Economic Benefits, Enhanced Awareness, and Available Resources: What Factors Navigate Bank Readiness in Basel III Implementation

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Abstract: - To maintain sustainable development, business management strategy of modern banks these days cannot neglect international standards. Hence, the main aim of the current study is to explore the factors that influence the readiness of banks in implementation of Basel III requirements based on the context of the Vietnamese banking system. To achieve clear explanations, this research utilizes the data set of 211 questionnaires collected from senior and middle-level managers as well as other management personnel related to Basel III implementation at 20 Vietnamese commercial banks, and performs the PLS-SEM by applying Smart PLS 3 software. The analysis results indicate that both awareness and expected economic benefits have positive impacts on the readiness of banks to implement Basel III requirements. Meanwhile, the effect of available resources is negative but not statistically significant. It can be said that the study provides one of the first evidence to shed new light on the factors that impact the readiness of banks in complying with strict requirements of Basel III, at least in the Vietnamese context. Hence, the findings are expected to provide the helpful guidance for banking leaders and policy-makers in Vietnam, where the banking system is ongoing reform to meet the international standards.

Key-Words: - Economic Benefits; Enhanced Awareness; Available Resources; International Standards; Bank Readiness.

1. Introduction

Following the global financial crisis, the Basel Committee on Banking Supervision ("Basel Committee") developed an international framework to improve liquidity governance, risk management and financial stability in the banking sector. The first version of Basel III was issued by the Basel Committee in 2010 following the 2007–2008 financial crisis. Accordingly, Basel III included a series of comprehensive reform measures designed to improve regulation, monitoring and managing risks in the banking sector. In addition, along with building on the standards of Basel I and Basel II, Basel III also represents a fundamental assessment of the legal and supervisory framework of the banking industry to enhance stability of the financial system and improve risk management as well as increase transparency in the banking system [1], [2]. Some assessments [3], [4]believe that Basel III was implemented to limit the shortcomings of Basel II

through focusing more on risk management for business operating environment of the banking system. On the other hand, some opinions [5], [6]also point out that Basel III represents a significant enhancement of capital standards that contributes to improving both quality and amount of capital in banking operations. According to research by [7], the proposal of Basel III comes from three main motivations including negative impacts from banking crises; frequency of banking crises; and, ultimately, the benefits from Basel III will outweigh the costs of implementation. In general, Basel III retains the risk weighting mechanism of Basel II, however the risk weights of some types of securities have been significantly adjusted following the crisis. These adjustments reflect exposure to large financial institutions and highly leveraged banks [8].

In Vietnam, although it has reaped certain economic achievements over the past decade (such as GDP growth rate, inflation rate, etc.), Vietnam's financial

market is still considered not yet developed and economic activities seem to depend greatly on the domestic banking system [9], [10], [11], [12]. In other words, the stability and sustainable development of banks is a solid premise for economic development in this country [13], [14], [15]. For that reason, there have been great efforts in establishing international standards for the domestic banking system in recent years. One of the most obvious efforts is that relevant regulations have been issued to create a legal corridor for the implementation of international standards in Vietnam. Indeed, following the Project *"Development of Vietnam's banking industry until 2010 and orientation to 2020"* was issued under Decision 11/2006/QD-TTg dated May 24, 2006 of the Prime Minister, the State Bank of Vietnam quickly issued Official Dispatch No. 1601/NHNN-TTGSNH dated March 17, 2014 on selecting 10 banks to pilot Basel II and proceed to apply Basel II to all domestic banks, and at the same time issued a series of related documents creating a legal framework guiding the implementation of the three pillars of Basel II.

Starting from the above analytical context, the goal of this study is to evaluate the factors affecting the readiness of Vietnamese commercial banks (VNCBs) in implementing Basel III standards. Thereby, based on data from 211 surveys collected from 10 large commercial banks in Vietnam, along with the use of the Partial Least Squares approach, empirical results show that there is a positive relationship between expected benefits, awareness and readiness to implement Basel III of VNCBs. However, the positive effect from perception is relatively stronger than the effect from expected benefits. In addition, the empirical results also show a negative relationship between the availability of necessary resources and the readiness to implement Basel III of VNCBs, but this relationship is not statistically significant. To the best of the authors' knowledge, this is the first empirical study in Vietnam to evaluate the factors affecting the readiness of VNCBs in implementing the Basel III standards. Accordingly, the research results are expected to be a typical reference for policymakers in Vietnam when applying Basel III standards in the near future.

The structure of the research includes the following main contents. The first section will present a literature review of existing studies. The second part presents the research method and data collection. The fourth part is the empirical findings. The final section presents a summary of conclusions regarding the main results.

2. Literature Review

Compared to Basel I and II, Basel III is still relatively new and relatively few empirical studies have been conducted [1], [16], [17]. However, there are still significant efforts in conducting empirical studies on the implementation and application of Basel III. Surveys conducted by BIS on Basel III implementation in several countries show that the preparation process is at different stages as some countries have already developed the necessary regulations to apply Basel III, while other countries are still in the early stages. On the other hand, a survey by [18]shows that the majority of banks are implementing Basel III projects (71%) but still seem not ready to apply Basel III credit risk standards from Basel III.

In the study of [19], the authors conducted an assessment of the readiness of public sector banks in India to implement Basel III. The key finding of this study is that public sector banks in India appear to have enough capital to meet immediate capital adequacy requirements as well as ensure credit growth in the Indian banking sector. However, the authors also point out that fully implementing Basel III will be a more difficult task as the focus will not be on total capital requirements but on Tier I capital, meaning there will be more emphasis on common share capital.

In a related study, [1] assessed the implementation readiness of Arab banks. Empirical results show that these banks have realized benefits from implementing Basel III. In addition, bank employees have also been properly trained on Basel III and banks are ready to apply new standards because they have fully prepared the necessary resources. Besides, the regression results indicate that the most important factor of Basel III implementation is the availability of necessary resources. Meanwhile, polls conducted by [20] indicate that public sector banks are positively motivated to implement the new standards introduced by Basel. Besides, knowledge, other necessary resources, as well as economic benefits and accompanying costs are fully recognized by bank managers when participating in implementing Basel III standards. Other research on compliance with Basel III proposed standards by public sector banks in the country shows that the regulations will bring greater stability to the banking sector [21].

Research by [22], [23]evaluated the patterns and trends of Basel III in Japanese banks for about 11 years, from 2004 to 2014. The results of the studies suggest that regulators in this country should consider macroeconomic indicators such as employment rate, inflation and economic growth

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when implementing regulations related to Basel III capital requirements because these indicators affect the risk management of banks. [24]conducted an assessment of the methods used by commercial banks in implementing Basel III. A total of about 43 commercial banks in Kenya were selected and studied. The results show that banks in this country have cut back on lending activities and dividend payments. Furthermore, to overcome the challenges of implementing Basel III, these banks also focus more on quality assets with longer maturities, especially individual deposits. [25]conducted an investigation into the application of Basel III in the banking sector in Mauritius. The results conclude that well-capitalized banks and good Basel III implementation will ensure greater financial stability. Besides, the authors also propose that in order to take advantage of the benefits from Basel III, banks need to have effective solutions. However, the study also points out challenges in the process of implementing Basel III in this country, including the lack of data management capabilities, risk reporting systems and technology.

[26]conduct an overview of Basel III regulations. The authors conclude that the main goal of Basel III is to improve the safety of banking operations and increase both the quality and quantity of banks' capital. Previous documents [27], [28], [29]also expressed support for reform according to Basel standards, which will make the banking system become more flexible and safer by minimizing risk taking as well as the probability of default by banks. Besides, there are still some concerns from policymakers and financial sector participants that implementing the Basel rules could impose a significant cost burden on the banking and financial systems. the economy in general [4], [30], [31].

In this field, the main goal of this study is to re-examine the above issue through assessing the factors affecting the readiness of Vietnamese commercial banks in implementing Basel III standards. Based on the review of existing literature as well as the research purposes presented above, the main hypotheses are proposed as follows:

H1: There exists a positive relationship between the readiness to implement Basel III of Vietnamese commercial banks and the expected benefits from Basel III;

H2: There exists a positive relationship between the readiness to implement Basel III of Vietnamese commercial banks and the awareness of Vietnamese commercial banks about Basel III;

H3: There exists a positive relationship between the readiness to implement Basel III of Vietnamese commercial banks and the necessary available

resources of Vietnamese commercial banks to implement Basel III.

3. Methodology

3.1. Survey and Data collection

For sampling and data collection, the research focuses mainly on senior and middle-level managers as well as other management personnel related to the implementation of Basel III at 20 Vietnamese commercial banks. About 300 survey questions were sent to collect information, in different forms, including: via email, surveys sent by mail, and a number of small workshops were conducted during the period from June to August 2023. Accordingly, the author received feedback from more than 222 answers. However, 11 of these responses were not fully informed. Therefore, after eliminating these answer sheets, the total number of valid questionnaires is 211. Accordingly, the response rate was 70.33% compared to the total number of questionnaire samples sent. According to [32], [33], this response rate is adequate and representative.

3.2. Measurements

The authors used a questionnaire developed and adjusted from previously conducted questionnaires [1], [18], [20]. In addition, the authors also use a five-level Likert scale, from 1: "completely disagree" to 5: "completely agree" to reflect and evaluate the perceptions of managers of Vietnamese commercial banks on the implementation of Basel III. In addition, to ensure compatibility with domestic practice, a draft questionnaire was discussed, reviewed, and commented on by 5 researchers and 6 different bank managers before conducting surveys to collect opinions on a broader scale. Thereby, the questionnaire has had some necessary corrections and changes to suit the situation in Vietnam.

Ultimately, the final questionnaire consisted of two main parts. The first part includes basic information such as gender, work experience as well as educational level of the respondents. The second part includes 30 questions on four different aspects of Basel III implementation. Accordingly, 8 questions about expected benefits from implementing Basel III, 11 questions about Basel III awareness, 6 questions about banks' readiness to implement Basel III, and finally 5 questions about the availability of the necessary resources to effectively implement Basel III. This research employs the SmartPLS 3.2.9 application to solve the main concerns and analyze the model. Table 1

below details the questions related to the aspects of   interest.

Table 1. Structure of the survey questionnaire

Construct	Item	No
Benefits	Manage portfolio risk more effectively	BE1
	Reduce loan losses thanks to better credit risk assessment of new credits	BE2
	Manage operational risk more effectively	BE3
	Improve image and reputation	BE4
	Basel III helps complete the necessary steps to strengthen bank capital standards	BE5
	Improve the use of legal capital	BE6
	Basel III is important in establishing a foundation for capital quality and helps improve liquidity	BE7
	Basel III is balanced and specifically designed to address lessons learned	BE8
Awareness	Basel III is a major step forward in capital regulation	WA1
	Basel III is a necessary step to strengthen capital standards in banking operations	WA2
	Basel III standards are relatively strict in terms of quality and amount of capital required	WA3
	The Basel III framework focuses on two standards: liquidity coverage ratio (LCR) and net stable funding ratio (NSFR).	WA4
	For NSFR requirements, available stabilizing capital must be greater than required stabilizing capital	WA5
	For LCR requirements, high quality liquid assets must be equal to or greater than the total net cash outflow for the next 30 days	WA6
	One of the requirements of Basel III is to increase tier 1 capital from 2% of total risk-weighted assets to a minimum of 7%	WA7
	The 2008 financial crisis demonstrated the need to impose higher costs of capital, liquidity ratios as well as leverage ratios.	WA8
	The NSFR requirement is quite useful in dealing with the risks associated with financing long-term assets from short-term liabilities.	WA9
	The Basel III regulations will strengthen banks' ability to absorb losses by requiring higher levels of equity-like capital instruments.	WA10
	There is a common understanding of Basel I, II, and III	WA11
Readiness	Liquidity assurance standards - LCR	RE1
	Understand capital requirements	RE2
	Risk assurance	RE3
	Capital preservation provisions	RE4
	Counter-cyclical provisioning	RE5
	Leverage ratio	RE6
Availability of required resources	Ability to maintain effective management and organization with quality human resources	AV1

	Ability to evaluate reporting metrics and monitor operations	AV2
	Ability to collect and store data effectively	AV3
	Ability to ensure deployment resources	AV4
	Ability to update and innovate technology	AV5

Source: Authors compiled from existing studies

4. Results

4.1. Demographic Profile

As stated above, survey participants were asked to provide some basic personal information, including gender, work experience in the banking sector and education level. Table 2 below provides descriptive statistics about the characteristics of these survey participants. Accordingly, approximately 55% of respondents were male and more than 45% were female. Regarding work experience in the banking sector, the majority of survey participants have over 5 years of experience, specifically accounting for nearly 48% of the total number of respondents. Next is the proportion of survey participants with experience from over 3 to 5 years, accounting for nearly 37%. Finally, the rate with experience from 01 to 03 years is more than 15%. In terms of educational level, nearly 29% of survey participants have a postgraduate diploma. Meanwhile, a large proportion have university degrees, accounting for more than 60%. The rate of people owning a college degree is nearly 11%. High educational level along with long-term working experience in the banking sector demonstrates the suitability and relatively high reliability of the research sample.

4.2. Measurement Model

Following some existing studies [34], [35], the validation of all constructs was assessed using Cronbach's alpha coefficient. In general, this coefficient greater than or equal to 0.7 is acceptable and ensures that the measurement scales are valid [36]. As shown in Table 3 below, the overall Cronbach's alpha coefficients of the four individual scales, including benefits of Basel III, awareness, implementation readiness and availability of resources, are all guaranteed to be greater than 0.7. Therefore, all four scale aspects meet the reliability level.

At the same time, the current study uses Composite reliability (CR) and Average Variance Extracted (AVE) to test the convergent validity of constructs employed. The figures in Table 3 illustrate that the values of CR surpass 0.7, while that of AVE exceed 0.5. This means that the convergent validity is acceptable [37].

Table 2. Summary of demographics analysis

Characteristic		Number	Ratio (%)
Gender			
	Male	116	54.98%
	Female	95	45.02%
	Other	0	0.00%
Experience			
	From 01 to 03 years	32	15.17%
	From over 3 years to 5 years	78	36.97%
	Over 5 years	101	47.87%
Academic level			
	College	23	10.90%
	University	127	60.19%
	Postgraduate	61	28.91%

Table 3. Validation and Reliability of Constructs

	Cronbach's Alpha	Composite Reliability (CR)	Average Variance Extracted (AVE)

Readiness (RE)	0.799	0,855	0,598
Benefits (BE)	0.817	0,878	0,644
Awareness (AW)	0.923	0,936	0,595
Available resources (AV)	0.872	0,906	0,658

Source: Authors' calculations

4.3. Results of Hypotheses Testing

To test the hypotheses stated previously, the authors perform the structural model with PLS, in which the three independent variables consist of BE, AW, and AV. The results are shown in Table 4 below. As shown in the table, in general, the research model has an R^2 coefficient of 44.1%. Accordingly, the change in the dependent variable is explained by the independent variables at 44.1%. In other words, 44.1% of the variation in readiness to implement Basel III is explained by components such as benefits, awareness and available resources.

❖ **Regarding the relationship between expected benefits and readiness to implement Basel III**

The regression results show that the estimated coefficient of benefits is as expected. Accordingly, this figure is positive with a value of 0.121 and statistically significant at the 5% level. This means that expected benefits have an positive impact on the level of readiness to implement Basel III of Vietnamese commercial banks. Specifically, when this factor increases by 1 point, banks' readiness to apply Basel III will increase by 0.121. point. Thus, this result supports hypothesis H1 about: "There exists a positive relationship between the readiness to implement Basel III of Vietnamese commercial banks and the expected benefits from Basel III".

❖ **Regarding the relationship between awareness and readiness to implement Basel III**

From a cognitive perspective, the estimated coefficient is positive with a value of 0.618 at the 1% statistical significance level. This shows that the awareness of Vietnamese commercial banks has a significant positive impact on their readiness to implement Basel III. Thereby, it can be seen that when this factor increases by 1 point, banks' readiness to apply Basel III will increase by 0.618

points. In addition, this result tends to support hypothesis H2: "There exists a positive relationship between the readiness to implement Basel III of Vietnamese commercial banks and the awareness of Vietnamese commercial banks about Basel III".

❖ **Regarding the relationship between available resources and readiness to implement Basel III**

The coefficient of the variable on the availability of necessary resources in implementing Basel III has an insignificant negative impact on the readiness to apply Basel III of Vietnamese commercial banks. However, this coefficient is not statistically significant. Therefore, this regression result does not support hypothesis H3 about: "There exists a positive relationship between the readiness to implement Basel III of Vietnamese commercial banks and the necessary available resources of Vietnamese commercial banks to implement Basel III."

However, it should also be noted that in terms of effect size, the f^2 indicator that can be calculated as the change in R^2 when a certain exogenous construct is removed from the model can suggests whether the removed structure has a significant impact on endogenous structures [36], [37]. Accordingly, this indicator reflects the contribution of exogenous variables to the R^2 of endogenous latent variables [34], [35]. According to the principle proposed by Cohen (2013), a value of f^2 around 0.02 is weak; 0.15 is moderate and 0.35 has a strong impact.

Based on this argument and principle, it can be seen that the positive relationship between expected benefits and the readiness to implement Basel III of Vietnamese commercial banks is quite weak (f^2 = 0.018), whereas the positive relationship between banks' awareness and readiness to implement Basel III is quite strong (f^2 = 0.357).

Table 4. Hypotheses Testing

Hypothesis	Std Beta	Std Error	T Statistics	P Values	f^2	VIF	Decision
H1: BE -> RE	0.121	0.061	1,997	0.045	0.018	1,429	Accepted
H2: WA -> RE	0.618	0.059	10,414	0.000	0.357	1,914	Accepted
H3: AV -> RE	-0.056	0.056	1,004	0.320	0.004	1,428	Not Accepted

R square	0.441
Adjusted R square	0.432

Fig. The Structural model analysis
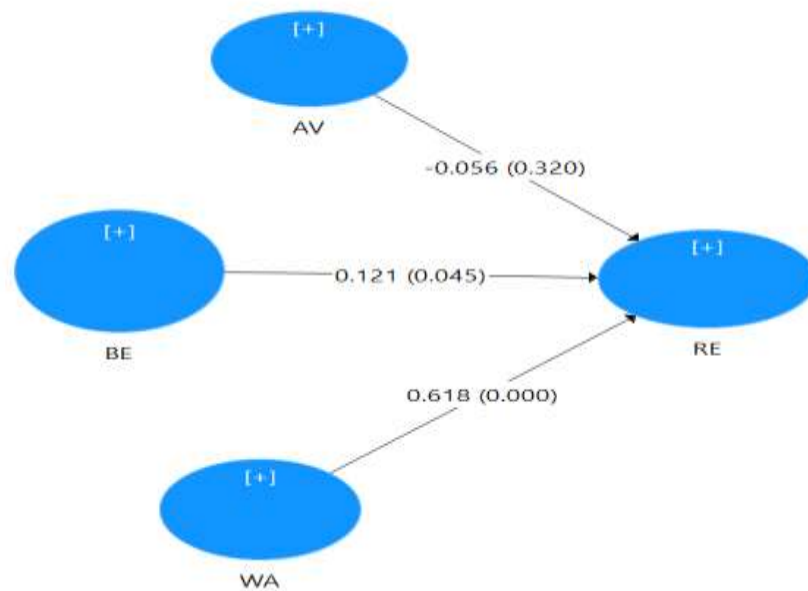
Source: Authors' calculations

5. Discussion and Conclusion

This study aims to understand the factors affecting the level of readiness of Vietnamese commercial banks in implementing Basel III. An adjusted survey questionnaire consisting of two main parts was conducted in the study. Accordingly, the first part includes basic information such as: gender, experience in the banking field and educational level. The second part includes 30 questions related to four different aspects of Basel III implementation, including: expected benefits from Basel III implementation; awareness of Basel III; the readiness of Vietnamese commercial banks in implementing Basel III; and the availability of the necessary resources to apply Basel III.

The analysis results show that in general, Vietnamese commercial banks are relatively aware of the benefits of implementing Basel III and are ready to implement these new standards because banks can partially ensure the necessary resources when implementing Basel III. Specifically, in terms of regression analysis, the results show that there is a positive relationship between expected benefits and readiness to implement Basel III of Vietnamese commercial banks as well as between awareness and readiness to implement Basel III of banks. However, the positive effect from perception is relatively stronger than the effect from expected benefits. In

addition, empirical results also show a negative relationship between the availability of necessary resources in implementing Basel III and the readiness to implement Basel III of Vietnamese commercial banks, but this relationship is not statistically significant.

From the results of this research, it can be concluded that further strengthening the awareness of Vietnamese commercial banks in the coming time will be one of the necessary factors to promote the comprehensive implementation of Basel III standards in Viet Nam. Therefore, it is necessary for bank administrators as well as regulatory agencies to regularly organize training and orientation sessions, in addition to enhancing communication to raise awareness of employees and other stakeholders as well as functional departments about the role of Basel III in banking business activities. This will contribute to further promoting the effective implementation and application of more stringent requirements from Basel III.

At the same time, although the analysis results show that the impact of available resources on Basel III implementation activities is not statistically significant, bank managers need to be clearly aware of the importance of required resources. It is important to be prepared to have the necessary resources, especially in terms of updating

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technology and human resources in the coming time. Indeed, while a number of recent empirical studies have shown the important role of both technology investment and knowledge-based management in banking business [9], [10], [39], the fact that managers ignore this factor can be a significant shortcoming in the business management strategy according to international standards that Basel III brings.

Although the research has achieved certain successes, there are still some shortcomings that future studies can carry out to fill these research gaps. First, the study sample set is relatively small, so future studies can expand the study sample and conduct empirical research analysis to provide more general findings. In addition, future studies can also perform empirical analysis based on a sample of foreign banks operating in Vietnam and analyse and compare with the results of this study to have more clear view about the level of readiness to implement Basel III of Vietnamese banks.

Furthermore, for future research, it is believed that future studies should be conducted related to different aspects of this research topic, for example, possible challenges when implementing and applying Basel III standards, or as the relationship between market risk management and Basel III implementation. Through this research, the authors hope that it will pave the way for many future studies on this important issue - Basel III - in the business activities of Vietnamese commercial banks.

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