

**MINISTRY OF FINANCE
UNIVERSITY OF FINANCE – MARKETING**

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**IMPACT OF MONETARY POLICY ON
FINANCIAL STABILITY OF VIETNAMESE
COMMERCIAL BANKS THROUGH RISK TAKING**

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SUMMARY OF ECONOMICS PH.D'S THESIS

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CHAPTER 1. INTRODUCTION

1.1 Research topic selection reasons.

After 2008, there have been many studies on the impact of monetary policy on the financial stability of commercial banks. Some theoretical studies suggest that stable economic conditions with sustained low interest rates over a long period of time can encourage high risk-taking and make financial markets more vulnerable (Borio and Zhu, 2008; Gambacorta, 2009). Altunbas et al (2014) found the impact of monetary policy on the risk of banks; Specifically, low interest rates impact valuations, earnings, and cash flow, which in turn can affect how banks measure risk. (Adrian và Shin, 2009, 2010; Borio và Zhu, 2012). Many views also believe that low interest rates for a long time have created a real estate bubble by stimulating financial institutions to increase leverage and accept more risks. (Borio và Zhu, 2008; Adrian và Shin, 2009; Taylor, 2009).

The monetary policy implemented by the Central bank can affect the risk taking of commercial banks; thereby, affecting the financial stability of commercial banks (Montes và Peixoto, 2014). In terms of loose monetary policy, banks increase their risk taking, thereby affecting financial stability. In Vietnam, the period of loosening monetary policy from 2006 to 2007 and then from 2009 to 2010, the low interest rate level pushed the risk taking level of the system beyond the capacity, risk management system risk through the increase in total assets and credit along with the expansion of investment in high-risk business fields such as real estate, securities, gold and foreign currencies.

Dang & Dang (2020) studies the influence of monetary policy on risk taking of banks in Vietnam in the period from 2007 to 2018. The results

show that loosening monetary policy through reducing interest rates reduces the bank's level of risk taking, which does not agree with the risk-taking channel. In addition, when policy interest rates decrease, bank stability increases, which is contrary to the argument of the risk-taking channel.

In Vietnam, there is no research on the impact of monetary policy on financial stability through risk taking. Stemming from the gap in theory as well as the need for practical studies to make recommendations with scientific value and application to policy administration, the author implements the thesis: **“Impact of monetary policy on financial stability of Vietnamese commercial banks through risk taking”**.

1.2 Research problems.

Since the 2008 financial crisis, banking stability has become the most significant concern for bank administrators and policymakers. Moreover, in the current globalization context, the role of the State Bank in maintaining the stability of the banking system has become increasingly vital.

The management and implementation of monetary policy tools to ensure that the economy operates effectively and safely are not simple.

Therefore, this thesis focuses on whether monetary policy affects the financial stability of Vietnamese commercial banks, whether monetary policy affects the risk taking level of commercial banks in Vietnam, and the impact of the risk taking degree on the financial stability of Vietnamese commercial banks

1.3 Research objectives and research questions.

Research objectives

First, study the impact of monetary policy on the financial stability of Vietnamese commercial banks.

Second, study the impact of monetary policy on the risk taking degree of Vietnamese commercial banks.

Third, study the impact of risk taking on the financial stability of Vietnamese commercial banks.

Fourth, propose some suggestions for monetary policy in VietNam, and give some advice on governance for Vietnamese commercial banks.

Research questions

First, how does the loosening/tightening monetary policy affect the financial stability of Vietnamese commercial banks?

Second, how does the loosening/tightening monetary policy affect the risk taking level of Vietnamese commercial banks?

Third, is there an impact of risk taking on the financial stability of Vietnamese commercial banks?

Fourth, how should the Central bank implement monetary policy to ensure the financial stability of Vietnamese commercial banks? Additionally, how should commercial banks manage to provide financial stability?

1.4 Object and scope of the study

Research object

The thesis studies the impact of monetary policy on the financial stability of Vietnamese commercial banks, the impact of monetary policy on the level of risk acceptance of Vietnamese commercial banks, and the impact of the risk acceptance degree on the financial stability of Vietnamese commercial banks.

Research scope

The thesis focuses on analyzing the impact of monetary policy on financial stability through the risk taking level of thirty Viet Nam commercial banks from 2007 to 2019.

1.5 Research Methodology

The thesis conducts research by quantitative method. Data used in statistical calculations are from audited financial statements of banks. The macroeconomic indicators are from the World Bank (<https://data.worldbank.org/>) and the General Statistics Office of Vietnam. In addition, this thesis also uses SBV's website www.sbv.gov.vn for data on rediscount interest rates.

1.6 Thesis contributions and novelty.

1.6.1 New perspectives of the thesis

The thesis analyzes the impact of monetary policy on the financial stability of Vietnamese commercial banks, the impact of monetary policy on the risk taking of Vietnamese commercial banks and the impact risk taking on the financial stability of Vietnamese commercial banks with data from 30 Vietnamese commercial banks between 2007 and 2019.

The thesis will help Vietnamese managers and policymakers maintain financial stability of Vietnamese commercial banks through risk taking.

The thesis inherits the research of Montes et al. 2014; Demoras et al., 2016; Dang & Dang, 2020 to study the impact of monetary policy on risk taking. From there, the thesis will add empirical evidence on the effect of risk-taking channel in Vietnam.

1.6.2 Dissertation contributions

Scientific contributions

The thesis will provide empirical evidence on the impact of monetary policy on the financial stability of Vietnamese commercial banks through risk taking. In addition, it contributes to the research on risk-taking channels conducted in Vietnam.

Practical contributions

The analysis results will provide Vietnamese commercial banks with a better understanding of monetary policy's impact on financial stability. As a result, bank administrators may have an appropriate roadmap and plan to maintain the bank's financial stability in the context that Vietnam's economy is integrated with the world economic system. In addition, the thesis shows the impact of monetary policy on the financial stability of commercial banks through the level of risk acceptance, thereby proposing appropriate regulations on monetary policy to improve its effectiveness and ensure the bank's financial stability in the future.

1.7 Thesis structure.

The thesis is divided into five chapters. Chapter 1 introduction. Chapter 2 literature. Chapter 3 methodology. Chapter 4 summary of results and discussion. Finally, chapter 5 conclusions and policy implications.

Chapter 2 LITERATURE

2.1 Monetary Policy.

2.1.1 Introduction.

According to Mishkin (2013), monetary policy is the process by which the Central bank manages the money supply in order to achieve specific goals such as controlling inflation, maintaining exchange rate stability, and achieving full employment or economic growth. The State Bank of

Vietnam stated: “National monetary policy is a national monetary decision made by the competent state agency, including: determining the goal of stabilizing the value of the currency, expressed as an inflation target, and deciding on the use of tools and measures to achieve the set goal.” (State Bank of Vietnam Law No.46/2010/QH12 of June 29, 2010). Therefore, the essence of monetary policy is that the Central bank achieves its set goals by controlling and adjusting the money supply, credit and interest rates in circulation, including: suppressing inflation, stabilizing the value of the national currency, economic growth and creating employment opportunities.

2.1.2 Monetary policy objectives.

There are three objectives of monetary policy: final objective, intermediate objective and operational objective. Among them, the business objectives represent the business direction of the Central bank. From time to time, the Central bank must flexibly use tools to achieve desired goals. In Vietnam, the National Bank has mainly used the reserve requirement ratio to control the supply of credit to banks since 1990. By 2000, the State Bank of Vietnam used a range of new tools, including: base rates, policy rates and open market operations. Among these tools, the deposit reserve ratio and the basic interest rate remained stable, and the policy interest rate was adjusted more frequently. The policy rates used include the refinancing rate and the rediscount rate (Dang & Dang, 2020).

2.2 Risk and Risk Taking.

2.2.1 Risk.

Risk is unmeasurable uncertainty, often accompanied by uncertainty about the future. In fact, people associate risk with the possible loss of an organization's operations.

2.2.2 Risks of commercial banks.

The risk of commercial banks is defined as unforeseen changes in the value of assets (including assets and liabilities) and other obligations in the bank's operating activities. Types of risk: credit, operating activities and markets.

2.2.3 Risk taking level.

The risk acceptance level of a commercial bank is the extent to which the bank responds to risks by maintaining a system for identifying, monitoring, measuring and controlling possible risks. The risk taking of commercial banks is also affected by the trade-off between profit, growth and risk.

2.2.4 Measure risk acceptance.

Loan allowances are expected losses determined by banks based on their estimates of loan risk. This variable can represent a bank's risk taking level (Montes and Peixoto, 2014; De Moraes et al., 2016; Dang & Dang, 2020).

2.3 Financial Stability.

2.3.1 The concept of financial stability.

Wellink (2002) believes that a stable financial system can effectively allocate resources and absorb shocks, preventing adverse effects on the economy and the financial system.

2.3.2 The role of financial stability.

Financial stability not only plays an important role in stabilizing prices (the main objective of Central banks), but also helps support sustainable economic development, as stability creates a more favorable environment for investors and savers, and increases the efficiency of financial

intermediation, A functional financial market has been added, resource allocation has been improved, a sound and transparent financial system has been established, and systemic shocks and risks have been reduced. A stable financial system is one that is sound, reliable, efficient, less volatile, and able to absorb shocks.

Maintaining financial stability is the responsibility of most Central banks. When the financial system becomes unstable, such as when financial markets are volatile and stressed, large amounts of capital are required to deal with the situation. History shows that the reason why the Central bank can do a good job of maintaining financial stability is that the Central bank has a monopoly on currency issuance and has the ability to immediately "pump" a large amount of liquidity

2.3.3 Financial stability of commercial banks.

According to Nadya and Thomas (2011), banking financial stability is a stable state in which banks effectively perform their functions of resource allocation, risk diversification and income distribution.

The financial stability of commercial banks is achieved when the banks operate smoothly and are not affected by current and future adverse factors. These factors can lead to the failure of commercial banks, disrupting the functions of banks as financial intermediaries and payment intermediaries.

2.3.4 Measure the financial stability of the bank.

Finding a way to measure a bank's financial stability and predict possible uncertainties to prevent financial instability is one of Central banks' top concerns. According to the Basel Accord, the measure of financial stability is the capital adequacy ratio (CAR).

2.4 The impact of monetary policy on the financial stability of commercial banks.

There are many studies on the impact of monetary policy on the financial stability of commercial banks.

The expansion of monetary policy increases the value of the bank's assets such as collateral and income, thereby increasing the bank's risk taking, or increasing the bank's financial stability.

Expanding monetary policy can also have competitive effects. When the Central bank implements expansionary monetary policy, banks can relax lending standards and increase credit to high-risk customers when monetary policy unwinds and credit risk flares, thereby reducing financial stability.

2.5 The influence of monetary policy on the risk taking of commercial banks.

Since the 2008 financial crisis, more research has confirmed that by easing monetary policy and maintaining low interest rates for a long time, not only banks are encouraged to extend credit to customers according to the credit channel, but traditional credit also encourages banks to accept higher levels of risk (Altunbas et al., 2010).

2.6 The impact of risk taking on the financial stability of commercial banks.

Risks in banking are inevitable. Credit risk is the largest and most common operational risk faced by banks as most of their revenue comes from credit activities (Bhattacharya & Roy, 2008, cited in Ravi P.S. Poudel, 2013). Risk provision not only reflects the level of risk acceptance, but also a condition to ensure the financial stability of the bank.

2.7 Review previous studies.

2.7.1 Monetary policy transmission.

In recent years, researchers have found that monetary policy can affect financial stability through the risk taking of participants in the economy. Borio & Zhu (2012) pioneered this research direction.

2.7.2 The impact of monetary policy on the financial stability of commercial banks.

Expansionary monetary policy can also have competitive effects. This is particularly evident when De Nicolò et al. (2010) hypothesized that lower interest rates would reduce deposit rates, only partially translating into lower lending rates, thereby increasing bank profits. In a highly monopolized, low-competitive market, big banks have the right to dominate the market.

In addition, Dang & Dang (2020)'s study on a sample of 30 Vietnamese commercial banks from 2007 to 2018 also shows that there is a negative relationship between policy rates and banking and financial stability, and its impact depends on the operation of each commercial bank efficiency and profitability.

2.7.3 The impact of monetary policy on the risk taking of commercial banks.

Although some authors have studied the relationship between monetary policy and business volatility, Borio and Zhu (2012) argue that the link between monetary policy and risk has not received enough attention. Altunbas et al. (2014) and Gambacorta (2009) highlight two main ways in which low interest rates affect bank risk. First, low interest rates affect valuations, earnings, and cash flows, which in turn affect how banks

measure risk (Adrian and Shin, 2009, 2010; Borio and Zhu, 2012). Second, low returns on investments, such as (risk-free) government securities, increase the incentive for banks, wealth managers, and insurance companies to accept higher risks for behavioral, contractual, or organizational reasons (Brunnermeier, 2001; Rajan, 2005).

2.7.4 The impact of risk taking on the financial stability of commercial banks.

Büyüksalvarci and Abdioğlu (2011) consider loan provisions as a proxy for bank risk because the ratio indicates the financial health of the bank. The negative impact of loan loss provisions on capital adequacy ratios means that banks are in financial distress and face many difficulties in raising capital adequacy ratios. Blose (2001) found that loan loss provisions lead to a decrease in capital adequacy ratios. Hassan (1992) and Chol (2000) also agree on the negative relationship between capital adequacy ratio and loan loss provisions.

2.7.5 Research gaps

First, this thesis analyzes the impact of monetary policy on the financial stability of Vietnamese commercial banks through risk taking. Specifically, thesis analyzes impact of monetary policy on the financial stability, impact of monetary policy on the risk taking and impact of risk taking on the financial stability of Vietnamese commercial banks

Second, from result of study, this thesis help Vietnamese managers and policymakers maintain financial stability of Vietnamese commercial banks through risk taking.

Third, this thesis provide additional evidence for the study of risk-taking channels in VietNam from inherits the research of Borio and Zhu, 2012, Montes et al., 2014; De Moraes et al., 2016; Dang & Dang, 2020.

CHAPTER 3 METHODOLOGY

3.1 Impact of monetary policy on financial stability of Vietnamese commercial banks.

In this study, monetary policy is measured by rediscount rate which inherited from the Dang & Dang (2020) study. Control variables were selected according to De Moraes et al. (2016). The model to analyse the impact of monetary policy on the financial stability of commercial banks is as follows:

$$CAR_{it} = \beta_0 + \beta_1 IR_t + \beta_2 R_REG_{it} + \beta_3 ROA_{it} + \beta_4 DEFAULT_{it} + \beta_5 O_GAP_t + \beta_6 C_GAP_t + \beta_7 LIQUID_{it} + \beta_8 NLTA_{it} + \beta_9 DEPTA_{it} + \epsilon_{it} \text{ (Model 1)}$$

Where: capital adequacy ratio (CAR); discount rate (IR); required reserve level (R_REG); return on assest (ROA); bad debt ratio (default); output gap (O_GAP); credit gap (C_GAP); liquidity Ratio (LIQUID); Risk Factor (NLTA); Deposit Ratio (DEPTA).

3.2 Impact of monetary policy on risk taking of Vietnamese commercial banks.

This thesis examine the impact of monetary policy on the bank risk taking measured by loan loss provisions, based on research by Montes et al (2014); Demoras et al (2016); Zheng et al (2019). The research model is as follows:

$$\text{PROV}_{it} = \beta_0 + \beta_1 \text{IR}_t + \beta_2 \text{R_REG}_{it} + \beta_3 \text{O_GAP}_t + \beta_4 \text{DEFAULT}_{it} + \beta_5 \text{ROA}_{it} + \varepsilon_{it} \text{ (Model 2)}$$

Where: loan reserves (PROV).

3.2.1 Risk taking.

According to Montes and Peixoto (2014); Demoras et al. (2016); Zheng et al (2019), PROV is calculated as:

$$\text{PROV} = \frac{\text{Loan loss provisions}}{\text{Total loans}}$$

In this thesis, the authors expect to discover the impact of the monetary policy on the risk taking of commercial banks.

3.2.2 Monetary policy.

✓ Discount rate.

In this study, the rediscount rate is considered to represent the Central bank's policy to regulate activities of commercial banks.

3.2.3 Factors that affect risk taking.

Reserve requirement: reservable liabilities that commercial banks must hold determined by the Central Bank: $\text{R_REG} = \text{Ln (deposits with the SBV)}$

Output Gap: Measured according to the following formula:

$$\text{O_GAP} = \frac{Y - Y^*}{Y^*}$$

where Y represents real GDP and Y* represents trend GDP (potential GDP) as measured by the Hodrick – Prescott (HP) filter.

Non-performing loan ratio: Measured by the following formula:

$$DEFAULT = \frac{\text{Nonperforming loans}}{\text{Total amount of outstanding loans}}$$

Return on assets: Measured by the following formula:

$$ROA = \frac{\text{Net income}}{\text{Total assets}}$$

3.3 Impact of risk taking on the financial stability of Vietnamese commercial banks.

The authors build a model based on work of Smaoui et al (2019); Demoras et al (2016).

$$CAR_{it} = \beta_0 + \beta_1 PROV_{it} + \beta_2 ROA_{it} + \beta_3 DEFAULT_{it} + \beta_4 O_GAP_t + \beta_5 C_GAP_t + \beta_6 LIQUID_{it} + \beta_7 NLTA_{it} + \beta_8 DEPTA_{it} + \varepsilon_{it} \text{ (Model 3)}$$

3.3.1 Financial stability of commercial banks.

According to the Basel, the capital adequacy ratio measures the capital adequacy ratio and is calculated according to the following formula:

$$CAR = \frac{\text{Tier 1 Capital} + \text{Tier 2 Capital}}{\text{Risk Weighted Assets}}$$

(credit risk + market risk + operational risk)

3.3.2 Factors affecting the financial stability of commercial banks.

This thesis explore the impact of risk taking on financial stability of commercial banks with control variable include: ROA, bad debt ratio, output gap, credit gap, liquidity ratio, risk ratio, deposit rate ratio.

3.4. Research Model and Research Assumptions.

3.4.1. A model of the impact of risk taking on the financial stability of Vietnamese commercial banks

The focus of this thesis is to assess the impact of monetary policy on the financial stability of Vietnamese commercial banks through risk taking.

3.4.2. Research Hypotheses.

Based on the research objectives and questions, the authors propose the following hypotheses:

Hypothesis for model (1).

Hypothesis H1-1: The tightening/easing of monetary policy by the State Bank has a negative impact on the financial stability of Vietnamese commercial banks.

Hypothesis for model (2).

Hypothesis H2-1: The tightening/easing of monetary policy by the State Bank affects the high/low risk taking of Vietnamese commercial banks.

Hypothesis H2-2: The output gap is negatively related to risk taking.

Hypothesis H2-3: There is a positive correlation between the bad debts of Vietnamese commercial banks and their risk taking.

Hypothesis H2-4: High-return banks tend to accept higher risk.

Hypothesis for model (3).

Hypothesis H3-1: Risk taking has a negative impact on the financial stability of Vietnamese commercial banks.

Hypothesis H3-2: ROA has a positive correlation between the financial stability of Vietnamese commercial banks.

Hypothesis H3-3: The non-performing loan ratio has a positive correlation between the financial stability of Vietnamese commercial banks.

Hypothesis H3-4: The output gap has a negative correlation between the financial stability of Vietnamese commercial banks.

Hypothesis H3-5: The credit gap has a negative correlation between the financial stability of Vietnamese commercial banks.

Hypothesis H3-6: The liquidity ratio has a positive correlation between the financial stability of Vietnamese commercial banks.

Hypothesis H3-7: The risk ratio has a positive correlation between the financial stability of Vietnamese commercial banks.

Hypothesis H3-8: The deposit rate has a negative correlation between the financial stability of Vietnamese commercial banks.

3.4.3 Methods of data collection.

This study collected data from audited financial statements of 30 commercial banks from 2007 to 2019. Capital adequacy ratio are adopted by the author from the commercial bank management report. The authors collect rediscount rate data from the State Bank's website www.sbv.gov.vn; GDP from General Statistics Office of Vietnam website <https://www.gso.gov.vn/>.

3.5. Estimation method.

To achieve the research objectives and answer the research questions posed, the authors performed data analysis and processing in Excel and STATA.

The authors chose S-GMM regression to deal with endogeneity, variable variance, autocorrelation, and multicollinearity. Selecting GMM is the most appropriate option. In addition, in order to verify the robustness of the regression results, the authors added FEM and REM regression to compare with GMM regression to give the most reliable conclusions for the model.

Chapter 4: SUMMARY OF RESULTS AND DISCUSSION

4.1. Monetary policy and loan provision, capital adequacy ratio of commercial banks in vietnam from 2007 to 2019

This thesis provides an overview of monetary policy and risk taking, financial stability of Vietnamese commercial banks from 2007 to 2019.

4.2. Descriptive statistics of study data.

A set of characteristic values for a variable used in a research study, such as the number of observations, standard deviation, mean, maximum, and minimum. Thirteen years of data from 30 banks form a panel dataset with 390 observations.

4.3. Correlation matrix and multicollinearity test.

4.3.1. Model correlation matrices (1) and (3).

There is no evidence of multicollinearity in model impact of monetary policy on financial stability and model impact of risk taking on financial stability.

4.3.2. Model correlation matrix (2)

No evidence of multicollinearity in model impact of monetary policy on risk taking.

4.4. Model test.

4.4.1. Model impact of monetary policy on the financial stability of Vietnamese commercial banks - Model (1).

First, the authors performed a Hausman test to assess whether the effects of individual characteristics were random or fixed; from there, it was concluded that FEM or REM regression was the appropriate approach. The test hypotheses are summarized as follows:

The test results show that the Prob coefficient is 0%, which is less than 5% → of the reference value, and the hypothesis H1 is selected, and REM regression is appropriate. The model detects variable variance and autocorrelation (at the 1% level).

4.4.2. Modeling Impact of monetary policy on risk taking – Model (2).

The Prob coefficient of Hausman test result is equal to 0.0001 less than the reference value 5%, while the Prob result given by F_Test is 0 smaller than the reference value 5%. Therefore, from the Hausman test results, FEM regression is more suitable than REM, and F-Test shows that there is a fixed characteristic (meaning that FEM regression is more effective than OLS). The result of the FEM regression is an estimation method that gives results consistent with the equations that assess the impact of interest rates on loan reserves.

As a result of the variance test, the obtained coefficient is 0% less than the reference 5%, rejecting H0, and accepting H1 → the estimated model has heteroskedasticity

Wooldridge's test is a test for detecting autocorrelation error, the result of Wooldridge's test coefficient is 0% less than reference 5%, reject H0 and accept H1 → estimated model has autocorrelation error.

4.4.3. Modeling the impact of risk taking on financial stability – Model (3).

The Hausman test results show that Prob is equal to 0.0748%, which is more than the reference value 5 % → appropriate H0 and REM regression is appropriate.

After that, proceed to LM-Test to compare REM and OLS. The test results show that the Prob coefficient is 0%, which is less than the reference value

5% → the hypothesis H1 is selected, and REM regression is appropriate. The model detects heteroskedasticity and autocorrelation (at the reference level 1%).

4.5. Regression results and discussion.

4.5.1. FEM and REM regression results on impact of monetary policy on financial stability through risk taking.

The results show that the rediscount rate has a positive impact on risk taking, providing reliable statistical evidence that banks tend to take less risk over the period of ease monetary policy with decreased interest rates.

4.5.2. The GMM regression results influence the impact of monetary policy on financial stability through risk taking.

It shows that the discount rate has a positive effect on risk taking, and it also shows that risk taking has a negative effect on financial stability.

4.5.3. Discuss the results of the GMM regression on the impact of monetary policy on financial stability through risk taking.

This study the impact of monetary policy on financial stability through GMM regression. The regression results support hypothesis that monetary policy has a negative impact on financial stability with significant 10%.

This study the impact of monetary policy on risk taking through GMM regression. The GMM regression results support the hypothesis that monetary policy has a positive impact on the risk taking level of Vietnamese commercial banks, that is, accept the hypothesis H2-1. Furthermore, the following assumptions are accepted: H2-2, H2-3, and H2-4.

This study the effect of risk taking on financial stability through GMM regression. The GMM regression results support the hypothesis of the

impact of risk taking on the financial stability of Vietnamese commercial banks, that is, accept the hypothesis H3-1. Furthermore, the following assumptions are accepted: H3-2, H3-3, H3-4, H3-5, H3-6, H3-8.

4.6. Summary of research results.

The results show strong evidence for the impact of monetary policy on financial stability (model 1). When the SBV uses the rediscount rate tool to implement a tight monetary policy (increasing interest rates), commercial banks will accept a higher level of risk (increasing loan reserves) (model 2), resulting in a lower capital adequacy ratio (model 3).

The output gap, credit gap and other factors that represent the macro factor group, which represent the economic cycle, represent the expected impact on the level of risk taking and financial stability. Other factors belonging to the bank characteristic group also showed the relationship with the dependent variable, except of the risk factor variable, which found no evidence of its impact on capital adequacy.

CHAPTER 5 CONCLUSIONS AND POLICY IMPLICATIONS

5.1 Conclusion.

In the estimation methods of FEM, REM and GMM, discount rate variable, which is a representative variable for monetary policy affecting the risk acceptance level, has a positive and similar sign in all three regression methods, and the difference is statistically significant, which is in line with the initial expectation.

When analyzing the impact of monetary policy on financial stability, it is concluded that monetary policy has an impact on financial stability, and when the National Bank eases monetary policy (lowers interest rates), it

will increase the effect of financial stability by adjusting capital. Commercial bank adequacy ratios; conversely, tightening monetary policy (increasing interest rates) reduces capital adequacy ratios, which negatively impacts financial stability. This is contrary to the risk taking channel, but is consistent with Dang & Dang (2020). The level of statutory reserves is negatively related to financial stability. Return on total assets is positively correlated with financial stability. The non-performing loan ratio is positively correlated with financial stability. Output gaps and credit gaps are negatively related to financial stability. The liquidity ratio is positively correlated with financial stability, and the higher the liquidity of the bank, the higher the financial stability. For the risk coefficient variable, the variable is not significant. The deposit rate is negatively correlated with financial stability, and banks with high deposit rates reduce the financial stability of banks.

When analyzing the impact of monetary policy on risk taking, the conclusion is that monetary policy has an impact on risk taking. When the SBV eases monetary policy (lowers interest rates), it has an impact reduce the risk taking of commercial banks. This is contrary to the risk taking channel, but is consistent with Dang & Dang (2020). Statutory reserve level, bad debt ratio, and rate of return are positively related to risk taking. The yield gap is negatively related to risk taking, that is, during periods of high growth, risk takking is lower.

Risk taking has a negative impact on the financial stability of commercial banks. The estimation methods of FEM, REM and GMM all have negative results. This suggests a trade-off between risk taking and financial stability.

That is, when banks increase their risk taking, their financial stability decreases. This is consistent with the risk taking channel.

5.2. Policy Implications.

5.2.1. Policy implications for the Central Bank.

- When interest rates are lowered, it will increase the financial stability of commercial banks. Therefore, the SBV needs to be cautious when changing the policy rate as this could affect the stability of the bank.
- Effective regulations should be in place to safeguard depositors' rights and maintain banks' solvency to limit the negative impact between deposit ratios and banks' financial stability.
- During periods of high growth and high credit growth, the financial stability of banks tends to decline. The Central Bank must strengthen the inspection and supervision of the commercial banking system; at the same time, formulate corresponding regulations to maintain the financial stability of commercial banks.
- The risk factor is not statistically significant, which indicates that the commercial banking system operates under the Risk-Based Management Regulations (Basel). The SBV needs to continue to maintain regulations regarding Basel implementation in the commercial banking system.
- Monetary policy has an impact on the level of risk taking of commercial banks, so when changing regulations monetary policy, the risk taking of banks must be considered.
- During periods of low growth, banks have higher risk taking. Therefore, during this period, the Central Bank must strengthen the inspection, supervision and assessment of the management of the banking system; at

the same time, formulate corresponding regulations to maintain the risk taking level of commercial banks.

- Banks with high NPL ratios have higher risk taking, so the Central bank should give priority to banks with high NPL ratios in inspection and supervision activities.

- Banks with high profitability have higher risk taking, so in inspection and supervision activities, the Central bank should give priority to banks with high profitability.

- The level of risk taking has an impact on a bank's financial stability. Therefore, the Central bank needs to pay attention to the risk attitude of commercial banks in order to maintain the financial stability of commercial banks.

5.2.2. Management implications for commercial banks.

- When Central Bank raises interest rates, commercial banks need to manage their lending activities more closely to maintain financial stability.

- Always monitor, internally monitor required reserve levels and deposit ratios.

- High ratio profitability to high financial stability of commercial banks. Commercial banks need to maintain and improve operational efficiency and enhance bank characteristics.

- To ensure financial stability, commercial banks must ensure an appropriate amount of liquid assets to deal with possible risks.

5.3 New perspectives of the thesis.

First, based on the data of 30 Vietnamese commercial banks, this study analyzes the impact of monetary policy on the financial stability of Vietnamese commercial banks through risk taking.

Second, it provides policy implications for helping managers and policymakers maintain financial stability for banks.

Third, provide additional evidence for the study of risk-taking channel at Vietnam.

5.4. Limitations and directions for further research.

First, the data collection of 30 commercial bank groups in Vietnam is the limitation of this study, so the next research direction is to expand the research sample by combining the comparison of risk taking with financial stability of VietNam's comerceail banks.

Second, the study only considers the rediscount rate tool that represent monetary policy.

Third, although many factors have been updated in the process of building research models that affect risk taking and financial stability. However; such as ownership structure, level of competition, and other risk taking, need to be considered in subsequent research.

Fourth, further research can increase the Z-Score to evaluate the financial stability of commercial banks to strengthen the stability of the conclusions and expand the dependent variables of the study; thus providing more perspectives and evidence for this research direction.

**THE LIST OF PUBLICATIONS RELATED TO THE
DISERTATION**

TT	Name of articles	Year	Type of paper
1	“Impact of monetary policy on risk taking of Vietnamese commercial banks.	2021	Article
2	“Factors affecting the financial stability of commercial banks in Vietnamese.	2020	Article