

Impact of Firm's Investment on Cash Flow Relation in the Context of Banking System Reform in Vietnam

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Abstract:

The study examines the effect of banking system reform, which is defined by the presence of foreign banks, on investment-cash flow relation in a context of a small transition economy. I find evidence that the presence of foreign banks in Vietnam results in decreasing in firm's dependence on local banks and has changed their financial constraint. Company investments are less reliant on internal cash flow in the post reform period. Although overinvestment of state controlled firms cannot be reduced but underinvestment problem of non- state-controlled listed firms is mitigated due to better accessibility to bank loans. The investigated relation between investment and leverage is robust for this conclusion

Keywords: financial constraints, investment – cash flow relations, state ownership, banking system reform, small transition economy

1. Introduction

In Vietnam, due to the underdevelopment of financial market, beside internal cash flows, bank loans have been main financing sources of funds for firm's investments. However, credit market is not a fair play ground for private companies due to some historical reasons although Vietnam has done several efforts to improve the situation. Nhung and Okuda (2015) show that Vietnamese SOEs have an advantage over privately owned firms in accessing bank loans as well as making a profit, even after economic booms. The higher accessibility to bank loans, the less financially constrained the firm is, meaning the lower investment – cash flow sensitivity. Therefore, banking system reform is proved to have an impact on investment – cash flow relation (Tsai et al., 2014). In the process of transforming the economy from centrally – planned to market oriented, Vietnam also has conducted a number of financial system reforms as a component of overall economic reform. One of them is to allow the entry of foreign banks to do business in Vietnam. This does not only come from the reality but from entrance requirements of international free trade agreements such as WTO also. The presence of foreign banks on one side would increase competition in credit market, and on the other side put pressures on domestic banks to improve their transparency, efficiency and profitability to be survival and grow in a integrated market. As such, the presence of foreign banks – which can be considered a measure to reform the banking system – may have certain impact on companies accessibility to external funds to finance their investment, or on the other words, firm's investment – cash flow relation. Therefore, it also motivates me to conduct this study.

The topic of investment – cash flows have been intensively conducted in financial literatures, but most of them use the samples of developed countries like U.S, Canada, or China – a big transitional economy. To my best knowledge, the relationship between investment and cash flows, especially in the context of state – ownership and foreign bank entry has still not investigated for the case of a small transition economy like Vietnam. Furthermore, in spite of sharing some cultural, social and political similarities with China, Vietnam also has many differences such as size of economy, history of the transformation, openness to the world economy, development of financial market, etc. Studying the Vietnamese context is believed to be worthwhile and valuable for international finance literatures because results from the rather specific case of China may not be generalizable for other small emerging markets.

2. Literature review

Investment is one of the most important financial decisions, and is an attractive topic of financial studies. Under the conditions of perfect capital market, external funds can be perfect substitution of internal funds, which means firm's investments are independent with financing decision. Firm's investment totally depends on the net present value of the investment opportunities. However, in the context of financial constraint where internal capital might be more expensive than external one (Modigliani & Miller, 1958), cost of capital is proven to be the only factor affecting firm's investment decisions. Especially, since the influential paper by Fazzari et al. (1988) about impact of financial constraint on corporate investment, a number of studies have been conducted to empirically test the determinants of corporate investments in the context of financial constraint. Notably, in this context, standard investment models assert that neither firm's current cash flows nor profits have impact on firm's investment. Instead, these models focus on investment opportunities of a company with arguments that internal capital does not have any significant relation with investment at certain specific point of time. If there is a significant relation, it can be used to explained for the presence of financial constraints on firm's investment (Kadapakkam, Kumar, & Riddick, 1998).

Bhagat et al. (2005) focus the study on the investment – cash flow relation of financial distress companies – the ones cannot meet their obligations with internal cash flows. The results show that the cash flow sensitivity of investment of financial distress companies depends on how profitable the financial distress companies are. Positive operating profit financial distress companies create a positive sensitivity while negative operating profit distress companies have negative relation, which may be caused by impact of external financing (Bhagat et al., 2005). Specifically, the net operating loss company would finance their investment with external funds, especially new equity. New equity investors are willing to invest in these risky company because they may expect that the companies would recover quickly in the future when economic conditions are better, and also because of the nature of limited liabilities.

Another approach used by Beck, Demirgüç-Kunt, and Maksimovic (2008), studying factors affecting financial constraints on investments by using a survey on more than 10,000 companies on 80 countries in the world. They find that firm age; firm size and ownership structure have significant impact on financial constraints on investment. Small sized companies has higher financial constraints than big sized ones, indicating that big sized companies have less information asymmetry and higher accessibility to external capital market. Besides, the authors also find that financial system development also reduce impact of financial constraint on investment.

Using pledgeable assets as a proxy for financial constraint, Almeida and Campello (2007) indicate that investment – cash flow sensitivities of the financially constrained firms should be rising in pledgeable assets.

Notably, whether the relation is positive or negative, the common point of these studies is under the assumption of linear relation between investment and cash flows whereas it may be nonlinear. Cleary et al. (2007) find a U-shaped relation, which is caused by cost and revenue effects, between investment and cash flow in a sample of 88,599 observations for the period 1980–1999. The cost effect arises because when firms invest more, their borrowing cost rises. The authors conclude that firm's investment has a positive relation with internal cash flows when the cash flows are significant high, and a negative relation if cash flows are low. Guariglia (2008) divide the research samples by levels of internal and external financial constraint, the author confirms the U-shape relationship between investment and internal cash flows for the former which supports Cleary et al. (2007), but a monotonically positive relation with firm's external financial constraint for the latter. Firth et al. (2012) also confirm the U-shaped relationship but further argue that the U-curve may vary with politically oriented investment or a soft budget constraint. In addition to the confirmation of the U-shape relation between investment and cash flow for listed firms in China, Tsai et al. (2014) assert the flatter U-shaped curves with the presence of foreign banks, which reduce financial constraints for firms, especially those that are privately owned. This means that lower investment - cash flow sensitivity reduces underinvestment by listed SOEs.

Type of assets the companies hold may also be an important factor. Almeida and Campello (2007) noticed that investment in companies with more tangibility of assets is not affected by change in internal funds. Tangible

assets does not have impact on investment sensitivity of cash flow of financially unconstrained firms, but constrained ones. The underlying theory supporting for this findings is credit multiplier which means that the company can increase its accessibility to credits by holding more tangible asstes.

Different with studies focusing on firm characteristics, another approach investigates how financial system affect the information asymmetry and agency costs which in turn affect firm's costs of capital. Companies in a bank-based financial system should be less constrained because their close relation with banks can reduce moral hazard problem and asymmetric information as well. Otherwise, banks can supervise how efficiently the capital is used the the companies (Petersen & Rajan, 1997). However, asymmetric information increases in a market-based financial system, causing an additional premium for cost of external capital. These findings are confirmed by Mizen and Vermeulen (2005), who find that the investment sensitivity of cash flow of British companies is higher than that of Deutch companies because of higher information asymmetry in a market-financed system. They extend their previous study by examining impact of creditworthiness and find a lower sensitivity at companies, which have higher creditworthiness, measured by sales growth rate and net profit margin. The results are consistent with theory that a strong financial health companies can access the external capital market better. Becker and Sivadasan (2010) use data of 21 European countries and find a lower sensitivity in more developed countries such as Switzerland, which is the outcome of market imperfection reduction in a well-developed financial context. The results are supported by Baum, Schäfer, and Talavera (2011). The authors indicate that companies in bank-based system are less constrained than those in market-based ones, confirming that bank-based system reduces barriers for external capitals due to lower asymmetric information as a result of banking supervision. Baum et al. (2011) also assert that financial development would reduce financial constraint because strengthening financial institutions would benefit companies with lower cost of capital. In summary, there is a consensus that improvement in financial market would lead to lower firm's financial constraint because of less market imperfection and more external capital usage.

Some studies suggest that financial constraints on corporate investment can be lowered if the company has membership in a business group. The studies provide evidences that business groups provide funds to their members, resulting in lower demand for external capital, in turn lower investmebt sensitivity of cash flow. Hoshi et al. (1991) examine the investment – cash flow relation, taking into account of group business membership, in this case Keiretsu. The findings suggest that company-bank relationship has impact on investment, and Keiretsu company members have less constraints. It comfirms that Keiretsu provides a strong linkage for its members to borrow from financial institutions. Similar findings are found by Deloof (1998) for a Belgium companies and by Gorodnichenko, Schaefer, and Talavera (2009) for German Konzerns which a kind of business group in Germany. Therefore, business groups play important role in reducing sensitivity between investment and cash flow, or financial constraints on corporate investment.

Recently, some empirical articles have investigated the impact of the financial crisis on financial constraints on corporate investment. In the financial crisis, the ability and willingness to lend of financial institutions has decreased, leading to an increase in interest rates and a reduction in willingness to take risks by lending. Duchin, Ozbas, and Sensoy (2010) find that during the financial crisis, corporate investment was significantly reduced, in which financially constrained companies were more affected than unconstrained companies. These results support the results of Campello, Graham, and Harvey (2010), who use an survey to evidence that the reduction in capital spending of constrained companies is more serious than unconstrained ones during the financial crisis because of limited accessibility to capital market of constrained companies.

A study of Liu and Lu (2007) on China reported that government officials at state – controlled listed firms often have incentives to achieve social and political objectives to serve for their own promotion, therefore politically-oriented investments were the main cause of overinvestment situation in these firms. Firth et al. (2012) find similar evidence supporting that point of view.

Detragiache, Tressel, and Gupta (2008) find evidence that foreign banks are less sensitive to political pressure, and they have less pressure of lending relation partners, who are capable of breaking relation barriers. Political and non-economic motivations are not top priorities of domestic banks now. Therefore, state-owned commercial banks are transformed from politically – incentive organization to modern corporate governance – oriented ones. Therefore, reforming bank system by allowing foreign banks holding ownership at domestic state-owned banks could reduce policies favoring politically – oriented investments of state – controlled companies. With presence of foreign investors, credit granting would be more prudential, in that way careless loans as well as politically-oriented loans could be mitigated. With this research, Detragiache et al. (2008) use foreign ownership in domestic bank as proxy for banking system reform and this research is supported by Berger, Klapper, Peria, and Zaidi (2008). Berger et al. (2008) report that after reform, foreign ownership in domestic banks, especially state-controlled banks can change their lending practice, from politically – oriented to commercially-oriented banks. Non state-controlled listed companies are considered more transparent, more commercially-oriented and more efficient than state-controlled listed companies. Therefore, after reform, non-state-controlled listed companies have more channels to access bank loan and underinvestment problem of non-state- controlled listed companies are reduced.

Tsai et al. (2014) in their study on effect of bank system reform on investment - cash flow sensitivity measures banking system reform by presence of foreign bank at region where company had headquartered or branches. The research finds evidence that with presence of foreign banks, politically-oriented investments at state controlled listed companies are reduced because state-owned banks transform from more politically – oriented to more commercially – oriented financing. Problem of underinvestment at non state – controlled listed companies seems to be mitigated due to an increase in their bank loan accessibility. The study also documents a reduction of distortion of investment in state controlled listed companies as well as reduction on financial constraints at non state – controlled listed companies.

In the context of a financial system which is dominated by banks and underdeveloped capital markets, Fohlin and López-Iturriaga (2006) investigate the impact of bank relationship on financial constraints on corporate investment in Spain. The authors assert that the close relationship between companies and banks will reduce the investment – cash flow sensitivity because banks would provide necessary liquidity to companies. They use two indicators of bank-company relations: the percentage of bank ownership in the company's capital and the bank debt over total debt ratio. The former implies that the bank plays both roles of creditor and equity investors in the company, and later means that the higher ratio, the closer relationship between company and bank. Unexpectedly, the authors find the relationship has little impact on the investment – cash flow sensitivity while it is lower than those of large block shareholders, meaning that the relationship between bank and company cannot perfectly substitute for supervision by major stakeholders and companies face the agency cost problem.

2.1. Investment – cash flow relation

In financial theory, a company can use two main sources of funds to finance its potential positive NPV projects: internal funds which is the cash flow generated by company's operations and external funds which is newly – issued debt/equity. In a perfect capital market where transaction cost does not exist, funds are available for all firms, so they do not need to rely on availability of internal cash flows (Modigliani & Miller, 1958). However, in an imperfect capital market with existence of transaction costs, external funds are more costly than internal funds, so internal funds becomes main source of financing for companies.

The topic of investment – cash flow relation has been studied for many decades and still is a controversial one so far. Fazzari et al. (1988) and Allayannis and Mozumdar (2004); Cleary (1999); Kaplan and Zingales (1997) are representatives for the two opposite opinions. Fazzari et al. (1988) use a sample of US manufacturing firm in the period of 1970 – 1984 to study firm's investment and cash flow relation under financial constrain. The authors use payout ratio as measure of financial constraint, in which firms paying decreasing dividend considered as more financially constrained and vice versa. The authors find that the relation between investment

and cash flow is more sensitive for financially constrained firms and less sensitive for non-financially constrained firms. Hoshi et al. (1991) support Fazzari et al. (1988) findings with their research on relation between capital structure and investment. Hoshi et al. (1991) also find that an individual company who does not have good relation with banks, implying high financial constraint has higher investment – cash flow sensitivity than Keiretsu – a type of Japanese group which is considered as less financially constrained.

The opposite opinion is represented by Kaplan and Zingales (1997). These authors built up KZ index to measure financial constrain and examined investment – cash flow relation with KZ index. They find that cash flow has positive relation with investment. Besides, less financially constrained firms have more sensitive investment – cash flow relation which is opposite to Fazzari et al. (1988). Cleary (1999) uses 2 samples, one US firms and the other Canadian firms to test both Fazzari et al. (1988) and Kaplan and Zingales (1997) findings. The US sample results supported Kaplan and Zingales (1997) that less financially constrained firms had more sensitive investment – cash flow relation. However, the Canadian sample supported Fazzari et al. (1988). Sheshinski and López-Calva (2003) document that state-controlled companies have soft budget constrain because they could access external funds easier than private companies, so less financially constrained. Hubbard (1997); and Cleary et al. (2007) demonstrate that financial constrain would make the U-shape curve of investment flatter, meaning that firm's investment would be less dependent on its internal cash flow.

Cleary et al. (2007) find a U-shape relation between investment and cash flow with a large sample of 88,599 observations for the period of 1980 – 1999, causing by cost and revenue effects. The cost effect arises because the more investment the firm takes, the more borrowing cost incurred. Accordingly, higher level of investment, more revenue is expected to generate. Guariglia (2008) supports Cleary et al. (2007) that there is a monotonic relation between investment – cash flow and degree of internal or external financial constraints. “Internal” financial constraints is measured by firms' cash flow and coverage ratio, and “external” financial constraint is measured by firm size, and age. Firth et al. (2012) also confirmed the U-shape curve but further argue that the curve may vary with politically – oriented investment or soft budget constraint. Tsai et al. (2014) also support Cleary et al. (2007) and Firth et al. (2012) with their findings of U-curve shapes of the relation between investment and cash flow for both state-controlled listed and non-state-controlled listed firms in China. The study also shows flatter U-shape curves with presence of foreign banks which reduce financial constraint for firms, especially uncontrolled firms. It means that lesser investment- relation sensitivity would reduce underinvestment problem of non-state controlled listed firms.

2.2. *Effect of banking system reform on investment – cash flow relation*

A study of Liu and Lu (2007) on China reported that government officials at state – controlled listed firms often have incentives to achieve social and political objectives to serve for their own promotion, therefore politically-oriented investments were the main cause of overinvestment situation in these firms. Firth et al. (2012) find similar evidence supporting that point of view.

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3. Methodology

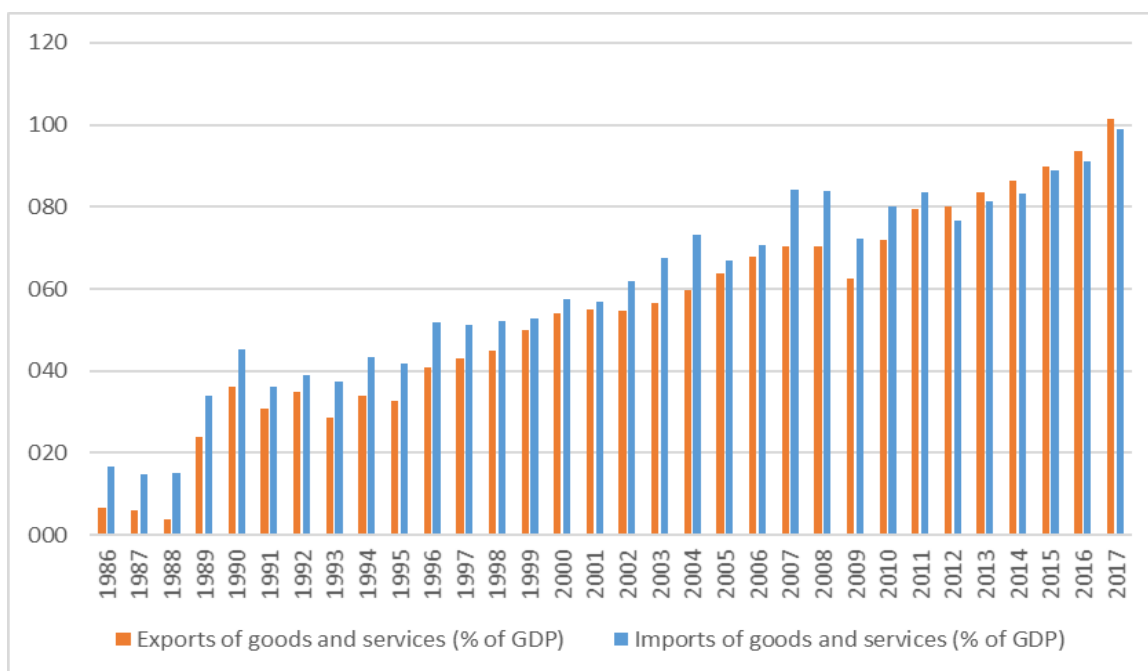
The study applies quantitative method. First, the U-shaped investment – cash flow relations in Vietnam are tested. The tests are conducted for the full sample, state controlled and state uncontrolled subsamples, employing two different approaches. The first approach follows Fazzari et al. (1988) and the second approach follows Firth et al. (2012). Secondly, I investigate the impact of banking system reform on the investment relationship for various groups of business such as state controlled, non-state controlled, high growth opportunity and low growth opportunity, etc. The variable proxied for banking system reform is manually collected from company annual reports. Thirdly, I examine the investment- leverage relationship under the impact of state – ownership. All the regressions are estimated by using Generalized Least Squared (GLS) method to fix the heteroscedasticity problem and robusted by Generalized Method of Moment (GMM) for endogeneity potential.

4. Result

Vietnam's economy, after the unification of the country in 1975, followed the centrally-planned mechanism, in which all important decisions must be made by the central governmental bodies. The period of 1976 – 1985 can be described by the low national income growth rate (3.7 percent), super high inflation (453.54 percent by the end of 1986); domestic production could not meet the basic needs for people, leading to reliance on imports; severe budget deficit and foreign debt problems. The failure of this model led the economy to the edge of economic crisis. Therefore, the Sixth Party Congress in December 1986 made an important decision to launch a comprehensive economic reform, shifting the centrally planned economy to a socialist-oriented market economy, which is called Doi moi policy. The Doi moi policy, which cored by economic reform, aiming at implementing the country's industrialization and modernization objectives, as well as opened-door, global integration policy and it has brought recognized remarkable achievements. Over the past more than 30 years, since Doi moi, Vietnam has been one of the countries which have had the most rapid economic growth and development in the world

Vietnam used to be considered closed economy in the period before the Doi moi, when goods and services was not freely traded. Foreign trade transactions were mainly conducted with former socialist counterparts and did not follow the market mechanism. Since the reform was launched, Vietnam has been gradually opened its economy to the world. Many measures have been done to push up both domestic and international trade such as removing unnecessary trade barriers; engaging in membership of Association of Southeast Asian Nations (ASEAN) in 1995, the ASEAN Free Trade Agreement (ATFA) in 2001, World Trade Organization (WTO) in 2007; signing many bilateral and multilateral economic and trade agreements with foreign countries and organization such as with EU (1992), US-Vietnam Bilateral Trade Agreement (2001), etc. As a result, both exports and imports have been constantly increased for the last more than 30 years. As shown in the Figure 2.3, the volume of exports of goods and services as a ratio of gross domestic product (GDP) rose from only 6.62%

percent in 1986 to 101.59 per cent in 2017, while the ratio of imports of goods and services to GDP also increase to 98.79 percent in 2017 from a low level of 16.6 per cent in 1986.



Source: World Development Indicators

Figure 1. Vietnam’s volume of imports and exports (% of GDP), 1986-2018

In the process of opening the economy, Vietnam also issued the Law on Foreign Investment in 1987 and its amendment in 1990 to attract foreign direct investment (FDI). The law has been revised or issued the new versions for several times⁵ since then to meet the current status of the world and the Vietnamese economy. With the advantages of cheap, young, skillful and hardworking labors force, rich natural resources, openness of investment laws, etc. Vietnam has been an emerging destination for FDI. And FDI has also played an important role in the development of Vietnamese economy. Figure 2.4. shows the net inflows as percentage of GDP of FDI into Vietnam since the opening the economy. FDI inflows was high during the period of 1993-1997, from 7.03 percent of GDP in 1993, rised to the peak of 11.94

percent and then dropped down to 8.27 percent in 1997. Under the impact of the Asian financial ciris in 1997, FDI inflows to Vietnam was low at the level of around 4 percent of GDP for the period of 1998 – 2008, and then slightly rised up again for the period afterward. FDI sector has been a major contributor to Vietnam’s GDP, helping creating jobs and boosting the development of the manufacturing sector which supported for the increase of foreign trade as well as the structural changes in exported products. In the late 1980s, about 80 percent 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 percent.

Over the past thirty years, as a part of the comprehensive economic reforms, the Government of Vietnam has initiated many banking reforms to improve the efficiency and competitiveness of the national banking system. Moreover, the reforms have also been motivated by Vietnam’s commitments in the process of growing participation in international agreement as well as adopting international standards such as Basel capital framework. The primary objectives of the reforms were restructuring banking system, gradually opening doors for foreign investors, partially equitizing state owned banks, and improving competitiveness of the Vietnamese banks. The major banking system reform was the removal of the commercial functions from the State Bank of

Vietnam (SBV) in 1990 which have been followed by several reforms such as equitizing state owned banks, opening the financial market for foreign banks, etc.

Before 1990, the Vietnamese banking system was a one-tier banking system, in which the State Bank of Vietnam (SBV) played both central bank and commercial bank functions. There were neither private nor foreign bank operating in the economy. Following the Ordinance on Banks, Credit Cooperatives, and Financial Companies issued in early 1990, SBV was reconstructed by removing the commercial functions from SBV so that SBV only governed the whole banking system and performed the traditional role of central banks the such as managing the country’s foreign exchange reserves; formating of monetary policies; licensing and supervising credit organizations, etc., while commercial banking functions such as funds mobilization and lending were delegated to separated commercial banks. As such, SBV’s four functional departments were separated to establish four new state-owned commercial banks (SOCBs) 7, each targeting a specific sector of the economy. At the same time, a number of joint-stock commercial banks (JSCBs) have been founded and quickly increased both in bank numbers and size.

In the process of interating with the world, to open the economy in general and financial sector in particular as well as to meet the requirements of membership from international trade and investment organizations, Vietnam has been gradually

Table 1.presents the foreing bank’s branches in Vietnam by the end of 2018 togerhter with their charter capitals.

No.	Name	No. & date of License	Charter capital
1	Agricultural Bank of China, Hanoi	80/GP-NHNN dated December 28, 2017	1,127.9
2	Bank of China (HongKong) HCMC	21/NH-GP dated July 24, 1995	1,890.55
3	Bank of India HCMC	10/GP-NHNN dated July 31, 2015	334.5
4	Bank of Communications HCMC	236/GP-NHNN dated October 22, 2010	984.52
5	Bangkok Bank Ha Noi Branch	48/GP-NHNN dated March 06, 2009	5,248.11
6	Bangkok Bank HCMC Branch	03/NH-GP dated April 15, 1992	
7	BIDC Hanoi	88/GP-NHNN dated April 22, 2011	309.74
8	BIDC HCMC	284/GP-NHNN dated December 18, 2009	269.12
9	BNP Paribas Hanoi	05/GP-NHNN dated May 11, 2015	1,740.75
10	BNP Paribas HCMC	05/NH-GP dated June 05, 1992	1,740.75
11	BPCE IOM HCMC (former name: NatixisHCMC)	06/NH-GP dated June 12, 1992	1,493.59
12	Busan Bank HCMC	48/GP-NHNN dated May 27th, 2016	784.46
13	Cathay Chu Lai	08/GP-NHNN dated June 29, 2005	1,293.75
14	China Construction Bank HCMC	271/GP-NHNN dated December 10, 2009	1,248.25
15	Citibank Hanoi	13/NH-GP dated December 19, 1994	169.88
16	Citibank HCMC	53/GP-NHNN dated February 20, 2013	315.54
17	CTBC HCMC	04/ NH-GP dated February 6, 2002 (renewed by License No.103/GP-NHNN dated October 30th, 2018)	893.14
18	DBS HCMC	09/GP-NHNN dated January 12, 2010 (renewed by License No.104/GP-NHNN dated October 30th, 2018)	1,589.7
19	Deutsche bank AG HCMC	20/NH-GP dated June 28, 1995	2,321.36
20	E. SUN bank - Dong Naibranch	07/GP-NHNN dated May 25, 2015	1,509.66
21	First Commercial Bank Hanoi	210/GP-NHNN dated Sep. 23, 2010	334.3
22	First Commercial Bank HCMC	09/NH-GP dated December 9, 2002	752.18

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23	Hua Nan HCMC	07/GP-NHNN dated July 23, 2006	1,216.39
24	ICBC Hanoi	272/GP-NHNN dated Dec. 10, 2009	897.05
25	Industrial Bank of Korea Hanoi	276/GP-NHNN dated Sep. 16, 2013	1,961.05
26	Industrial Bank of Korea HCMC	04/GP-NHNN dated January 08, 2008 (renewed by License No.106/GP-NHNN dated November 1st, 2018)	2,539.42
27	JP Morgan HCMC	09/NH-GP dated July 27, 1999	1,726.73
28	KEB – Hana Hanoi Branch	298/NH-GP dated August 29, 1998 (renewed by License No.114/GP-NHNN dated November 29th, 2018)	1,291.23
29	KEB - Hana HCMC Branch	85/GP-NHNN dated December 12, 2014	1,553.83
30	KookminHanoi	117/GP-NHNN dated Dec. 3rd, 2018	
31	Kookmin HCMC	21/GP-NHNN dated January 19, 2011	1,503.99
32	Malayan Banking BerhadHanoi Branch (Maybank Hanoi)	22/NH-GP dated August 15, 1995	165.23
33	Malayan Banking BerhadHCMC Branch (Maybank HCMC)	05/NH-GP dated March 29, 2005	238.58
34	Mega ICBC HCMC	25/NH-GP dated May 3, 1996	1,733.99
35	Mizuho Hanoi	26/NH-GP dated July 3, 1996	2,476.13
36	Mizuho HCMC	02/GP-NHNN dated March 30, 2006	2,550.38
37	MUFG Bank, Ltd. – Hanoi Branch(old name: BTMU Hanoi)	55/GP-NHNN dated February 20, 2013	2,137.61
38	MUFG Bank, Ltd. – HCMC Branch (old name: BTMU HCMC)	24/NH-GP dated February 17, 1996 (renewed by License No.109/GP-NHNN dated November 9th, 2018)	2,461.52
39	Nonghyup Bank Hanoi	72/GP-NHNN dated Nov. 1, 2016	1,795.82
40	OCBC HCMC	27/NH-GP dated October 30, 1996 (renewed by License No.51/GP-NHNN dated May 9th, 2018)	534.58
41	The Shanghai Commercial & Savings Bank, Ltd - Dong Nai Branch	07/GP-NHNN dated Sep. 23, 2010	1,296.93
42	Siam HCMC	30/GP-NHNN dated December 17, 2015	2,262.21
43	SinoPac – HCMC (Far East National Bank HCMC)	03/NHNN-GP dated May 20, 2004	1,366.73
44	SMBC Hanoi	292/GP-NHNN dated Nov. 4, 2008	6,937.97
45	SMBC HCMC	1855/GP-NHNN dated Dec. 20, 2005	3,372.32
46	Taipei Fubon Bank - BinhDuong Branch	02/GP-NHNN dated January 8, 2008	680.01
47	Taipei Fubon Bank - Hanoi Branch	11/ NH-GP dated April 09, 1993	437.79
48	Taipei Fubon Bank - HCMC Branch	54/GP-NHNN dated February 20, 2013	1,258.42
49	United Oversea Bank HCMC	18/NH-GP dated March 27, 1995	261.75

By joining the WTO in early of 2007, Vietnam has implemented a number of integration activities which have affected to local bank's operations. Foreign banks could expand their operations, dealing with not only foreign but also domestic customers. Geographical boundaries of foreign banks has been gradually removed and they directly competed with local banks. This would impose the pressure on local banks to improve their efficiency as well as quality of services. In 2018, some foreign banks received approval from State Bank of Vietnam (SBV) to open new branches, transaction offices and outlets such as Malaysian's Public Bank Vietnam Ltd. (open three new branches and two new transaction offices in some big cities), Republic of Korea's Woori Bank Vietnam Ltd. (it is allowed to open branches in some provinces in the North and Dong Nai, and Binh Duong; and a transaction office in Ho Chi Minh City); Shinhan Bank Vietnam (four newly established branches and transaction offices in Ha noi and Ho Chi Minh City). Besides, some banks have increased their investments in

their subsidiaries, such as to increase their charter capital (i.e. The Bank of China (Hongkong) Ltd – Ho Chi Minh City Branch; Hanoi Branch of HongHyup Bank). In addition to widen the networks, foreign banks have also increased their presence via increasing operations (Shinhan Bank Vietnam got approval to trade some debt instruments); or investment in their subsidiaries in Vietnam (i.e. Bank of China (Hongkong Ltd. – HCM City Branch (BOC HCM); NongHyup Bank); extending their licences (Singapore-based DBS Bank in Hanoi and Thailand’s JCB International; or opening the representative offices (i.e. Export – Import Bank of Thailand), etc. The trend is forecasted to be continue in the future because by 2020, Vietnam will have to completely open its banking sector’s doors to the world in compliance with commitments the World Trade Organization (WTO).

Table 2. Effect of banking system reform on investment – cash flow relation

				companies
<i>CFKPOS</i>	b1	0.044*** (3.10)	0.062*** (3.12)	0.036 (1.57)
<i>CFKNEG</i>	b2	-0.240*** (-6.06)	-0.179*** (-3.55)	-0.238*** (-5.26)
<i>CFKPOSBANK</i>	b3	0.044*** (2.77)	0.091*** (3.48)	0.032 (1.3)
<i>CFKNEGBANK</i>	b4	0.223*** (5.52)	0.137** (2.46)	0.219*** (4.79)
<i>BANK</i>		0.013** (2.12)	0.029** (2.35)	0.010 (1.34)
<i>L.SaleGrowth</i>		-0.002*** (-4.18)	0.013 (0.99)	-0.002*** (-5.44)
<i>SIZE</i>		0.020*** (10.26)	0.025*** (5.76)	0.020*** (9.6)
<i>LEV</i>		0.010 (0.97)	0.018 (0.84)	0.016** (2.01)
<i>AGE</i>		0.001 (0.63)	0.003 (0.86)	0.001 (1.21)
<i>BETA</i>		-0.011** (-2.10)	-0.024* (-1.90)	-0.006 (-1.15)
<i>_cons</i>		-0.071*** (-3.01)	-0.12 (-1.64)	-0.121*** (-2.82)
joint test (p-value)				
b1=b2		0.000	0.000	0.000
b1+b3=0		0.000	0.000	0.000
b2+b4=0		0.065	0.065	0.055
b1+ b3=b2+b4		0.000	0.000	0.000
R-sq		0.166	0.118	0.164
Year Dummy		Yes	Yes	Yes
Industry Fixed Effect		Yes	Yes	Yes
No. of Obs.		2266	667	1601

Table 3 Effect of banking system reform on investment –cash flow relation of state – controlled listed companies by different growth opportunities

		High growth opportunity		Low growth opportunity	
		(1)	(2)	(3)	(4)
<i>CFKPOS</i>	b1	0.291*** (11.42)	0.252*** (4.47)	0.009 (0.73)	-0.001 (-0.04)
<i>CFKNEG</i>	b2	-0.124*** (-3.08)	-0.271** (-2.47)	-0.047*** (-2.74)	-0.199** (-2.20)
<i>CFKPOSBANK</i>	b3		0.040 (0.66)		0.020 (1.01)
<i>CFKNEGBANK</i>	b4		0.204* (1.74)		0.163* (1.77)
<i>BANK</i>			0.039*** (2.86)		0.057*** (4.45)
<i>L.SaleGrowth</i>		0.057*** (3.54)	0.071*** (4.03)	-0.007 (-0.53)	0.002 (0.27)
<i>SIZE</i>		0.024*** (4.78)	0.024*** (4.55)	0.021*** (5.43)	0.023*** (6.55)
<i>LEV</i>		0.202*** (7.66)	0.203*** (8.66)	0.018 (0.81)	-0.011 (-0.58)
<i>AGE</i>		-0.012*** (-3.11)	-0.012*** (-3.02)	0.007*** (2.85)	0.003 (1.00)
<i>BETA</i>		-0.013 (-0.83)	-0.015 (-0.84)	-0.039*** (-3.28)	-0.045*** (-3.85)
<i>_cons</i>		-0.586*** (-3.89)	-0.624*** (-4.06)	-0.067 (-1.56)	-0.117** (-2.17)
joint test (p-value)					
	b1=b2		0.000		0.033
	b1+b3=0		0.000		0.199
	b2+b4 =0		0.145		0.030
	b1 + b3= b2+ b4		0.000		0.026
R-sq		0.058	0.069	0.049	0.106
Year Dummy		Yes	Yes	Yes	Yes
Industry Fixed Effect		Fixed	Fixed	Fixed	Fixed
No. of Obs.		343	343	324	324

5. Conclusion

This research focus on investigating investment cash flow sensitivity in a context of Vietnam as well as investment behavior of Vietnamese companies is affected by banking system reform which is measured by presence of foreign banks. The research also studies if banking system reform reduces political-oriented investments of state-controlled listed companies, as well as mitigate underinvestment caused by financial constraint at non state –controlled listed companies. Using an unbalanced panel of companies listing on HOSE and HNX from 2009 and 2014, I find evidence for U-shape relation between investment and cash flows, both state controlled and non-state controlled firms. Banking system reform measured by presence of foreign banks

has significant impact on investment behaviour of Vietnamese companies. Underinvestment problem of uncontrolled firms is mitigated by the reforms due to their better accessibility to external financing. Unlike my expectation, overinvestment problem of state controlled firms is almost not reduced which is different with findings by Tsai et al. (2014)Tsai et al. (2014). It can be explained that foreign bank presence in Vietnam is still very limited while state owned banks are still playing dominating role on the credit market. Besides, both high and low growth state controlled firms seem do not change their investment behavior much after the reform. However, high growth uncontrolled firms significantly increase their investment after the reforms while low growth uncontrolled firms seems have to more rely on their cash flows in the post reform period. The results also shows a significant change from negative to positive investment – leverage relation from pre reform period to post reform period for both state and non-state controlled firms, meaning that firm investments are less dependent on internal financing in the post reform period. This impact is especially significant for low growth opportunity firms.

As a result, I conclude that banking system reform measured by presence of foreign banks has significant impact on both company's investment and financing behaviors. The impacts are not the same for different group of companies. I believe that the governmental authorities should create a better and fair play ground for foreign banks, allow them to do more business in Vietnam. Moreover, financial deregulation and liberation should be improved so that financial market truly becomes a efficient financing channels for corporate investments. This will help to allocate assets effectively, attract more profitable investments from both state controlled and non-state controlled firms, consequently stimulates economic development.

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