MINISTRY OF FINANCE

**UNIVERSITY OF FINANCE - MARKETING**

---------------

**BUI NGOC TOAN**

# THE RELATIONSHIP BETWEEN FINANCIAL DEVELOPMENT AND THE REAL ESTATE MARKET IN VIETNAM

Major: Finance – Banking

Major code: 9340201

SUMMARY OF ECONOMICS PH.D'S THESIS

**HO CHI MINH CITY – 2021**

The thesis is completed at:

**University of Finance - Marketing**

Supervisors:

**Assoc. Prof., Ph.D. Nguyen Thi My Linh and Ph.D. Pham Thi Thanh Xuan**

Reviewer 1: ...............................................................................................
Reviewer 2: ...............................................................................................
Reviewer 3: ...............................................................................................
The thesis will be defended at the committee at the school level at ............
..............................................................................................................
............ time........... day............ month............. year...................................
The thesis can be found at the library: ......................................................

# CHAPTER 1. INTRODUCTION

## 1.1. Introduction

In countries with high levels of financial development, a better-developed banking sector and stock market, their financial services are superior to those with a limited financial development (King & Levine, 1993; Bencivenga et al., 1995; Esso, 2010). Therefore, in the countries with better-developed financial development, capital can be easily accessed from the stock market and banking sector (including real estate mortgage to borrow). Meanwhile, in the countries with low levels of financial development, this access from the banking sector can be primarily, partly reducing financial market imperfections (Lim, 2018). Thus, real estate is closely correlated to financial development, especially in the countries with limited levels of financial development.

The impact of financial development on the real estate market (REM) can be explained through the wealth effect which was suggested by Ando and Modigliani (1963), developed by Yoshikawa and Ohtaka (1989), and Skinner (1999). Recently, this effect has been employed in many empirical studies, particularly in developed countries, such as those of Gimeno and Martínez-Carrascal (2010), Che et al. (2011), Bahmani-Oskooee and Ghodsi (2018), and Lim (2018).

The effect of the REM on financial development can also be clarified through the credit effect which was first mentioned in the studies of Ghosh et al. (1997) and Liow (1999), recently used by Anundsen and Jansen (2013), Bahmani-Oskooee, and Ghodsi (2018).

Generally, financial development and the REM can be mutually affected each other. Specifically, the interaction between the wealth effect and credit effect leads to the credit cycle effect (Petrova, 2010). Since the global financial crisis in 2007, researchers and policymakers have paid more attention to the association between financial development and REM (Tsai, 2015; Zhang et al., 2016). There, however, exists various arguments on this link (Su, 2011; Su et al., 2011), especially the proxy of financial development and the degree of impact in this association.

Vietnam has experienced the minimal financial development and young, developing real estate market. Also, there is a lack of empirical studies on this issue, especially on the correlation between financial development and REM. Addressing the limitations in current studies and the theoretical and practical necessity of this issue, I selected the topic "**The relationship between financial development and the real estate market in Vietnam**" for this study. This is expected to fulfill the theoretical framework on financial development and REM. Also, based on what previous studies have reported and the status quo, I developed a research model of the relationship between financial development and REM in Vietnam based on what previous studies have reported and the actual development, then suggesting the implications to promote financial development as well as the real estate market in Vietnam.

## 1.2. Study objectives and questions

This study is conducted with the aim of investigating the relationship between financial development and REM in Vietnam. This is expected to be significant empirical evidence to suggest implications in the aim of stimulating financial development as well as the REM of Vietnam.

Financial development is basically analyzed through improvements in financial depth, financial efficiency, financial access and financial stability of the banking sector, and the stock market. These proxies show their superiority in demonstrating the multidimensional quality of financial development from different perspectives. Thus, in order to reach the general purpose, the detailed objectives are established as follows: (1) Investigating the relationship between financial depth and the REM in Vietnam; (2) Investigating the relationship between financial efficiency and the REM in Vietnam; (3) Investigating the relationship between financial access and the REM in Vietnam; (4) Investigating the relationship between financial stability and the REM in Vietnam.

After achieving these objectives, I suggest implications that are based on the findings in order to promote financial development as well as the REM in Vietnam.

## 1.3. Subject and scope of the study

### 1.3.1. Subject of the study

The subject of the study is the relationship between financial development and the REM.

### 1.3.2. Scope of the study

In this study, I analyze the relationship between financial development and the REM in Vietnam. Particularly, financial development is limited in the scope of improvements of financial depth, financial efficiency, financial access, financial stability of the banking sector (commercial banks, specifically), and the stock market. The research period is selected from Q3 2004 to Q4 2018.

### 1.4. Methodology

#### 1.4.1. Methods

To obtain the study objectives, I employed a combination of both qualitative and quantitative analyses. About the quantitative analysis, based on features of the dataset, the relationship among the data series would be tested by using the vector autoregression (VAR), vector error correction (VECM) or autoregressive distributed lag (ARDL) models.

#### 1.4.2. Data

The data series were collected quarterly between the third quarter of 2004 and the last counterpart of 2018. The data are obtained from the General Statistics Office of Vietnam (GSO), International Financial Statistics (IMF - International Monetary Fund), and State Securities Commission of Vietnam (SSC). Furthermore, the data from the World Bank, annual reports of the State Bank of Vietnam, and financial statements of the commercial banks were also used to analyze the status quo, which in turn clarify the research problem.

### 1.5. Contributions

#### 1.5.1. Theoretical contributions

This study is conducted based on theory and findings of earlier studies as well as the status quo which ensures its scientific validity. This study is expected to scientifically contribute to the completion of a theoretical framework of the relationship between financial development and the REM. Further, with its objectives, this study is also expected to have the following scientific validity:

- The study focuses on the relationship between financial development and the REM. In specific, financial development is measured by improvements in financial depth, financial efficiency, financial access, and financial stability. This measurement is good at showing the multidimensional instinct from different perspectives of financial development. This is a novelty of the study compared to previous research.

- In this study, I clarify how financial development and the REM affect each other. This mutual relationship can be explained on the basis of wealth and credit effects.

### 1.5.2. Empirical contributions

Together with its scientific validity, the study can also ensure practicality with lots of meaningful values to Vietnam. This study is intended to bring practical and meaningful value to Vietnam by exploiting sparse issues and solving the existing gaps in the current literature, which is specified as follows:

- The study provides a piece of empirical evidence on the association between financial development and the REM in Vietnam where there are only few empirical studies on this matter. This is thus expected to provide meaningful empirical evidence to Vietnam.
- This is not only essential to Vietnam but also to other economies, especially those sharing the same background with Vietnam.
- In this study, I aim to suggest the implications for the development of financial development and the REM of Vietnam, particularly those which are appropriate with the context of the international integration.

## 1.6. The structure of the thesis

To reach the objectives of the study, the study is divided into 5 chapters. The first chapter presents the introduction. The second one gives a review of current literature. Chapter 3 includes the methodology. Chapter 4 presents the results and discussion. Chapter 5 gives the conclusion and implications.

# CHAPTER 2. LITERATURE REVIEW

## 2.1. Overview of financial development

### 2.1.1. Definition of finance

Finance can be defined as the move of money. It demonstrates the diversity of relations in the economy which develop in the distribution of financial resources by creating, using funds in order to meet various requirements of individuals in the society.

### 2.1.2. Definition of financial development

Financial development can be understood as improvements in depth, efficiency, access and stability of financial institutions and the financial market.

### 2.1.3. Measurement of financial development

Financial development can be fundamentally approximated by improvements in depth, efficiency, access and stability of financial institutions and the financial market. In specific, the former concentrates on the banking sector while the latter focuses on the stock market.

### 2.2. Overview on the real estate market

#### 2.2.1. Definition of real estate

Real estate refers land, houses, structures and other assets attached to land. Assets attached to land are considered as real estate when being attached on its land with a specific function which will be annulled without this attachment.

#### 2.2.2. Definition of the real estate market

The REM can be broadly defined as all trading on real estate (consisting of transferring, leasing, and other activities related to real estate) among entities in the market, in which the government has a vital administrative role in enhancing or inhibiting its activities.

#### 2.2.3. Measurement of the real estate market

Now there exist different indices of the REM. However, the most comprehensive and frequently used indicator is its growth index. This proxy is measured by growth in consumption and investment of the whole economy into the REM during a certain period.

### 2.3. Theories explaining the relationship between financial development and the real estate market

#### 2.3.1. Wealth effect

Wealth effect can account for the impact of financial development on the REM. This idea suggests that the asset and wealth of a household and firm affect consumer spending and investing behavior. The growth in financial development will increase the asset values in their portfolios along with their investment income, making them confident about their asset value, feel richer and spend more. Also, it leads to a rise in housing demand and investment in the REM, boosting the REM. Contrarily, a falling financial development lowers the financial asset values in a household and firm's portfolios, leading to a fall in their wealth. To maintain a secure living and a balance between earning and spending, they tend to spend and invest less, which reduces the real estate market. Admittedly, financial development exerts a significant impact on the REM.

#### 2.3.2. Credit effect

Credit effect can be used to interpret the effect of the REM on financial development. The REM considerably affects the access to capital of real estate owners (Kapopoulos & Siokis, 2005). As a consequence, growth in the REM gives a rise in credit supplied to the economy by the banking sector, which in turn improves financial development through the banking sector. This significantly affects financial development through the stock market. It can thus be concluded that the REM has a considerable impact on financial development.

## 2.4. An overview of previous studies on the relationship between financial development and the real estate market

### 2.4.1. Findings of previous studies on the relationship between financial development and the real estate market

Reviewing the current literature, I found that only few studies analyzed the relationship between financial development and the REM, particularly financial development is measured by growths in the banking sector and stock market. A majority of earlier studies have been in favor of the banking sector or the stock market as a proxy of financial development. On the other hand, financial development has been approximated by financial depth (domestic credit to private sector, stock market capitalization) and financial stability (stock market volatility). In fact, there has not been any research considering the correlation between financial development and the REM in which financial development is measured by 4 indicators including financial depth, financial efficiency, financial access, and financial stability. In regard to findings, there exist contrary views but can be summarized into three main ones: (1) There exists a bidirectional relationship between financial development and the REM; (2) There exists a one-way impact of financial development on the REM; (3) There exists a one-way impact of the REM on financial development. In specific, what most of the earlier studies have done is testing the link between financial development and the REM, not using wealth and credit effects in the interpretation of this relationship. Together with this, there are different views on the impact degree of the relationship.

About the analyses, most of them have applied quantitative methods which vary depending on their dataset and study objectives. In those studying the relationship among data series, the analyses frequently employed are VAR, VECM, and ARDL. In particular, the VAR was used by Ibrahim (2010), Hott (2011), Ni and Liu (2011), Ibrahim and Law (2014), Li et al. (2015), Chen et al. (2017), Shi et al. (2017), and Funkea et al. (2018) while the VECM was found in studies of Gimeno and Martínez-Carrascal (2010), Ibrahim (2010), Ni and Liu (2011), Anundsen and Jansen (2013), and Jiang et al. (2018). Liang and Cao (2007), Lean and Smyth (2014), and Bahmani-Oskooee and Ghodsi (2018) applied the ARDL in their research.

### 2.4.2. Review on the current literature gaps

Real estate has been an interesting topic mentioned in a big number of studies since 1990 (Wheaton, 1999). The REM can be interpreted better by financial factors than by common economic factors (Choi & Park, 2017). The link between financial development and economic growth has been mentioned popularly in many previous studies (Gerschenkron, 1962; Levine & Zervos, 1998; Graff, 2003; Choi & Park, 2017). Nevertheless, the association between financial development and the REM has received lots of attention in empirical studies. This is also an interesting topic but uncommon among empirical studies, creating a big gap in the current literature.

Also, by reviewing the current literature, some limitations in the earlier studies can be acknowledged as follows: (1) There is no agreement on the measurement of financial development; (2) Most of the earlier studies have only tested the relationship between financial development and the REM, not explaining it by applying wealth and credit effects; (3) A majority of these studies have concentrated on developed countries, not developing ones; (4) To the best of my knowledge, there has not been any research analyzing the link between financial development and the REM in Vietnam.

## CHAPTER 3. METHODOLOGY

### 3.1. Approaches

### 3.2. Hypotheses and models

The model investigating the relationship between financial development (FD) and REM in Vietnam is suggested as follows:

- The impact of financial development in the REM:
  REM = f(FD, GDP, CPI)
- The impact of the REM on financial development:
  FD = f(REM, GDP, CPI)

The impact of financial development on the REM is shown in Model 1. Financial development is measured by financial depth (DCP, SMC), financial efficiency (LDS, SME), financial access (SMA), and financial stability (stock market volatility – SMV). Consequently, the impact of the REM on financial development is detailed in the following models including 2a (dependent variable: DCP), 2b (dependent variable: SMC), 2c (dependent variable: LDS), 2d (dependent variable: SME), 2e (dependent variable: SMA), and 2f (dependent variable: SMV).

**Table 3.1. Summary of the variables**

<table>
<tr><th colspan="2">Variable</th><th>Code</th><th>Source</th></tr>
<tr><td colspan="4">Variable of the real estate market</td></tr>
<tr><td colspan="2">Growth of the real estate market</td><td>REM</td><td>GSO</td></tr>
<tr><td colspan="4">Variables of financial development</td></tr>
<tr><td rowspan="2">Financial depth</td><td>Domestic credit to private sector</td><td>DCP</td><td>IMF</td></tr>
<tr><td>Stock market capitalization</td><td>SMC</td><td>SSC</td></tr>
<tr><td rowspan="2">Financial efficiency</td><td>Bank lending-deposit spread</td><td>LDS</td><td>IMF</td></tr>
<tr><td>Stock market efficiency</td><td>SME</td><td>SSC</td></tr>
<tr><td colspan="2">Financial access</td><td>SMA</td><td>SSC</td></tr>
<tr><td colspan="2">Stock market volatility<br>(financial stability)</td><td>SMV</td><td>Estimated on the basis of the SSC source</td></tr>
<tr><td colspan="4">Control variables</td></tr>
<tr><td colspan="2">Economic growth</td><td>GDP</td><td>GSO</td></tr>
<tr><td colspan="2">Consumer price index</td><td>CPI</td><td>GSO</td></tr>
</table>

Source: computed and suggested by the author.

### 3.3. Data

The data are quarterly obtained from Q3 2004 to Q4 2018. The data on growths of the REM and macroeconomic indicators are obtained from the General

Statistics Office of Vietnam (GSO). Meanwhile, the data on financial development through the banking sector and the stock market are collected from the International Monetary Fund (IMF), and State Securities Commission of Vietnam (SSC). Additionally, the data published by the World Bank, annual reports of the State Bank of Vietnam and financial reports of commercial banks are used for analyzing the actual situation, thereby clarifying the research problem.

### 3.4. Analyses

To obtain the objectives, the combination of quantitative and qualitative methods is applied. About the quantitative methods, per dataset characteristics, the impact among data series is tested by using the vector autoregression (VAR), vector error correction (VECM) or autoregressive distributed lag (ARDL) models.

Due to the specific features of Vietnam, the data series on financial development and the REM are relatively short. Also, since the models contain a variety of variables, it is difficult for the data series to become stationary at I(0) or I(1). Thus, to the models with cointegration, the ARDL is employed in the expectation of ensuring the best validity, which is in line with the reports of Perasan et al. (2001), Tursoy and Faisal (2016). In case of no cointegration in the models, the VAR is used for the analysis.

## CHAPTER 4. RESULTS AND DISCUSSION

### 4.1. Financial development and the real estate market in Vietnam

#### 4.1.1. Financial development in Vietnam

In general, financial development in Vietnam has been improved significantly in recent time. Particularly, the banking sector is essential in supplying capital to the economy. Credit activities play a key role and generate major income for the banking sector. That is why the banking sector must diversify financial services, which allows it to reduce its deep dependence on income from loans. Despite being young, Vietnam’s stock market has developed rapidly. Especially, the stock market is becoming more and more important in supplying medium and long-term capital to the economy. There however exist some limitations, such as its low financial access, and more especially its limited medium and long-term capital to the REM. Some of its main causes can be counted as a limited and undeveloped real estate investment fund in the stock market, only few real estate firms listed on the stock market which are 65 listed firms among 10.000 ones (HOREA, 2019).

### 4.1.2. The real estate market in Vietnam

Vietnam's REM is quite young but has made considerable developments and played a major role in the economy. It however is facing some limitations and difficulties which are: (1) the difficult access to capital, (2) imbalance between supply and demand, and (3) minimal data on the REM.

## 4.2. Results

### 4.2.1. Descriptive statistics and correlation analysis

The results are shown that the variables of financial development are positively correlated to REM. About the control variables, REM is positively correlated to GDP and negatively associated with CPI. On the other hand, the correlation between the indicators of financial development and the control variables is relatively low (the maximum value is 0,5942), so there is no serious issue of multicollinearity.

### 4.2.2. Stationarity test

The Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) are employed to examine the stationarity of the time series. The results are shown that LDS, SME, SMV, and GDP are stationary at the root time series (I(0)) while the others become stationary after taking the first difference (I(1)). It can be concluded that these series are suitable for the ARDL analysis if cointegration really exists. In case there is no cointegration, the VAR can be used in the analysis to reveal the short-term relationship among the series.

### 4.2.3. Cointegration test

The bound test suggested by Pesaran et al. (2001) are applied to examine cointegration among the time series. The results are shown that there really exists cointegration in models 1, 2a, and 2f while there is no cointegration in models 2b, 2c, 2d, and 2e. As a consequence, the ARDL will be selected to analyze the association between financial development and the REM using models 1, 2a, and 2f while the VAR will be used for the other models (2b, 2c, 2d, and 2e).

### 4.2.4. Results of model estimation

By analyzing the models, the relationship between financial development and the REM are presented in Table 4.16 as follows:

**Table 4.16. Results of testing the relationship between financial development and the REM**

| Hypothesis | | Results | | Conclusion |
|---|---|---|---|---|
| | | ***Long run*** | ***Short run*** | |
| Financial depth and the REM | DCP ⟹ REM | ✓ | x | Accepted |
| | REM ⟹ DCP | ✓ | ✓ | Accepted |
| | SMC ⟹ REM | x | ✓ | Accepted |
| | REM ⟹ SMC | x | x | Rejected |
| Financial efficiency and the REM | LDS ⟹ REM | ✓ | ✓ | Accepted |
| | REM ⟹ LDS | x | x | Rejected |
| | SME ⟹ REM | x | x | Rejected |
| | REM ⟹ SME | x | x | Rejected |
| Financial access and the REM | SMA ⟹ REM | ✓ | ✓ | Accepted |
| | REM ⟹ SMA | x | x | Rejected |
| Stock market volatility and the REM | SMV ⟹ REM | x | ✓ | Accepted |
| | REM ⟹ SMV | x | ✓ | Accepted |
| *Note: ✓ indicates the significant impact.* | | | | |

Source: computed by the author.

**- The relationship between financial depth and the REM:** in the long run, there exists a mutual association between domestic credit to private sector (DCP) and the REM. In the short run, the REM has a positive impact on domestic credit to private sector (DCP). Regarding financial depth of the stock market, the study reveals the positive effect of stock market capitalization (SMC) on the REM in the short run which confirms a close relationship (positive) between financial depth and the REM.

**- The relationship between financial efficiency and the REM:** the bank lending-deposit spread exerts a positive effect on the REM in the short run and long run. Alternatively stated, financial efficiency through the banking sector significantly affects the REM.

**- The relationship between financial access and the REM:** the financial access (SMA) exerts a one-way effect on the REM in the short run and long run. It can thus be said that financial access through the stock market is significantly correlated to the REM.

**- The relationship between stock market volatility and the REM:** there really exists a positive association between stock market volatility (SMV) and the REM in the short run. In other words, stock market volatility (SMV) through the stock market are closely related to the REM.

Generally, financial development is closely correlated to the REM in the short run and long run, which is consistent with wealth and credit effects. However, degrees of this relationship vary among indicators of financial development, namely financial depth, financial efficiency, financial access and financial stability. Additionally, the study reports the significant impact of macroeconomic indicators (GDP and CPI) on financial development. Meanwhile, the REM is greatly affected by the consumer price index (CPI). These findings provide a reliable base for the detailed result discussion and implications in the following section.

### 4.3. Discussion

#### 4.3.1. The relationship between financial depth and the real estate market

The results show that financial depth is closely associated with the REM. In specific, domestic credit to private sector (DCP) has a positive link with the REM in the long run. In the short run, the REM exerts a positive impact on domestic credit to private sector (DCP). Also, stock market capitalization (SMC) is positively correlated to the REM in the short run. This means that the link between financial depth and the REM is appropriate with wealth and credit effects.

**- The impact of financial depth on the REM:**

+ ***The impact of domestic credit to private sector on the REM:*** in the long run, domestic credit to private sector (DCP) has a positive impact on the REM. This finding is suitable with the wealth effect and has been previously reported by Bunda and Zorzi (2010), Hott (2011), Shen et al. (2016), and Lim (2018). It can be seen that more credit supplied by the banking sector to the economy increases the capital accessed by the private sector (households and non-financial institutions), thereby stimulating consumption and investment. Together with this, their demands in housing and real estate investment raises, contributing to the growth of the REM. Vietnam's banking industry plays a key role in supplying credit to the economy, as well as to the REM. In 2007 and early 2008, the rise in domestic credit to private sector leads to impressive growth in the REM. In 2011 and early 2012, due to the economic difficulties, together with a tight credit policy and tough capital access, the REM decreased considerably. After that, thanks to the recovery of the global and national economy, credits supplied by the banking sector have been improved greatly, which contributes substantially towards the comeback of the REM. It can be concluded that domestic credit to private sector is important in stimulating the REM. However, if the banking sector grants excessive loans and raises loans to high-risk projects, there will be potentially real estate bubbles, which may cause a crisis and a big decline in the REM. The global financial crisis in late 2007 is a typical case of this effect.

+ ***The impact of stock market capitalization on the REM:*** stock market capitalization (SMC) is positively connected to the REM in the short run. This shows its appropriateness with the wealth effect and what has been claimed by Choi and Park (2017). Thus, the stock market size is essential in fostering the REM's development. This impact however is only revealed in the short run. This is because Vietnam's stock market is quite nascent, small and insecure, so it cannot make a positive impact by supplying medium and long-term capital to the REM.

**- The impact of the REM on financial depth:**

The findings show that the REM exerts a positive effect on domestic credit to private sector (DCP) in the short run and long run, so it plays an important role in improving financial depth of the banking sector. This result is in line with the wealth effect and the findings of Hott (2011), Igan et al. (2011), Arestis and Gonzalez (2014), and Shen et al. (2016). Thanks to the developed REM, it is easy for real estate owners to access banking loans. This gives a rise to credit supplied by the banking sector, which enables it to earn more and develop. Thus, the REM has a key role in promoting the banking sector. However, crises in the REM also put the banking sector in a tough time. The global financial crisis that occurred in late 2007 in the U.S is typical for this effect.

**4.3.2. The relationship between financial efficiency and the real estate market**

This study reveals the substantial impact of financial efficiency on the REM through the banking sector. Specifically, bank lending-deposit spread (LDS) is positively correlated to the REM in the short run and long run. This effect is suitable with the wealth effect. This is also a discovery of this study compared to earlier research. In Vietnam, credit activities are the main income of commercial banks. Therefore, the rise in bank lending-deposit spread brings more income and stimulates the banking sector. This will become an essential financial resource for it to improve the service quality, capital supply ability to the economy as well as the REM, which greatly contributes to the REM's development. Recently, The State Bank of Vietnam has adjusted the interest policy to adapt to macroeconomic developments as well as the money market and commanded credit institutions to issue reasonable interest rates as well as stabilize lending and deposit interest rates (Pham, 2019). This helps the banking sector firmly promote facing the economic predicaments. Despite the fact interest rate differential brings commercial banks a huge income, it should be kept reasonably in order to maintain a stable banking development as well as stimulate the REM. This is because the excessive lending interest rate makes it difficult to access capital and possibly negatively affects the REM (Gimeno & Martínez-Carrascal, 2010; Jiang et al., 2018). Also, too large interest rate differential is an early signal of crisis in the banking sector (Kaminsky & Reinhart, 1999; Godstein et al., 2000).

**4.3.3. The relationship between financial access and the real estate market**

The findings reveal that financial access (SMA) has a positive impact on the REM in the short run and long run. This is suitable with the wealth effect and also an unprecedented finding. It can be deduced that financial access is essential in promoting the REM. The increase in financial access helps to reduce the inequality in size between large firms (the top ten biggest firms) and the rest, which facilitates the integration process of newly listed firms. In other words, it will be equal among all listed firms. This greatly contributes towards the improvement of the of stock market ability in satisfying customer demand on capital, giving a rise to the of stock market capital to the REM. More than that, financial access is also vital in increasing investors' income, making them richer, increase housing and investing demand, thereby boosting the REM.

**4.3.4. The relationship between financial stability and the real estate market**

By this study, the positive relationship between stock market volatility (SMV) and the REM in the short run is revealed. Particularly, stock market volatility indicate financial stability. This proves a close connection between financial stability and the REM which is only expressed in the short run. This finding is consistent with the wealth and credit effects as well as the reports of Heaney and Sriananthakumar (2012), Tsai (2015), Liow et al. (2019), Liu et al. (2019), Xia et al. (2019), and Tiwari et al. (2020).

**- The impact of financial stability on the REM:** wide stock market volatility (low financial stability) will stimulate the REM. This is because stock market volatility in a growing trend increase the capital in the REM, boosting it. However, if the capital to the REM increases excessively without being well-controlled, it will bring more potential risks which are the bubble appearance and future crisis. The global financial crisis (in late 2007) is a typical example. In case the stock market fluctuates in a declining trend, it can make investors tend to change their investment from the stock market to the REM, boosting the REM.

**- The impact of the REM on financial stability:** the growth in the REM is a signal for a more active stock market. However, this impact is only shown in the short run. This is because the stock market and REM in Vietnam are quite nascent, unstable and their variations time is too short to make a huge impact in the long run.

**4.3.5. The importance of control variables in the relationship between financial development and the real estate market**

It can be seen that the control variables (GDP and CPI) have a substantially positive impact on financial development. Meanwhile, the REM is negatively affected by consumer price index (CPI). Admittedly, macroeconomic factors facilitate the improvement of financial development. However, the rise in consumer price index may lead to an unstable stock market. To the REM, this increase can restrict its development.

# CHAPTER 5. CONCLUSION AND IMPLICATIONS

## 5.1. Conclusion

This study systematizes the theoretical base of the relationship between financial development and the REM as well as reviews the current literature. Based on these, I have selected the methods and developed the models of the link between financial development and the REM in Vietnam. After studying, the general purpose – analyzing the relationship between financial development and the REM in Vietnam has been obtained thanks to achieving the detailed objectives.

In general, the findings reveal the close association between financial development and the REM in the short run and long run. However, its degrees are different among the indicators of financial development which are specifically financial depth, financial efficiency, financial access, and financial stability. Also, the study reports the significant impact of macroeconomic factors (GDP and CPI) on financial development. More than that, the CPI negatively affects the REM in the short run and long run. The findings are essential in providing policymakers, managers, and researchers a full understanding of the link between financial development and the REM in Vietnam.

## 5.2. Implications for financial development and the real estate market

### 5.2.1. Implications for financial development in the aim of boosting the real estate market

The results confirm the positive impact of financial development on the REM, so the former plays a major role in fostering the latter. In Vietnam, capital in the REM is mainly from the banking sector while the stock market is becoming a substantial channel supplying medium and long-term capital to the REM. As a consequence, the increase of capital from the banking sector and stock market to the REM will lead to developments of the REM. Contrarily, its fall will put the REM in difficult circumstances. It requires a sustainable development of the financial sector to provide a stable capital supply to the REM. Especially, together with the REM's growth, the banking sector should avoid increase real estate loans, which in turn make the REM become "too hot" and likely occur bubbles. Or during the period when the REM faces a crisis and declines, the banking sector tends to restrict this loan, leading to a sharp fall in the REM. This causes that the financial sector and REM are always facing potential risks due to this unstable growth. Besides, it is necessary to boost the stock market so that it becomes an effective medium and long-term capital channel of the REM which enables the REM to reduce its deep dependence on credit.

***5.2.1.1. Implications for financial depth in the aim of boosting the real estate market***

The results reveal that the REM is affected by financial depth through the banking sector in the long run and the stock market in the short run. On the other hand, by analyzing the reality, it can be seen that the stock market is quite minimal in size. Based on these, the implications for financial depth in the aim of boosting the real estate market are suggested as follows:

- Implications for the banking sector:

+ It is important for commercial banks to develop a consistent and flexible credit policies towards real estate in each period.

+ Commercial banks need to encourage and stimulate lending based on the association among three entities "investor – bank – customer".

+ It is necessary for commercial banks to develop "house purchase savings" products.

+ Commercial banks also need to determine that loans for buying a house are real estate loans, rather than consumption ones (regarding loans for house construction or buying first house) as they are doing now.

+ It is necessary for commercial banks to build an early warning system on credit risks and concentrates on their prevention, particularly real estate credit.

- Implications for the stock market:

The stock market in Vietnam needs to be restructured completely, especially its size, which allows it to become a big channel supplying medium and long-term capital to the economy as well as the REM. This restructure should be undergone on the basis of Decision No. 242/QD-TTg dated February 2019 by the Prime Minister approving the scheme for "Restructuring securities and insurance markets by 2020 and vision to 2025". Accordingly, the stock market shall be restructured towards development of both the scale and the quality, as well as the best international standards and general rules. In addition, it is necessary to increase the number of enterprises with a large scale listed on the market by promoting state-owned enterprise equitization as well as combining the equitization with listing bonds on the market.

***5.2.1.2. Implications for financial efficiency in the aim of boosting the real estate market***

It can be reported from the results that the REM is significantly affected by financial efficiency through the banking sector. Therefore, the interest rate differential between lending and deposit in commercial banks should be increased reasonably and firmly, creating an excellent base for sustainable development of the banking sector. This will provide commercial banks a good financial resource for the improvement of their service and capital supply ability. Further, they need to diversify income and reduce their dependence on lending income for the allocation of risks in their activities.

***5.2.1.3. Implications for financial access in the aim of boosting the real estate market***

The positive impact of financial access on the REM through the stock market in the short run and long run is confirmed in this study. Also, the reality analysis shows this impact still has some limitations. Based on these, the implications for financial access are suggested as follows:

- Improve the financial access of the stock market. Accordingly, it is essential to increase the number of enterprises (especially those in large size) listed on the stock market.
- Increase the number of real estate companies listed on the stock market.
- Establish and promote real estate investment funds.

***5.2.1.4. Implications for financial stability in the aim of boosting the real estate market***

As can be revealed, stock market volatility is positively associated with the REM. Therefore, the impressive growth in the stock market gives an increase to capital in the REM, which stimulates the REM. When the stock market fluctuates in the falling direction, the capital tends to be invested in the REM, so it is really necessary to develop the stock market sustainably for mutual development of both the stock market and REM. To reach these targets, along with the improvements in stock market scale and access, the following activities should be also focused on:

- Making sure that the stock market information is public and explicit to all investors (especially foreign ones).
- Improving the management, supervision as well as administering severe punishments on every violation in order to build trust among investors.

- Developing the stock market sustainably and firmly. In specific, it is necessary to restructure the overall stock market for its stable growth which should be undergone based on Decision No. 242/QD-TTg dated February 2019 by the Prime Minister approving the scheme for "Restructuring securities and insurance markets by 2020 and vision to 2025".

**5.2.2. Implications for the real estate market in the aim of boosting financial development**

The results show the positive effect of the REM on financial depth through the banking sector in the short run and long run. Alternatively stated, the REM plays a major role in boosting the banking sector. The study also reveals the impact of the REM on financial stability through the stock market in the short run. Indeed, the well-developed REM makes a positive signal which allows the stock market to perform better. However, the REM with the crisis may negatively affect financial development, which the 2007 global financial crisis (primarily by the REM crisis in the U.S) is a typical case. Consequently, it needs to develop sustainably to avoid the risk of real estate bubbles. Based on the results, the implications for the development of the REM in the collaboration with financial development as follows:

- Raise the access to capital of the REM: raise the ability of its participants to maintain its effective and professional performance. Also, real estate companies need to diversify their capital from credit and the stock market. Together with this, it is necessary for the expansion by forming joint ventures or connections with domestic and foreign firms in order to improve their capacity. Also, improve their access to capital from foreign investors.
- Redress the imbalance between supply and demand in the REM: restructure the REM and develop a variety of real estate products. Also, it is necessary to develop segments of social housing, affordable commercial housing, and leased housing to meet the actual demand, contributing to correct the imbalance between real estate supply and demand. These enable the REM to grow sustainably and satisfy the actual needs, which creates an excellent base for promoting the economy and finance.
- Publicize information of the REM: develop a reliable, open, and explicit data system, even those on planning. In particular, it is necessary to promote the implementation of real estate price index for each geographical zone so that

policymakers, managers, and researchers can have a better understanding of the REM. In addition, the outlook for the REM should be predicted for the aim of sustainable development. These will provide banks reliable information to improve their forecast and efficiently regulate credit to the REM.

### 5.2.3. Other implications

#### *5.2.3.1. Implications for the authorities*

The results show that financial development is closely correlated to the REM. Further, they are significantly affected by macroeconomic factors. Therefore, the authorities need to promote financial development together with the REM efficiently and sustainably. Also, practical solutions are required to limit the negative impact caused by abnormal economic fluctuations. To perform these, the implications are suggested as follows:

- Enhance solutions that make use of capital in the economy to promote the REM.
- Enhance proposals for the sustainable REM.
- Improve the prediction on economic developments.

#### *5.2.3.2. Implications for the State Bank of Vietnam*

- Administer monetary policies cautiously and flexibly.
- Enhance the inspection and supervision of credit activities, especially on credit issuance for real estate investment and business.
- Develop a good data system of the REM: The State Bank of Vietnam should develop a data system on the REM, which concentrates on the warning of real estate risks as a reference for commercial banks. It also helps the State Bank of Vietnam to propose appropriate policies for the development of the banking sector as well as the inhibition of credit to the REM.

#### *5.2.3.3. Implications for the State Securities Commission of Vietnam*

- The State Securities Commission needs to collaborate with other relevant units to complete legal documents for the overall stock market development in both quality and quantity.
- Drastically perform the restructure of the stock market on the basis of Decision No. 242/QD-TTg dated February 2019 by the Prime Minister approving the scheme for "Restructuring securities and insurance markets by 2020 and vision to 2025".

### 5.3. Limitations and suggestions for future studies

Despite achieving its objectives, the study exists its own limitations such as:

- Vietnam's real estate market was officially established by the issuance of the 2003 Land Law (being implemented since July 1st, 2004), so the research period is between the third quarter of 2004 and the last counterpart of 2018. This leads to a limitation in the data series.

- Due to the limitation on its data, financial development has to be narrowed on its measurement by the banking sector developments and stock market. Also, some indicators are unable to be included because their quarterly data could not be collected during the whole period.

- Currently, there is no available quarterly data on a comprehensive index of financial development, so it was only measured by separate indicators which are financial depth, financial efficiency, financial access, and financial stability. It would be measured more generally with this index.

These limitations may be interesting proposals for more investigation.