
The Effect of Bad and Doubtful Debt on The Bank Performance: A Study of Banking Institutions in Malaysia

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Abstract

The main driver of economic growth and development in Malaysia is the financial banking industry which will be represented by the largest contributor to Gross Domestic Product (GDP). In simple words, a financial banking institution is one of the financial institutions in Malaysia that conducts fundraising activities from the community in the form of savings and deposits as well as channeling the accumulated funds through credit and loans. Improper and problematic credit and loan management can lead to high bad and doubtful debt provisions. This is one of the wrong methods of financial management and can affect the performance of banks to make a positive contribution to the economic development of the country. The development and performance of a bank can be measured through profitability ratio, liquidity ratio and solvency ratio. Therefore, this study was conducted to determine the effect of bad and doubtful debt on the performance of banks in financial banking institutions in Malaysia. The population of this study consists of 10 financial banking industries in Malaysia taking into account the approach of 30% of the sample selection. The secondary data within 5 years were collected from 2016 to 2020 with reference to the annual reports of each selected bank through Bursa Malaysia. The data in this study were analyzed through descriptive analysis and analysis of variance. In short, this descriptive analysis is conducted to determine the level of bad and doubtful debt, profitability ratio, liquidity ratio and solvency ratio. From this descriptive analysis has shown that the level of bad and doubtful debt, profitability ratio and solvency ratio are at average level while liquidity level only is at low. In addition, the ANOVA results showed that the model was statistically no significant effect at significant value above 0.05. Advanced ANOVA tests also clarified that there was statistically no significant effect on profitability ratio, liquidity ratio and solvency ratio. This study has recommended that every financial banking institution in Malaysia pays attention to the proper management of bad and doubtful debt despite the fact that it does not significantly affect the performance of the bank. Therefore, more systematic management of bad and doubtful debt enables these financial banking institutions to have higher assets which are able to contribute to economic growth while recording better performance in terms of profitability

Keywords : Financial Banking Institutions, bad debt, doubtful debt, bank performance, profitability ratio, liquidity ratio, solvency ratio

I. INTRODUCTION

The aim of this study is to provide information on how the whole study will be carry out in finding further evidence on the effect of bad and doubtful debt on the bank performance of chosen banks. This chapter introduces the background of study, research problems, research objectives and questions, hypothesis of the study. Last but not least, the summary that can be conclude for this chapter.

A bad debt incurred when a company extend too much credit to a customer that is incapable of paying back the debt, resulting in either a delayed, reduced or missing payment. A bank primary function is to move capital from surplus to deficit units, whether for the government, businesses, or

individuals. As a result, financial sector stability has emerged as one of the most important macroeconomic policies for governments today [8]. According to [19] (2017), bank plays an essential role in economic development by providing financial services and allocating resources that aid economic progress. Banks encourage capital creation, new business investment, commerce and industrial growth, agricultural development, and the balanced development of diverse regions. Late payment of debts can cause severe cash-flow issues, leaving a company with a slew of issues ranging from disgruntled employees to a lack of ability to meet demand for other clients. In banking system, the terms of bad debt and doubtful debt refer to the percentage of a bank's loan, advance, or overdraft that has proven difficult to recover in full from the committed client. A bad debt

is very much an account receivable that has been determined to be uncollectible and, as a result, has been written off [1] Note after a lending institution has confirmed that a particular amount of a loan balance is in default, the allowance for doubtful debt accounts balance will be reduced. 7 Lenders charge genuine bad debts against the allowance for bad debt account when they recognize them. [20] (2009) stated that banks utilize this to charge off the expected incremental change in bad debt as soon as the account receivables are recorded. Allowance for doubtful debts assists banks in recognizing bad debts earlier rather than waiting for a set period to do so. It also allows for more consistent identification of bad debt expenditure from one period to the next [21]. Therefore, when a country's financial system is efficient, effective, and disciplined, it leads to fast growth in all areas of the economy. According to [22] (2013), one of the prerequisites for improved economic growth is the reduction of non-performing loans. Despite this, the banking system has a high level of accomplishment profitability, and banks attempt to assist in the growth of the appropriate sort of investments by giving loans to the right people, but bank operations are subject to a variety of dangers, [14]. Credit risk is one of the most significant threats to commercial banks and financial organizations. [16] (2018), stated that when a customer or borrower fails to respect debt commitments on the due date or at maturity, the bank faces credit risk. Credit risk, on the other hand, is the chance of losing the existing loan in part or all owing to credit events. When it's likely that not all the principal and interest payments on a loan will be collected, it is considered to be impaired [23]. The central bank noted in its June 2021 monthly highlights that notwithstanding a slight monthly increase in impairments, the overall gross and net impaired loan ratios were basically stable at 1.6 percent and 1%, respectively [24]. While the impaired loans ratio is expected to stay constant in the short term, Bank Negara Malaysia (BNM) stated that banks have continued to set aside extra provisions for anticipated credit losses, which now account for 1.8 percent of total banking system loans. It said that the banking system's liquid coverage ratio remained solid, and that banks' financing profiles remained steady despite continuous deposit growth. To further the study of these research papers, our group have chosen Malaysia Financial Banking Institution as our main resources in conducting data.

According to [2] 2013, the granting of lending and advances by banks is a very significant key function that aims to provide funds to customers when needed to implement large projects that has a very high cost. These loans and advances have also facilitated the efforts of the companies entrusted to carry out these large-scale projects to perform economic activities that are more focused on the development and growth of the country more rapidly.

Essentially, lending is the main point of rotating and operating banking activities for which it is the larger part of profits that banks can afford to generate. The banking industry needs to act efficiently in its loan administration to ensure more efficient and effective allocation and use of loan funds. Efficient loan administration certainly gives a positive outlook to economic development to be better stimulated. In a period of lack of financial resources, if loan funds can be recycled properly, the economy will be a good path of growth. However, one problem that has occurred in the banking industry in Malaysia that has never been resolved to date is where the amount of loans and advances has never recovered well due to poor loan administration recovery process and the occurrence of poor loan and advance management by customers, [25]. As a result, it has led to a large percentage of bad and doubtful debts difficult to recover and properly controlled. Simply put, bad and doubtful debts occur when borrowers fail to repay their loans. The high and rising percentage of bad and doubtful debts in commercial bank loans is a dangerous trend that should be curbed if the economy is to make adequate use of these banks and enhanced to prevent the collapse of the banking system, [26]. If this problem still fails to be resolved quickly, it can lead to losses to the bank and reduction of the bank's financial resources. Unrestricted and well-managed lending and advances will have affected to the reduce in net accounts receivable, [27]. Indirectly, it makes it difficult for banks to liquidate the assets they own and affects the bank's performance to grow well. Therefore, the problem faced by this research is to determine the effect of bad and doubtful debts on the performance of banks in Malaysia by making banking institutions in Malaysia as the main example of a case study.

The objectives of this study can be divided into these two following sub-objectives which are: 1) Investigate the effect level of bad debts and allowance for doubtful debts on performance of banks in particular. 2) Determine the performance level of bank through profitability ratio, liquidity ratio and solvency ratio.

II. LITERATURE REVIEW

A. Financial Banking Institutions in Malaysia

A financial institution is a firm that specializes in financial and monetary activities including deposits, loans, investments, and currency exchange [11]. Financial institutions, which include banks, trust companies, insurance companies, brokerage firms, and investment dealers, cover a wide variety of commercial operations in the financial services industry. Financial institutions provide services to most people in some form, as financial activities that important element for any economy, with individuals

and businesses relying on financial institutions for transactions and investments. Financial institutions are vital because they serve as a marketplace for money and property, allowing capital to be effectively allocated to the most productive uses [15]. For example, a bank accepts consumer deposits and loans the funds to borrowers. Without the bank as a facilitator, it is improbable that any person will be able to discover an eligible borrower or understand how to pay its debt. Individual and commercial clients can choose from a variety of goods and services offered by financial institutions. The financial institutions can be variously listed under commercial banks, Islamic banks, International Islamic Banks, Investment Banks, and other Financial Institutions. To further research, it is highlighted that 10 out of 27 from commercial banks in Malaysia are chosen to determine the effect of bad and doubtful debt on the bank performance. Firstly, stated that commercial bank is a type of financial institution that accepts deposits, provides checking account 12 services, personal and home loans, and provides people and small companies with basic financial products such as certificates of deposit and savings accounts. Commercial banks profit through loans such as mortgages, vehicle loans, company loans, and personal loans, which they provide and earn interest on. Malaysia's banks play a significant role in financing growth as a developing country. Commercial banks in Malaysia play an important role in financial intermediation. The ability of a commercial bank to employ its assets is frequently considered while evaluating its performance. The profit of commercial banks comes from their major activity, which is to take short-term deposits and convert them into long-term deposits. The information gathered during the bank's performance review may be utilized to improve the bank's overall operational efficiency, which can help it gain a competitive advantage. In this context, the goal of this research is to examine the sources of efficiency and technological changes in all Malaysian commercial banks. Investors can use financial ratios to identify a bank's strengths and weaknesses, which can help them better understand the bank's profitability, liquidity, and credit quality [28] , [29] (2020) stated that, when comparing the functions of commercial banks to those of other types of banks, commercial banks are the largest sources of funds in the financial system. Aside from that, commercial banks face a variety of hazards that must be properly managed, particularly when dealing with big amounts of debt. According to [42] (2020), the Malaysian banking industry's gross impaired loan (GIL) ratio recorded a new low of 1.38% of September 2020, thanks to a substantial number of loans under repayment moratorium. After the relief measures have expired, the underlying asset quality will become more obvious. In the worst-case scenario, estimated that the GIL ratio will reach 3.0% - 3.5% in 2021 or 2022. During Covid-19 pandemic, banks played a vital role in helping people with

finance problems. According to [30] (2021), to mitigate the pandemic's severe economic effects, the Malaysian government and central bank established an agreement with all banks to give an automatic six-month moratorium on loan or financing repayments to all people and SME's. The COVID-19 pandemic reacted to government initiatives aimed at managing the infection, as well as the function of trade flow during the pandemic in a specific region. Much research has looked at how successful government policies are at preventing COVID-19 transmission. Measures that are adopted swiftly in nations with lower cost of living or in countries 13 with a higher percentage of the elderly or stronger health systems, have a higher effectiveness [31]. Therefore, the overall it can be concluded that the level of bad and doubtful debt among banking institution in Malaysia is average but due to the Covid 19 pandemic that hit the world, give impact for the level of bad and doubtful debt slightly increased, [32]. However, this increase is still considered average because it is well controlled.

B. Concept of Bad and Doubtful Debt

There are several definitions of bad debts. According to [33] 2017), bad debts are debts that occur when a firm believes that the debtor is unable or unwilling to pay and causes the firm not to get back the money they have lent. In the context of this study, these bad debts will arise when debtors fail to make repayments on debts that they borrow with these banking institutions in Malaysia either intentionally or unintentionally. In a simple word, these bad debts cannot be recovered or debts whose collection is not economical to continue. Generally, in these circumstances bad debts will be written off, which is essentially a debt cancellation to eliminate its effect on the accuracy of the financial statements. Only specifically identified amounts are written off as bad debts. Therefore, this study has measured bad debt using the formula below:

$$\text{Accrual Bad Debt} - \text{Recovery Bad Debt} \\ \text{Turnover for the period}$$

Other than that, doubtful debt is a term that is very synonymous with bad debts, [33]. In other words, when talking about bad debts, it has become a must to also talk about doubtful debts because it has almost the same meaning but with different terms. Doubtful debt is a situation where the firm believes there is an increased likelihood that the debtor will fail to pay his debt for a variety of reasons, [34]. Basically, in accounts these bad and doubtful debts are very closely related to two generally certified accounting principles, [13]. The first concept is the matching concept where expenses are recorded on the income statement in the same period that related revenues are earned and expenses not directly tied to revenues should be reported on the income statement in the same period as their use. It means that this method of recording matches income with the period it was

generated regardless of the actual time of the cash flow. This matching concept rule is adapted to bad and doubtful debts because each revenue must be allocated to the accounting period in which the goods were sold or services performed, and expenses must be allocated to the accounting period in which it was used to generate revenue. The second concept is the concept of objectivity which says that the amount of a balance sheet item such as accounts receivable should reflect the expected realizable value. Therefore, under the allowance method each loss from bad debts is matched to sales recorded under revenue in the income statement. Below is formula regarding measuring the allowance for doubtful debt in this study.

The Established Allowance for bad debt loss
Total Credit Granted x 100

According to [35] , 2013), any debt that exceeds 6 months should be carefully considered to be a bad debt despite the fact that the debt can become bad at any time in the life cycle of the loan period depending on the circumstances and situation. String from this, a debt can be classified as a doubtful debt when it has exceeded a period of 90 days. These bad debts generally need to be made based on accurate evidence and proper objectives. This is because Range Indicator Remarks 0.01 – 0.50 Low (Good) Low level of bad and doubtful debt refers to the effective implementation of strategies by banks in controlling loans or outstanding balance that are no longer recoverable and must be written off from continuing to increase significantly. 0.51 - 1.00 Average Average level of bad and doubtful debt looks at the bank's ability to allocate outstanding balance that can no longer be recovered without affecting the services being performed and the profits being generated. Above 1 High (Not good) High level of bad and doubtful debt refers to the high financial risk that banks will face after allocating at large amount of bad and doubtful debts due to the practice of large-scale lending without a sustainable management strategy. Doubtful debt is described as a subjective estimate where a record will be made when a person fails to pay his debt within 90 days and precisely the creditor has a major problem that fails him to repay the loan that has been made.

C. Causes of Bad and Doubtful Debt

The world situation hit by the covid 19 pandemic has become an issue to the problem of bad debts that has never been resolved in any country especially in Malaysia, [36]. Therefore, the problem of bad debts often occurs in commercial banks in Malaysia in recent times due to the amount of debt or loans given to creditors that are not likely to be paid or creditors are not willing to take action to recover the loan amount for various reasons. Taking the example in the United States of America, bank loans with arrears of

more than ninety days are automatically recorded as troubled loans. Therefore, the basic approach of accounting becomes the best source to follow where the full amount of bad debts will be written off to the profit and loss account or bad debt provision as soon as it is forecast.

In the article written by [37], several main reasons have been identified that are the cause of the occurrence of bad debts and provision for doubtful debts. Frankly, the problem of bad debts cannot be blamed on one party only, which are the creditors because every debt made has occurred with the consent of two parties. Therefore, the cause of this bad debt should also be blamed on the bank as a debtor. The biggest problem of bad debts is due to poor credit ratings by banks. Poor credit assessments by banks have resulted in borrowers failing to comply with loan agreements properly such as repaying loans according to their ability and repaying loans below the value they have agreed in the loan agreement.

The second problem that occurs is the inefficient debt management administration system. Banks will usually wait within 3 months to give a warning notice and make a call if a person fails to pay a debt or loan. Ideally, the debt management system in Malaysia should take the example of Japan where they will take the approach of only a period of 1 month to issue a notice to its customers who fail to repay the loan. Not only that, the bank will also set a time to make an appointment with the creditors who have financial problems to repay the debt that they borrowed. As a result, the Bank of Tokyo has been hailed as one of the best trading banks in the world in controlling the problem of bad debts from continuing to rise, [38]. Apart from that, the most significant problem happening to creditors is poor and unsystematic financial management. Financial management should be well designed by placing debt as a major responsibility that needs to be resolved. Some creditors will experience financial management problems after they make a loan with a bank due to them failing to distribute their expenses well between life and also commitment to pay the debt.

D. Concept of Bank Performance

Generally, performance is defined as the achievement of objectives set by a firm or bank within an agreed time and at minimal cost while using available resources. As stated by [39] 2012), bank performance can be defined as the reflection of how a bank's resources are utilized in a way that allows it to achieve its objectives. More simply, the performance of this bank refers to the use of set of indicators that give an idea of the current status of the bank and the extent of its ability to achieve the desired objectives. As a simple analogy, as a manager or director in charge of a firm or bank, the performance they may describe as

profitability or competitiveness for the company or bank, a conducive work environment as well as the quality of services provided for customers. As such, the measure of bank performance is a tool to analyze a bank's capacity to use existing resources to generate sustainable profits. Measurement of bank performance is also seen as a control function that provides information effectively to management in directing and giving ideas to act towards progress. Progress or improvement cannot occur without a mechanism that collects feedback on performance measurement. [40] (2013) has identified two approaches to measure bank performance, namely non-structural and structural approaches. The non-structural approach uses performance measures traditionally through analysis of relevant ratios. In contrast, the structural approach is based on theoretical models of banking behaviors such as efficient boundaries and profitability. However, we found that a more effective study would focus on the traditional approach because it has taken into account cost efficiencies in day-to-day operations. Therefore, the traditional approach that will be presented in this study will be broken down into 3 main ratios namely profitability ratio, liquidity ratio and solvency ratio.

E. Profitability Ratios

Profitability is a measure of net revenue and expenses. Revenue refers to an increase in owners' equity as a result of the sale of goods or performance of services consisting of cash or debt (accounts receivable). Expenses refers to the reduction in owner's equity as a result of costs incurred to earn revenue. In this study, profitability is a key measure of a bank's ability to generate profit as a return on the funds invested. As stated by [41] (2014), a less profitable or unprofitable bank may not be able to last long while a highly profitable bank has the ability to reward its owners with a large return on their investment. Profitability is the main objective of all business ventures whether in the short term or long term. Therefore, it is important for an assessment to be made on the profitability ratio to reflect the actual situation of the bank in providing daily services in addition to the quality of management to move effectively. In completing this study, Return on Assets (ROA) and Return on Equity (ROE) are among the 2 ratios taken from the profitability ratio. Therefore, the table below clearly shows the 2 ratios that are used from the profitability ratio and the benchmarks that will be used to measure the level of profitability of financial banking institutions in Malaysia.

Metric Name	Name	Derivation
ROA	Return on Asset	Profit After Tax / Total Asset

ROE	Return on Equity	Profit After Tax / Total Equity
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Table 1: Profitability Ratio

F. Liquidity Ratio

Liquidity ratio is used to measure a company's ability to meet available or current short-term resources to meet these obligations. The liquidity ratio at banks as presented by [43], (2016) has emphasized that if a commercial bank maintains a large amount of assets that can be transferred to other banks for cash without material losses, if necessary, then there is no need to rely on maturities. Simply put, this theoretical view states that a perfectly transferable asset must be immediately transferable without loss of capital when the need for liquidity arises. The bank will have liquidity if it has assets that can be easily transferred to another party to obtain cash at a satisfactory price when funds are needed regardless of the asset. Thus, this liquidity ratio facilitates commercial banks to scrutinize liquidity management strategies whereby it can assess the bank's ability to have a more sustainable plan to meet short-term and immediate cash obligations without incurring significant losses, [6]. This liquidity ratio is an important element for banks in making investment decisions because most investment decisions will be related to the amount of liquidity available through liquidity management methods. In completing the study, 3 ratios under the liquidity ratio (current ratio, asset turnover and operating cash flow ratio) were used as a measure to determine the actual liquidity level of financial banking institutions in Malaysia. The table below is a further description of the selected liquidity ratio and the benchmark to liquidity ratio.

Metric Name	Name	Derivation
CR	Current Ratio	Current Asset / Current Liabilities
ATR	Asset Turnover Ratio	Revenue / Total Non-Current Liabilities
OCFR	Operating Cash Flow Ratio	Operating Cash Flow / Current Liabilities

Table 2: Liquidity Ratio

G. Solvency Ratio

Solvency refers to the ability of a financial institution to meet its obligations in the event of cessation of activities or liquidation. It refers to the long-term financial viability of a financial banking institution and its ability to meet long-term obligations. The bank will be considered a solvent if the total assets exceed

the total liabilities. If the total assets are lower than the total liabilities, the bank will face the insolvency risk. Insolvency risk is a situation where a bank is highly likely to be unable to meet its debt obligations. This can indirectly result in the existence of the probability that the bank will go bankrupt due to inability to pay its debts. It is important to note that this solvency problem tends to be more long-term than liquidity issues because basically banks always hold funds and stop lending when there is a solvency crisis, [44]. Solvency ratio is a ratio that will measure the extent to which a bank's cash flows can cover its long-term debt. Not only that, this ratio will also typically be used to assess the financial health of a bank and can be used to determine the likelihood that a bank will default on its debt obligations. Therefore, financial leverage and equity ratio have become the main metrics in measuring the level of solvency. The table below shows a description of solvency ratios that have been selected and the benchmarks in assessing the level of financial banking solvency.

Metric Name	Name	Derivation
FL	Financial Leverage (Debt to Equity)	Total Liabilities / Total Equity
ER	Equity Ratio	Total Equity / Total Asset
FL	Financial Leverage (Debt to Equity)	Total Liabilities / Total Equity

Table 3: Solvency Ratio

H. Effect of Bad and Doubtful Debt in Bank Performance

Bad and doubtful debt are to determine if the debt is to be written off or still has a chance to collect the cash. In other word, bad debt ratios can help to lower the risk of default while also allowing for future credit expansion. Bank performance is the one that bank give a response on their behalf opinion regarding the performance on a certain matter. The variables that affect bad debt in banks, as well as the magnitude of each factor's impact, will aid bank administrators in making appropriate decisions to keep bad debt ratios low and promote steady economic growth. This is because if bad and doubtful debt increases, it will increase the liabilities in the banks and when liabilities increase, the rate of ratio will be decreased. The decrease of the rate of ratio will make the financial status of the banks to be decreased and the ability of the bank to pay loan in timely manners will decreased.

As the amount of debt grows, so does the chance of bad debts rise as well. It is essential for an investor to assess bank performance through

profitability ratio before they invest which includes Return of Equity (ROE), a good place to start when estimating a stock's growth rate and dividend growth rate in the future. For example, if the ROE rises, investors will be more interested in investing their money in the business, causing stock prices to climb. Next, Return on Asset (ROA) where the potential to generate bank profits on any capital source, regardless of which capital source has a more holistic view [12]. Furthermore, using ROA, it is possible to evaluate the performance of banks with similar risk levels, as this index accounts for differences in tax policies as well as financial leverage.

Bad and doubtful debt can affect the accounts receivable and inventory of the liquidity ratio that include assets that can be turned into cash. Liquidity ratios use variables including the current ratio, quick ratio, cash ratio and operating cash flow ratio to determine a bank's capacity to satisfy debt obligations in its short-term liabilities and its balance sheet [11]. A bank that can satisfy its financial commitments on schedule is said to be liquid. A bank that is liquid has a payment method or current asset that is bigger than its debt smoothness. For example, liquidity was assessed by the number of current ratio acquired by the bank, which can reflect the amount of their capacity to fulfil their operational demands, particularly working capital, which is critical to maintain their performance, which in turn influences stock price performance [3]. It can encourage confidence in investors, encouraging them to purchase shares to boost stock returns.

Apart from this, solvency ratio is a measurement of a bank's capacity to pay its debts if it goes bankrupt [10]. This ratio is also known as the leverage ratio, and it evaluates a company's borrowing capacity. In other words, solvency ratio will measure a bank's capacity to utilize its own capital as security for all its loans [10]. When the economy slump, banks with high solvency will have less downside risk, but when the economy improves, the chances of making a profit are limited, [45]. The solvency ratio will affect the bank's performance as well as its share value. When the solvency ratio is too low, it has a negative impact on the performance of the bank because a lower solvency ratio indicates higher interest expense and lower income.

Through the same objective of expanding company operations, Malaysian commercial banks must carefully evaluate credit expansion while enhancing credit quality and raising the rate of loan programs with property growth. Outstanding debts have been dealt with risk provisions, and all recovery efforts must be vigorously sought. RHB bank is an example of bank which facing problem with bad debts. The relationship between the amount of RHB's bank credit risk and its bank assets reveals a negative

relationship, with the bank's credit risk increasing as the number of its assets dropping. The amount of the bank's assets has an impact and influence on its credit risk, with the bank's total assets dropping as the credit risk increases. Hence, the allocation of bad debt and doubtful debt will affect a bank profitability as well as in solvency and the bank liquidity because of the dropping amount of assets. Thus, it gives effect to the financial statement of a bank which it shows that the bank level of efficiency in handling company operations is dropping.

I. Conceptual of Research Framework

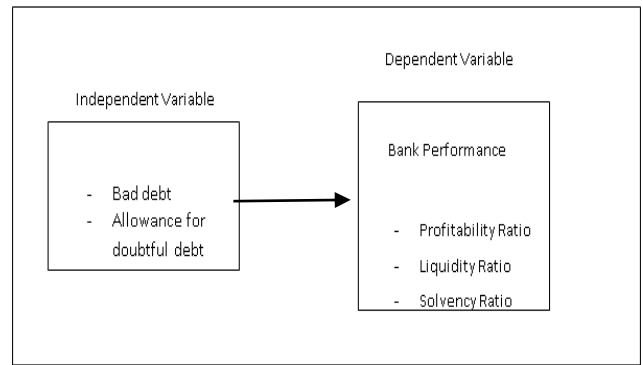


Figure 1: Presentation of Independent Variable and Dependent Variable

The conceptual of research framework figure shows that the independent variable consists of allowance for bad debts and bad debts ratio. Meanwhile, the dependent variable is the performance of the bank which consists of profitability ratio, liquidity ratio and solvency ratio. This study adapts the same purpose which is determining the effect of bad and doubtful debt on the performance of bank by analyzing the relationship of independent and dependent variable as shows above. This study attempts to show the effective ways in minimizing the emergence of the growth of bad account.

III. RESEARCH METHODOLOGY

This study variables, problem statement, and research conceptual framework were identified in the previous chapter. As a result, the following stage is to create a research design for this study to identify data collection and evaluate the data to come up with a solution. According to [46], research design will be used to combine the many components of the study in a cohesive and logical manner to assure that it will effectively solve the research topic.

As mentioned in the previous chapter, this study focusses on the effect of bad and doubtful debt on the performance of Banking Institutions in Malaysia. In the previous chapter about conceptual of research framework figure shows the relationship between the independent variable and dependent variable which the independent variable consists of allowance for

bad debts and bad debts ratio. Meanwhile, the dependent variable is the performance of the bank which consists of profitability ratio, liquidity ratio and solvency ratio.

Thus, this study of course uses secondary data. In addition, the study used quantitative data methods. According to [47] (2013), data that have been collected and available which are then scrutinized for validity and reliability by researchers are usually used to obtain quantitative data for statistical analysis. Therefore, before conducting this research study, we need to understand how the research design is produced and how the research can be carried out properly before we can undertake this research study. As a result, we should structure the design such that it may be followed throughout the stud

Bank Code	Bank Tag	Bank Name
1155	MAYBANK	Malayan Banking Berhad
1295	PBBANK	Public Bank Berhad
1023	CIMB	CIMB Group Holdings Berhad
1066	RHBBANK	RHB Bank Berhad
2488	ABMB	Alliance Bank Malaysia Berhad
5185	AFFIN	Affin Bank Berhad
5258	BIMB	Bank Islam Malaysia Berhad
1015	AMBANK	AmBank Malaysia Berhad
5819	HLBANK	Hong Leong Bank Berhad
	BMMB	Bank Muamalat Malaysia Berhad

Table 4: List of Selected Bank

A. Methodology Approach

There are 3 types of methodology approach namely qualitative data, quantitative data and mixed method approach. Therefore, types of approaches used in this research is quantitative methods. In another study conducted by [48], quantitative data is defined as the value of data expressed in counts or numbers, with each data set having a distinct numerical value. This data is any measurable

information that may be utilized for mathematical computations and statistical analysis, with the goal of making real-world decisions based on the results. As such, the quantitative method approach has been chosen as a more efficient strategy in preparing this study. This refers to a set of data collection made through statistics to be evaluated and decided. Secondary data used in this study includes the collection and analysis of numerical data that will be made through the calculation of ratios from the annual reports of banking institutions in Malaysia that have been selected before it is translated into statistics for evaluation in more detail.

B. Population and Sample selection

Financial banking institutions in Malaysia have continued to experience good growth in their industry since 2015 and encouraging more investors to invest in this industry, [5]. However, the rapid growth of the banking industry did not last long as the covid-19 pandemic hit Malaysia and caused many banking institutions to struggle to remain at their best. Being the biggest factor in this problem is one of them stems from the problem of bad debts that are too large allocated by the bank because many of its customers began not to repay the loan according to the agreement that has been signed. There was an increase in the contribution of gross domestic product from the financial banking industry in 2016 and a slight decline starting 2020. Gross domestic product is an indicator used to measure the health of a country's economy. The contribution of gross domestic product in the financial banking industry showed a very significant increase starting with

11% in 2011 increasing to 12.3% in 2016 and further increasing to 13.9% in 2019. Starting 2020, it falls back to the level of 12.1% and it is expected to increased back starting in 2022 with various economic injection initiatives already designed for this industry, [5]

Accordingly, financial banking institutions licensed under Bank Negara Malaysia were selected for this study. A total of 10 of the 27 financial banking institutions were selected based on the ease of accessing their annual reports on Bursa Malaysia. All the information required in this research will be accessed through the five-year annual report starting 2016 - 2020 on Bursa Malaysia. The accessibility and reliability of the annual report financial data is reliable when accessed through Bursa Malaysia where providing transparency of the annual report is necessary in accordance with the Securities Commission Act 1993. Therefore, the Table 4 shows 10 lists of financial banking institutions that have been selected in completing this study.

C. Data Collection

As discussed previously, this study used quantitative methods to collect the required data. Therefore, secondary data were selected as the primary source to complete this study. This secondary data is taken into account throughout the study conducted covering 5 years of annual reports of each banking institution from 2016 - 2020.

Secondary data is data collected by someone other than the actual user. In a simple word, these secondary data relate to some information collected and recorded by several others for different purposes yet have the same utility of use for researchers in achieving the objectives of the study, [18]. This secondary data includes magazines, newspapers, books, journals and so on. As mentioned earlier, since this study covers quantitative methods of course it becomes a matter that should not be left to be discussed in this study. This is appropriate as stated by [17] in his article where the first type of data that a researcher should look at while conducting any research is secondary data. Therefore, the use of data from government publications and annual reports from companies is the approach used in this quantitative method that covers secondary data.

The use of secondary data requires great vigilance and precision even if it does not take any cost and the use of time is faster and safer, [18]. Caution and accuracy should be made as the main component in this secondary data because some

related problems may arise such as relevance and accuracy in data selection so that it is appropriate to the information needs to achieve the objectives of the study. The careful handling of secondary data indirectly allows it to be used in the exploitation of the literature to help researchers understand the level of work in the field of ongoing investigation. Thus, this secondary data can sharpen one's focus on the research being conducted because the researcher deeply understands the purpose of the study being conducted and ultimately it is able to achieve the set objectives.

As mentioned above, there are various methods that can be used for data collection in research. Therefore, the secondary data collection method has been decided to be used as one of the data collection methods in this study. This is because based on the nature of this study, all the required information will lead to a very effective analysis as it will all be accessed through annual reports obtained from companies as well as government-issued data through the Malaysian Stock Exchange. This has clearly shown that no cost will be involved or used to obtain all the required information and the time involved can also be minimized as it is all derived from annual reports and government published data. In summary, research is difficult to exclude from the use of secondary data because it is made from relevant information from books, journal articles, annual reports and so on.

D. Data Analysis

Data analysis is the process of coding, keying in and editing the data [1]. In completing this study, the data will be analyzed using the latest version of SPSS which is 27. This SPSS software was chosen to analyse the data because it helps make the process of analyzing easier. It is just the matter of set the variables names, types, title and label that required by in this study. After the data has been exported in the SPSS, the process of statistical analysis can be made well.

Therefore, SPSS was used to analyze the secondary data that had been collected. Analysis of secondary data can have some complexity where the calculation of financial ratio analysis needs to be done first before the data will be standardized for inclusion in the SPSS software. In this study, the analysis of bank performance will be measured through 3 ways,

namely profitability ratio, liquidity ratio and solvency ratio. All these ratios will be calculated through the collection of data made through the last 5 years of the company's annual report starting from 2016- 2020.

In order to facilitate this data to be interpreted and understood by the reader, data analysis has been divided into two, namely descriptive data analysis and inferential data analysis. First, descriptive analysis was performed to see in detail the mean and standard deviation of the variables set in the research objectives. Second, the inferential analysis performed consisted of an analysis of variance that included one way analysis of variance (ANOVA) which will be discussed in more detail in the next chapter.

IV. DATA ANALYSIS

A. Analysis of Sample

Based on the table below, there are 69 financial institutions listed by Bank Negara Malaysia (BNM). However, this study only focuses on financial banking institutions of which there are only 27 in Malaysia as licensed by BNM. As such, we used the 30% method of sample selection to determine how many financial banking institutions we need to take to ensure that this study can be completed successfully. Therefore, 30% of the 27 financial banking institutions are 8, however we rounded the selection of this sample to 10 to facilitate this study.

List of Financial Institutions	No. of Financial Institutions
Financial Banking Institutions	27
Financial Islamic Institutions	16
Financial Investment Institutions	11
Financial Development Institutions	6
Other Financial Institutions	9
Total of Financial Institutions in Malaysia	69

Table 5: Analysis of Sample

B. Descriptive Analysis

This descriptive analysis is conducted to see the level of bad and doubtful debt that has been allocated by each financial banking institution in Malaysia. Not only that, in this descriptive analysis there is also an evaluation on the bank's performance through 3 main ratios (profitability ratio, liquidity ratio and solvency ratio). The assessment of these three ratios takes into account and believes that the provision of bad and doubtful debt can affect the performance of the bank.

C. Bad Debt and Allowance for Bad Debts

N	Min	Max	Mean	Std. Deviation
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	N	Minimum	Maximum	Mean	Std. Deviation
BAD DEBTS	50	.81	2.98	1.3230	.37677
ALLOWANCE FOR DOUBTFUL DEBT	50	.05	1.51	.3452	.27013
Valid N (listwise)	50				
overallRQ1	50	.43	2.25	.8341	.31795
Valid N (listwise)	50				

Table 6: Level of bad debt and allowance for bad debts

Table 6 shows bad debts with a mean of 1.323 and a standard deviation of 0.377. The minimum value recorded was 0.81 while the maximum value was 2.98. It has also illustrated that the level of bad debts is high. For allowance for doubtful debt, the mean is 0.345 with a standard deviation of 0.270. Due to the mean and standard deviation recorded were lower than bad debt, the minimum and maximum values were also significantly lower with 0.05 and 1.51 recorded respectively. The level of allowance for doubtful debt shows to be at a low level. Thus, the overall mean is 0.834 with a standard deviation of 0.318. This indicates that the level of bad and doubtful debt among financial banking institutions in Malaysia is at an average level. This concludes that the bank has the ability to allocate outstanding balances that cannot be recovered without compromising the services performed as well as the profits generated.

D. Profitability Ratio

	N	Minimum	Maximum	Mean	Std. Deviation
RETURN ON ASSET	50	.20	1.80	.9552	.32311
RETURN ON EQUITY	50	2.10	17.12	9.7810	3.25090
Valid N (listwise)	50				
overallRFR	50	1.15	9.25	5.3681	1.76802

Table 7: Level of Profitability Ratio

Table 7 shows an overall mean score of 5.368 with a standard deviation of 1.768 for profitability ratio based on return on assets and return on equity. The minimum value recorded in the table above is 1.15 and the maximum value is 9.25. From the overall mean gives the impression that the profitability ratio among financial banking institutions is at an average level where banks are able to balance the prudent use of assets to generate profit and value to shareholders.

E. Liquidity Ratio

N	Min	Max	Mean	Std.
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		imum	imum	ean	Deviation
CURRENT RATIO	50	.14	1.22	.6228	.32977
ASSET TURNOVER RATIO	50	.03	.08	.0514	.00948
OPERATING CASH FLOW RATIO	50	.02	1.34	.1458	.21985
Valid N (listwise)	50				
overallLR	50	.09	.85	.2733	.15464
Valid N (listwise)	50				

Table 8: Level of Liquidity Ratio

Table 8 shows an overall mean score of 0.273 with a standard deviation of 0.155 for the liquidity ratio represented by current ratio, asset turnover and cash ratio. The minimum and maximum values displayed in the table above are recorded 0.09 and 0.85 respectively. As such, the level of liquidity ratio for financial banking institutions in Malaysia is at a low level. This illustrates that the bank does not have sufficient liquid assets to cover its short-term liabilities.

F. Solvency Ratio

Table 9: Level of Solvency Ratio

Table 9 shows an overall mean score of 9.410 with a standard deviation of 1.538 for the solvency ratio which includes financial leverage and equity ratio. The minimum score is 6.72 while the maximum score is 14.47 which overall reflects that the level of solvency ratio among financial banking institutions is at an average level. Average solvency ratio indicates the stable financial health of a bank in the context of its debt obligation where the profits earned by the bank are able to meet the demands of its long-term obligations.

G. Inferential Analysis

This section will briefly discuss the analysis of variance used to identify the effect of bad and doubtful debt represented by independent variables on bank performance (profitability ratio, liquidity ratio and solvency ratio) represented by dependent variables. This section has also been analyzed in more depth to achieve the objectives and hypotheses of the study as set out.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	47.983	46	1.043	4.735	.112
Within Groups	.661	3	.220		
Total	48.644	49			

Table 10: ANOVA test of effect bad and doubtful debt on bank performance

Table 10 shows the ANOVA analysis test to see whether there is a statistically significant difference or not between the group means that have been collected to achieve the objectives of the study. The table above clearly shows that the significance value is 0.112 which is more than 0.05. Therefore, it can be concluded that there is no significant effect exists between bad and doubtful debt with bank performance (profitability ratio, liquidity ratio and solvency ratio) in banking institutions in Malaysia ($F(3) = 4.735, p > 0.05$). Therefore, the null hypothesis is accepted.

	N	Minimum	Maximum	Mean	Std. Deviation
FINANCIAL LEVERAGE	50	6.22	13.97	8.9068	1.53547
EQUITY RATIO	50	7.22	14.97	9.9138	1.54063
Valid N (listwise)	50				
overallSR	50	6.72	14.47	9.4103	1.53754
Valid N (listwise)	50				

	Sum of Squares	df	Mean Square	F	Sig.
ovrl PR Between Groups	149.950	46	3.260	3.038	.196
Within Groups	3.219	3	1.073		
Total	153.168	49			
ovrl LR Between Groups	1.161	46	.025	7.051	.066
Within	.011	3	.004		

Groups						
Total		1.172	49			
ovrl SR	Between Groups	114.704	46	2.494	6.603	.072
	Within Groups	1.133	3	.378		
Total		115.837	49			

Table 11: ANOVA post hoc Tukey test of bank performance

Table 11 above shows the ANOVA analysis test to find out the mean difference between the groups involved represented by each ratio in bank performance namely profitability ratio, liquidity ratio and solvency ratio. The second analysis of this ANOVA is important to do in order to see whether or not there exists a ratio that has a significant value less than 0.05. If a ratio occurs with a significant value of less than 0.05, then a Tukey post hoc test should be performed to obtain a multiple comparison table. As shown in the table above, there is no ratio whose significant value below 0.05 where profitability ratio recorded a significant value of 0.196, liquidity ratio is 0.066 and solvency ratio is 0.072. Overall, it is evident that there is no significant effect that exists between bad and doubtful with profitability ratio, liquidity ratio and solvency ratio. Therefore, this study did not require post hoc Tukey testing to be conducted.

According to the research model above, Model 1 which refers to descriptive analysis 1 was created to test the first research question (What is the effect level of bad and doubtful debt on the performance of banks especially for Banking Institutions in Malaysia?). Model 2 which refers to the descriptive analysis 2, 3 and 4 was created to test the second research question (What is the performance level of bank through profitability ratio, liquidity ratio and solvency ratio?). The combination of model 1 and model 2 will form model 3 which refer to ANOVA created to test the hypothesis [H1 1: There is significant effect between bad and doubtful debt with performance of banks (profitability ratio, liquidity ratio and solvency ratio) in the banking institution in Malaysia]. Therefore, the summary of the analysis that will be conducted in this study to answer all research questions and hypotheses can be summarized as the following table:

Purpose	Analysis
Research Question #1	Descriptive Analysis
Research Question #2	Descriptive Analysis
Hypotheses #1 (H1: 1)	Analysis of Variance (ANOVA)

Table 12: Summaries of Analysis on Findings

IV. RESULT AND DISCUSSION

A. *RQ1: What is the effect level of bad and doubtful debt on the performance of bank especially for Banking Institutions in Malaysia?*

Based on the findings on the research question above, it shows that the average level of bad and doubtful debts among banking institutions in Malaysia. The provision for bad and doubtful debts should not be allocated too high as it can increase bank spending which in turn will affect the increase in credit risk. Therefore, the average level of bad and doubtful debt reflects that financial banking institutions in Malaysia are still at a safe level and do not need to worry. This is in line with a study conducted by [32], (2021) who stated that the performance of bad and doubtful debts in Malaysia should be at a low or average level only because it is an important sector in boosting economic growth, especially in the Covid-19 pandemic. As stated by [49] (2015), Gross Domestic Product (GDP) will move in line with the progress of the bank and at this point that it begins to demand banks to ensure that bank profits grow well. In this article, it is explained that bank profits can grow well if the credit risk which refers to bad and doubtful debt is at a low or average level. Therefore, all these statements support that bad and doubtful debt should be at a low or average level only to drive the development of banks and boost economic growth.

B. *RQ2: What is the performance level of bank through profitability ratio, liquidity ratio and solvency ratio?*

i) Profitability Ratio

The findings on the above research question for profitability ratio show that the level of profitability ratio is at the average level in the financial banking industry in Malaysia. A high profitability ratio at a bank is very important for financial stability as it is seen as a major bulwark against losses incurred as a result of credit deterioration. A high profitability ratio will also reflect that retained earnings are in a good position to be an important source of capital to enable banks to build strong buffers to absorb additional losses. In the study conducted by [7] stated that the level of profitability of financial banking institutions in Malaysia is represented by the level of high and average. The study also explains that most banks are in the average group and only 3 major banks show high profitability namely Maybank, Public Bank and CIMB Bank. Thus, the findings of the study for this profitability ratio are in line with what is written in this article.

ii) Liquidity Ratio

The level of liquidity ratio for financial banking institutions in Malaysia is at a low level. This contradicts the study conducted by [4] who stated that commercial banks in Malaysia have shown encouraging growth in having enough cash to pay off debts in the short term and the existence of financial surplus that is successfully reinvested for distribution to investors. This inherent discrepancy is believed that the study was conducted before the onset of the covid 19 pandemic and did not take into account the shaky economic situation in which banks gave a lot of leeway to their customers in settling debts. In a study conducted by [32], (2021) stated that Bank Negara Malaysia is constantly refining more efficient methods on bank liquidity as it is believed to have an impact on bank income. This will indirectly encourage the bank's liquidity level to be at least at an average level. Thus, the above statement clearly seems to contradict the findings in this study which have proved the low level of liquidity ratio.

iii) Solvency Ratio

The level of solvency ratio for financial banking institutions in Malaysia is at an average level. This finding is seen in line with a study conducted by [49], (2015) which showed that commercial banks in Malaysia are still able to improve their finances in terms of equity which includes share offerings and dividend reinvestment plans. This proves that the equity recorded by all commercial banks outweighs the debt imposed on their banks. The solvency level of a bank usually depends on the value of bad loans and investments that have become an expense on bad debts on the profit and loss statement and the impairment of assets on the balance sheet. In an article written by [50] (2011), after the 2008 financial crisis has urged all affected commercial banks to draw up a strategic plan for solvency which has emphasized several key aspects such as increasing cash flow to cover existing expenses as well as increasing financial independence through equity and retained earnings. The string of these measures has resulted in the non-existence of banks with solvency problems which refers to the low level of solvency ratios. In summary, the above statement clearly proves that the level of solvency ratio for the financial banking industry in Malaysia is at an average level and has not yet reached a high level.

V. LIMITATION OF STUDY

Limitations of the study have existed when this study focused on financial banking institutions in Malaysia only. This means that the results displayed throughout the study are limited to Malaysia only and cannot be applied to other countries with different operating environments. The uniqueness of the operating environment may preclude the application of these results in other countries whose environments are different. Not only that, this study

focuses on financial banking institutions namely commercial banks. Next, the results of this study are against commercial banks only examined in this study. Any attempt to apply these findings to financial institutions other than financial banking institutions should be refined and approached with caution.

In addition, this study is very limited in the use of profitability ratio that only focuses on ROA and ROE. It may have other factors that can influence a bank's performance such as profit margin ratio. The performance of the company in this study through profitability ratio is only focused on the data that has been provided by the bank on the financial highlight. Therefore, any study that wants to evaluate the performance of banks through profit margin in profitability ratio is less suitable to be this study as a reference and it requires a careful study if still to use it.

VI. RECOMMENDATION FOR FUTURE RESEARCH

The suggestion for future studies is that researchers can conduct cross-border studies involving other countries in ASEAN such as Thailand, Indonesia, Singapore and Philippines to determine the effect of bad and doubtful debt on bank performance. Indirectly, researchers can also see and compare the way banks manage bad and doubtful debt in other countries. In addition, future studies can also study the effect of bad and doubtful debt on bank performance by also taking into account financial institutions other than financial banking institutions. This will assist the study in providing results that can be generalized to all financial institutions in Malaysia.

Furthermore, the next researcher is proposed to investigate other factors to evaluate the performance of the bank for profitability ratio such as operating profit margin and net profit margin. This is because these two ratios play an important role in driving a bank's profits. Studies that take into account these two ratios seem to be more accurate to describe the actual profit situation of a bank.

VII. CONCLUSION

As a conclusion, bad debts can affect the performance of bank to grow well. Although in this study describes bad and doubtful debt does not have a significant effect on the performance of bank, but it still affects the performance in terms of bank's liquidity to settle its debt obligations in the short term. Due to banks have a large market capitalization in the stock market, it results in the bank's profitability and bank's solvency are less effected. Finally, the best recommendation to the bank is to make good management of the debt given to its customers to ensure that it does not affect the bank's performance in the long term.

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