ISSN 2776-110X

Diversification of Bank Profitability and Bankruptcy Risk in ASIA

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Abstract

This study aims to determine the bank interest margin and non-interest income in 25 countries in ASIA in the study period 1993 and 2020. This study uses the quantitative method Generalized Method of Moments (GMM). Prudence in developing the banking business by banking business actors is essential in preventing a systemic financial crisis in the future, such as the experience of the Asian financial crisis in 1997 and the subprime mortgage crisis in 2008. Bank interest margins and non-interest income are both required in maintaining bank cash inflow.

Keywords: Diversification, Bankruptcy Risk, Financial Risk
JEL Classification: C0, C33,G21, G11,

Background

The role of banking is currently very dominant in the financial system. even today banking also has an important role to support economic progress in a country. A bank is a business entity engaged in finance or financial services. The bank has operations involving many parties in the community. So that a good understanding and management of a bank will certainly encourage a good financial system. A good financial system will have a positive effect on banking performance and the level of profitability. The way to assess whether a bank is good or bad is by looking at its financial performance. Profitability or what is known as profitability is the ability of a company to generate profits during a certain period. Profitability is measured by ROA, which measures the ability of bank management to generate profits (profits) as a whole. Banking is strongly influenced by the number of interest rates (interest rate). One indicator that can be used in measuring bank efficiency is the net interest margin (NIM). A high NIM is often associated with inefficiencies in the banking system(Weber & Remer, 2011). Importance The role of banking is currently very dominant with the financial system. A good financial system will have a positive effect on banking performance. The development of a country's economy is highly dependent on the development and real contribution of the banking sector. Banks are the most important financial institutions and greatly influence the economy both at micro and macro levels. Indonesia is one of the countries with a very fast economic development. This development cannot be separated from the role of banks as financial institutions that regulate, collect, and channel funds entrusted by the public in the form of deposits. Banks as financial institutions have a very important role as intermediaries between parties with excess funds and those who need funds. The more developed people's life and economic transactions in a country, it will also require an increase in the role of the banking sector through the development of its service products. The increasingly rapid globalization of the economy has had various impacts on the banking industry. This impact is a consequence that must be faced because the banking industry is an industrial sector that plays an important role in the country's and world economic system. The global economic crisis that occurred in 1997-1998 was a period decline in banking in Indonesia where this is caused by

errors in managing banks. In 1997-1998 due to the economic crisis that hit Indonesia, many companies were unable to pay the credit that had been given by banks, so that this condition caused the level of bad credit or default to increase. This condition resulted in the emergence of Non-Performing Loans (NPL) and negative spread between interest income and interest costs, which caused banks to no longer carry out credit activities because the Capital Adequacy Ratio (CAR) decreased and was negative. has undergone a fairly rapid development followed by an increasingly complex risk of banking business activities. Risk in general is nothing but an uncertainty (uncertainties) that lead to the occurrence of various levels of profitability that worsen or even cause losses. For the banking sector, the uncertainty that has an impact on profitability is also rooted in uncertainty, even though the banking business has undergone increasingly broad and deep developments. This has also created opportunities for various types of risk on an increasingly high scale. Uncertainty and risk are realities that companies must face in their quest to create value. Banks that are able to manage their risks, including the volatility of their income, are expected to increase their returns. However, if the existing risks cannot be managed properly, it can potentially increase the probability of bank bankruptcy.

Net Interest Income and Net Interest Margin has contributed to an increase in Net Income Margin, enabling banks to have more profitable off-balance sheet (OBS) activities. However, the negative relationship implies the opposite, a higher share of non-interest income is associated with anincreased profit volatility and the potential for banks to experience financial difficulties(Fiordelisi & Ricci, 2011). Our motivation to learn is that given the Asian financial crisis in 1997 and the global crisis in 2008,This is a valuable lesson in implementing policies that must be accompanied by caution. In particular, our study of Net Interest Income and Net Interest Margin for the period before of crisis, the crisis period, and after the 1997 Asian financial crisis and the 2008 global crisis in 25 countries in Asia. Our study uses data before the Asian financial crisis in 1997 which started from the period 1993 and for the full years after the 2008 financial crisis, namely in the period 1993 to 2020. We use the second data with a very large scope with more than 135,215 records recorded. covers 25 countries in Asia. Indonesia is one of the countries in Asia that has experienced financial stress for years and therefore we excluded Indonesia from the tested data set.

We use secondary data for examine the evidence (or lack thereof) of the complementary benefits of traditional and non-traditional activities for the period after the 1997 and 2007-2008 financial crises. Several previous studies have shown that nontraditional activities increase the risk of independent and systematic financial institutions.

Bank profitability and non-traditional bank income have a positive relationship (Tan, 2014). Bank profit proxies relate to their past values including their experience in managing the bank (Padmalatha, 2011).

Literature Review

The types of loan demand that are interdependent will have an impact on spreads, diversification, and specialization as determinants of interest margins. Loan interest has an impact on banks even though interest is not the only bank income. Banks can have non-interest income. Interest rates certainly have an impact on loans (Almarzoqi & Naceur, 2015). Net Interest Income (NII) and Net Interest Margin (NIM) have been explored several times in the literature in the Asian region, but with mixed results (Tan, 2012). It is also known as creative financing because it creates illusive profits by adding bogus transactions, such as factoring and consignment stocks that inflate profits and hide liabilities. Off-balance-sheet financing is most often used to meet financial requirements. Banks certainly need

profits to survive and grow in the banking business (Choudhry, 2018). Diversification has a positive correlation with bank profitability. So that banks can diversify to increase profits, which of course needs to be accompanied by the principle of prudence because every business diversification has risks (Dorman, 2014). Increased diversification reduces risk. By diversifying your business or investment you can share your risk in investment instruments or business instruments managed by banks (Tsounis & Vlachvei, 2018). Net Interest Income (NII) increases the return on assets while providing diversification to maintain risk. Therefore, studies with large cross-country panel data sets using current empirical methodologies are urgently needed.

Data and Methods

We model NIM using the following equation:

$$NIIAEA_{ib,t} = C_i + \beta_1 NIIAEA_{ib,t-1} + \beta_2 HERFA_{ib,t} + \beta_3 NIEAA_{ib,t} + \beta_4 EA_{ib,t} + \beta_5 IIR_{ib,t} + \beta_6 COV_{ib,t} + \beta_7 LNTA_{it} + \beta_8 LNLO_{ib,t} + \beta_9 RFILGL_{ib,t} + \beta_{10} TREGCR_{ib,t} + \beta_{11} NFC_{ib,t} + e_{ib,t}$$

Where,
C = Constant
β = parameter estimate
$e_{ib,t}$ = error term.
NIIAEA = net interest margin
HERFA = the ratio of total deposits per bank to total deposits in the banking sector in the country where the bank is located.
Where, HERRFA = TDi / TD
TDi = total bank deposits i
NIEAA = Ratio of non-interest costs to total assets used as a proxy for operating expenses.
EA = level of risk avoidance
IIR = interest rate risk.
RFILGL = The ratio of loan loss reserves to gross loans
COV = The covariance of credit risk and interest rate risk
LNTA = logarithm of total assets
LNLO = volume of loans (credits)
TREGR = The ratio of capital funds to total assets
NFC = net fees and commissions

Results and Discussion

Table 1 is the regression results in the period before the global crisis in 2008 and before, during and after the Asian financial crisis (1997) so that this study uses the study period 1993 to 2008 and the second sub-sample after the 2008 global finance (2008-2020).

Table 1. Estimation Results

Dependent Variable : Net Interest Margin			
Independent Variable	1993-2008	2008-2020	1993-2020
NIIAEA(-1)	0.175219***	0.033581	0.061074**
HERFA	-17.50666	-12.11412	21.81184
NIEAA	0.936618***	0.562665***	0.019558

EA	0.122188**	0.112256***	0.221057***
IIR	0.183653**	0.005395	-0.002615
COV	-0.023636***	-0.005526**	0.001882
LNTA	2.258258***	0.118665	-4.2512
LNLO	-2.582125	1.383969**	5.251734***
RFILGL	0.532662***	0.232603***	0.362306***
TREGCR	-0.125903	-0.006631	-0.016622
NFC	-0.35325	0.1559	-0.065625
J-Stat (PValue)	0.1592	-0.059652	0.3115
Dependent Variable : Non-interest Income			
Independent Variable	1993-2008	2008-2020	1993-2020
NFC(-1)	-0.101585	-0.272221	-0.323635
LNTA	0.855258***	8.101525***	5.890520***
LNTD	-0.685053	-6.606099	-5.639898
RFILGL	-0.005276	0.381011***	0.095565***
IIR	-0.13106	-0.003272	-0.003235
NLTA	-1.714818	12.85835***	8.029584***
OVTA	-15.96266	-268.2526	-53.2664
LLPTA	-5.665201	-25.19505	-12.62366
BTPTA	-3.565196	0.303221	-1.382365
NIIAEA	-0.01922	0.6613	-0.201936
J-Stat (PValue)	-0.062022	0.1855	0.2215
Dependent variable: RAROAA			
Independent Variable	1993-2020	1993-2008	2008-2020
C	-1.0866	-1.583	-1.5596
GOTA	0.0002**	0.0005**	-0.0005
LLPTA	-10.5616	-9.8693	-11.230
NONSHARE	-0.0022	0.0512***	-0.0392
LNTA	0.1695***	0.1962***	0.2685***
EA	0.0158***	0.0203***	0.0153***
Adjusted R2	0.5555	0.5511	0.861
Dependent variable: RAROAE			
Independent Variable	1993-2020	1993-2008	2008-2020
C	-1.6568	-1.5532	-3.2189
GOTA	0.0009***	0.0008***	0.0005**
LLPTA	-16.2129	-13.8295	-10.256
NONSHARE	0.0089***	0.0339***	-0.01316
LNTA	0.2551***	0.2153***	0.5085***
EA	0.0269***	0.0222***	0.0552***
Adjusted R2	0 .5258***	0.3156	0.6021***

HERFA does not have a correlation with NIIAEA. NIEAA, having a direct influence on NIIAEA . This suggests that there are more risk-averse banks in periods of crisis. So it can be said that in a period of crisis interest rates do not affect bank profits due to inflation and economic recession. The

credit-market risk interaction, COV, has a negative relationship, indicating the need for diversification of interest-based to non-interest banking operations during the crisis period.LNTA also has a negative relationship, indicating that economies of scale are not an important factor in maintaining bank operations during crisis periods. RFILGL credit risk has a significant positive effect on NIM for the first period, which indicates the need for a net margin of interest rates. Loans are an important factor in maintaining traditional bank profits. TREGCR was negatively associated with NIM in the first period but not significant for the other periods. OBS activity is inversely related to NIM.

LNTA is positively related to non-interest income (NII). Core deposit rates (LNTD) are negatively related to nontraditional returns. RFILGL provides a negative, though not significant, relationship to NFC. Overhead, OVTA, has a strong and negative impact on NFC. The NIIAEA was found to have a negative relationship with NFC.

Conclusion

Diversification can minimize the risk of loss. However, prudence is needed in developing business and investment in the banking industry. A prudent policy can improve financial stability so that banks can anticipate potential systemic losses that have an impact on the economy in general and have the potential to cause a crisis. Prudence in developing the banking business by banking business actors is essential in preventing a systemic financial crisis in the future. Bank interest margins and non-interest income are both required in maintaining bank cash inflow.

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Attachment

1. Brunei Darussalam
2. Kamboja
3. Cina
4. Fiji
5. Polinesia Perancis
6. Hong Kong,
7. Cina
8. Jepang
9. Korea
10. Makau
11. Cina
12.Malaysia
13. Papua Nugini
14. Filipina
15. Singapura
16. Kepulauan Solomon
17. Tajikistan
18. Thailand
19. Timor-Leste
20. Turki
21. Tonga
22. Tuvalu
23. Vanuatu
24. Vietnam