Fintech As Financial Inclusion : Effect of FinTech on the share price and profitability of commercial banks in Malaysia, Indonesia and Singapore.

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Abstract: The technological industry has advanced so much that it has changed the way people get things done. The growth of FinTech companies worldwide poses a threat to the retail banks since Fintech provides better alternatives to banks at the comfort of our own homes. The objective of this research is to find the effect FinTech has on the banking industry of Malaysia, Singapore and Indonesia. The main variables that are studied are profitability and the share price of the banks. A study as such is much needed in South East Asia since fewer research has been made on this topic. The data has been collected from two of the top commercial banks in each of the countries. A total of six banks has been included in this research and the data dates to a 5 year time period between 2015 and 2019. The findings reveal that there is a positive impact on the profitability of the banks. However, the share price keeps fluctuating from year to year, which is why we cannot come to a conclusion whether it is caused by FinTech since many other factors are involved as well.

Keywords: Fintech; Share price; Profitability; Commercial banks; CAPM; Financial technology

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1 Introduction

FinTech firms, described as the companies that use technology to complete transactions, have completely disrupted the whole financial industry (Huang, 2015). It would not be a lie to say that applications like Robo advising, mobile payment, crowdfunding, and budgeting have eliminated the need for the majority of

people to go to banks. The world of blockchain, cryptocurrency, and stock trading apps are FinTech products which have proven to be better alternatives to regular investment. Investments in FinTech rose by 75% globally in 2015 and continues to grow (Dickerson et al., 2015). The growth of FinTech companies worldwide poses a threat to the retail banks since Fintech provides better alternatives to banks at the comfort of our own homes. The strength of an organization depends on efficient management (Aminah et al., 2021; Azlisham et al., 2021; Saadiah et al., 2021; Firkhan et al., 2021; Ishak et al., 2021). Efficient management and effective leadership can influence the success of an organization (Norazmi et al., 2019; Fauziyana et al., 2020; Norazmi, 2020; Zaid et al., 2020; Zaid et al., 2021). In addition, consumers also play an important role in implementing this (Mohd Norazmi et al., 2021; Rosnee et al., 2021; Roszi et al., 2021; Nik Nurhalida et al., 2021; Een et al., 2021; Yusaini et al., 2021).

Due to this reason, people have opted out of the traditional banking system and gone for technology since it makes everything so much easier. Financial system has been digitalized long time ago but due to regulations and marketability (Alwi, S., Alpandi, R. M., Salleh, M. N. M., & Najihah, I., 2019) the uptake of mobile payments has created more competition for Kenyan Banks (Nguna Killu,2016). This is bound to happen. Across the world, FinTech is the biggest competition faced by banks. Over the last few years, banks like Tesco Bank, Ecuador Bank, and several polish banks have made headlines for being prey to cyber fraud and have lost tons of money (Platform, 2018). The adoption of Fintech also reduces cost for both parties, the bank and its customers (Alwi, S., Salleh, M. N. M., Razak, S. A., & Naim, N., 2019). This is another reason why customer force is driven towards FinTech. They are more secure and have better contingency policies that are ready for implantation whenever something goes wrong.

Countries like Sweden account for just 2 percent of cash transactions that are expected to fall further in the following years, thereby emerging as one of the world's most cashless economies. However, cash transactions in the United Kingdom accounted for up to 40%, which dropped by 15 % in 2017 due to the adoption of new technology and payment technologies, so cash transactions are anticipated. Accordingly, cash transactions are expected to decline to 16% by 2027 (World Payments Survey, 2019).

Patterns in digital transformation and changes in customer needs have driven banks to change their organizations to stay pertinent. With the growth in use of technology and shift to use alternative payment methods (Alwi, S., Salleh, M. N. M., Alpandi, R. M.,Ya'acob, F. F., & Abdullah, S. M. M., 2021), new rivalry from FinTechs, computerized banks, and versatile just banks has given conventional banks new difficulties. Even if regular banks offer similar administrations as advanced banks, some critical differentiators between the two make one more appealing than the other. FinTech enables customers to assume liability for their budgetary choices, prompting undeniably more critical money related proficiency than any other time. So, FinTech consolidates conventional budgetary administrations with the most recent computerized innovation and Big Data items, making life simpler for clients.

People choosing FinTech over the services offered by the bank is bound to affect the performance of banks. There have been several studies conducted across the world regarding the impact FinTech has on banks but not much has been done on the banks in South East Asia. Countries like Malaysia, Singapore, and Indonesia are growing countries with a lot of potential in them. Singapore and Malaysia are highly developed while Indonesia is on the journey to it. Banks play a crucial role in economic stability and hence it is extremely important to know what they are in for. Therefore, the research questions are as follows:

1. What is the effect of FinTech companies on the profitability of commercial banks?

2. What is the impact of FinTech companies on the share prices of commercial banks?

3. Should bank adopt FinTech to better come with the competition?

The findings of this study are crucial as it can serve as a useful input for the banks on quantified idea of what they are about to face. FinTech is already the biggest competition faced by banks. This study will help them to decide whether they need to team up with their competitors or raise their protective barriers by making it tough for the FinTech start-ups or even come up with better and learned policies to deal with it. FinTech is taking over the financial industry like a storm and by examining the rate at which it is growing, there is the possibility of commercial banks being totally abandoned in the future. There are few or no Laws at all in the selected countries regarding FinTech and protection policies for customers. Hence, a mishap could affect the citizen's economic stability in a number of ways. Banks have started to adapt certain FinTech services in the banking area to adjust to the trends.

2 Literature review

The approach of forefront innovations combined with the client's interest in a sheltered and easier to understand banking experience has driven the banks and monetary administrations to promptly select FinTech

money innovation. Fintech is a term used to describe the technological innovation in the financial sector; has seen various major breakthroughs over the past decade, and Bitcoin was right at the center stage (Basir, I. N., Alwi, S., Salleh, M. N. M., & Mohd, S. N. A., 2020). Today FinTech is greater than any time in recent memory as it incorporates all that we just referenced in this blog. It is evolving at a rapid speed and driven in part by the favourable regulation, thrust less environment, decentralized process and digital transformation (Salleh, M. N. M., Tasnim, R., Alwi, S., Hassan, M. S., & Zainuddin, N. M., 2019). In coming years, it is good to go to turn out to be considerably greater with retail banking programming, money related center financial programming, and numerous different parts going under it. The truth will surface eventually how huge of an effect FinTech will have in our reality. FinTech is not, at this point, a language of the financial business. All things considered; it has become a recognizable term in innovation all in all. The Global interests in FinTech adventures have multiplied to an incredible $112 billion when contrasted with $51 billion a year ago. This is more than proof to demonstrate that the computerized transformation is at the doorsteps of money-related administrations area. The repudiating sees on the eventual fate of FinTech and to a great extent, spellbinding examination inspire us to reconsider the part of computerized banking new companies in the conventional financial industry utilizing a quantitative methodology.

2.1 Profitability

One of the questions that we are trying to find an answer to is what impact the FinTech companies have on the profitability of the banks. This is analyzed using the profitability ratios of the firm. Profitability consists of profit and capacity. Profit is the difference between the cost of something and what we earned. Capacity shows the intensity of a business element to acquire profits. The capacity of concern likewise indicates its procuring power or working execution. The profitability might be characterized as the capacity of an offered speculation to acquire a get back from its utilization (Tulsian, 2014).

2.2 Net profit margin

Net profit margin is the primary concern. It takes a gander at an organization's net pay and partitions it into all-out income. It gives the last image of how profitable an organization is after all costs, including interest and charges, have been considered. Motivation to utilize the net profit margin as a proportion of profitability is that it considers everything. Basically, it is what is remaining after deducting all the expenses of the business from the gross profit. This amount is what will eventually be divided among the shareholders and hence holds a lot of significance in the business. The net profit margin also shows how efficient the business is at managing and controlling the expenses. Net profit is crucial for a business for a number of reasons. We already know how important it is for owners. When the business applies for a loan of any sort, the creditors will have a look at the net profit to make sure the business is worthy and has the capability to repay it before sanctioning the loan. Investors and shareholders check the profits of the business before deciding to invest in the company to be sure that they are investing in the right place. All these are indicated by the net profit margin and hence, it is very important for a business to have a high net profit margin.

2.3 Gross profit margin

Gross profit is the difference between revenue and cost of goods sold (Jagelavičius, 2013). The gross profit margin is calculated by comparing the gross profit to the revenue earned in the financial period. This shows how much a business is procuring, considering the required expenses to create its products and ventures. A high gross profit margin mirrors a higher proficiency of center tasks, which means it can even now cover working costs, fixed costs, profits, and devaluation, while likewise giving net income to the business. Then again, a low overall revenue shows a significant expense of products sold, which can be credited to antagonistic buying strategies, low selling costs, low deals, firm market rivalry, or wrong deal advancement approaches. The ratio is calculated by dividing the gross profit by sales. This revenue is an indicator of how good a business is at managing its cost of sales.

2.4 Return on Assets

Return on assets (ROA) shows the level of net profit comparative with the organization's all-out assets. The ROA proportion explicitly uncovers how much after-charge benefit an organization produces for each one dollar of assets it holds. It likewise gauges the resource force of a business. The lower the benefit per dollar of assets, the more resource serious an organization is considered to be. Profoundly resource concentrated organizations require large investments to buy hardware and gear to produce pay. Instances of businesses that commonly are extremely resource serious incorporate telecommunications administrations, vehicle producers, and railroads. Instances of less resource serious organizations are publicizing offices and programming organizations. Return on assets is calculated by dividing the total net profit by the assets owned by the company at the time. This shows how efficient the business is at using its assets to generate income. This ratio is very important for a business since it reflects a business's efficiency. Firms with situational oddballs or possibility loners, or both,

bring about execution misfortunes consequently on resources contrasted and firms without any rebels (Burton, Lauridsen and Obel, 2003).

2.5 Return On equity

Return on Equity (ROE) is the proportion of an organization's yearly return (total compensation) separated by the estimation of its all-out investors' equity, communicated as a rate. Return on Equity is a two-section proportion in its derivation since it unites the pay explanation and the asset report, where overall gain or benefit is contrasted with the investors' equity. The number speaks to the absolute return on equity capital and shows the association's capacity to transform equity interests into benefits. To put it another way, it quantifies the benefits made for every dollar from investors' equity. Return on equity (ROE) communicates the level of overall gain comparative with investors' equity, or the pace of return on the money that equity speculators have placed into the business. "Return on equity analysis provides a system for planning as well as analyzing financial institution performance. The profit margin allows the analyst to develop a pro forma income statement" (Almazari, 2012). The ROE proportion is one that is especially watched by stock experts and speculators. A well high ROE proportion is regularly referred to as a reason to buy an organization's stock. Organizations with an exceptional yield on equity are typically more fit for producing money inside, and subsequently less subject to obligation financing. Stock Equity firms that fail to meet expectations the standard benchmarks have time arrangement restores that co-vary with factor returns built from non-issuing firms. It has been found that that the stock returns following equity issues mirror a more unavoidable return design in the more extensive arrangement of traded on open market organizations (Brav, Geczy, and Gompers, 1998).

2.6 Cash Flow Margin

The cash flow margin communicates the connection between cash flows from working exercises and deals produced by the business. It quantifies the capacity of the organization to change over deals into cash. The higher the level of cash flow, the more cash accessible from deals to pay for providers, profits, utilities, and administration obligation, just as to buy capital resources. Negative cash flow, nonetheless, implies that regardless of whether the business is producing deals or benefits, it might at present be losing cash. In the occurrence of an organization lacking cash flow, the organization may select to get reserves or to fund-raise through financial specialists to prop activities up.

2.7 Capital asset pricing model

2.7.1 Share Price

A share price is a sum it would cost to get one share in an organization. The price of a share isn't fixed, however vacillates as per economic situations. It will probably increment if the organization is seen to progress admirably, or fall if the organization isn't meeting desires. Share prices can be viably investigated through both specialized and crucial examination. Specialized investigation tries to evaluate the future price developments of shares by taking a gander at authentic diagram information. By considering past share price patterns, specialized investigators can regularly distinguish whether a stock is going to enter a bullish or bearish pattern. A crucial investigation is more worried about recognizing whether a stock is finished or underestimated. It does this by dissecting the individual organization's apparent capacity to create a benefit, zeroing in on macroeconomic information, fiscal summaries, and choices from senior administration.

There are various reasons that organizations need their share prices to rise. For instance, a high stock price carries with it a specific measure of renown and can debilitate takeovers. Furthermore, just as having the option to create a lot of income for the organization, it can likewise imply that senior administration – or representatives as a rule – might get a reward at specific focuses in the year. One way an organization can energize share price growth is by delivering dividends to its shareholders as a prize for their speculation. Dividends not just pull in new speculators, which will build interest and drive the share price up, however, urge current shareholders to keep their shares as opposed to selling them. This is useful for the organization since selloffs can make the price of a share fall as the market acclimates to the expanded supply. If an organization actually needs its share price to fall – maybe to make their shares more open to speculators – at that point, it can give a stock split. Stock parts will lessen the price of an organization's stock by expanding the gracefully of shares accessible. For instance, if an organization gives a two-for-one stock split, the complete number of shares will twofold, which implies that the price of each share will divide. A positive connection is found between dividend yield and stock price changes, and a negative connection between dividend payout proportion and stock price changes. Moreover, it is indicated that a company's growth rate, obligation level, size, and profit clarify stock price changes. (Hussainey, Oscar Mgbame, and Chijoke-Mgbame, 2011).

2.7.2 Interest rate

Interest rate is the level of the presumptive worth of a bond or the equilibrium in a store account that you get as pay on your speculation (Hull and White, 1990). Interest rates are one of the main parts of the

American monetary framework (Patton, n.d.). They impact the expense of acquiring, the profit for reserve funds, and are a significant part of the complete return of numerous speculations. Also, certain interest rates give an understanding of future monetary and budgetary market movements. As for in the case of Banks, Interest rates are the key source of income for the banking system which makes it really important for the profitability of banks as well when calculating the share price. Interest rates are determined by the Federal Reserve, Treasury, and the banking sector. The objective is to give interest rates in that famous sweet spot, where the rate is sufficiently high for banks to bring in cash however low enough to pull in borrowers. On account of a bank or security backer, the thought is to keep rates sufficiently low to set aside cash, yet sufficiently high to draw in contributors and financial specialists.

2.7.3 Risk Market

This is an ever-evolving scene, however, the known dangers to the banks presented by fintech by and large rely on giving clients reasonable options in contrast to rewarding administrations like unfamiliar trade, venture exhortation ('robo guidance'), and furnishing clients with the apparatuses to adequately abstain from assuming on awful acknowledgment or falling into their overdraft. The dangers aren't simply to commonplace retail banking gold mines like overdrafts and unfamiliar trade; however, FinTech is coming for the banks' most significant clients on the abundance of the executives' side as well. Robo-guide firms like Nutmeg, Moneyfarm, and Wealthsimple, use innovation to adequately supplant normally costly venture consultants, cutting down hindrances to the section for individuals needing to put away more modest measures of cash. On a more existential level fintech is changing the manner in which individuals consider their accounts altogether, increasing current standards with regards to desires for computerized items, client support, and transparency. Banks order trust since they are large and have been around for quite a while, not on the grounds that individuals feel they can identify with them on a human level. Perhaps the greatest zone where FinTech has separated themselves is by giving an extremely exclusive requirement of client care and adopting a client-first strategy with regards to the plan and conveyance of their item. Normally the banks have tried to re-position this danger as a chance, talking up organizations and advancement arrangements themselves. In the event that we look carefully, fintech is right now just zeroing in on a simple portion of the money related administrations range. Until this point, a large part of the focal point of fintech has been on retail banking administrations - loaning and financing alongside installments related items and administrations, where versatile and internet business has prompted genuine interest from shoppers.

2.7.4 Risk-free rate

The risk-free rate of return is the hypothetical rate of return of a venture with zero risks. The risk-free rate speaks to the premium a financial specialist would anticipate from a totally risk-free venture throughout a predefined time frame. The genuine risk-free rate can be determined by taking away the current expansion rate from the yield of the Treasury security coordinating your venture span. In principle, the risk-free rate is the base return a financial specialist expects for any speculation since he won't acknowledge extra risk except if the possible rate of return is more noteworthy than the risk-free rate. By and by, in any case, a genuinely risk-free rate doesn't exist on the grounds that even the most secure speculations convey a limited quantity of risk. In this manner, the loan cost on a three-month U.S. Treasury bill is often utilized as the risk-free rate for U.S.- based speculators. Assurance of an intermediary for the risk-free rate of return for a given circumstance must think about the speculator's home market, while negative loan costs can confound the issue.

2.10 Research Framework

Research framework for this study is depicted in Figure 1.e

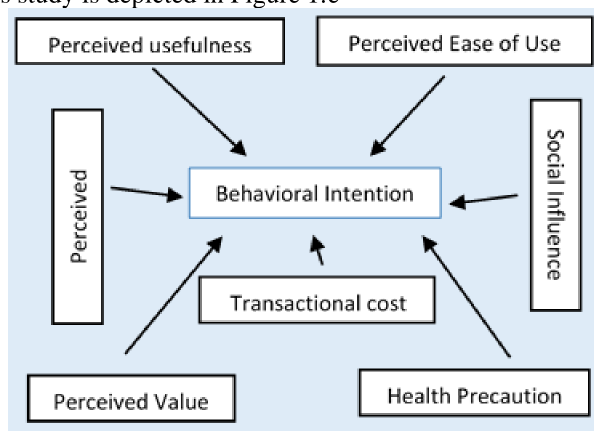

Figure 1 Research Framework

Source: Developed by authors

3 Research Methodology

This analysis is focused on quantitative research and descriptive research. Quantitative strategies underline target estimations and the measurable, numerical, or mathematical examination of information gathered through surveys, polls, and overviews, or by controlling previous factual information utilizing computational methods (Gambrill, 1991). A quantitative study means that researchers will identify a certain set of variables and try to seek a correlation between the two variables while accounting for the relationships identified. Generally, this allows greater objectivity and accuracy of results. Here numbers and facts are used to generate answers which means that the data won't be biased. With qualitative data, often surveys are conducted on people and each person will have a different opinion on the matter making it difficult for the researcher to come to a conclusion. This problem is eliminated in the case of quantitative data.

However, it does come with its own set of limitations. It is a more effective way to test hypotheses but leaves out contextual detail as we would only be focusing on the quantified results. We would not know anything about the behavior or attitude which contributes to the results. Surely, we will know something happens, a relationship exists and even our assumption is true, however, it would be difficult to get to the bottom of the issue when we don't know the personal reasons behind it. Since the purpose of the study is to find the impact FinTech has on the profitability and stock prices of the selected banks, it is more suitable to conduct a quantitative analysis on the data as the results will be much easier to comprehend if done so. Due to the nature of the research, it made sense to use secondary data to generate results.

Secondary data is defined as data that already exists in other forms. In this case, the main data is collected from the financial statements of the selected banks which are extracted from their annual reports. Other relevant data was taken from news articles and documents published relevant to the topic. Using this method of data collection is very economical compared to using primary data. It already exists in some form which means that the researcher won't be required to conduct surveys/observations/questionnaires to collect data. This saves both time and money and makes much more sense since this is research in three different countries. However, the thing with using secondary data is that it might have been collected for some other purpose which means that the data might be irrelevant. In my personal opinion, this won't be an issue in the scope of this research.

The sample data used in this research is 6 commercial banks from 3 different countries in SouthEast Asia. The three countries are Malaysia, Singapore, and Indonesia. Fintech is growing in these countries and due to issues like These three countries are adapting into the world of FinTech at a fast pace and I felt like it needed to be the base of my study. I randomly chose two of the largest commercial banks from each of the countries meaning there will be a total of 6 banks included in this research. For a better comparison, and to identify a trend all the data collected falls into the time period between 2015-2019. There are believed to be the peak times when most banks started to adapt FinTech services and hence will be more suitable for generating results that will help us to answer the research questions. The Capital Asset Pricing Model (CAPM) is a model that portrays the connection between the normal return and the danger of putting resources into security. It shows that the normal profit for security is equivalent to the danger-free return in addition to a danger premium, which depends on the beta of that security. The CAPM recipe is broadly utilized in the account business. It is fundamental in figuring the weighted normal expense of capital (WACC), as CAPM registers the expense of value.

WACC is utilized widely in money related to demonstrating. It tends to be utilized to locate the net present worth (NPV) of things to come, incomes of speculation and to additionally compute its venture esteem lastly its value esteem. It thinks about just methodical danger, mirroring a reality wherein most speculators have expanded portfolios from which unsystematic danger has been basically disposed of. It is a hypothetically determined connection between required return and precise danger which has been liable to visit experimental examination and testing. It is commonly observed as a greatly improved technique for ascertaining the expense of value thanthe profit development model (DGM) in that it unequivocally considers an organization's degree of precise danger comparative with the financial exchange in general. It is unmistakably better than the WACC in giving markdown rates to use in speculation evaluation. Finding an incentive for the value hazard premium (ERP) is more troublesome. The profit for financial exchange is the amount of the normal capital increase and the normal profit yield. Temporarily, a securities exchange can give a negative instead of a positive return if the impact of falling offer costs exceeds the profit yield. It is consequently normal to utilize a drawn-out normal incentive for the ERP, taken from an experimental examination, however, it has been discovered that the ERP isn't steady over the long haul. In the UK, an ERP estimation of somewhere in the range of 3.5% and 4.8% is right now observed as sensible. In any case, vulnerability about the ERP esteem brings vulnerability into the determined incentive for the necessary return. The examination has shown the CAPM stands up well to analysis, despite the fact that assaults against it have been expanding lately. Until something better presents itself, however, the CAPM stays a valuable thing in the budgetary administration toolbox.

4 Results and discussion

4.1 Profitability

CIMB & Maybank (Malaysia)

The bank seems to be doing well in terms of profitability. All the profitability ratios used kept on rising at a slow rate till 2017. Then in 2018, Gross Profit margin suddenly rose to a 19.04% from 17.42%. Though it fell to 18.73% in 2019, it was still a better figure compared to what they had in 2015. The rest of the ratios also showed a similar trend. They kept on increasing steadily and suddenly rose in 2018. It seemed to be a good year for CIMB for their ratios to jump up all of a sudden and even when it fell in the next year it was still higher than what it used to be before. Similarly, the ratios of Mybank had a similar effect as CIMB bank. In Spite of being close competitors in the Malaysian market, the fact that they both grew alongside each other shows that the business was really efficient in their operations. The banks adapting fintech services did not necessarily mean that their profits were affected.

This must have been due to a number of reasons. Malaysia is a developing economy and on the verge to going completely cashless. It is expected that by the year 2030, the country will be completely cashless (Chan, Ng and Fadi, 2018). Even now, the buses and toll gates have started accepting payments via TouchNGo card. Majority of the apps offer in-app payments. People can now shop for groceries, buy food, make appointments, do hotel bookings and even book cars on the same app. To encourage people to use these services, loyalty programmes are introduced. There is no difference between the old and young when using these fintech services. On top of that Malaysia's internet speed is distinct which allows for a smooth running of the transaction. Malaysia has been a pioneer on guidelines to guarantee that the money related framework stays safe in the midst of the chance of network protection episodes.

Very much aware that cyberattacks can undermine client certainty and deliver inescapable harm, Malaysian banks and controllers list online protection among their issues of top concern. As an innovator in Islamic account, Malaysia includes an interesting situation inside Islamic fintech, as indicated by IMF investigation. Islamic bank advance development in the nation extended by 8.9 percent in 2018, contrasted with 2.5 percent for customary banks. While Islamic fintech is still in its earliest stages in Malaysia, the national bank upholds endeavors to advance the area. Developments in Malaysian fintech are altering the country’s financial sector landscape. For example, while fintech products offered by traditional financial institutions expand, the number of physical commercial bank branches is declining, and the number of automated teller machines has fallen over the last two years. Traditional Malaysian banks continue to dominate in deposits, lending, and raising capital while, at the same time, adopting new technologies and either competing or collaborating with new tech startups. As of April 2019, there were close to 200 startups in Malaysia in a range of fintech areas, including payments, lending, and blockchain.Islamic monetary foundations can profit by fintech in a significant number of the very ways that customary accounts do. Some fintech instruments could be especially valuable in Islamic accounts, since improved straightforwardness which is a central guideline of Islamic money. It is probably because of these reasons that Malaysian consumers welcomed their top banks’ efforts to set foot in the Fintech Industry.

DBS and OCBC

DBS is a Singaporean Bank. The Singaporean economy has been doing really well over the past couple of years. This has been reflected on the profitability ratios of the bank. Right from 2015 to 2019, the ratios kept growing steadily at a constant rate. The return on Equity as well as Return on Assets kept increasing which means that the bank was successful in utilising its assets and the funds invested by the shareholders to its full capacity. Net Profit margin is supposed to lower than gross profit margin but the fact that it grew at the same slope as the gross profit margin meant that they were very efficient in managing and controlling their expenses as well. The bank is by all accounts doing great regarding profitability. All the profitability ratios utilized continued rising continually. The remainder of the ratios likewise indicated a comparable pattern. They continued expanding consistently. It was by all accounts a decent year for OCBC for their ratios to bounce up out of nowhere and in any event, when it fell in the following year it was as yet higher than what it used to be previously. In Spite of being close rivals in the Singaporean banking industry, the way that the two of them developed close to one another shows that the business was truly proficient in their activities. The banks adjusting fintech administrations didn't necessarily imply that their profits were influenced. The reason why a large number of the world's most imaginative organizations are looking to Singapore can be clarified by the nation's long standing record of help for arising industries.This culture of empowering advancement is appeared by a scope of strong activities started in both the private and public areas. A little more than a year back, The ASEAN Financial Innovation Network dispatched the world's first cross-fringe, open design worldwide fintech commercial center and sandbox, the API Exchange (APIX).This stage spoke to an aspiring exertion to permit

budgetary establishments and fintech firms to associate through an internationally curated commercial center and analysis with other industry members, drawing in any semblance of Mastercard as corporate individuals. Singapore has likewise put forth attempts to stay at the cutting edge of guideline and best practice. Its Cybersecurity Bill, which got consent 2 March 2018, set up a hearty system for oversight and support of security and information assurance measures. A vital piece of this demonstration was laying out a permitting structure explicitly to energize suppliers in a 'dynamic online protection environment', fundamental for any fintech improvement network. In the last a very long time of 2019, Singapore consented to an arrangement with the Bank of International Settlements to build up a financial advancement center point in Singapore. Only a couple months sooner, the Monetary Authority of Singapore (MAS) consented to an arrangement with the non-benefit Asia-Pacific Future Financial Research Institute (AFF) to help encourage participation among budgetary foundations in China.Considering the moderately little size of the homegrown market, Singapore's compelling joint effort with countries over the world has helped it arrive at a size equivalent to numerous bigger companions. Singapore has a long history of grasping unfamiliar direct speculation, which rose from $10.85bn in June 2017 to $19.13bn to June 2018, as per Enterprise Singapore, an administration office. A generous segment of that ascent can be credited to fintech. Advanced tech organizations gobbled up practically all (93%) of the S$13.4bn of adventure interests in Singapore in the initial nine months of 2019.F intech is essential for Singapore banks' intensity. Continuous weighty interests in innovation by enormous homegrown banks and cooperation with innovation organizations are securing their plans of action, and giving them an edge over new participants. Fintech is probably going to be more collective than troublesome, with banks liking to cooperate with tech new businesses as opposed to taking them head on. Coronavirus has quickened the appropriation of advanced banking in Singapore. Controller endeavors to accomplish a fine harmony between safeguarding monetary dependability and advancing advancement. Singapore had not always fared well to fintech. They did have their obstacles and the banks quickly learnt that if they were to stay on the market and retain their dominance in the economy they have to adapt to the changes in the market and consumer needs.

Bank Mandiri & Bank Rakyat

The situation in Indonesia is very different to what is happening in Malaysia and Singapore. The data collected from both Bank Mandiri and Bank Rakyat showed that the ratios showed an improvement for a brief period of time between 2015 and 2016. After that it was constantly falling till the end of the period in 2019. Indonesian market did not react well to the establishment of Fintech by banks. The period where they showed improvement might have been just when they started. People might have been curious to have a go at the new technology and experience something new for a bit. Perhaps it was the experience in the initial stages that discouraged people from it. “According to the Speedtest Global Index, as of March 2019, Indonesia is placed 118 out of 139 countries for its mobile internet speed of 10.51 Mbps, and 111 out of 178 for its fixed broadband speed of 16.65 Mbps” (Khidhir, n.d.). With 50% of the populace unbanked, 85 percent of the nation's exchanges are still money based. As indicated by the Wall Street Journal, just 3 percent of Indonesians know about the idea of versatile cash. At the present time, [people are] overhauling their necessities without versatile cash. Money related Inclusion Insights (FII) Asia lead Nathaniel Kretchun told the Wall Street Journal. Indonesians need to be shown the manner by which their lives will be improved on the off chance that they approach these administrations. The moderate selection of fintech in Indonesia comes from one primary issue — the advantages of portable cash, and eventually fintech, aren't meaning Indonesian residents. As indicated by an investigation by Bank Indonesia, 10 to 15 percent of Indonesians either don't get banks or don't see the benefit of the sparing. Shockingly, they come from center or upper-pay brackets.This implies that regardless of whether more choices are made for Indonesian residents, they may not pick up footing on the lookout. The items are available, with a cell phone in the possession of 40% of its huge populace, yet the apparent hole among Indonesians and present day money remains. When we analyse the results of all the banks we can see that Fitech does not have a negative impact on the majority of the banks. The banks in Malaysia and Singapore seem to be faring well with the introduction of FinTech in the banking system. The case is different for Indonesia. Since, 4 out of the 6 banks did really well, we can come to the conclusion that Fintech has a good impact on the profitability of banks hence, answering one of the research questions.

4.2 Profitability Capital Asset Pricing Method (CAPM)

The Capital Asset Pricing Model (CAPM) portrays the connection between orderly danger and anticipated return for resources, especially stocks. CAPM is generally utilized all through money for evaluating hazardous protections and creating expected returns for resources given the danger of those resources and cost of capital.

The CAPM formula is as follows:

$ER_i = R_f + \beta_i(ER_m - R_f)$

$ER_i = \beta_i(ER_m - R_f)$

ER_i = Expected return of investment

Rf = Risk-free rate
βi = Beta of the investment
ERm = Expected return of the market

Here, the expected return of the investment is the share price of the bank. Risk free rate is0.1 since most treasury bonds have that rate. The interest rate of each of the individual banks is used as the beta. Expected return of the market is the sum of all the interest rates.

The results are as follows.

Country	Bank	2015	2016	2017	2018	2019
Malaysia	CIMB	117.66	244.585	131.86	130.1872	133.82
Malaysia	Maybank	158.806	255.451	263.62	223.384	267.54
Singapore	DBS	67.1092	140.6336	129.5542	125.6568	129.8084
Singapore	OCBC	88.8578	123.248	112.096	113.36	116.4364
Indonesia	Bank Mandiri	301.3475	371.355	337.735	331.79	342.7575
Indonesia	Bank Rakyat	133.5306	180.8378	114.0724	I26.6276	131.1456

As for CIMB, the share price rose in 2016, fell in the years 2017 and 2018 and rose to 133.82 in 2019. The share price of Maybank continued to rise, starting from the year 2015 to 2017. However there was a drop in the price in the year of 2018 and again had an increase up to 267.54 in 2019. In the case of DBS, the prices of the shares rose in 2015 and 2016. Yet there had been a descent in the prices through the years 2017 and 2018 and rose again to 129.8084 in 2019. The share price of OCBC had a significant rise in the year 2015 to 2016 by 88.8578 to 123.248. Although it had a fall in 2017, it can be seen that the prices were slowly rising in the years 2018 and 2019. As for Bank Mandiri, the prices had a rough ride. If it increased in one year, it fell in the next year. Same goes for Bank Rakyat. Any increase is the share price is followed by a decrease and it increases again. The fluctuations vary too much hence it is difficult to come to a conclusion. The profitability of the majority of the banks did react very well to the adaptation of fintech services by banks. Share price is influenced by a lot of factors. Share price when there are purchasers slamming into the entryway for those offers. Without purchasers an offer's cost will fall. The more purchasers there are to drive interest, the higher an offer cost will go. bunny costs will go up or down in response to news transferred in the media.

This may be general data, for example, the most recent business measurements or news about the nation's equilibrium of instalments, or another Government activity that favors a specific industry. Frequently the response comes down to whether the news improves or imprints financial specialist certainty, which is the reason purchasers and merchants respond emphatically to the unforeseen. The greater the report nobody saw coming, the greater the effect on share costs. At the point when purchasers have foreseen something in the news – like a declaration on loan fees – share costs don't in general move that much. That is on the grounds that the news occasion was considered already. Regardless of whether your offer value rises or falls, no doubt it very well may be in light of how the Government is dealing with the economy. An economy shipping along pleasantly supports purchasers' certainty, as they probably are aware the atmosphere is appropriate for organizations to perform well. Solid benefits can mean a liberal profit for investors with a decent thump on impact on the offer cost.

. This report (regardless of whether it is just somewhat negative in nature) can influence the way that association's customers think, particularly those that are all the more momentary arranged. Regardless, because of the examiner's analysis, some selling pressure regularly results. While singular financial specialists may experience difficulty getting to these reports, huge media sources will regularly declare that a business firm report has been given, or the firm itself may deliver some data about the presence of the report to the overall population. Once more, the clever speculator might have the option to utilize this data as a purchasing opportunity once the selling pressure dies down, accepting that there have been no major changes in the organization. Hence, we cannot come to the final verdict that the fluctuations that are apparent from the data is a result of the banks using fintech.

5 Conclusion

The development of FinTech organizations overall represents a danger to the retail banks since Fintech gives better options in contrast to banks at the solace of our own homes.Because of this explanation, individuals have quit the customary financial framework and gone for innovation since it makes everything so a lot simpler. Examples in computerized change and changes in client needs have driven banks to change their associations to remain appropriate. New competition from FinTechs, modernized banks, and flexible just banks has given traditional banks new troubles. Regardless of whether normal banks offer comparable organizations as cutting-edge banks, some basic differentiators between the two make one more engaging than the other. FinTech

empowers clients to expect obligation for their budgetary decisions, provoking certainly more basic cash related capability than some other time.

Since FinTech is a continuous unforeseen development, close to no legitimate assessment has been aimed now. In any case, existing investigation generally centers around new organizations' ability to disturb organizations. This hence controls standard banks to redesign their organization quality and lessen trade costs, going about as shown by key need rather than high ground. The disavowing sees the inevitable destiny of FinTech and generally, enchanting assessment rouses us to rethink the piece of electronic banking new organizations in the traditional budgetary industry using a quantitative technique. One of the inquiries that we are attempting to discover a response to is the thing that sway the FinTech organizations have on the benefit of the banks. This is broken down utilizing the benefit proportions of the firm. Productivity comprises benefit and limit. Benefit is the contrast between the expense of something and what we procured. Limit shows the force of a business component to procure benefits. There are various reasons that organizations need their share prices to rise. For instance, a high stock price carries with it a specific measure of renown and can debilitate takeovers. Furthermore, just as having the option to create a lot of income for the organization, it can likewise imply that senior administration – or representatives as a rule – might get a reward at specific focuses in the year.

Quantitative methods have been applied in this research namely the use of profitability ratios and the capital asset pricing model. Data from a total of six banks from 3 different countries have been used to generate the final results. All the data has been extracted from the financial statements available from the annual reports of the banks. The data findings have answered the research question to some extent. While 4 banks out of the 6 showed a positive response in terms of profitability we cannot conclude in the case of share price. This is because the share price fluctuates so much. There are some very serious limitations to this research even if it has proved something. Few variables have been used in this study while there are a lot more other factors that will affect both the profitability and share price of the banks.

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