Referee Report on the Dissertation Thesis
"Monetary Policy Transmission Mechanism (MPTM) and Its Impact on Bank Performance: Evidence from Vietnam and Taiwan"

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The submitted dissertation thesis examines how the monetary policy transmission mechanism is associated with bank performance in Vietnam and Taiwan. The author focuses on three key channels of monetary transmission - the interest rate channel, the exchange rate channel and the credit (bank lending) channel - and extends the analysis by examining whether banks' business models, proxied by income diversification and measured by the non-interest income share, moderate the relationship between monetary policy variables and bank profitability.

The topic is highly relevant from the perspective of monetary economics, banking, financial stability and international finance. Monetary policy transmission has become an especially important research area in the context of repeated external shocks, exchange-rate volatility, changing interest-rate environments, credit booms, post-pandemic balance-sheet adjustments and the transformation of banks' income structures. The comparison of Vietnam, presented as a frontier economy with a bank-dominated financial system, and Taiwan, presented as a more advanced and financially developed economy, is potentially valuable because it allows the author to discuss how the same monetary-policy channels may operate differently across heterogeneous institutional and financial environments.

The thesis is structured into six chapters. After the introduction, the author presents the research methodology, the literature review, the monetary-policy and macroeconomic landscape of Taiwan and Vietnam, regression results and discussion, and finally conclusions, contributions, limitations and suggestions for future research. The empirical part uses a panel dataset of 59 banks over the period 2014-2023, consisting of 28 Vietnamese banks and 31 Taiwanese banks. Bank performance is primarily measured by return on assets, while return on equity is used for robustness checks. The author estimates several panel-data specifications and ultimately relies mainly on the System Generalized Method of Moments (System GMM, SGMM) estimator.

The dissertation represents a substantial research effort and is clearly positioned within the empirical literature on monetary transmission and bank performance. Since the work is submitted for the final defence, I evaluate it as a completed scholarly output and not merely as a research proposal. The comments below therefore focus not only on the relevance and ambition of the topic, but also on the conceptual clarity, methodological reliability, interpretation of empirical results, scientific contribution and formal quality of the thesis.

1. Determination of the objective and the degree of its fulfilment

The main objective of the dissertation is to investigate how the monetary policy transmission mechanism affects bank performance in Vietnam and Taiwan, with particular emphasis on the interest rate, exchange rate and credit channels. The author also examines whether income diversification moderates these relationships. The research objectives are decomposed into research questions dealing with the theoretical background of MPTM, the measurement of transmission channels, the role of the business model and the implications for banking-sector resilience.

The objectives are generally understandable and correspond to a legitimate doctoral research problem. The author has translated the topic into an empirical design and presents a set of hypotheses that can be tested using panel data. The thesis therefore fulfils its declared objective to a considerable extent: the theoretical chapters explain the basic transmission channels, the country chapter provides useful institutional and macroeconomic context, and the empirical chapter offers comparative results for both economies.

However, the degree of fulfilment is weakened by a certain ambiguity in the wording of the objective. The thesis repeatedly uses terms such as effect, impact, influence and correlation interchangeably. This is not a purely stylistic issue. If the work claims to analyse the impact of monetary policy transmission on bank performance, it must clearly distinguish between causal impact and statistical association. The empirical design based on bank-level panel regressions and macroeconomic proxies can identify conditional associations and dynamic relationships, but causal interpretation requires a more demanding identification strategy. This distinction should have been made more explicit throughout the thesis.

The comparative ambition of the work is also only partly fulfilled. Separate regressions for Vietnam and Taiwan provide a useful descriptive comparison, but they do not formally test whether the estimated coefficients are statistically different between the two countries. A pooled model with country interactions, or an explicit test of coefficient equality, would have strengthened the comparative component and made the claim about structural differences between a frontier and an advanced economy more convincing.

2. Evaluation of the knowledge base and literature review

The dissertation offers a broad review of the theoretical foundations of monetary policy transmission. The author discusses classical, Keynesian, monetarist and New Keynesian perspectives and correctly identifies the interest rate, exchange rate and credit channels as core mechanisms through which monetary policy may affect the real economy and the banking sector. The literature review also reflects the role of banks in bank-based financial systems and introduces the theme of income diversification as a potentially important business-model variable.

I appreciate that the author does not restrict the theoretical discussion to a single channel. The work recognises that the MPTM is a multi-channel process and that the importance of individual channels depends on financial development, market structure, openness, institutional quality and the role of banks in financial intermediation. This is an appropriate starting point for comparing Vietnam and Taiwan.

Nevertheless, the literature review remains partly descriptive. The author often presents individual theories and empirical findings in sequence, but the critical synthesis of competing results is less developed. The work would have benefited from a more explicit mapping of what is already known, what remains empirically unresolved, and why the selected comparison of Vietnam and Taiwan is the most suitable way to address the identified research gap. In particular, the discussion of bank profitability, bank risk-taking, interest-rate pass-through, credit supply and income diversification could have been more tightly connected to the formulated hypotheses.

A further conceptual issue concerns the expression "grounded theory of MPTM" used in the thesis. In methodological terminology, grounded theory usually denotes a qualitative research strategy. In the dissertation, however, the term is used to refer to theoretical foundations of monetary transmission. This creates unnecessary ambiguity. A more precise title such as "Theoretical foundations of MPTM" or "Conceptual framework of MPTM" would be more appropriate.

The relationship between macroeconomic monetary transmission and bank-level performance is not always sufficiently separated. The classic MPTM literature primarily explains how monetary policy affects output, prices, investment, consumption, credit and asset prices. The thesis extends this discussion to bank profitability, which is a legitimate research direction, but the conceptual bridge between macro-level transmission and micro-level bank performance should have been developed more systematically.

3. Suitability of used methods, methodology and data

The empirical part of the thesis is based on a panel dataset of 59 banks from Vietnam and Taiwan over the period 2014-2023. The selection of ROA as the main measure of bank performance is acceptable and well justified, particularly because ROA is less directly distorted by leverage than ROE. The use of ROE as an alternative dependent variable in the robustness section is also appropriate. The inclusion of bank-specific control variables such as capital adequacy, non-performing loans, loan-to-deposit ratio, asset growth, cost-to-income ratio and Z-score, together with macroeconomic controls, reflects a standard approach in the empirical banking literature.

The author applies a sequential empirical strategy, beginning with pooled OLS and then using random-effects, fixed-effects, feasible generalized least squares and SGMM specifications. The use of diagnostic tests for heteroskedasticity, autocorrelation, endogeneity, instrument validity and serial correlation strengthens the methodological presentation. In general, the decision to consider a dynamic panel estimator is understandable because bank profitability is persistent and some explanatory variables may be endogenous.

At the same time, the methodological part contains several important weaknesses. First, the sample is relatively small for SGMM, especially when regressions are estimated separately for each country. The number of banks is 31 for Taiwan and 28 for Vietnam, while the time dimension covers only ten years. This does not automatically invalidate the use of SGMM, but it requires very careful treatment of instruments. The thesis reports the number of instruments and Hansen and Arellano-Bond tests, which is useful, but the discussion should more clearly specify the instrument set, lag structure, whether instruments are collapsed, and how the risk of instrument proliferation or weak instruments is handled. Some Hansen test p-values are close to the conventional threshold, which should have led to a more cautious interpretation.

Second, the dissertation estimates the individual transmission channels mainly in separate models. This makes the presentation clear, but it can create omitted-variable problems because the interest rate, exchange rate and credit channels do not operate independently in real economies. In fact, these variables may be correlated and jointly determined. A model including all three channels simultaneously, supplemented by country interaction terms, would have provided a stronger test of the central thesis.

Third, the exclusion of year fixed effects is debatable. The author argues that all banks in one country are exposed to the same macroeconomic and monetary-policy conditions and that macroeconomic controls capture these effects. However, the period 2014-2023 includes several global shocks, including pandemic-related disruptions, changes in global interest rates, trade tensions and exchange-rate pressures. These common shocks may affect all banks in a given year and may not be fully captured by domestic GDP growth and inflation. The omission of year effects or alternative global controls therefore needs stronger justification.

Fourth, the use of the rediscount rate, the nominal exchange rate and aggregate credit growth as proxies for MPTM channels is plausible but not unproblematic. The rediscount rate may not fully capture the effective policy stance or the actual interest-rate pass-through to bank deposit and lending rates. The exchange rate is itself an endogenous macro-financial variable, not merely a transmission channel. Aggregate credit growth can reflect monetary policy, credit demand, business-cycle conditions and banking-sector risk appetite at the same time. These variables should therefore be interpreted as proxies for transmission channels rather than as clean monetary policy shocks.

Fifth, a serious technical point concerns the Z-score variable. In the methodology and variable summary, the Z-score appears to be defined as the standard deviation of ROA divided by the sum of ROA and equity-to-assets. The conventional bank Z-score is usually defined in the opposite way, namely as the sum of ROA and the equity-to-assets ratio divided by the standard deviation of ROA. If the thesis actually uses the inverse measure, the interpretation of the sign and the claim that a higher Z-score indicates lower insolvency risk would be incorrect. This issue should be clarified during the defence because it may affect the interpretation of the estimated coefficients.

Sixth, the non-interest income share variable contains values outside the conventional 0-1 interval, including negative values and values above one. Such observations may occur because non-interest income or total operating income can be negative or very small, but they require explanation and sensitivity testing. Since this variable plays the role of a moderator, outliers can materially affect interaction terms. Winsorization, trimming or alternative measures of income diversification would have strengthened the reliability of the results.

4. Evaluation of empirical results and their interpretation

The empirical results are presented in a systematic and relatively transparent manner. The thesis first provides descriptive statistics, then reports quantile regressions, correlation and diagnostic tests, baseline panel models, SGMM estimates, models with the income-diversification moderator and robustness checks using ROE. This structure allows the reader to follow the logic of the analysis.

The main empirical findings are plausible and economically interpretable. The interest rate channel has a positive association with bank performance in Taiwan but a negative association in Vietnam. This finding is consistent with the idea that banks in a more developed financial system may benefit from higher rates through wider margins, while banks in a frontier or less developed financial system may face higher funding costs, weaker borrowers and rising credit risk. The exchange rate channel is found to be positively associated with bank performance in both countries, which the author explains through export-oriented structures and borrower cash-flow improvements. The credit channel is negatively associated with bank performance, suggesting that rapid credit expansion may increase risk, future provisioning and profitability pressure. The moderating role of income diversification is mixed and, in several specifications, appears to intensify rather than mitigate adverse effects.

The discussion shows that the author is able to connect empirical outcomes with institutional differences between Vietnam and Taiwan. This is one of the stronger aspects of the dissertation. The comparison between a bank-dominated frontier market and a more developed financial system gives the results a meaningful interpretation beyond the purely statistical level.

However, some interpretations are too strong relative to the empirical identification. The thesis sometimes moves from estimated associations to policy claims rather quickly. For example, the conclusion that depreciation improves bank profitability through export-related cash flows is plausible, but the model does not directly test borrower-level export exposure, currency mismatch, hedging behaviour or sectoral loan composition. Similarly, the negative effect of credit growth on profitability is plausible, but the model does not fully distinguish between supply-driven credit expansion, demand-driven loan growth and risk-taking behaviour.

The economic magnitude of results should be discussed more carefully. Several variables are expressed in decimals, percentages or logarithms, and the interpretation of coefficients as percentage-point effects is not always sufficiently precise. The exchange-rate variable is logged, and therefore its coefficient should be interpreted as a semi-elasticity. Similarly, interest-rate and credit-growth variables require a precise explanation of whether a one-unit change means one percentage point or a change from 0.01 to 0.02 in decimal form. Without such clarity, some statements about the size of effects may be misleading.

The robustness checks using ROE are useful, but they remain relatively narrow. The robustness assessment would be stronger if the author also tested alternative monetary-policy indicators, alternative income-diversification measures, alternative treatment of extreme observations, a model with all three channels included simultaneously, pre- and post-COVID subsamples, and a pooled Vietnam-Taiwan model with interaction effects. Such extensions would not necessarily change the main results, but they would make the empirical conclusions more defensible.

The policy and managerial recommendations are largely relevant, but some of them extend beyond the empirical evidence. Recommendations regarding technological transformation, AI, blockchain, cybersecurity or detailed bank management strategies are interesting, but they are not directly derived from the estimated models. The final implications should be more disciplined and more tightly linked to the actual findings on the interest rate, exchange rate, credit and income-diversification channels.

5. Language level and use of correct professional terminology

The dissertation is written in English. The language is generally understandable and the professional terminology is mostly appropriate for the field of monetary economics and banking. The author uses key concepts such as monetary policy transmission mechanism, interest rate channel, exchange rate channel, credit channel, bank lending channel, income diversification, ROA, ROE, dynamic panel data and SGMM in a largely correct professional context.

Nevertheless, the thesis would benefit from careful language editing by a native or highly experienced academic editor. There are recurring grammatical inaccuracies, awkward formulations, inconsistent use of articles and prepositions, and some sentences that are unnecessarily long or difficult to follow. The text also alternates between expressions such as "the author", "the researcher", "we" and "our study", which should be unified.

Terminological consistency also requires attention. The thesis sometimes uses "impact", "effect", "influence" and "correlation" interchangeably, although they do not have the same methodological meaning. Similarly, the terms "credit channel" and "bank lending channel" should be used with greater precision, especially when the empirical proxy is aggregate credit growth rather than a bank-level credit-supply measure.

There are also formal inconsistencies in the front matter. Although the document is presented as a doctoral thesis, it still contains wording referring to the Edition Doctoral Thesis Summary and states that the full text of the doctoral thesis is available in the library. If the submitted document is intended to be the full dissertation, this wording should be checked and corrected. Several tables are also very dense and contain long diagnostic statements inserted into cells, which weakens readability and professional presentation.

6. Scientific contribution and originality of the work

The dissertation makes its most evident empirical contribution through its comparative design. Studies on monetary policy transmission and bank profitability frequently focus on a single country, a single channel or advanced economies. By comparing Vietnam and Taiwan and by incorporating the moderating role of income diversification, the author provides an applied contribution to the literature on how financial structure and bank business models shape the relationship between monetary policy and bank performance.

The most valuable contribution of the thesis is not a new theory of monetary transmission, but rather an empirical comparison of transmission-channel effects in two structurally different Asian banking systems. The finding that the interest rate channel works differently in Taiwan and Vietnam, while the exchange rate and credit channels show more similar signs, is useful and contributes to the debate on institutional heterogeneity in monetary transmission.

The originality of the work is somewhat reduced by the fact that the methodological framework is relatively conventional and the theoretical contribution is mainly synthetic. The use of SGMM, ROA/ROE, bank-level controls and income-diversification indicators is standard in the banking literature. The contribution therefore lies primarily in the country comparison, the combination of three transmission channels and the moderator analysis, not in the development of a fundamentally new empirical method or theoretical model.

Despite the methodological reservations discussed above, the dissertation contains results that may be considered scientifically relevant, provided that they are interpreted cautiously and not overstated as causal evidence without additional identification support.

7. Application benefits of the work for practice

The dissertation has applied relevance for central banks, banking supervisors and bank managers. For policymakers, the results suggest that monetary-policy channels may have different effects on bank profitability depending on the level of financial development, the structure of bank funding, export dependence and the strength of credit-risk management. This is especially important in frontier or emerging banking systems, where changes in policy rates and credit conditions may produce more adverse effects on bank performance than in more mature financial systems.

For bank managers, the thesis highlights the importance of asset-liability management, cost efficiency, credit-risk management, capital strength and careful diversification of income sources. The finding that income diversification does not automatically mitigate monetary-policy-related risks is particularly relevant. Banks should not assume that higher non-interest income necessarily stabilizes profitability; the effect depends on the type of non-interest activities, the quality of risk management and the maturity of financial markets.

However, the practical recommendations would benefit from sharper focus. Some managerial implications in the thesis are broad and partly go beyond the evidence generated by the empirical analysis. The final policy section would be stronger if it concentrated on what the results directly show: the asymmetric effect of interest rates, the positive association of depreciation with profitability in export-oriented economies, the negative association between rapid credit growth and bank performance, and the ambiguous or adverse moderating role of income diversification.

8. Formal and technical comments

The dissertation contains all essential components of a doctoral thesis: abstract, introduction, methodology, literature review, country context, empirical results, discussion, conclusion, references and supplementary author information. The structure is acceptable overall, although the placement of the methodology chapter before the literature review is somewhat unusual and may make the formulation of hypotheses less natural for the reader.

Several tables should be redesigned for readability. Some regression tables are too dense, and diagnostic information is sometimes inserted in long text form inside table cells. This makes the tables difficult to read and reduces their professional appearance. A cleaner presentation with diagnostic tests in separate rows, short labels and explanatory notes below the table would be preferable.

The econometric equations in the methodology section should be checked carefully. The model notation must be complete, consistent and readable. All variables used in the equations should match the variables in the tables. The thesis should also consistently report whether variables are measured in percentages or decimals.

The final version should be thoroughly proofread. Although the text is understandable, a number of language and formatting issues remain. These do not invalidate the thesis, but they reduce the professional quality of the final document and should be addressed before archival publication.

9. Questions for the author when defending the work

1. How do you justify the use of the rediscount rate, nominal exchange rate and aggregate credit growth as proxies for the interest rate, exchange rate and bank lending channels? To what extent can the estimated coefficients be interpreted as monetary policy transmission rather than conditional correlations?

2. Why did you estimate the three transmission channels mainly in separate models? How would the results change if all channels were included simultaneously, or if a pooled Vietnam-Taiwan model with country interaction terms were estimated?
3. Please clarify the exact formula used for the Z-score variable. Did you use the conventional Z-score, defined as (ROA + equity/assets) divided by the standard deviation of ROA, or the inverse measure reported in the thesis? How does this affect the interpretation of the coefficient?
4. How did you construct the instrument set in the SGMM estimations? Which lags were used, were the instruments collapsed, and how do you address the risk of instrument proliferation or weak instruments, especially given the small number of banks in each country?
5. Why did you decide not to include year fixed effects or global shock controls? How could the COVID-19 period, global interest-rate cycle, trade tensions or exchange-rate shocks have affected the estimated relationships?
6. The non-interest income share variable contains negative values and values above one. How do you explain these observations, and how sensitive are the interaction effects to winsorization, trimming or alternative measures of income diversification?
7. What is the economic, not only statistical, magnitude of the main results? How should central banks or bank managers interpret the estimated effects in practical decision-making terms?

10. Final recommendation

The dissertation thesis is based on extensive empirical work and addresses a topical problem at the intersection of monetary economics, banking and financial stability. The author shows good orientation in the theoretical foundations of monetary transmission and provides an empirical comparison of Vietnam and Taiwan that is of value for both academic discussion and policy practice.

At the same time, the thesis contains several methodological and formal weaknesses that should be addressed in the defence. The most important issues concern the causal interpretation of the results, the proxy character of the selected monetary variables, the treatment of the dynamic panel estimator in a relatively small sample, the interpretation of the Z-score variable, the handling of extreme values in the non-interest income share, and the need for a more formal comparative testing strategy between the two countries.

Despite these reservations, I consider the dissertation to meet the essential requirements for a doctoral dissertation. The topic is relevant, the research design is coherent, the empirical work is extensive, and the results are sufficiently original to contribute to the literature on monetary policy transmission and bank performance. The comments above are intended primarily to guide the discussion during the defence and to encourage a more cautious interpretation of the findings.

Based on the above,

I recommend that the submitted dissertation thesis be accepted for defence

and that, after successful defence, the doctoral student be awarded

the academic title Philosophiae Doctor (PhD.).

Košice, June 17, 2026

prof. Ing. Rajmund Mirdala, PhD.
referee