impact of some key internal and external variables on return to assets (ROA) of these banks has also been carried out. The following

variables were considered: capital ratio, deposit ratio, non-interest income, non-interest expense, inflation and bank size (bank owned type and WTO commitment are dummies variables). Table 6 and table 7 below present the summary statistics of the variables used in the regression analysis.

Table 6. Summary statistic of dependent and explanatory variables (state-owned banks)

	Mean	Median	Std. Deviation	Number of Observation
ROA	0.91	0.87	0.52	40
CAR	7.18	6.74	3.28	40
DETA	59.64	64.47	15.00	40
IFR	11.92	9.50	5.88	40
NETA	1.64	1.55	0.59	40
NII	0.32	0.27	0.19	40
LGDP	6.82	6.55	1.33	40
LSIZE	18.99	19.21	1.01	40

Table 7. Summary statistic of dependent and explanatory variables (joint stock commercial banks)

	Mean	Median	Std. Deviation	Number of Observation
ROA	1.51	1.50	0.81	99
CAR	13.34	12.35	6.93	99
DETA	55.19	56.57	15.58	99
NETA	1.30	1.26	0.57	99
NII	0.45	0.40	0.26	99
IFR	12.03	10.75	5.88	99
LGDP	6.77	6.31	1.31	99
LSIZE	17.37	17.49	1.17	99

Table 6 and Table 7 report the descriptive statistics of all variables used in the analysis. For each variable, mean, standard deviation and number of observations was computed. On average, over the entire time period from 2005 to 2012, state-owned banks have a return on asset (ROA) of 0.908%, while joint stock commercial banks perform higher with an ROA of 1.510%.. The median value amounts to 0.87% and 1.5% respectively, and is, therefore, lower than the mean. This difference, as well as other statistics point to the existence of profitability differences between the 18 banks in the sample.

The capitalization of banks, defined by the ratio of equity over total assets, also varies significantly among the 18 banks in the sample. On average, the capital ratio is 7.18% for state-owned banks and 13.34% for joint stock commercial banks. The best capitalized bank

in the group of state-owned banks has a capital ratio of 15%, whereas the least capitalized bank's total equity only covers 2.45% of its total assets. Meanwhile, the former in the group of joint stock commercial banks amounts to 45.89% and the latter is 0.5%.

On average, the annual growth rate of deposits over total assets ratio accounts for nearly 60% in both bank groups. However, the median value reveals that the total deposits of certain banks grew on average at a significantly higher rate. Total assets, which approximate bank size, are over 17 million VND on average in both bank groups, and the median value amounts to 17.4 million VND. However, the size of state-owned banks is relatively larger than the one of joint stock commercial banks. The differences between these two values group can be explained by the existence of big banks such as Vietcombank or Vietinbank in the state-owned bank group, which exert a larger impact on the average.

Real GDP growth amounted to more than 6.5% on average, which is quite significant for a developing economy. This also reflects the fact that the time period considered in this study covers an economically prosperous period.

5.1 Correlation Coefficient Test Results

Examination of the correlation coefficients allows us to study the null hypothesis of no correlation between explanatory variables. We must therefore set the limit value of the correlation coefficient to specify our models. We set this limit to 0.8 (Kennedy, 1985).If the correlation between the two variables exceeds 0.8, then these two variables should not be in the same model in order to ensure the effectiveness of the interpretation of results. As shown in the tables below, all correlation coefficients are smaller than 0.8, which means that the phenomenon of collinearity is becoming more pronounced. It follows that the correlation

between the explanatory variables in our models may be acceptable. Thus, the problem of multicollinearity can be ruled out.

Table 8. Correlation coefficient test results (state-owned banks)

Correlation	ROA	CAR	DETA	IFR	LSIZE	NETA	NII	RGDP
ROA	1							
CAR	0.361	1						
DETA	0.344	0.054	1					
IFR	0.142	0.169	-0.184	1				
LSIZE	0.595	0.123	0.406	0.168	1			
NETA	-0.065	-0.098	-0.115	0.154	0.038	1		
NII	0.556	0.352	0.397	0.127	0.609	-0.313	1	
RGDP	-0.359	-0.21	0.225	-0.338	-0.354	-0.229	-0.236	1

Table 9. Correlation coefficient test results (joint stock commercial banks)

Correlation	ROA	CAR	DETA	IFR	LSIZE	NETA	NII	RGDP
ROA	1							
CAR	0.114	1						
DETA	0.317	-0.055	1					
IFR	-0.067	0.065	-0.048	1				
LSIZE	0.068	-0.336	0.073	0.285	1			
NETA	-0.030	0.111	0.322	0.272	0.351	1		
NII	0.320	-0.095	0.440	0.136	0.321	0.372	1	
RGDP	0.161	-0.006	-0.041	-0.329	-0.588	-0.582	-0.133	1

5.2 Regression Analysis Result of Joint Stock Commercial Banks

Table 10 reports the regression results for our main profitability measure 'return on assets' (ROA). The first column estimates the results of bank groups' variables without the dummy variables on WTO commitment effectiveness. Column two lists the findings for all variables, including internal variables, external variables and dummy variables.

Table 10. Regression result of joint stock commercial banks

Dependent Variable: ROA	(4) Joint Stock Banks	(5) Joint Stock Banks
Internal factor		
Equity/Total assets	0.032***	0.029**
	(0.010)	(0.017)
Deposits/Total assets	0.012**	(0.014)**
	(0.025)	0.014
Non-interest income/Total assets	0.695**	0.632*
	(0.045)	(0.066)
Non-interest expenses/ Total assets	-0.223	-0.178
	(0.203)	(0.308)
Natural logarithm of total assets	0.159*	0.129*
	(0.095)	(0.175)
External factor		
WTO affects		0.898*
		(0.079)
Natural logarithm of GDP	0.158*	0.427**
	(0.075)	(0.017)

Annual inflation rate	-0.007	-0.025
	(0.623)	(0.147)
Constant	-3.347	-5.086**
	(0.125)	(0.033)
Number of observations	99	99
Number of banks	13	13
R-squared	0.440	0.565

Notes: Prob. correlation within firms in brackets. Values in parentheses are t-statistics. *, **, *** denote an estimate significantly different from 0 at the 10%, 5% or 1% level, respectively.

Overall, we can see that there are no significant differences between the two estimation results with respect to significance as well as size of the coefficients, with the dummy variables about WTO commitments. The overall R-squared of the full model with our entire explanatory variables amounts to 56%. As can be seen from the table, the internal variables (CAR, DETA, NII, and LSIZE) and the external variables (GDP and WTO affect) are significant, and thus, need to be considered as drivers of this banks group' profitability.

Internal variables:

The results show that the measure of bank's capital adequacy in year t, which is the capital adequacy ratio (CAR), has a strong positive impact on profitability and is statistically significant in the estimated model. This is also in line with the priority expectation. The statistical significance in the model indicates that the capital adequacy ratio (CAR) can be considered as a major driver of joint stock commercial banks' profitability. The positive relationship between the commercial banks' profitability and their level of capital adequacy exhibited by the result is also in line with the findings of Berger (1995), Molyneux (1993) and Suffian (2008). High level of capital enables banks to offer depositors a better safety net which results in reduced capital costs and hence, high profitability. Moreover, both Basel II

and III accords have underlined the fact that most bank insolvencies are caused by credit losses and therefore it is important for commercial banks to have higher quality of capital in order to be able to absorb more loss hence to better withstand stress periods. Banks with high level of equity can reduce the cost of capital by offering a safety net to depositors and interbank markets, and with it, have opportunities to increase their profitability. Moreover, a commercial bank endowed with enough capital can take higher risks which in turn attracts high income and absorbs shocks emanating from liquidity and credits risks which results in higher profitability. These results indicate that it is obvious for Vietnamese banks with their high level of capital to make profit.

The ratio of non-interest income to gross income (NII), a measure of diversification and business mix, has a negative impact on profitability which is in line with some aspects of the initial expectations of the present study. This variable is also statistically significant, and thus, can be included as a major variable showing a positive influence on the profitability of commercial banks in Vietnam. On the other hand, the coefficient of non-interest income (NII) entered the regression model with a positive sign and is statistically significant at both the five percent and ten percent levels in both regression models. The results imply that financial institutions, which derive a higher proportion of their income from non-interest sources such as fee-based services tend to report a higher level of profitability. The empirical findings provide support for earlier studies, such as that by Canals (1993). Canals (1993) study suggests that revenues generated from new business units can significantly contribute to enhanced bank performance. On the other hand, Stiroh and Rumble (2006) found that diversification benefits gained by US financial holding companies are offset by their increased exposure to non-interest activities, which tend to be much more volatile but not necessarily more profitable than interest-generating activities.

LSIZE has positive relation, and is significant at the 10% level. This provides support to earlier research findings regarding economies of scale and economies of scope for smaller banks or diseconomies of scale for commercial banks respectively (Pasiouras, 2007; Staikouras, 2008). Hauner (2005) offers two potential explanations regarding the positive relation between size and bank performance: Firstly, if the relation relates to market power, large banks are likely to pay less for their inputs. Secondly, there may be increasing returns to scale through the prioritization of fixed costs (e.g. research or risk management) over a higher volume of services or through efficiency gains from a specialized workforce. It is interesting to note that the coefficient of the variable loses its explanatory power when other macroeconomic and financial indicators are controlled for.

External variables:

Furthermore, the results of the estimated model for both bank groups show that GDP plays as a role of the external variables in the model can be considered as driver of the banks' profitability in Vietnam. The GDP growth rate affects bank profitability in Vietnam positively, with the coefficients being significant at the 5% level. This result stands in line with the findings of Bourke (1989), Molyneux and Thornton (1992), and Athanasoglou (2008). Observably, there is a positive effect of more business opportunities induced by economic growth on banking profitability. As GDP growth decelerates, particularly during recessions, credit quality deteriorates while defaults increase, which in turn, reduces bank returns and vice versa.

5.3 Regression Analysis Result of State-owned Banks

Table 11 reports the regression results for the main profitability measure 'return on assets' (ROA). The first column shows the results of bank groups' variables without dummy variables on WTO commitments' effectiveness. The second column lists the findings for all variables, including internal variables, external variables and dummy variables.

Table 11. Regression analysis result of state-owned banks

Dependent Variable: ROA	(6) State Owned Bank	(7) State Owned Bank
Internal determinants		
Equity/Total assets	0.034	0.036
	(0.136)	(0.123)
Deposits/Total assets	0.006	0.007
	(0.261)	(0.256)
Non-interest income/Total assets	0.398	0.285
	(0.463)	(0.615)
Non-nterest expenses/ Total assets	-0.036	-0.051
	(0.787)	(0.702)
Natural logarithm of total asset	0.173**	0.179***
	(0.078)	(0.072)
External Determinants		
WTO affects		0.324
		(0.489)
Natural logarithm of GDP	-0.084	0.013
	(0.192)	(0.932)
Annual inflation rate	0.000	-0.007
	(1.000)	(0.673)

Constant	-2.507	-3.355
	(0.179)	(0.138)
Number of observations	40	40
Number of banks	5	5
R-squared	0.496	0.504

Notes: Prob. correlation within firms in brackets. Values in parentheses are t-statistics. *, **, *** denote an estimate significantly different from 0 at the 10%, 5% or 1% level, respectively.

With regard to the discussion of the result of the estimated model for joint stock commercial banks the variables which have been indicated by the result as significant will be focus on. The results in table 11 show that only one internal variable, namely LSIZE is significant and thus, to be considered as a potential driver of bank profitability. While none of the external variables shows significance in this model.

It is argued that a growing bank size is positively related to a bank's profitability (Smirlock,1985; Pasiouras and Kosmidou, 2007). Larger banks are likely to have a higher degree of product and loan diversification than smaller banks. In addition to the higher diversification potential, economies of scale can also arise from a larger bank size. As diversification reduces risks and economies of scale lead to increased operational efficiency, a positive effect of a bank's size on bank profitability can be expected. However, very large banks tend to exhibit a negative relationship between size and profitability due to several factors related to the large firm size such as agency costs, bureaucratic processes, and so forth. In the case of Vietnam, even though state-owned banks have higher market share in deposit and credit as well as in total assets, the banks' size is still relatively small when compared with banks in developed countries. Hence, the positive significant of bank size in regression model is support by the previous studies.

WTO affects as well as other variables have shown in the regression analysis no significant correlation to state-owned banks' profitability. However, due to the fact that the number of observation is only 40, the result might be unstable and insufficient to study the determinant variables. It is necessary to explore further studies on state-owned banks in order to explain other potential factors that might determine bank profitability.

CHAPTER VI. CONCLUSION AND SUGGESTION

This paper examines how bank specific characteristics, namely, internal determinants and external determinants factors, affect the profitability of two bank groups (state-owned and joint stock commercial banks) in Vietnam over the time period from 2005 to 2012. So far, there have been very little econometric research examining determinants of banking profitability for the Vietnamese banking market, even it is the back bone of the economic activities. Besides the internal factors, the regression model in this study incorporated the influence of previously ignored factors.

As from the results of the regression analysis can be observed, factors that have affected the profitability of joint stock commercial banks in Vietnam over the period from 2005 to 2012 include WTO commitments implementation periods are mainly internal ones, while state-owned banks do not seem to be affected by any of the internal factors, but an external factor, namely bank size..

The investigation of factors which influence bank performance is not new in the economic literature. The effects of various internal as well as external determinants on profitability of banks are well explored. However, in this thesis, it is the first time that these internal determinants and external determinants are carefully tested in regard to the effectiveness of profitability in the Vietnamese banking sector.

In this research paper, the effect of a set of determinants on the profitability of Vietnamese banks was analyzed. The results show that the characteristics of the banks, the macroeconomic conditions and the financial structure may all have an impact on a bank's profitability. It is not only for bank managers but also for many other stakeholders (e.g., central bank, government and financial authorities of Vietnam) important to understand the

factors which affect bank profitability. The conclusions drawn from this study may also be important in economies and banking systems which experience radical changes.

There are a number of limitations in this study which ought to be mentioned. While searching for literature articles, studies on the determinants of Vietnam banks' profitability are limited. Only a few articles examined the impact of the 2008 global financial crisis on bank performance in Vietnam. There are two major research variables on determinants of profitability of commercial banks in Vietnam. Moreover, although the eighteen banks which were selected in this study account for more than 50 per cent of the total market share in Vietnam's banking sector, only 13 commercial banks among the 39 existing commercial banks were chosen for the purpose of this study. Thus, since in this study not all banks were covered, the results regarding the general trend in Vietnam's banking sector might have been slightly distorted. Besides, data from five state-owned banks in the eight years period might affect the stability of the research result. Finally, there were differences in data received from the State Bank of Vietnam (SBV) and General Statistic Office which is in need of further studies.

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