THE IMPACT OF CASH FLOWS ON CAPITAL ADEQUACY RATIO: A COMPARATIVE STUDY OF INDONESIAN AND MALAYSIAN COMMERCIAL BANKS

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by

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LIST OF ABBREVIATIONS

CAR   Capital Adequacy Ratio

CFO   Cash Flow from Operating Activities

CFI   Cash Flow from Investing Activities

CFF   Cash Flow from Financing Activities

RSS   Residual Sum of Square

NCF   Net Cash Flow

CF   Cash Flow

BCBS   Basel Committee on Banking Supervision

BIS   Bank for International Settlement

D-W   Durbin Waston

T1C   Tier 1 Capital

T2C   Tier 2 Capital

RWA   Risk-Weighted Assets

NI   Net Income

CA   Current Assets

CL   Current Liabilities

NCE   Non-cash Expenses

LTA   Long Term Assets

GLTAR   Gains on Long Term Asset Retirement

LLTAR   Loss on Long Term Asset Retirement

SHE   Shareholder's Equity

LTL   Long Term Liabilities

AD   Annual Dividends

LIST OF SYMBOLS

y	Capital Adequacy Ratio (CAR)
a	Constant level of Capital Adequacy Ratio
b_1	Coefficient of the Slope of Cash Flow from Operating Activities
b_2	Coefficient of the Slope of Cash Flow from Investing Activities
b_3	Coefficient of the Slope of Cash Flow from Financing Activities
x_1	Cash Flow from Financing Activities (CFO)
x_2	Cash Flow from Investing Activities (CFI)
x_3	Cash Flow from Operating Activities (CFF)
α	Significance level
μ	Mean
VIF	Variance inflation factor
p	Probability value
$t\text{-}test$	Partial test
$F\text{-}test$	Simultaneous test
Δ	Changes in cash flow
R^2	Coefficient of determination
r	Linear correlation coefficient of a sample
d	Serial correlation
df	Error variance
Sb	Sobel test
N	Number of observation

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IMPAK ALIRAN TUNAI KE ATAS NISBAH KECUKUPAN MODAL: KAJIAN PERBANDINGAN BANK KOMERSIAL INDONESIA DAN MALAYSIA

ABSTRAK

Aliran tunai adalah pergerakan tunai yang merupakan medium urus niaga dalam menjalankan aktiviti operasi, pelaburan dan pembiayaan bank. Dengan mengurus aliran tunai, berbanding dengan Indonesia, bank komersial Malaysia menunjukkan purata Nisbah Kecukupan Modal yang lebih rendah tetapi secara operasi menunjukkan keupayaan yang lebih baik dalam pengembangan perniagaan. Kajian ini bertujuan untuk mengukur kepentingan perbezaan dalam kesan Aliran Tunai terhadap Nisbah Kecukupan Modal antara bank komersial Indonesia dan Malaysia. Bagi perbandingan, penyelidikan ini menggunakan data sekunder Aliran Tunai dan Nisbah Kecukupan Modal tahun 2009 hingga 2013 daripada lima bank terbesar tiap negara. Penggunaan statistik Chow pada data yang ada menunjukkan bahawa Aliran Tunai dari Aktiviti Pelaburan kedua-dua negara menunjukkan impak yang berbeza terhadap Nisbah Kecukupan Modal. Aliran Tunai daripada Aktiviti Pelaburan adalah aliran tunai yang paling mempengaruhi Nisbah Kecukupan Modal. Penemuan ini menguatkan implikasi bahawa bank komersial Malaysia lebih stabil dan boleh dipercayai kerana pelaburan terurus baik sebagai sumber aliran tunai dan pendapatan yang dipermodalkan. Oleh itu, kajian ini mengesyorkan pihak berkuasa perbankan Malaysia untuk menaja penubuhan institusi penyusunan semula bagi perbankan negara-negara ASEAN. Kepada pihak berkuasa perbankan Indonesia, kajian ini mencadangkan peningkatan aktiviti pelaburan dan menggabungkan bank-bank komersial kecil untuk menyokong pengukuhan modal bank.

THE IMPACT OF CASH FLOWS ON CAPITAL ADEQUACY RATIO:

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ABSTRACT

Cash flow is the movement of cash, which is a medium of the transactions in carrying out the banks' operating, investing, and financing activities. At managing the cash flow, instead of the Indonesians, Malaysian commercial banks showed an average lower Capital Adequacy Ratio but operationally exhibited better capability in business expansion. This study aims to measure the significance of differences in the impacts of Cash Flows on Capital Adequacy Ratio between the commercial banks in the two countries. For the comparisons, this study uses the secondary data of Cash Flows and Capital Adequacy Ratio from 2009 to 2013 of the big five banks of the countries. Application of Chow statistics on avail data showed that the Cash Flow from Investing Activities of the two countries shows the different impact on Capital Adequacy Ratio. Cash Flow from Investing Activities is the most influencing cash flow on the Capital Adequacy Ratio. Accordingly, these findings reinforce the implication that Malaysian commercial banks are more stable and reliable due to the well-managed investment as a source of cash flow and capitalized income. Hence, this study recommends the Malaysian banking authority to sponsor the establishment of a banking restructuring institution for ASEAN countries. To the Indonesian banking authority, this study recommends the improvement of investing activities and merge the small commercial banks to enforce the banks' capital strengthening.

CHAPTER 1

INTRODUCTION

1.1   Introduction

This chapter begins with the background of the research disclosing the results of observation on the differences in the trend of capital adequacy ratio and operating performance of Indonesian and Malaysian banks. In line with the research gaps, this chapter also discusses the research problems, research questions, and research objectives. This section also explains the scope and significance of the study to sharpen the focus of the study. The chapter ends with the session of thesis organization.

1.2   Background of the Research

A bank is a financial institution that serves as a liquidity intermediary that receives deposits from depositors and provides loans to debtors (Cecchetti & Schoenholtz, 2015). Through the banking system, the government and central banks control the monetary policy that affects the money supply, interest rates, and the level of economic activity as well as the people's well-being, through the country's monetary and fiscal policies (Stowell, 2013). In a financial system, privately owned banks accept deposits and make loans directly to the public besides playing the role of depository institutions. Meanwhile, commercial banks function as financial intermediaries to provide liquidity (Molnár, 2018) for the people, whereas the central bank operates as a financial intermediary for commercial banks.

As a financial instrument, the establishment and operations of commercial banking are under control by the government and the central bank. A group of international banking authorities has established the Basel Committee on Banking Supervision (BCBS) in the 1960s to strengthen the regulations, supervision, and

practices of banks as well as improving the financial stability worldwide (http://searchcompliance. techtarget.com).

Internally, commercial banks have an organizational structure that is designed to perform management functions, which include planning, organizing, directing, and controlling (Kurtz, 2015). The element of the bank organization aligns with the bank's commercial objectives that follow the bank regulations. In order to push the soundness and stability of international banking system and maintaining the current level of capital in the system, BCBS has published the Basel II guide in June 2004 (Sarwar et al. 2011) that includes an agreement of involving a minimum Capital Adequacy Ratio (CAR) of 8% and a Tier-1 Capital of 4%. Besides, the deal is also expected to enhance competitive equality and introduce a more risk-sensitive framework that closely aligns with the internal economic as well as the regulatory capital.

According to Mishkin (2010), to fulfill these obligations, commercial bank managers strive to meet the following four issues concerning the guarantee of cash adequacy, low-risk asset management, funds ownership at a low cost, and capital adequacy. According to Rustam & Rashid (2015), the capital adequacy represents the performance of the banks' capital structure, where the low CAR depicts that the banks' capital structure is weak against liquidity risk.

In progress, the size of the bank's capital needs takes two approaches. Firstly, by using a leverage ratio that represents the sum of the total assets of the bank. This ratio is obtained by dividing the banks' equity by their total assets. In other words, it shows the rate of their assets financing by their equities (Doğan, 2013). The second alternative is the regulation of bank capital requirement, based on risks approach (Dreca, 2014). This approach was under an agreement between banking officers from industrialized countries after the establishment of the Basel Committee on Banking

Supervision. The committee is under the surveillance of the International Settlement Bank in Basel, Switzerland. This approach is named as Capital Adequacy Ratio (CAR) and used as a tool to measure the banks' financial performance (Akbar et al. 2018).

Conceptually, the capital adequacy includes the average capital amount or ratio required by the bank by which the bank capable of covering the risks associated with its assets, off-balance sheet and dealing transactions, as well as all other threats that a bank must deal with (Peter & Mihail, 2010). The capital adequacy ratio is a percentage of total capital against the risk-weighted assets of the bank. The formula distinguished the banks' capital into Tier-1 and Tier-2 capitals. Tier-1 capital comprises the equity capital and free reserves, whereas the Tier-2 capital includes subordinated debt of 5-7 year tenure (Sangmi & Nazir, 2010). However, the bank capital is an accumulation of monetary units comes from the operation, investment, and financial transactions the bank reported in the cash flow statements.

According to Basel II, banks require capital adequacy as a prerequisite to support the commercial bank's viability. Sufficient capital can absorb losses driven the banks into failure (Qin & Pastory, 2012). Capital adequacy reflects the inner strength supporting the bank to survive when facing a financial crisis. With sufficient capital, a bank can expand to open new branches, provide new loans in relatively high-risk areas, recruit potential labor, and even diversify into acquisitions of other firms (Sangmi & Nazir, 2010). The banks with high Capital Adequacy Ratio (CAR) tends to have sufficient liquidity to meet its obligations due immediately as well as having a reserve fund for expansion purposes. In line with the statements, Peter & Mihail (2010) asserted that banks require adequate capital to reduce the consequences of bank failure.

For setting the minimum CAR, the central banks issue some applicable regulations to force the banks to comply. In practice, the fulfillment of such CAR is

affected by the implementation of management policies in responding to the banks' external and internal business environment (Wheelen et al. 2012). Such external factors of the banks include the natural, societal, and macroeconomic environments Meanwhile; internal factors include the structure, culture, and resources the firms adopted that influence the business strategy in managing capital and liquidity.

Uncertainties in the financial market make the banks doubtful in defining the optimal level of capital adequacy and the amount of financial leverage (Scannella, 2012). A higher capital can degrade the bank's profit performance. However, Al-Farisi & Hendrawan (2012) explained that additional capital would only lower the bank's deposit ratio, affecting the maximum amount of credit, and raising their cost of capital. According to Kim et al. (2010), tighter prudential enforcement in the 1988 Basel capital adequacy requirements has reduced the supply of bank loans. Nevertheless, Qin & Pastory (2012) stated that there is a contradictory argument regarding the role of buffer capital in generating profits.

The placement of loan capital as a capital buffer leads to the fixed expense and the opportunity cost of capital retention. When the bank reinvested the money into earning assets, the banks will only bear the fixed interest and not the opportunity cost. Thus, fund allocation as a capital buffer raises the opportunity cost as a result of using the capital into unproductive areas (Qin & Pastory, 2012). According to Gale (2010), it is not clear that higher capital requirements will reduce the level of risk in the banking system when the banks accounted the general equilibrium effects (Oladejo & Oladipupo, 2011). China's experience showed that the establishment of capital adequacy ratio standards primarily due to regulatory pressure rather than capital market pressures and bank performance to improve the premise (Yuanjuan & Shishun, 2012).

On the contrary, when the CAR is too low, the customers' fund is unsafe since the bank unable to absorb the risk of its assets. The lower the CAR, the bigger the customers' concerns about their fund security and decreases their trust in the bank. The establishment of regulations and the exercise of financial institutions oversight intend to ensure that the banks have sufficient capital to overcome the risks they take (Bell & Hindmoor, 2017). However, it relates to experience during the recent financial crisis where investment banks did not have sufficient capital to cover the risk decisions they made on their assets (BCB, 2010). Besides, the capital requirements are likely to be adjusted to boom and bust; so that they become more counter-cyclical as a way to restrain the boom-and-bust cycle in credit markets (McCoy & Wachter, 2017).

The rising in banking risk requires the banks to comply with internationally agreed capital regulations (Scannella, 2012). The bank's failure in meeting an adequate CAR pushed the economy and financial crisis in aggregates. In other words, the bank grows stronger after maintaining a higher capital adequacy ratio. Unfortunately, an excessive CAR, on the other hand, indicates a bank is too conservative and has not taken full advantage of the full potential of its capital (Sangmi & Nazir, 2010).

The liquid asset functions as a means of payment to meet liquidity, carry out investment (Ostergaard et al. 2010), and capital financing of a bank. Otherwise, it is often used to cover the cash flow deficit from the previous accounting period (Subramanyam, 2014). According to Higdon (2011), the relationship between cash and liquidity describe the visibility of cash flow and explains the areas on which the corporate treasures are presently focused on their efforts. The theory of financial intermediation implies that in an economy, the banks take place in liquidity creation and risk transformation (Al-Khouri, 2012).

According to Scarborough (2012), funding activities include activities that lead to changes in the amount and composition of the entity's financial structure, including equity and long-term liabilities. On the assets side, such sources raise the cash balance so that funding activity is also a source of cash. While investment activities are related to the acquisition and sale of long-term earning assets, such as the entity's property, plant, equipment, and other productive assets that are more than one year old, often stated in the term of capital expenditure (Qandhari, 2016).

Cash balances arising from the difference between cash inflow and outflow from categories of operating, investing, and financing activities are being the measure of liquidity outstand into each activity group (Scarborough, 2012). Cash flow from operating activities stems from transactions that influence the company's revenue, operating expenses, working capital, and net income (Warren et al. 2012).

The cash flow from investing activities represent the cash receipts, and disbursements caused the changes in the long-term assets of an entity (Warren et al. 2012). Investing activities usually focused on cash flow related to changes in a firm's productive capacity such as property, plants, equipment, and acquisition of long-term securities. In conducting investment activities, banks typically use the resources of long-term debt and equity. Thus, it can stimulate the change of long-term loans involving Tier-2 Capital and Tier-1 Capital in the calculation of CAR.

Cash flow from financing activities includes the stock shares and long-term bonds issuance. The cash flow from financing activities covers the cash inflows and outflows related to the changes in a company's long-term liabilities and stockholder's equity (Warren et al. 2012). Cash flows from these activities are required to support the investments made or to back up activities, including loan portfolios in the long run finally expected to strengthen the bank's capital and liquidity.

Al-Khouri (2012) found a significant positive relationship between capital and the creation of liquidity. Regarding the banking regulations, Qin & Pastori (2012) quoted that the liquidity of commercial banks is a fundamental bank requirement because it is a prerequisite for the survival of the bank. The Basel Committee recommends the bank's managers maintain the specific level of liquidity to ensure the stability of cash flow.

According to Higdon (2011), the cash and liquidity relationship describes the respective role of these two aspects in facilitating the visibility of corporate cash flows beside explaining the areas on which corporate treasures are presently focusing their efforts. Hence, cash flow becomes potentially related to various aspects of current profitability, the growth of bank size, corporate value, and even the bank's survival.

The transactional relationship between the elements of cash flows may be experienced by the big and small banks, on a different scale between countries. Al-Khouri (2012) described that bank size is significant in determining the liquidity created by banks. Literature in risk portfolio suggested that larger banks are more diversified than their smaller counterparts, mainly due to the extent of their quantity and size of credit portfolio (Afzal & Mirza, 2012). Large banks in rich countries have a tremendous opportunity to sell more products, thus having the ability to multiply liquidity due to the broader market share support. According to Wu & Shen (2011), strong banks in the US, earn higher profits in the areas with higher income per capita. With higher market shares, large banks run the business more efficient, and by which produce higher profits.

Stan & McIntyre (2012) assert that compared to smaller banks, larger banks are more willing to take higher risks. The management willingness to take higher risks is influenced by lower capital to asset ratios, in addition to the variance of bank asset

returns that are high amongst big banks. According to Subramanyam (2014), the heterogeneity of variation in the level of banks' cost inefficiency is mostly determined by the characteristics of bank management, which however are influenced, among others, by the psychological pressure of financial position which includes bank liquidity.

Large banks are more likely to collect better liquidity due to their accumulation of better resources. By which they could organize a better management system to improve CAR's quality. Thus, big banks became stronger and more confident of holding on to the philosophy of "too big to fail" (Kaufman, 2015). On the contrary, the involvement of small and lowest-ranked banks in universal banking activities and high cost to customer ratios, as well as facing the possibility of any negative variations in their assets to cause a direct negative impact on their financial health indicators (Camelia & Angela, 2013).

As a learning point, small or weak banks can learn from these large or strong ones. The differences in financial performance related to the differences in economic (Gutu, 2015), technological (Gado, 2015), prevailing political (Mark & Nwaiwu, 2015), legal (Brown, 2016), socio-cultural forces in the country, and internal financial factor (Bilal et al. 2016). The power of the economy affects the regulation of material trade, money, energy, and information. The power of technology helps to produce innovation problem-solving banking (Sajić et al. 2018). Political and legal forces are concerned with policy arrangements that serve as guidelines for work, inhibiting and protecting regulations while sociocultural power is concerned with the values and moral standards prevailing in a society (Wheelen et al. 2012). According to Mukherjee & Dutta (2013), both political and cultural aspects shape the financial development of a country where the commercial banks run the business.

Implementation of the regulations is likely to limit bank activity, and affect the risk diversification opportunities for banks, even in the broader sense, consequently limit the potential and scale of the economy. The application of policies also influences investment decisions as an alternative to achieving the desired return (Pasiouras et al. 2011). However, the regulatory effect on banks is conditional on the political and economic environment.

As a comparison, Indonesia and Malaysia are two neighboring countries with a similar cultural heritage (Clark, 2013). Both countries applied the different political and legal system. Indonesia is a country adhering a presidential government system (Ahmad, 2017) with a legal system inheriting by the Dutch colonialism. Malaysia, on the other hand, applies the constitutional monarchy system by adhering to the Islamic judicial system (Asrani & Kusrin, 2016). The two government systems, however, lead to the different legal systems, including the financial systems development.

The two countries adopted the bank regulations of the Basel Committee on Banking Supervision. Over the last ten years, the banks in both countries showed an increase in total assets that mirrors the increase in total investments. Likewise, their annual profit, total equity, and loan capital also increased. Indonesia provides an open opportunity for economic agents to conduct various banking scale. While, Malaysia has a limited number of banks but each bank, individually, has more considerable assets size. In the economy, instead of Indonesian Rupiah, Malaysian Ringgit has a stronger exchange rate against the US dollar (http://www.bi.go.id).

In the banking sector, the large Indonesian commercial banks consist of the government-owned banks that gradually merged and privatized, while private ownership dominated Malaysian banks. From 2009 to 2013, Indonesian banks (http://www.bi.go.id) maintained an aggregate higher CAR, but international credit

rating agencies rewarded better ratings for Malaysian banks (http://www.bnm.gov.my). In conjunction with the global financial crisis 2007 (BCBS, 2010), Indonesian banking suffered liquidity problems. Hence, in 2007 and 2008, Malaysian commercial banks took over to Indonesia commercial banks, which the Indonesian banks cannot do. In 2007 CIMB Bank took over Bank Niaga (https://www.cimbniaga.com) and in 2008 Maybank Offshore Corporate Services (Labuan) Sdn. Bhd. (MOCS) took over Bank International Indonesia (https://www.maybank.co.id). In 2008 Bank Century suffered financial difficulties, that if the government liquidated, 18 other banks would suffer liquidity rush (Kompas, 2010). While, on the other hand, according to Ibrahim (https://www.bis.org/publ), the impact of the current global crisis on the Malaysian financial sector has remained well contained. The series of events alert that Indonesian commercial banks were vulnerable enough in facing the crisis.

Under the Basel II of the BCBS, Bank Indonesia formulated an Architecture of Indonesian Banking (API) guideline. The design contains the programs for strengthening national banking structure, improving the quality of banking arrangements; increasing supervision function, improving the quality of banking management and operations, banking infrastructure development, and enhancing customer protection. According to Bank Indonesia, the design refers to the vision to attain a sound, and the efficient banking system in order to ensure financial stability to push the national economic growth (http://www.bi.go.id).

As the response to the significance of the robust banking system, central banks such as Bank Indonesia require to regulate a minimum ratio of capital adequacy (www.bi.go.id) in the framework of Indonesian Banking Architecture. Such provision refers to the Indonesian Banking Act recently updated by The Law No. 10/1998 and

The Law of Financial Service Authority (OJK) No. 21/211. Other countries, such as Malaysia, also adopt similar regulation (www.bnm.gov.my) in line with the Banking and Financial Act (BAFIA) 1989 and Financial Service Act (FSA) 2013. The banking authorities functioned such law and regulations as the general stipulation to control the capital and liquidity movement and entrusts the banking practitioners for executing its day to day technical implications.

Regarding the capability to spend money in operating, investing, and financing activities, the statistical data showed that compared to the Malaysians, Indonesian banks seem to have a higher average CAR, but lower ability to expand abroad. For this study, it is a sign that Malaysian banks have stronger financing than Indonesians. However, the matters alert any difference in the banks' performance between the two countries when managing cash flows and maintaining the CAR.

To enforce the financial performance, Kidwell et al. (2012) stated that a bank must balance profitability and liquidity from operating activities, as well as the solvency in the financing side. The banks' may achieve such financial performances by the supports of daily operating, investing, and financing activities. The ability and flexibility in managing bank capital and liquidity, including cash flows, are influenced by the regulations (Summer, 2013). Liquidity analysis of Vodova (2011) showed a positive relationship between the banks' liquidity and capital adequacy (Qin & Pastory, 2012). The banks' external and internal factors, as well as the bank size, domicile, and country risk, influenced the interplay relationships between the CF and CAR (Al-Khouri, 2012). Thus, the combination of the mentioned relationships drags out a general hypothesis regarding the impact of cash flow from operating, investing, and financing activities on the CAR.

Among the trigger of differences in the banking performance between countries are capital concentration and its derivatives. The fact showed that Indonesia still retains 120 commercial banks in operations (http://www. bi.go.id.) over an area of 1.905 km^2 (https://www.bps.go.id.) and around 250 million of inhabitants. Malaysia, on the other hand, retains only 27 commercial banks (http://www.bnm.gov.my). The banks consist of large and small banks according to their total assets. While on financing capability, a bank gets the title as a reliable bank when it has strong finance. With the prevalence of ranking, in the respective countries, another way to identify the bank's size is by selecting the top ranks, such as the big-five grade.

The above description recognizes that Indonesia has a larger geographical area with all its natural resources, abundant population, and a more open-ended system of government. In managing the banks, Indonesian commercial banks have higher CAR, but on the other hand, Malaysian banks are more stable. The top-ranking of Malaysian banks have higher total assets, and there was no bank liquidation in the last ten years. By applying similar principles of financial management, using the local currency as the prime medium of transaction, Malaysian commercial banks could acquire Indonesian commercial banks having financial difficulties.

On the contrary, as the aligned country, with higher average CAR, Indonesian banks with higher average CAR can not expand overseas. Moreover, during the last ten years, some commercial banks have experienced financial difficulties. The differences in their performance raise the question of how the banks in these two countries utilize the cash flow to achieve desired capital adequacy ratio, by which Malaysian banks seem to be more reliable with the lower CAR. Considers the similarities and differences of the banking environment of the countries, it is

reasonable to develop a comparative study regarding the CF impact on CAR between Indonesian and Malaysian banks.

1.3 Profile of Indonesian and Malaysian Banking

Indonesia and Malaysia are two neighboring countries in South East Asia with a similar culture. Besides, these two countries also have differences in the legal and political systems. Among the similarities and differences include the geographical background, history, demographics, culture, and constitutional arrangements between the two countries. Apart from that, the banking performance in the economy of the two countries is still different.

In the economy, Indonesia uses Indonesian Rupiah (IDR) as its official currency. According to the Indonesia Central Bureau of Statistics, money supply at the end of December 2013 amounted to Rp 3,727,877 billion or equivalent to USD 305,839.44 million based on the mid rate of Rp 12,189.- per USD *(https://latitudes.nu)* with the inflation rate in the average range of 6% during the last three years until 2013.

On the other hand, for almost 50 years of using Malaysian Ringgit (MYR) currency, Malaysia becomes one of the best economic records in Asia, with average GDP growth of 6.5% (https://latitudes.nu). In 2013 BNM reported that the amount of money circulating in Malaysia as of December 31, 2013, amounted to RM 143,755.38 million or equivalent to USD 44,130.47 million, based on BNM Mid Rate of RM 3.26 per USD (http://www.bnm.gov.my). The inflation rate in the recent three years up to 2013 lied in the range of the average of 3% (The Malaysian Economy in Figures, 2013). As the potential development for the banking market by the end of 2013, Indonesia had a population of 247 million, with labor force were around 155 million, with income per capita USD 3.499,9 (http://ekonomi.kompas.com). While at the same time, Malaysia had a population of about 27,336 million with labor force 13.20

million, and income per capita of USD 10,265 (The Malaysian Economy in Figures, 2013).

Along with the development of the economy and government in each country, the Malaysian banking cursory seems more stable compared with Indonesia. It is, however, due to government control over the majority of Indonesian banks, especially before the banks' restructuring in 1998. In the history of Malaysian banking during the recent 50 years, the direct influence of the government on the banks' existence is almost not visible. Banks in Malaysia seem to be fully innovating commercially. On the other hand, the Indonesian government dominated the possession of large banks. Consequently, strategic policies of the banks should be run in line with the government policy and cause the banks' professionals are not sufficiently independent in innovating and developing the banks.

1.3.1 Indonesian Banking Development

The history of Indonesian banking began with the establishment of De Javasche Bank N.V. by the Government of the Dutch East Indies in 1828 (http://www.scribd.com). De Javasche Bank functioned as a circulation bank with the duty of issuing and circulating currency. In 1922, the bank's name conversed to De Javashe Bankwet (DJB). During 1942, Japanese troops liquidated all of the Dutch, British and some Chinese banks, including DJB. The roles and duties of such liquidated banks were taken over by the Japanese banks. DJB activated again during the period of Dutch aggression in 1945-1949. Post the international recognition for the Republic of Indonesia's Sovereignty, in 1953, the Indonesian government took over the DJB and changed the name to Bank Indonesia, which became the central bank to date.

Indonesian commercial banks effectively started with the establishment of BNI in 1946. Indonesian government nationalized some of the commercial banks established in the era of the Netherlands and Japan. Through the 1988 deregulation package, the number of Indonesian commercial banks developed rapidly with an increase of 58.55% in two years, from 111 banks in March 1989 to 176 banks in March 1991. However, by 1997, the negative impact of credit expansion triggered by the deregulation was increasingly felt in 1988, and the government finally liquidated 16 banks and merged four state banks into Bank Mandiri.

At the end of 2013, there were 120 commercial banks in Indonesia. The banks, respectively consist of four State Banks, 34 Private Foreign Exchange Banks, 30 Private non-Foreign Exchange Banks, 15 Foreign Banks and Joint Venture Banks, 10 Branches of Foreign Banks, and 27 Regional Development Banks. Besides, 1.634 rural banks mainly scattered in densely populated areas (http://www.ojk.go.id). The Indonesian central bank is currently governed by Act No. 6 of 2009 concerning the Stipulation of Government Regulation as a substitute for Law No. 2, 2008 on the Second Amendment Act No. 23 of 1999 (http://www.fh.unsoed.ac.id) concerning the Bank Indonesia into law (https://www.bi.go.id/en). While commercial banks are regulated by Law No. 7 of 1992 concerning banking as amended by Act No. 10/ 1998. By the Law of the Republic of Indonesia Number 21 the Year 2011 on the Financial Services Authority, starting 22 November 2011, Indonesian banking supervision was transferred from Bank Indonesia to the Financial Services Authority. Indonesian commercial banks applied the Basel II Accord and gradually started to implement the Basel III Accord in 2013.

1.3.2 Malaysian Banking Development

The history of Malaysian banking development began since the establishment of Chartered Mercantile Bank of India, London and China in 1859 as the first commercial bank. The bank then showed progress, and in 1875, Chartered Bank opened a branch in Penang, while in 1888, it began operating in Kuala Lumpur and Taiping. Initially, banking activities included trade financing, working capital provision, and foreign exchange remittance with London, India, and China. Rising in the international rubber and tin trades in the early 1900s led the banking to continue developing, with more foreign and local banks established by the independent traders.

In 1959, with the recommendation of the World Bank Mission, Bank Negara Malaysia (BNM) as the central bank was established under the Central Bank of Malaya Ordinance 1958 (http://www.bnm.gov.my). The primary objective of the bank development was to take over the authority for issuing currency and money orders from the Currency Board. The ordinance of the Central Bank in 1958 also led BNM to supervise the activities of commercial banks. In 1988, there were amendments to the Insurance Act 1963, together with the changes to the Banking Act 1973 (http://www.bnm.gov.my). BNM granted complete authority over financial institutions in Malaysia, including finance companies, merchant banks, money market, and insurance companies.

In line with its authorities, Bank Negara Malaysia as the Central Bank launched the vision of committing to excellence in promoting monetary and financial system stability, fostering a sound and progressive financial sector to achieve the sustainable economic growth for the benefit of the nation (http://www.bnm.gov.my). In conjunction with the applicable regulations, economic and trading developments, there are currently 61 banks operating in Malaysia. The banks consist of 27 Commercial

Banks, 16 Islamic Banks, 5 International Islamic Banks, and 13 Investment Banks. The existing commercial banks comprised of eight banks with local ownership and 19 foreign banks.

Banking practices in Malaysia subject to the Laws of Malaysia Act 701 (http://www.bnm.gov.my) Central Bank of Malaysia Act 2009, Date of Royal Assent 19 August 2009 published in the Gazette on 2 September 2009. The commercial banks subject to Law of Malaysia Act 372, Banking and Financial Institutions Act 1989, Date of Royal Assent 23 August 1989 (http://www.bnm.gov.my). Besides the national regulations, Malaysian banking also applied the Basel II Accord and gradually started to implement the Basel III Accord in 2013.

1.4   Problem Statement

Studies of Chong (2012) show that Indonesia and Malaysia have similarities as the members of the ASEAN Economic Community with extensive land borders, the population's common historical roots, and cultural dimensions. In running the business, they have similarities in uncertainty avoidance and power distance (Nobes & Parker, 2008) but in running the banks, Malaysia shows a more reliable Capital Adequacy Ratio (CAR) and operational performance.

CAR is the ratio of the capital buffer that the bank should provide to absorb financial volatility. Banks with adequate capital buffer are believed to have sufficient liquidity to finance their investing activities involving long-term assets, operating activities to generate profit and financing activities to repay their principals and cost of capital that in turn constitutes their future CAR. A high CAR will increase customers' confidence to place money in the bank. In turn, the bank will receive additional funds that can be spent to improve its operating, investing, and financing activities.

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The banks measure their capital adequacy ratio by comparing the total capital to the Risk Weighted Assets (RWA). In the Basel Accord I and II, BCBS regulated the minimum CAR of 8% that constitutes 4% of Tier-1 Capital and another 4% of Tier 2 Capital. In Basel III, BCBS restricted a minimum CAR of 8%. It represents a minimum Tier 1 Capital of 6% and Common Equity Capital of 4.5% of the Risk Weighted Assets (BIS, 2011). Commercial banks worldwide, including Indonesia and Malaysia, are expected to adopt these regulations.

In practice, the degree of commercial banks' real CAR may differ from the regulation of similar to 8% every time. Most banks maintain a higher CAR while others experience a lower CAR. The daily CAR fluctuated due to the influence of a combination of cumulative results based on day-to-day financial engineering (Hubbard & O'Brien, 2012) through market interactions and internal funding discretion and control mechanism. According to Dreca (2014), form stability aspect, it is better to have a higher CAR, but from the profitability side, lower CAR is preferable.

For safety reasons, conservative banks tend to maintain a higher CAR (Sangmi & Nazir, 2010). They evade risk by retaining liquid assets unless it is potentially unproductive. Unfortunately, in the long run, it likely degrades the bank's profit (Al-Farisi & Hendrawan, 2012), gradually reduces public trust and causes the insufficient supply of bank's loan (Kim et al. 2010), and ultimately, resulted in the slow growth of the banks. For safety reasons, this approach is preferable by conservative banks. Such banks are worried about liquidity risk due to cash shortage if their investors and depositors withdraw their funds concurrently. The small banks are not strong enough to bear market risk such as potential loss (Dhanda & Rani, 2010) that arises from selling their investments at a lower price.

On the contrary, progressive banks tend to perform secured operations with lower CAR. They converse more of their liquid assets into excessive levels of risk assets (Stan & McIntyre, 2012) with expectations of acquiring additional income after fighting against funding risks. They expect to generate higher profitability, and an impetus continuous growth of retained earnings that can potentially reinvest into earning assets to improve operating capability, post the spending periods.

Stronger banks could adopt this approach through the philosophy of "too big to fail." In case of emergency, governments protect larger banks (Kaufman, 2015) from failure risk for financial stability reasons. It is common sense that instead of small ones, big banks have more loyal customers, higher operating assets, reliable financial resources, and more contempt for taking risks. Bigger banks have the folding power to become stronger, and higher potential to survive, high customers trust, the strength of the financing portfolio, and government support encourage the banks to operate with a lower CAR.

While attempting to meet the CAR regulations, commercial banks continue to carry out their normal operations by taking public deposits and making loans (Hubbard & O'Brien, 2012) through the financial market mechanism (Kidwell et al. 2012). Most of the funds are in the form of cash and cash equivalents; the banks reported in the statement of cash flows. In line with the classification of banks activities, such a statement presents cash inflows, cash outflows, and net cash flows from operating, investing, and financing activities (Spineanu-Georgescu et al. 2014). Accountants report the ending cash balance from cash flow statement as a current asset in the banks' balance sheets at the same date. In assessing the bank's financial health, a higher cash balance brings higher liquidity or vice versa.

The amount of cash circulated into each segment of cash flow statement is influenced by the bank's funding policies that represent the areas on which the bank treasures are presently focusing their efforts on (Higdon, 2011). Each segment of cash flow contributes to a different influence on assets, liabilities, and equities portfolios, as well as the degree of their inherent risks. Hence, this study suspected that each class of cash flow contributes different influence on the banks capital, the risk-weighted assets, and CAR. This course of thinking is in line with Qin & Pastory (2012) regarding the existence of a positive relationship between liquidity and capital adequacy.

According to Brown (2018), the bank is a business that follows the center of economic and business turnover, so they often headquartered in the capital or the large cities in a country. Indonesia is an archipelago in the Southside of Southeast Asia with the capital city located far to the southernmost island near the Indian Ocean. Malaysia located its capital city on the West side of the peninsula of West Malaysia (https://www.google.com/maps), which is more strategic in connecting the economies of the neighboring Asian countries. This position is more favorable for the economic activities of Malaysians comparing to Indonesian banks.

As the underlying potential for the development of the banking market by the end of 2013 Indonesia has a population of 245.1 million, with a labor force of 118,2 million (https://www.bps.go.id.), with income per capita of Rp 36.5 million or USD 2,995. Malaysia, on the other hand, has a population of about 25 million with a labor force of 13.2 million, with income per capita of USD 10,265 (The Malaysian Economy in Figures, 2013). The lower income per capita implies Indonesian commercial banks unable to develop in proportion to the developed countries or at least compared to the Malaysian banks. The large Malaysian banks multiply overseas branches to overcome their local potential market shortage. However, economic growth, savings, and foreign

direct investment of a country have a positive and significant impact on banking sector development (Tsaurai, 2018).

The tracing on the individual banks' financial statements at the end of 2013 shows that Malaysia's largest commercial banks have higher total assets comparing to some of the Indonesians. Total assets of big five Malaysian banks have 199% of the Indonesian top ranks. Malaysia's first and the second largest bank respectively has assets of 198% and 216% of the total asset of the same Indonesian top rank. Even Malaysia's second-largest bank has assets of 184% of Indonesia's largest bank at the end of 2013. The first top rank of the Malaysian bank holds an asset ratio of 60.30% compared to the total assets of the five largest banks in Indonesia. With the total assets, at the end of 2013 Malaysian commercial banks reach the market capitalization of 10, collected an amount of 10 accounts, and a savings fund of RM 10 or equivalent to USD 10. While Indonesian bank hold market capitalization at the range of 9, involved 99 accounts with savings fund of IDR 10 or equivalent to USD 9. However, the comparison shows that Malaysian banks had better public trust compared to the Indonesian banks.

At a glance, the comparative data between the CAR of Indonesian and Malaysian commercial banks from 2004 to 2013 showed that they maintain the CAR to exceed 8% as regulated in the Basel Accord. The Indonesian banks keep an average CAR of 18.23% in the aggregate between the ranges of 17.18% – 21.27% (http://www.bi.go.id). Meanwhile, Malaysian banks hold an annual CAR average of 13.92% between the space of 12.20% to 15.40%. With a lower average CAR, some Malaysian commercial banks have custody of a higher total asset and able to expand overseas by which the Malaysian banking system is ultimately rewarded a higher grade by the International Rating Agencies. These grades are a representation of public trust

and total management quality. Indonesian commercial banks attempt to show a higher CAR to increase trust.

When comparing the risk of assets, Malaysian banks seem to maintain an RWA aggregate of 62.38% between the ranges of 55.74% − 66.47%. At an average, Indonesian commercial banks operated with a higher RWA of 63.63% in aggregate between the space of 52.68% − 72.44% with a significant growth up to 9.91% from 62.53% in 2010 to 72.44% in 2013. The figure proves that the asset risk of Indonesian commercial banks has grown up to 9.91% in four years. The comparisons alerted that Indonesian commercial banks involved in a higher financial risk environment.

In the capital and liquidity viewpoints, the above data indicated that Indonesian banks appeared to be more conservative. The higher CAR of Indonesian banks reported that they retain higher capital and liquidity. In another perspective, the fund placement in operating, investing, and financing activities with lower cash and liquidity resulted in better financial performance for Indonesian banks. With an average higher capital in the last five years, Indonesian commercial banks achieve higher growth of annual profitability from operating activities, which is up to 5.78%. For the total assets acquired from investing activities, there is an increase of up to 5.41%, and the total capital earned from financing activities is up to 7.12%. In this case, Indonesian banks have shown a more efficient and effective way of using their limited liquidity.

Conceptually, the banks that retain low CAR tend to be more extensive in using their capital and liquidity to increase profits, assets, and equity. On the contrary, the banks run with higher CAR, tend to use their money more conservatively and accordingly generating lower income, lower assets growth, and lower capital growth. These banks maintain a higher liquidity rate of which they are less productive in cash

usage. Contradictorily, Indonesian banks hold a superior CAR while at the same time achieving higher growths of profit, total assets as well as capital from the use of cash for operating, investing, and financing activities.

Differences in performance above showed that banking practices do not always in line with the typical structure of CAR and liquidity regulations. This experience can occur in Indonesian and Malaysian banks. Basically, in the day-to-day business activities, both Indonesian and Malaysian commercial banks use their local currency as their primary medium of economic transactions, as stated in their cash flow statements. Both banking groups segregated their activities and cash flow into CFO, CFI, and CFF, by which the banks achieved their specific level of CAR. In the frame of comparison, the banks in different countries deserve to have different country risk, demographics, liquidity, and capital performance.

The Organization for Economic Co-operation and Development (OECD) published country risks at the rates of 3 and 2, respectively, for Indonesia and Malaysia at the end of 2013 (http://www.oecd.org). The Euler Hermes, another rating agency, categorized the country risks of B2 for Indonesia and A1 for Malaysia (https://www.eulerhermes.com). Both institutions provide a higher country risk rating for Indonesia. Malaysian commercial banks run the business at the lower country risk rating (Euler Hermes, 2015; OECD, 2016) so that the RWA ratio becomes more depressed and enable the banks confidentially to operate with a lower CAR. On the other hand, the low CAR indicates that the bank is relatively risky for customers. In reality, Malaysian commercial banks are surviving and even expand like the larger banks when viewed based on their total assets, more capable of expanding overseas and receive better ratings from international rating agencies. During the last five years, Malaysian banks have shown a lower profit growth compared to the Indonesian banks.

In contrast, Indonesian commercial banks have invested in a higher risk assets environment; a higher country risks rating (Euler Hermes, 2014; OECD, 2016) pushing a higher ratio of RWA. For a higher RWA, banks must provide a higher capital buffer to provide a more advanced CAR. Sensibly, Indonesian commercial banks that operate with a considerable CAR means that they should generate relatively higher liquidity. High liquidity means that there is a hold on a lot of liquid assets that ensure the safety of customer funds, even investments of such funds that are not productive. However, the facts show that during the past five years, Indonesian commercial banks have better growth in profit, total assets, and total capital. The performance showed that with relatively limited circulating capital, Indonesian commercial banks succeed in keeping the cash flows portfolio into the segments of operating, investing, and financing activities effectively. With an aggregate higher CAR, Indonesian banks resulted in higher profitability than the Malaysian banks.

In order to follow up the BCBS regulations, BNM issued the provisions to implement the Basel III minimum capital requirements dated November 28, 2012, that took effect on January 1, 2015, with a two-year term. During the transition, besides a minimum CAR of 8%, the BNM respectively set a minimum CET 1 Capital Ratio of 3.5% and 4% for 2013, and minimum Tier 1 Capital Ratio of 4.5% and 5.5% for 2014.

Bank Indonesia, on the other hand, issued the regulation number 14/18 /PBI/2012, which stipulates the obligation to provide minimum capital for commercial banks in the amount of 8 - 11% of RWA. The rates consider the national rating of the banks' risk profile between 1-5 without distinguishing the tiers of capital. To implement the Basel III Bank Indonesia issued the provision Number 15/12/PBI/2013 explaining the minimum CAR of 8% which took effect on the 1st January 2014.