

FINANCIAL LIBERALIZATION AND ECONOMIC GROWTH IN THAILAND

การเปิดเสรีทางการเงินกับการเติบโตทางเศรษฐกิจในประเทศไทย

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ABSTRACT

The objectives of this study had two-fold: 1) to overview financial liberalization and economic development in Thailand; 2) to examine the relationship between financial liberalization and economic growth by studying the issue of financial liberalization which affects the financial sector and economic growth.

Both descriptive and quantitative analyses were employed in this study. For descriptive analysis, it explained the background and general conditions of financial liberalization together with the related monetary policy in Thailand. A Vector Autoregressive (VAR) model with the applications of cointegration and causality test was employed for the quantitative analysis. The variables used in this study were time series data including Gross Domestic Product (GDP), bank deposit, market capitalization in the Stock Exchange of Thailand and outstanding debt instrument in the bond market from the period of 1997-Q1 through 2014-Q4.

The results of the study showed that 1) during the past two decades, financial sector in Thailand tended to have greater development and liberalization according to the current global changes. Bank of Thailand had facilitated deregulation and the movement of capital flow between countries and had positive impacts on the financial sector development. 2) financial liberalization had positive impacts on economic growth as well. However, this study also indicates that stock exchange was only the channel affecting economic growth. Thus, the continuous development in this channel was necessary for support economic growth. While the other two channels, namely deposits in the banking system and bond markets had no significant effects on economic growth in Thailand during this period of time.

Keywords: Financial Liberalization, Economic Growth, VAR Model, Cointegration, Causality

บทคัดย่อ

การศึกษากการเปิดเสรีทางการเงินกับการเติบโตทางเศรษฐกิจในประเทศไทย มีวัตถุประสงค์เพื่อ 1) ศึกษาสภาพทั่วไปของการเปิดเสรีทางการเงินและการพัฒนาเศรษฐกิจในประเทศไทย 2) วิเคราะห์ความสัมพันธ์ระหว่างการเปิดเสรีทางการเงินกับการเติบโตทางเศรษฐกิจ โดยศึกษาในประเด็นของการเปิดเสรีทางการเงินที่ส่งผลต่อภาคการเงินและการเติบโตทางเศรษฐกิจ

สำหรับวิธีการศึกษาแบ่งเป็น 2 ส่วน คือ การวิเคราะห์เชิงพรรณนาและการวิเคราะห์เชิงปริมาณ สำหรับวิเคราะห์เชิงพรรณนาเป็นการอธิบายความเป็นมาและสภาพทั่วไปของการเปิดเสรีทางการเงิน รวมทั้งนโยบายการเงินที่เกี่ยวข้องในประเทศไทย ส่วนการวิเคราะห์เชิงปริมาณใช้แบบจำลอง VAR (Vector Autoregressive) การทดสอบความสัมพันธ์เชิงดุลยภาพระยะยาว และการทดสอบความสัมพันธ์เชิงเหตุและผลของตัวแปรที่ละคู่ด้วยวิธี causality โดยใช้ข้อมูลทุติยภูมิรายไตรมาส ประกอบด้วยผลิตภัณฑ์มวลรวมในประเทศ (GDP) เงินฝากในระบบธนาคารพาณิชย์ (BANK) มูลค่าตามราคาตลาดของหลักทรัพย์ในตลาดหลักทรัพย์แห่งประเทศไทย (EQ) และยอดคงค้างของตราสารหนี้ในตลาดตราสารหนี้ (BOND) ในช่วงพ.ศ. 2540-2557

ผลการศึกษาพบว่า 1) ในช่วงสองทศวรรษที่ผ่านมาภาคการเงินในประเทศไทยมีพัฒนาการขึ้นเป็นลำดับ โดยมีแนวโน้มที่จะเปิดเสรีมากขึ้น อันเป็นไปตามกระแสการเปลี่ยนแปลงของโลกที่ประเทศต่าง ๆ มีแนวโน้มของการเปิดเสรีมากขึ้น ธนาคารแห่งประเทศไทยได้ทยอยผ่อนคลายกฎระเบียบต่างๆ และการเคลื่อนย้ายเงินทุนระหว่างประเทศให้มีความสะดวกคล่องตัวขึ้น ส่งผลดีต่อการพัฒนาภาคการเงิน 2) การเปิดเสรีทางการเงินส่งผลบวกต่อการเติบโตทางเศรษฐกิจ อย่างไรก็ตามผลการศึกษาระบุว่าตลาดหลักทรัพย์เป็นเพียงช่องทางเดียวที่ส่งผลต่อการเติบโตทางเศรษฐกิจ ดังนั้นจึงจำเป็นต้องพัฒนาช่องทางระดมทุนผ่านตลาดหลักทรัพย์อย่างต่อเนื่อง เพราะจะช่วยส่งเสริมการขยายตัวทางเศรษฐกิจ

ในขณะที่อีกสองช่องทาง คือ เงินฝากในระบบธนาคารพาณิชย์ และตลาดตราสารหนี้ กลับไม่ส่งผลต่อการเติบโตทางเศรษฐกิจของไทยอย่างมีนัยสำคัญในช่วงเวลาที่ทำการศึกษา

คำสำคัญ: การเปิดเสรีทางการเงิน การพัฒนาเศรษฐกิจ แบบจำลอง VAR วิธี Cointegration วิธี Causality

Introduction

Over the past three to four decades, many countries turned to a policy of greater financial liberalization including Thailand. Thus, financial liberalization has played an important part in various aspects of economic development. In general, financial liberalization was the deregulation of domestic financial markets together with the relaxation of the capital flow. In case of Thailand, for instance, this was to involve relaxing foreign exchange regulations to increase flexibility for Thai residents in overseas investment and in foreign exchange risk management (Bank of Thailand, 2012). As a result, it was promoted international trade together with investment and borrowing in the international financial markets.

For theoretical framework, it was believed that financial liberalization would affect the financial sector development both in the width and depth. However, the effects of financial liberalization had been subjected to extensive debates. Some of them indicated that it strengthened financial development and contributed to long-run economic growth (Henry 2000, Bekaert et al. 2005, Ang and McKibbin (2005) and Ranciere et al. 2006). On contrary, it tended to increase risk-taking and macroeconomic volatility (Levine and Zervos 1998). In general the positive contribution of capital control helped to reduce the risk of external financial crises.

The gradual financial liberalization began in the late 1980s (a few years before the acceptance obligations under Article VIII of the International Monetary Fund Agreement in 1990). The main goal was to develop Thailand into a regional financial hub. (see the National Economic and Social Development Plan 6, 1987-1991). Various measures included reducing restrictions on payments and transfers of current account transactions. Foreign exchange controls were largely relaxed both in current account and capital account to increase the flexibility of capital flow. Later, stock market liberalization also had been relaxed including some restrictions such as ceiling expansion on foreign shareholding in financial institutions. However, it was gotten stuck when

Thailand entered to the Asian financial crisis in 1997. After the crisis, Thai economy recovered, in the early 2000s then financial liberalization took place again.

At present, financial liberalization is widely studied in various aspects including its advantages and disadvantages. Many countries may have gained advantages such as encouraging foreign direct investment, enhancing overall economic growth, and increasing financial sector development, while some of them have not been as good as their expectation. Many studies agree that financial liberalization will benefit financial sectors from new technology development and players. New comers, foreign bank with new knowhow, enhanced the efficiency of the domestic banking system from higher competition from foreign banks (Levine 2000). Liberalizing restrictions on stock exchange also tend to enlarge international portfolio flows and stock market liquidity. This leads to promote economic growth by capital accumulation and productivity growth. Capital inflows together with the progressive of domestic financial sector development contribute to support savings for investment activities. Moreover, higher liquidity keep domestic interest rates low, and stimulate the expansion of investment. The more financial sector development also permitted for the higher of risk diversification efficiency through a variety of financial products. As a result, these likely lead to increase economic opportunity and growth. Stiglitz (2000), on the contrary, revealed that if financial and capital market liberalization were conducted too fast without proper and effective regulation framework delivering economic turmoil and crisis together with volatility transmission between countries.

The main question of this paper, we should ask “Through financial liberalization, does it support financial sectors development?” The financial openness may obtain the financial system development through increased financial

depth¹. When equity, bond, and bank deposits allow the diversification of risk, these enhance the higher return investment projects. Moreover, lower transaction costs from openness also facilitate international trade and investment. In addition, financial liberalization such as the relaxation of the capital flow and foreign exchange regulations is important as a source of funding for investment projects. Thus, this paper examines the roles of raising fund channels including commercial bank, bond market and stock market in determining economic growth in Thailand during the period of 1997 to 2014.

This paper can be divided into 3 sections. First, various relevant studies concerning the financial liberalization and economic growth are reviewed. Second, the results are examined by unit root test, cointegration test and Granger causality test for investigation of the relationship between liberalization and economic growth. Finally, some conclusions and discussions are drawn.

Literature Review

Recently, the studies regarding the effects of financial liberalization on economic growth have been extensively analyzed both in developed and developing countries. Most of the past studies tended to agree that financial liberalization had positive impact on economic growth such as Ranciere et al (2006). This study investigated the relationship between financial liberalization and economic growth covering sixty countries during the period from 1980 to 2002. The results revealed that financial liberalization led to faster average long-run growth, even though it conveyed to occasional crises as well. Similar to Henry (2000), he showed that stock market liberalization led private investment booms for 11 developing countries both in Latin America and Asia namely Argentina, Brazil, Chile, Colombia, India, Korea, Malaysia, Mexico, Philippines, Thailand and Venezuela in the period of 1985 to 1994. This was because it might reduce the country's cost of equity capital by allowing for risk sharing between domestic and foreign agents. In addition, the increasing in future marginal productivity of capital caused investment boom as well. As a result, the deregulation of capital movements

helped increasing in capital inflows following by interest rate reduction. Therefore, this encouraged the expansion of the economy.

Another point of view, Bekaert et al (2005) showed that equity market liberalizations, on average, led to 1% increase in annual real economic growth. In addition, capital account liberalization played the important role in future economic growth as well. However, the openness made a country had different response to a financial liberalization. It likely did not have the same impact in every country depending upon the strength of domestic institutions and other factors such as legal systems, conditions for foreign investment. Furthermore, additional investment and efficiency of new investments also conducted a large growth response. Relatively high physical and human capital stock created relatively efficient financial markets and investment.

Furthermore, some studies focused on the relationship between financial sector development and economic growth such as King and Levine (1993). The study presented the consistent with Schumpeter's view from 80 countries over the 1960–1989 periods that financial system was able to promote economic growth. Financial sector development both in banking system and stock market were robustly correlated with future rates of economic growth, physical capital accumulation, and economic efficiency improvements. Choe and Moosa (1999) also concluded from the studies in the same way that financial liberalization and the development of financial markets conducted a positive effect on economic growth.

In addition to bank and stock market, bond market was another major source of long term capital. It provided long-term funding for public and private expenditures. At the same time, it was another important channel for savers to search for their return. Many previous studies paid attention to this channel in order to examine its role to economic growth. Ali Abbas and Christensen (2007) revealed that domestic bond channel had positive impacts on economic growth through investment efficiency or factor productivity rather than the volume of capital accumulation itself in 93 low-income countries and emerging markets from 1975 to 2004. Bond markets were able to help strengthen money and financial markets, boost private savings, as well as spur investment. In addition, the study found that bond market had linkages to key macroeconomic, financial and institutional variables such as private saving and financial depth. Levine and Zervos (1998) found the same thing that they also showed

¹ Financial depth measures by the ratio of total financial assets, including equities, fixed income and bank deposits to gross domestic product (GDP).

a strong positive link between financial development and economic growth.

For the financial liberalization's studies in Thailand, there were widely interests especially in the beginning phase of financial liberalization in 1987-1997 periods. However, the current financial market structure is likely to change remarkably from the past. Financial sector has developed in a sequence following by the increasing in financial depth. In addition, the role to raise funds through stock market has ranked the first instead of banking system since 2007. Similar to other countries, the more developed financial market, the lower the role of raise funds through banking system were noticeable because of higher financial literacy and lower cost of raise funds from financial market such as stock market as well as debt instrument (Ang and McKibbin, 2005).

Financial Depth in Thailand

In general, financial depth is one of the popular indicators that use to measure the level of financial market development. When the country has a ratio of financial assets to gross domestic product (GDP) rise, it means that financial market is more developed from various financial products. It works as a channel for savers to seek for their return and borrowers for raising fund through a variety of financial instruments. Many studies such as Cihak et al. (2013), Levine (2001) and Choe and Moosa (1999) suggested that well developed financial institutions and financial markets play the important role to economic development through financial sector function.

Because these helped allocating resources efficiently, expand opportunities, and provide economic growth.

For financial depth in Thailand during the period of 1997-2015, according to my review, it was found that financial depth increased 74% steadily. Financial assets have expanded at a higher rate than economic growth especially after 2008. As a result of the expansion of the stock and bond markets were rising rapidly than doubled in that period. In addition to relaxing capital flowed between countries of the Bank of Thailand in 2013, it was one of the various factors that encourage the expansion of the financial instruments.

Methodology

For the study of financial liberalization and economic growth, the funding channels including commercial bank, bond market, and stock exchange that influence to economic growth in Thailand are examined by using quarterly time series data from 1997-2014. According to advantage of Vector Autoregressive (VAR) model, it treats all variables as endogenous variables and no theoretical restrictions on the way that the variables affect one another internally. In addition, VAR analysis and its application namely cointegration and causality become popular tools for time series analysis. Thus, these tools are employed to examine the relationship between variables in this study. A VAR model with four endogenous variables expresses as following:

$$Y_t = \mu + \sum_{i=1}^p \phi_i Y_{t-i} + u_t \quad (1)$$

$p \geq 1$ and $1 \leq i \leq p$

- u_t = $R \epsilon_t$
- Y_t = vectors are observable
- μ = vector of intercept term
- ϕ_i = vector of coefficient
- ϵ_t = vector of error term
- R = unknown fixed non-singular matrix
- $\epsilon_t \sim iid N(0,1)$

variance of the series is diverging to infinity with time trend. The relationships between these series data are likely to be spurious regression with high R^2 values but no economic meaning. Therefore, unit root is employed to test these data in order to check for stationary. For data stationary, the popular methods are Augmented Dickey-Fuller (ADF) test (Dickey and Fuller, 1979, 1981) and Phillips-Perron (PP) test (Phillips and Perron, 1988). Both of them test for the existence of a unit root, if the process has a unit root then it is a non-stationary time series. It means that the movements of stochastic process depend on time trend as well as the variance of the series diverges to infinity with time trend. For unit root test, the

Unit Root Test

In general, most of time series data are non-stationary. The movements of stochastic process depend on time trend as well as the

null hypothesis of the ADF and PP tests is that the variable is non-stationary. It is the method to determine whether the time series data is

consistent with I(1) process with a stochastic trend (non-stationary) or I(0) process, that is stationary.

For unit root test, equations can be expressed as:

$$\Delta y_t = \mu + \gamma y_{t-1} + \sum_{i=2}^{\infty} \beta_i \Delta y_{t-i+1} + \varepsilon_t \quad \text{--- (2)}$$

(no time trend)

$$\Delta y_t = \mu_1 + \gamma y_{t-1} + \mu_2 t + \sum_{i=2}^{\infty} \beta_i \Delta y_{t-i+1} + \varepsilon_t \quad \text{--- (3)}$$

(with time trend)

y_t = time series data
 ε_t = error term

Cointegration Test

Cointegration test has become popular in many empirical studies. It is adopted to tests for the relationship among non-stationary time series variables. If two or more series have a unit root or I(d) process, whereas a linear combination of them is stationary or I(0), then these time series are cointegrated. It means that there exist long run relationships. The study employs this tool to check for long run relationships among Gross Domestic Product (GDP) and all of funding channels in this study including commercial bank, debt market, and stock exchange.

Causality Test

Granger causality test has been widely used in economics to investigate the pairwise causal relationship between variables. When the variable x can explain behavior of variable y, and reduce variable y’s conditional variance: x causes y. The opposite circumstance will be expressed as y causes x. If both are true, both x and y maintain a feedback relationship or bi-directional causality. If neither is true then both x and y has independent relations or no causality. Thus, results of causality test indicate a feedback phenomenon between variables in three ways: uni-directional, bi-directional, and no causality. It is based on a bivariate linear autoregressive model of two variables (Granger 1969) as follow:

$$\Delta Y_t = \alpha_0 + \sum_{i=1}^P \alpha_i \Delta Y_{t-i} + \sum_{i=1}^P \beta_i \Delta X_{t-i} + e_t \quad \text{(4)}$$

(X_t causes Y_t , if β_i is not equal to zero)

$$\Delta X_t = a_0 + \sum_{i=1}^P a_i \Delta Y_{t-i} + \sum_{i=1}^P \gamma_i \Delta X_{t-i} + u_t \quad \text{--- (5)}$$

(Y_t causes X_t , if a_i is not equal to zero)

Empirical Results

The relationship of variables is examined by VAR model and its applications i.e. cointegration test and Granger causality test. The estimation of a VAR model firstly requires the explicit choice of lag length in the model. For this study, the appropriate lag length of the VAR is determined by using standard model selection criteria of Akaike Information Criterion (AIC), Akaike (1973). It points to a VAR of order 2 as an

adequate representation of data set. However, it is also necessary first to determine whether time series data is stationary by using unit root test.

Unit Root Test

The relationship between financial liberalization and economic growth is examined by VAR model and its applications i.e. cointegration test and Granger causality test. This study investigates the role of each funding channel including bank deposit (BANK), outstanding value of bond market (BOND) and market

capitalization in stock exchange of Thailand (EQ) towards economic growth. However, it is

necessary to first determine whether time series data is stationary by using unit root test.

The results from these time series data are reported in Table 1

Table 1 ADF and PP test statistics

Unit Root Test	ADF-test		PP-test	
	No trend	Trend	No trend	Trend
GDP	1.4132	-3.4054	1.5171	-3.2035
BANK	2.8306	0.8764	2.5837	0.6656
BOND	4.2190	-0.2045	4.9003	-0.0894
EQ	0.9662	-2.1597	1.4330	-1.8622
Δ GDP	-7.1797*	-7.6086*	-10.7799*	-10.8742*
Δ BANK	-6.0432*	-6.6512*	-6.0433*	-6.6971*
Δ BOND	-7.0601*	-8.9715*	-7.1404*	-9.0109*
Δ EQ	-6.7535*	-6.8818*	-6.6063*	-6.8899*

*denotes: significance at the 5% level and Δ is first different

As it can be seen from Table 1, ADF and PP test statistics indicate that all of variables namely GDP, BANK, BOND and EQ are non-stationary at their level. It cannot reject null hypothesis that there is a unit root process. They have a unit root because of the movements of stochastic process depending on time trend. After data at level using first difference, the results show that all of these variables are achieved stationary or I (1) process.

Cointegration Test

For the study of financial liberalization and economic growth, to investigate the long run relationship among these key variables including GDP, BANK, BOND and EQ is necessary first to determine. This study employs Johansen's cointegration test (Johansen 1988, 1991). It is one of various popular tools in empirical economic study. The cointegration results including maximum eigenvalue and trace tests with Vector Autoregressive (VAR) present as Table 2

Table 2 The results of cointegration test

Hypothesized No. of CE(s)	Trace Statistic	P-value	Max-Eigen	P-value
None *	56.29827	0.0066	31.61598	0.0143
At most 1	24.68229	0.1731	18.57289	0.1099
At most 2	6.10940	0.6826	6.10843	0.5993
At most 3	0.00096	0.9756	0.00096	0.9756

Trace test and Max-eigenvalue test indicate 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

As can be seen from Table 2, Trace statistic and Max-eigenvalue statistic from cointegration test indicate that all variables have long run equilibrium with 1 cointegrating equation at the 0.05 level. Both of them reject the null hypothesis of no cointegration. In case of cointegration, the levels of these variables are non-stationary but cointegrated. It means that all of these variables including GDP, BANK, BOND and EQ have a long run relationship or there exists a linear combination.

Causality Test

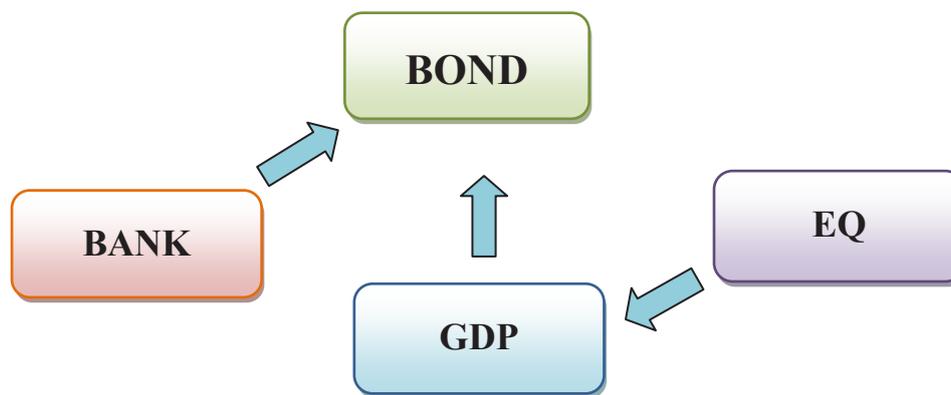
In this section, Granger causality test is employed to investigate relationship among variables including Gross Domestic Product (GDP), bank deposit (BANK), outstanding value of bond market (BOND) and market capitalization in stock exchange of Thailand (EQ) to explain the role of each funding channel to economic growth. The results of causality test are presented as follows:

Table 3 The results from causality test

Variables	Relationship	F-statistic	P-value
Δ BANK and Δ BOND	Δ BANK \rightarrow Δ BOND	6.55786	0.0026*
Δ GDP and Δ BOND	Δ GDP \rightarrow Δ BOND	3.29620	0.0434*
Δ EQ and Δ GDP	Δ EQ \rightarrow Δ GDP	6.22578	0.0033*
The rests	no causality		

Note: A \rightarrow B denotes causality running from variable A to variable B
* denotes significance at the 5% level

The results from causality test in Table 3, it can be expressed as the following:

**Figure 1** The relationship between variables

As it can be seen from Table 3 and Figure 1, the results from Granger causality analysis reveal the important linkages that stock market is the only funding channel in financial sector to encourage economic growth during this period of time, while the other two channels are deposits in the banking system and bond markets showing no effect to economic growth significantly. However, this study also finds that Gross Domestic Product (GDP) and deposits in the banking system have a positive impact on the growth of bond market. In Thailand, raising fund to real sector through stock market has significantly increased. Many potential companies are listed in stock market (Stock Exchange of Thailand: SET) in order to raise funds. This is because financing through the stock exchange is more convenient and no obligation to repay the principal unlike borrowing from commercial bank. In addition, the increasing in financial products and demand from both foreign and domestic make stock market improved liquidity and size. It is a key mechanism to allocate funds to the real economy through private investment leading to the expansion of the manufacturing sector and employment.

For bond market channel, no linkage effect on economic growth has been found

probably due to its small size (8.24% of total financial asset at the end of 2014) compared with those of other channels. The results in this study also indicate that banking channel has no effect to growth. Unlike bond market channel, bank deposit has a big portion in the financial system in Thailand by the first ranking before 2010 and then replaced by stock market. According to banking system, it is the first institution that has been launched since more than 100 years. Therefore, bank financing in Thailand played a key role in financial sector development. However, resource allocation through bank loan seems to concentrate in some core sectors, large firms and wealthiest individuals such as real estate and personal consumption (Outstanding loans by commercial bank, data from Bank of Thailand 2015). As a result, it cannot efficiently transmit money to the real sector especially in agricultural sector. Huge amounts of credit cannot always correspond to extensive use of financial services. Thus, it tends to hinder economic growth when financial systems poorly perform these functions.

The role of funding channel towards financial sector development and economic growth

All of funding channels in this study including commercial bank, debt market and stock exchange support financial sector development through increasing financial depth. In recently, the quantity of financial product expands faster than its GDP. This facilitates the greater financial depth in Thailand. Furthermore, financial liberalization by relaxing the restrictions on capital movements and more open stock market and banking system has positive impact on financial sector development as well. All channels contribute to financial sector development through the enlargement of financial depth.

Table 4 The role of each channel to financial sector development and economic growth

Channel	Financial Deepening	Economic Growth
Commercial Bank	*	
Bond Market	*	
Stock Market	*	*

In summary, the results of this study revealed that stock market channel has supported economic growth in Thailand, whereas the other two channels namely commercial bank and bond market have been insignificant on economic growth.

Discussions and Conclusions

The aims of this study are to investigate the overview of financial liberalization and economic growth in Thailand and, to examine the empirical relationship between financial liberalization and economic growth through funding channel including banking system, stock market, and bond market covering the period of 1997-2014. Financial liberalization in Thailand was first introduced in the late 1980s. In early stage, foreign exchange controls

have been relaxed. Later, capital flow has relaxation such as removing amount limit for foreign currency deposit and direct investment by Thai Individuals, raising amount limit per investor, as well as reducing barriers to entry the financial sector. These factors support financial sector development through the increasing in financial depth and new technology. It also enhances the efficiency of the domestic banking system from higher competition.

For the relationship between economic growth and funding channels namely banking system, bond market, and stock market, the causality results indicate that stock market is the only one factor to encourage growth. It is consistent with many studies such as Bekaert et al (2005), Choe and Moosa (1999) and King and Levine (1993) that stock markets conduct a positive effect on economic growth. At present, market capitalization in stock exchange ranks the first large amount of the overall funding because of its convenience and no obligation to repay the principal unlike bank loan. In addition, demand from both foreign and domestic investors make stock market enriched its liquidity and size as well. Therefore, it plays the crucial role to drive economic growth through the allocation fund to business firm. However, the other two channels, banking system and bond market have no impact on economic growth in Thailand during this period of time. It is inconsistent with many studies such as King and Levine (1993), and Ali Abbas, S. M. and Christensen, J.E. (2007). According to bond market, it has a small portion in the financial system comparing with other channels. At the same time, banking system is likely to handle large amount of raising fund but it also has no impact on economic growth. It cannot efficiently transmitted money to the real sector because of credit concentration in some core sectors and large firms. In addition, the results show that GDP and bank deposits also have causal relation to the expansion of bond market but not in the opposite direction. It means that bond market benefits from the expansion of bank deposit and economic growth.

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