MICROPRUDENTIAL FINANCIAL SUPERVISION FOR COMMERCIAL BANKS

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Abstract: ***Financial supervision is an essential management tool of relevant departments in detecting and preventing potential risks that may affect a single financial area in particular or the entire financial system as a whole, thus ensuring smooth and consistent operation of the financial system. In the national financial system, commercial banks serve as financial intermediaries that operate within the financial market. Commercial banks are vital to the national financial system, as they can influence every aspect of the system. Therefore, relevant departments have to financially supervise commercial banks in order to ensure correct and adequate compliance of regulations regarding financial safety and financial risk control. Financial supervision for commercial banks includes microprudential financial supervision and macroprudential financial supervision. The main focus of this article lies on microprudential financial supervision.***

• Keywords: *financial supervision, microprudential financial supervision, commercial banks.*

Date of receipt: 15th Jun, 2022

Date of delivery revision: 20th Jun, 2022

Date of receipt revision: 20th July, 2022

Date of approval: 1st August, 2022

Tóm tắt: *Giám sát tài chính là công cụ quản lý quan trọng của cơ quan chức năng nhằm phòng ngừa, cảnh báo, phát hiện, ngăn chặn những rủi ro có thể xảy ra đối với từng khu vực tài chính nói riêng và hệ thống tài chính nói chung,đảm bảo cho toàn hệ thống tài chính vận hành ổn định. Trong hệ thống tài chính quốc gia, ngân hàng thương mại là tổ chức tài chính trung gian hoạt động trong thị trường tài chính. Ngân hàng thương mại đóng vai trò rất quan trọng trong hệ thống tài chính quốc gia, ngân hàng thương mại có tác động chi phối đến tất cả các khu vực trong hệ thống tài chính. Vì vậy, cơ quan quản lý chức năng cần giám sát tài chính đối với ngân hàng thương mại để đảm bảo sự tuân thủ đúng, đủ các quy định về an toàn tài chính và kiểm soát rủi ro tài chính. Giám sát tài chính đối với NHTM bao gồm giám sát tài chính an toàn vi mô và giám sát tài chính an toàn vĩ mô. Trong phạm vi bài viết này, tác giả chủ yếu bàn về về giám sát tài chính an toàn vi mô.*

• Từ khóa: *giám sát tài chính, giám sát tài chính an toàn vi mô, ngân hàng thương mại.*

1. Financial supervision for commercial banks

The financial operation of commercial banks is closely tied to capital flows among entities of the financial system through such banks. Therefore, financial supervision for commercial banks consists of monitoring, examination and evaluation of their financial situations in order to detect, tip off and prevent impending risks in a timely manner, and at the same time, such methods of supervision also applies to these commercial banks' execution of financial regulations. All of these are put in place with the aim to ensure the consistency of commercial banks, the stability of the financial market, as well as to protect the rights and benefits of all investors in the financial market in general and the ones investing in such commercial banks in particular.

The targets for financial supervision include all financial activities of commercial banks. However, such activities can be diverse and complicated, with connections that are closely-knitted, interactive, directive and dependent to one another, so financial supervision for commercial banks focus mainly on the supervision of certain basic but specific financial activities of the banks. The responsibility of doing the supervising lies on entities such as relevant departments of the government, as well as the owners and the internal supervising units within these commercial banks.

The three fundamental purposes of financial supervision for commercial banks are as followed:

Firstly, *to ensure the stability, safety and soundness of the commercial banking system.* This offers the ability to avoid the effects of

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sudden changes. Financial supervision ensures that commercial banks comply with the safety regulations set up by relevant departments.

Secondly, *to guarantee commercial banks' operational efficiency and making sure their participation in the financial market is on equal footings.*Toensure the operational efficiency of commercial banks is to ensure their continuous operation and development. The operational efficiency of every commercial bank determines its existence and development. However, a commercial bank that fails to operate efficiently, creating risks due to an imbalance between funds and costs not only affects its own existence but also consequently impacts both the commercial banking system in particular and the whole financial system in general. On the other hand, making sure that all commercial banks participate in the financial market on equal footings entails that commercial banks need to be in full compliance with all the regulations required of them when participating in the financial market.

Lastly, *to protect the consumers utilizing financial products and services and investing in commercial banks.* There is a possibility that consumers' interest might not be guaranteed or might be damaged due to an insufficiency in amount and accuracy of the information provided by commercial banks or in cases of handling conflicts between commercial banks and consumers with only the banks' point of interest in mind. Therefore, financial supervision for commercial banks ensurestheir compliance to healthy competition regulations, thus protecting consumers' interests and strengthening their faith in commercial banks. All of this would in turn contributes to maintaining stability in not only the commercial banking system but also, in a general sense, the financial system.

2. Microprudential financial supervision for commercial banks

Micropudentialsupervision for commercial banks is a method of safety monitoring applied to individual targets of supervision, implemented on the basis of a ranking system for assessment of the targets of supervision(which, in this case, are commercial banks), an information system with records of microprudential supervision reports, safety standards, a system of procedures, tools, criteria and skills for analyzing financial activities and a system for evaluation, monitoring and cautioning of all types of risks and legal breaches from said targets of supervision.

Microprudential financial supervision implements contents as followed:

(1) Monitoring, examination and evaluation of the implementation of regulations regarding rates and limitations to ensure safe banking operations, statistical report protocols and other monetary and banking regulations of the law for credit institutions and foreign bank branches.

The content ofmicroprudential financial supervision aims for specific regulations and safety limits that the National Bank required of commercial banks in several different stages (Ex: Regulations on capital adequacy ratio, credit extension limits; coverage ratio; maximum ratio of short-term funds used for medium and long-term loans; the ratio of buying/investing in government bonds; government-guaranteedbonds; capital contribution and share purchase limits…)

(2) Analysis and assessment of commercial banks' risks, mainly including credit risks, market risks, liquidity risks, operational risks…, all of which can be assessed simultaneously or seperately based on the situation at hand.

(3) Analysis and evaluation of commercial banks' operational situations in accordance with contents as followed: equity developing and safety ensuring situation; capital mobilizing situation from candidates that met the requirements for exchange participation according to current laws and regulations, including: individuals, economic organizations, credit institutions, foreign bank branches and other organizations; capital utilizing situation such as credit extension for candidates meeting the exchange participation requirements according to current laws and regulations, investments in valuable papers, other capital utilizing activities, non-performing loan situation and management, business activity outcome.

(4) Analysis and evaluation of commercial banks' administrative and managerial capability.

(5) Rankings of commercial banks and foreign bank branches in accordance with regulations set up by the Central Bank.

(6) Analysis and assessment of other miscellaneous contents in accordance with laws and regulations.

Microprudential supervision criteria

In order to deal with the global financial and monetary crisis, the Central Banks of developing countries as well as international organizations established principles and implemented supervision on the clean-up of the financial system like: the CAMELS rating system established by American National Credit Union Administration (NCUA) in 1987; the Financial Soundness Indicator (FSIs) by International Monetary Fund (IMF); credit rating organizations like Standard and Poor also established their own criteria system. Even though organizations around the world differs in the specifics of their criteria, all assessments of credit institutions are based on 6 fundamental contents: Capital adequacy, asset quality, administrative and managerial capabilities, profitability, liquidity and market sensitivity.

Microprudential supervision for commercial banks utilizes the following criteria:

(1) Capital criteria

Supervision of capital criteria is implemented through 2 main indicators: charter capital and capital adequacy ratio.

- Charter capital: Reflects on the compliance with laws and regulations on capital set up for commercial banks.

Decree No. 86/2019/ND-CP regulates the legal capital for credit institutions and foreign bank branches. Specifically, the amount of legal capital authorized for commercial banks is 3,000 billion VND.

- Capital adequacy ratio (CAR): Reflects on the capital adequacy of a bank; an important indicator established and highly recommended by banking specialists from the Basel committee for evaluation of the compliance with the laws and regulations on capital adequacy for commercial banks.

$$\text{CAR (\%)} = \frac{\text{Core Capital}}{\text{Risk Weighted Assets}} \times 100$$

With: Core capital = Tier 1 Capital + Tier 2 Capital - Revenue deduction (according to regulations); Risk weighted assets are calculated in accordance with specific regulations.

Each country has their own specific regulations on capital adequacy ratio for commercial banks.

According to Basel II and Basel III regulations, the capital adequacy ratios are both 8%. However, Basel III possess stricter regulations when it comes to the calculations of core capital and risk weighted assets.

According to Circular No.22/2019/TT-NHNN by Vietnam National Bank, a bank's capital adequacy ratio consists of separate and merged capital adequacy ratio. Everybanks must maintain a separate capital adequacy ratio of 9% and a merged ratio of 9%.

Capital criteria are utilized to assess capital adequacy as well as the level of compliance with the laws and regulations on capital adequacy for commercial banks.

(2) Criteria on asset quality

Supervision on asset quality relies on indicators such as the ratio of non-performing loans (NPL) to total loans and the ratio of non-performing loans to equity in order to evaluate the level of compliance with the laws and regulations on loan activities, provisions and credit risk management.

$$\text{NPL to Total loans Ratio (\%)} = \frac{\text{NPL}}{\text{Total loans}} \times 100$$

NPLs ratio is a vital basis to evaluate commercial banks' asset quality. It is also one of the conditions for limitations on credit extensions for investment and exchange regarding corporate bonds and stocks.

$$\text{NPL to Equity Ratio (\%)} = \frac{\text{NPL}}{\text{Equity}} \times 100$$

The NPL to equity ratio reflects on the ability to withstand credit risks based on the owner's equity.

Supervision on asset quality helps detect and prevent impending risks as well as to oversee compliance with the regulations on debt groupings and credit risk provisions. Apart from the afore-mentioned indicators, supervision on commercial banks' asset quality can also be executed through the following classification of debt structures: debt groups, customers and economic sectors. The criteria on asset quality are used to detect credit risks and evaluate the level of compliance with the law regarding to creditability for commercial banks.

(3) Criteria on liquidity

Supervision on liquidity is implemented through indicators like short-term funds ratio used for medium and long-term loans, loans to deposits ratio, liquid asset to liability ratio and liquidity coverage ratio in a 30-day period in order to evaluate compliance with the law regarding liquidity adequacy and liquidity risk management, and thus to better assess the liquidity risks of commercial banks.

$$\text{Short-term funds ratio used for medium and long-term loans (\%)} = \frac{\text{Total medium and long-term loans - total regulated medium and long-term funds}}{\text{Total regulated short-term funds}} \times 100$$

This criterion is the ground to evaluate the consistency level of funds for commercial banks. According to State Bank of Vietnam, commercial banks are only allowed a certain ratio of the short-term fund for medium and long-term loans. This criterion going over the regulated numbers would entail an inherent risk in time-limit imbalance. As regulated in Circular No.22/2019/TT-NHNN dated November 25th, 2019, the maximum ratios of short-term fund allowed to be used for medium and long-term loans are stated accordingly as followed: a) From January 1st, 2020 to September 30th,2020: 40%; b) From October 1st, 2020 to September 30th, 2021: 37%; c) FromOctober 1st, 2021 to September 30th, 2022: 34%; d) From October 1st, 2022: 30%.

$$\text{Loans to Deposits Ratio (LDR)} = \frac{\text{Total regulated loans}}{\text{Total regulated deposits}}$$

This criterion is the ground to evaluate the balance between customer deposits and loans. According to Vietnam National Bank, commercial banks are only allowed a certain ratio of the mobilized capital to loan out. This criterion going over the regulated number entails inherent risks on loss of liquidity when faced with drastic deposit withdrawals. As regulated in Circular No.22/2019/TT-NHNN dated November 25th, 2019, the maximum LDR allowed for a commercial bank is 85%.

$$\text{Liquidity Ratio (\%)} = \frac{\text{Regulated Liquid Assets}}{\text{Total Regulated Liabilities}} \times 100$$

This criterion reflects on the ability to meet the liquidity needs for liabilities. According to State Bank of Vietnam, commercial banks are required to maintain a certain liquidity ratio so as to ensure liquidity for liabilities. As regulated in Circular No. 22/2019/TT-NHNN dated November 25th, 2019, commercial banks and foreign bank branches must maintain a minimum liquidity ratio of 10%.

$$\text{Liquidity Coverage Ratio up to 30 days (\%)} = \frac{\text{Regulated Liquid Assets}}{\text{Total Regulated Net Cash Outflows up to 30 days}} \times 100$$

This criterion is the ground to evaluate commercial banks'ability to ensure in a 30-day period. According to the regulations of Vietnam National Bank, commercial banks are required to maintain a certain liquidity coverage ratio for both domestic and foreign currencies. A number lower than regulated for this criterion means higher liquidity risks. As regulated in Circular No.22/2019/TT-NHNN dated November 15th, 2019: (1) In the cases that commercial banks and foreign bank branches determine a positive net cash outflow for the VND currency in the next 30-day period, they are required to maintain a 30-day liquidity coverage ratio for VND of at least 50% as regulated in point b of this paragraph. (2) In the cases that commercial banks and foreign bank branches determine a positive net cash outflow for foreign currencies in the next 30-day period, they are required to maintain a minimum 30-day liquidity coverage ratio for foreign currencies, as regulated in point b of this paragraph, as followed: (i) 10% for commercial banks; (ii) 5% for foreign bank branches; (iii) 5% for co-operative banks.

The liquidity criteria is utilized in liquidity risks monitoring, evaluation of capital usage and mobilization in commercial banks and assessment on the level of compliance with the law in regards to operational safety guarantee of commercial banks.

(4) Criteria on market sensitivity

Supervision on market sensitivity is executed through such indicators as interest rate gap and net foreign exchange position with the aim to evaluate compliance with the law in regards to market risks management.

$$\text{Interest Rate Gap (GAP)} = \text{Interest Sensitive Assets} - \text{Interest Sensitive Liabilities}$$

This criterion assesses interest rate risks. If GAP>0, net interest income would increase along with a rise in exchange rate and vice versa. If GAP<0, net interest income would decrease when exchange rate goes up and vice versa. Consequently, interest risks are bound to happen to commercial banks with GAP>0 when there is an increase in exchange rate and to those with GAP<0 when there is a decrease in exchange rate.

$$\text{Net Foreign Exchange Position} = \text{Foreign Exchange Assets} - \text{Foreign Exchange Liabilities}$$

This criterion evaluates exchange rate risks. A positive foreign exchange position means profit comes along with an increase in exchange rate and losses come with an exchange rate decrease. On the other hand, a negative foreign exchange position entails losses brought along by a rise in exchange rate and vice versa. This criterion can be calculated for each separate foreign currency or classified into groups: total positive net foreign exchange and total negative net foreign exchange. Therefore, exchange rate risks would appear when the exchange rate decreases during a positive foreign exchange position and when the exchange rate increase during a negative foreign exchange position. In accordance with regulations on exchange rate risks management, commercial banks are required to maintain a certain ratio of net foreign exchange position to core capital in order to ensure the ability to manage risks when there is an exchange rate fluctuation.

$$\text{Net foreign exchange position to Core capital Ratio (\%)} = \frac{\text{Net foreign exchange position}}{\text{Core capital}} \times 100$$

As regulated in Circular No.07/2012/TT-NHNN dated March 20th, 2012: (1) End-of-day total positive foreign exchange position of credit institutions and foreign bank branches must not go over 20% of their core capital. (2) End-of-day total negative foreign exchange position of credit institutions and foreign bank branches must not go over 20% of their core capital. (3) Branches of foreign banks in Vietnam with a core capital of 25 million USD and under are allowed to apply limitations of total foreign exchange position as followed: (i) End-of-day total positive foreign exchange position in US currency must not go over 5 million USD. (ii) End-of-day total negative foreign exchange position in US currency must not go over 5 million USD.

Apart from the afore-mentioned criteria, supervision is also required in the compliance with regulations on capital contribution and share purchase limitations so as to manage price risks.

These criteria on market sensitivity are utilized to monitor commercial banks' market risks and their compliance with law.

(5) Criteria on administrative and managerial capability

Supervision on managerial capability is executed through the ratio of costs to revenue in order to evaluate commercial banks' cost management capability. A costs-to-revenue ratio lower than the sector's average quota entails commendable managerial capability, low risks and vice versa.

(6) Criteria on profitability

Supervision on profitability is achieved through indicators such as net interest margin, assets' profitability and equity's profitability with the aim to evaluate the operational efficiency of commercial banks, thus to detect and prevent risks.

$$\text{Return on Assets Ratio (ROA; \%)} = \frac{\text{Net profit after company income tax}}{\text{Average total assets}} \times 100$$

ROA is the basis for supervision on commercial banks' asset profitability. A negative ROA means extremely high-risk, a positive but under-average ROA would still paint a grim picture for commercial banks.

$$\text{Return on Equity Ratio (ROE; \%)} = \frac{\text{Net profit after company income tax}}{\text{Average Equity}} \times 100$$

ROE helps monitor equity's profitability of commercial banks. A positive equity but negative ROE indicates extremely high-risk.

$$\text{Net Interest Margin (NIM; \%)} = \frac{\text{Net Interest Income}}{\text{Average Profitable Assets}} \times 100$$

NIM is the basis to help supervise commercial banks' profitability situation of interest-earning assets. A NIM ratio below sector's average quota indicates a negative outlook for commercial banks.

After calculations are finished for all quantitative criteria of the supervised credit institution, the supervising entity would begin the process to compare all the collected data with the sector's average quotas, regulated threshold set up by relevant governmental departments and among different time frames so as to make an assessment on the fluctuation tendency of risks. However, these afore-mentioned thresholds for criteria of financial supervision evaluation regarding credit institutions tend to vary with time,depending on the operational characteristics, functions and purposes of each type of credit institution.

3. The application of microprudential financial supervision on commercial bank X through some specific criteria

Table 1: Criteria reflecting on Commercial bank X's microprudential situation

Criteria	31/12/2020	31/12/2019
Capital		
1. Charter capital (billion VND)	37.234	37.234
2. Merged CAR (%)	>9%	>9%
Asset quality		
1. NPL ratio (%)	0,94	1,20
2. NPL to Equity ratio (%)	10,83	14,79
Liquidity		
1. Short-term fund ratio used for medium and long-term loans (%)	29,3	32,0
2. Loans to Deposits ratio (LDR) (%)	86,1	88,1
3. Liquidity Coverage ratio (%)	12,3	14,0

Criteria	31/12/2020	31/12/2019
Profitability		
1. NIM (%)	2,86	2,80
2. ROA (%)	1,3	1,0
3. ROE (%)	16,8	13,1

Source: Collected from financial reports, annual reports and capital adequacy reports of Commercial bank X

From all data collected and calculated, the supervising entity would be able to present the following opinions:

+ About capital criteria: Decree No.86/2019/NĐ-CP regulates the authorized capital for commercial banks at a minimum of 3,000 billion VND. Commercial bank X maintains a charter capital of 37,234 billion VND, which is in compliance with legal charter capital regulations. Circular No.22/2019/TT-NHNN regulates the minimum ratio of separate and merged capital adequacy for commercial bank at 9%. Commercial bank X's minimum capital adequacy ratios in both years are over 9%, thus abiding by regulations.

+ About asset quality: Circular No.22/2019/TT-NHNN regulates a limitation for NPL ratio of under 3%. Commercial bank X's NPL ratio in 2020 is at 0.94% which is in compliance with regulations. On the other hand, the NPL ratio in 2020 is on the decrease in comparison with that of 2019, entailing a decrease in credit risks. In 2020, the NPL to equity ratio of commercial bank X also goes down compared to the figure in 2019, leading to a stronger resistance to credit risks from equity and indicating a decrease in risks.

+ About liquidity:

The ratio of short-term fund used for medium and long-term loans in 2020 shows a decrease compared to 2019 so liquidity risks due to overusage of short-term fund for medium and long-term loans consequently lessen. Alternatively, Circular No.22/2019/TT-NHNN regulates a maximum short-term fund ratio that can be used for medium and long-term loans of 40% from January 1st,2020 to September 30th, 2020 and 37% from October 1st, 2020 to September 30th, 2020. Therefore, commercial bank X's compliance with regulations is guaranteed. Moreover, decreasing figures also indicate a rise in safety level.

Circular 22/2019/TT-NHNN also regulates a maximum loans to deposits ratio of 85%. The figures for commercial bank X in 2019is 88.1% which is slightly higher than regulated, resulting in inherent liquidity risks. The ratio reduces by 2% in 2020. The year shows a rise in both deposit and loan outstanding balances even though the increase rate of the loan outstanding balance is lower than that of the deposit outstanding balance, leading to a decline in liquidity risks. However, the number still exceeds that in regulations. A warning would be issued to commercial bank X regarding their compliance with deposits to loans ratio regulations in hopes of managing liquidity risks.

2020 brings forth a decrease in liquidity coverage ratio for commercial bank X, though still in an accepted range in accordance with regulations. (Circular No.22/2019/TT-NHNN regulates the minimum liquidity coverage ratio for commercial banks at 10%).

+About profitability: 2020 shows a positive increase in all profitability criteria of commercial bank X in comparison with 2019, indicating their impressive profitability among commercial banks in general. Consequently, there is a reduction in efficiency risks.

Through all of the above criteria, it can be shown that commercial bank X basically abided by all legal regulationsregarding capital, asset quality and liquidity, with the exception of the regulations on deposits to loans ratio. In regards to risk monitoring, all criteria fluctuates in a positive trend, less risks and more safety on an microscopic level. As recommendation, it is of great importance for commercial bank X to abide by regulations on deposits to loans ratio in order to better manage their liquidity risks.

Conclusion: Financial supervision in general and microprudential supervision in particular are activities of great importance for commercial banks in ensuring the safety of each and every commercial bank, the commercial banking system as well as the national financial system.

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