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**THE INFLUENCE OF TOP MANAGEMENT TEAM (TMT) CHARACTERISTICS TOWARD
INDONESIAN BANKS PERFORMANCE DURING THE DIGITAL ERA (2014-2018)**

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Abstract: Despite the abundant opportunities in the Indonesian bank industry, the digital era began to challenge banks to fully embrace the use of technology (information) to prolong competitive advantage. An organization becomes a reflection of its top managers. In facing such challenges, Top Management Team (TMT) members' initiative to overcome the current status quo, will be reflected in the company under their management. For this reason, an effective TMT structure is mandatory during the digital era to digitalize banking firms. This research investigates the relationship between top management team characteristics and Indonesian banks' financial performance during the digital era. For top management team characteristics, this research includes functional background, gender diversity, average age, level of education, IT Expertise, and experience in years. While to measure the performance of Indonesian banks' financial performance the paper includes return on asset (ROA), capital adequacy ratio (CAR), and non-performing loan (NPL). The results show that gender diversity has positive significant influences on NPL, average age have positive significant influences on ROA, CAR, NPL, and IT expertise have positive significant influences on CAR.

Kata Kunci: Perbankan, Manajemen Puncak, Performa

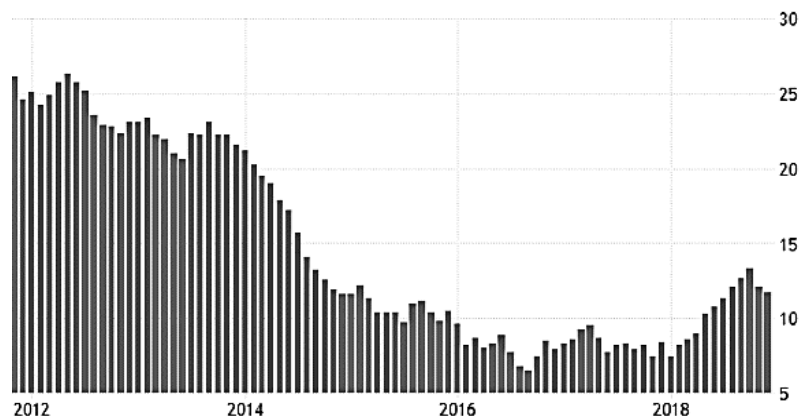
Abstrak: Meskipun terdapat banyak peluang di industri perbankan Indonesia, era digital mulai menantang bank untuk sepenuhnya merangkul penggunaan teknologi (informasi) dengan tujuan untuk memperpanjang keunggulan kompetitif. Suatu organisasi menjadi cerminan dari para manajer puncaknya. Dalam menghadapi tantangan seperti itu, inisiatif anggota Tim Manajemen Teratas (TMT) untuk mengatasi status quo saat ini, akan tercermin pada perusahaan di bawah manajemen mereka. Untuk alasan ini, struktur TMT yang efektif adalah wajib selama era digital untuk mendigitalkan perusahaan perbankan. Makalah ini menyelidiki hubungan antara karakteristik tim manajemen teratas dan kinerja keuangan bank-bank di Indonesia selama era digital. Untuk karakteristik tim manajemen teratas, penelitian ini mencakup latar belakang fungsional, keragaman jenis kelamin, usia rata-rata, tingkat pendidikan, keahlian di bidang Teknologi Informasi (TI), dan pengalaman dalam tahun. Sementara untuk mengukur kinerja keuangan bank-bank di Indonesia, makalah ini mencakup pengembalian atas aset (ROA), modal rasio kecukupan (CAR), dan kredit bermasalah (NPL). Hasil penelitian menunjukkan bahwa keragaman gender memiliki pengaruh signifikan positif pada NPL, usia rata-rata memiliki pengaruh signifikan positif terhadap ROA, CAR, NPL, dan keahlian IT memiliki pengaruh signifikan positif terhadap CAR.

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INTRODUCTION

Twenty years on from a severe economy crisis the effects of which still define the industry, the banking sector in Indonesia is still rich for opportunities. According to Financial Service Authority of Indonesia or Otoritas Jasa Keuangan (OJK) in Bahasa, Indonesia had 120 commercial banks in Indonesia (4 state owned banks and 117 private banks). Two of the state owned banks have Islamic banking units. From 26 government regional banks, 15 of them have Islamic banking units, while of 86 private national banks, 7 have Islamic banking unit, and there are five Islamic commercial banks. There are four state-owned banks hold over 45 percent of bank assets, ranked by their assets which are: Bank Mandiri, Bank Rakyat Indonesia, Bank Negara Indonesia, and BTPN. The end of the global commodity super cycle (Mothersole, 2014) in 2014 indirectly weighed on the economy, causing gross domestic product (GDP) growth to slow from between 6 and 6.5 percent to 5 percent. This begin a continuous moderate GDP growth at 4.8 to 5.1 percent in the following years until present days. The slowdown led to overcapacity in many industries. Smaller businesses had to reduce the capacity by closing factories and shops, reducing work hours, and even trimming headcounts. Bigger businesses may have been able to avoid bankruptcy and trimming the numbers of employee by absorbing the costs of idle capacity. Despite of that, businesses of all sizes did not require loans as their one thing in common. (Chandra, 2019).

Figure 1. Loan Growth in Indonesia's Bank Industry (2012-2018)



Source: tradingeconomics.com | Data obtained from Bank Indonesia (2019)

According to Figure 1, loan growth in Indonesia's bank performances is weakened significantly since 2014, where 20 to 30 percent of annual growth is no longer a normal state. Between 2014 and the first half of 2018, system loan growth was around 8-10 percent annually not even half the average of 23 percent in 2010-2013. Indonesia's banking system differs from countries that are much more developed, in the sense that business loans make up 72 percent of overall system lending, with the remaining 28 percent coming from consumer loans. This suits Indonesia's economy condition as a country with emerging economy, where more funding is required for business purposes than consumption. Related to the presence of disruptions in the current status quo of Indonesian Economics, bank as one of traditional financial service institutions is vastly developing in order to adjust their business model significance with the current market demand. Despite of the abundant opportunities, the Banking Industry in Indonesia is facing a significant challenges of business slowdown managing bad loans, and the increasing rate of Non-Performing Loan (NPL) in the recent years. This surely damaged the overall banks' performances as well (Sjahrifa, Daryanto, & Anangadipa, 2018). Digital Era is also began to challenge banks to fully embrace the use of technology (information) with the objective of prolong competitive advantage. Digital Era is indicated with numerous inclusive innovations that are usually disruptive or transformative. Around the world, companies are facing the implications of digitizing markets and the ongoing productive processes. The Digital Era strategy can lead to expansion or entry into related sectors, unrelated sectors, improving processes and developing completely new products or services. Various digital financial services technology have emerged to the surfaces to fulfil the problem in the society that all this time is

overlooked by the traditional financial service institution. Peer-to-Peer (P2P) lending applications, financial technologies that often it appears as a new business model to offer the facilities of financial services by non-financial institution, has exist in order to create effectivity and efficiency in financial transactions and began to replace the role of conventional financial services. It opens new opportunities for organizations / companies and at the same time eliminates existing opportunities. This condition has surely motivates the traditional financial services institutions especially bank to retaliate in order to survive during this very disruptive digital era. In contrast, with the bank's conventional business model such as the debit payments that provides non cash transaction facilities, the current market trend can be used as the example of why the era of disruption and digitalization is problematic towards banking industry. In the current days, a digital financial E-money service technology Go-Pay that owned by a non-financial based firm GO-JEK, has 40% Micro, Small, and Medium Enterprises (MSMEs) partners of 240 thousand Go-Pay partners in total. As an authentic Indonesian financial service product, the business model wanted to facilitate access to financial services for millions of families in the country, especially people who have limited access to formal financial services. Non-cash payments, especially those related to daily activities, are the first step targeted by Go-Pay to increase public confidence in digital financial services by embracing business partners including MSMEs to adopt non-cash transactions. FT Confidential Research Mobile Payment research states, Go-Pay which is part of the Gojek ecosystem leads the market. Because, the number of users reaches almost three-quarters of the total users of electronic money. Furthermore, the 2018 DailySocial Fintech report said, 79.4% of 1,419 respondents used Go-Pay, while OVO from PT Visionet International is used by 58.4% of respondents, and lastly, payment applications belonging to PT Telekomunikasi Selular (Telkomsel), TCash gets 55.5% of the votes. As many as 70.63% of respondents claimed to understand about digital financial services. There are seven reasons they use digital financial services, namely ease of use (74.9%); simple (71%); time efficiency (62.7%); no need to bother going to the bank for deposits (48.9%); safer (36.4%); the promos and incentives (36.4%); and, better management (29.8%) (Setyowati, 2019). None of the products above are business unit or the products from any conventional banks and several respondents of the digital financial service user even stated that going to the bank for deposits were bothering. This has proven that the financial service industry starts to be dominated by non-traditional financial service institution. In this case, banks surely forced to formulate strategic decisions as countermeasures to this uncertainties.

In facing such challenge, developing an equivalent product as the solution can be solutive. But it might not be as simple as that because, where does the company's strategy to face such circumstances come from? Finkelstein, C.Hambrick, and Cannella (2009) stated that to be sure, strategic actions are sometimes due to imitation, inertia, and careful objective decision making; And in order to understand that, a better understanding of the strategists is mandatory, which is the top management team (TMT). According to Hambrick and Mason (1984), an organization becomes a reflection of its top managers. This means that the TMT members initiative to overcome the challenges in the current status quo, will be reflected to the company under their management. Decision makers are informed, influenced, and sometimes constrained by the others, both inside and outside the organization. Perspectives of the TMT members also are very variative due to different characteristics traits that each members has, thus made the decision making process in the board room dynamic. For this reason, an effective and efficient TMT structure is a mandatory for the firm sustainability. Caluwe and Haes (2019) conclude that TMT can no longer delegate their IT related responsibilities in the actual business. As digital transformation changes the bases of competition, the board needs to take accountability for IT-related strategic decision-making and control. However, literatures point out that in practice little boards engage in IT governance with regard to the question of how to implement IT related governance at the level of the board, the majority of research refers to structures. Structures proposed are an IT oversight or similar committee and IT expertise at the level of the board.

According to Tulung and Ramdani (2016), TMT characteristics significantly influence the financial performance of several entities that included in the research. With the general assumption that these characteristics traits will most likely affects the strategic decision making, due to the benefits or disadvantages that the traits brought. This research combined several tested hypotheses related to the TMT characteristics from various late research and test them in a complete different dimension in terms of sample, entity and time variable based on personal perspective; with the assumptions of those research objects and variables have significant relationships with the disruptive digital era. Therefore, it will totally distinguished the result of this research with the past academical researches.

THEORETICAL REVIEW

Bank Industry in Indonesia

Bank is a financial service institution that acts as an intermediary who accepts deposit of savings from the public and distribute it in form of Credits. According to Financial Service Authority of Indonesia or Otoritas Jasa Keuangan (OJK) in Bahasa, Indonesia had 120 commercial banks in Indonesia (4 state owned banks and 117 private banks). Two of the state owned banks have Islamic banking units. From 26 government regional banks, 15 of them have Islamic banking units, while of 86 private national banks, 7 have Islamic banking unit, and there are five Islamic commercial banks. There are four state-owned banks hold over 45 percent of bank assets, ranked by their assets which are: Bank Mandiri, Bank Rakyat Indonesia, Bank Negara Indonesia, and BTPN.

Corporate Governance

Generally, companies in Indonesia are implementing the Two-Tier-System governance; *Undang-Undang No. 40 Tahun 2007 tentang Perseroan Terbatas* only recognize and fully enforce Two-Tier-System governance as the Top Management Team (TMT), the government of Indonesia seeks to separates the authority of management and the authority of supervision among the TMT, that has been known as the Directors and Board of Commissioners. In the implementation of Two-Tier-System, the representation of shareholder in the boardroom are crucially taken by the Board of Commissioners in supervising the management team in this case are the Directors.

According to Monks and Minow (2011), Corporate governance is a management of a company that explains the relationship among participants of the company determining the direction and performance of the company. Agoes (2011) also define Corporate Governance as a system that regulates the relationships of the TMTs, shareholders and other stakeholders. Corporate Governance / Corporate Governance is also referred to as a transparent process for the company's goals, winning and deciding its performance through strategic decision making. From the definitions, can be concluded that the substantial points of corporate governance is an improvement of the company performance through the management performance and accountability of the management in order to fulfil the interests shareholders. Corporate governance means a company management that explains the relationship among a number of parties within the company that determine the vision and performance of the company. The appropriate practice of corporate governance or known as Good Corporate Governance (GCG) can help the shareholders to know the condition of the company through the disclosure of accurate, timely, and transparent financial performance. In the case with the relationship between TMT characteristics and financial performance as the reflection of Good Corporate Governance, Tulung and Ramdani (2016) has found the relationship between those two aspects. The research shows that quantitatively several TMT members with particular characteristics traits does have relationship or affecting the financial performance.

Functional Background

Hoogervorst (2009) suggests organizations should focus on design and competence-oriented governance. According to Jewer and McKay (2012), competency in board level structure is required for its governance and for understanding the impact of IT on the business operational and strategic goals thus it differs from traditional areas of corporate governance, the lack of IT competency within the boardroom is by far the most widely mentioned inhibitor of engagement of the board in the current digital era. Referring to that as well, Functional Background (Haes & Grembergen, 2015) can be used as the starting point on measuring the competencies of the Top Management Team on Corporate Governance. On top of that, board involvement in IT related field has a positive effect on strategic decision making in the current status quo. In fact, strategic decision making is a partial mediator between board level IT governance and organizational performance (Caluwe & Haes, 2019).

Gender

Referring to the research by Carter et al. (2003), it found that firms with two or more women as its of top management team members, tend to have higher corporate values than firms with fewer women in TMT members of less than two. However Glunk et al. (2001), found that gender distribution differs greatly in several countries, for instance, the quantity of female executives in UK, Denmark, and the Netherlands are less significant. The proportion of women in

important positions is still quite few, as men's ability in making strategic decisions is considered to be better than women. But on the other hand, women tend to have a very high cautious attitude, to avoid risks, and to be more thoroughly than men. This makes women not hasty in making decisions. Therefore, female directors as members of the board are considered able to make more informed decisions and lower risks.

Age

Tulung and Ramdani (2016) found that seniority of age in TMT characteristics has a positive relation with BPD performance. At the demographic level, Team Diversity refers to variables, such as the age used to measure team differences. This diversity indicator is used to measure deeper differences in terms of cognitive, information and value, because a young manager may have different information, experience and perspective compared with senior managers in making a company's decision to strategic issues. Pegels and Yang (2000) suggest that older managers tend to avoid risk, whereas young managers tend to pursue something riskier, and innovative growth strategies (Vroom & Pahl, 1971).

Level of Education

Dahlin et.al. (2005) found that the diversity in level of education on TMT members influences the range and the depth of the information used; meanwhile, this may influence the information combination negatively. Nevertheless, the ratio of "cognitive bias" (Herrmann and Datta, 2005; Hambrick and Mason, 1984) also explain that in the previous sub section on the influence of functional background of the educational background, it may become the supplement. Bray et al (1997) states that education in a university should support the students' career, assuming that higher education has higher chance in getting job. The level of education also reflects the cognitive ability of the people and their skill. Moreover, higher education is related to the higher capacity for processing the information and to the ability to distinguish various situations (Schroder et al 1967). Bantel & Jackson (1989) found that top management team influences the knowledge of manage the firm and make a good decision. Although educational background in business is not obligatory for those people who enter the business world, it is better if the team members have educational background in business and economy. Having that background, the members of the team have at least better ability to manage the business and to make any decision related to the business compared to those who do not have educational background in business. As a result, this ability gives better value for the company.

IT Expertise

According to Caluwe and Haes (2019), top management teams can no longer delegate their IT governance related responsibilities in the actual business. As digital transformation changes the bases of competition, the board needs to take accountability for IT-related strategic decision-making and control. However, literature points out that in practice little boards engage in IT governance with regard to the question of how to implement IT governance at the level of the board, the majority of researches refers to structures. Structures proposed are an IT oversight or similar committee and IT expertise at the level of the board. Referring to the "Upper Echelons" Theory (Hambrick & Mason, 1984), the upper tier of organization structures are the major executives in an organization, and each of them provides instructions and directives on making important strategic decisions and the outcomes can partially be predicted by managerial background characteristics of the top level management team. (Tulung & Ramdani, 2016) also confirmed that board characteristics also has a positive relation with Bank performance. In strategic IT related decision making during the digital era, Board characteristics like board size and director age as the integral part of Corporate Governance have strategic importance (Caluwe & Haes, 2019).

Experience

Vafeas (2003) suggesting that extended board service time is a sign of director commitment, experience, and competence and the management-friendliness hypothesis suggesting that extended board service time marks directors who befriend management at the expense of shareholders. It find evidence that Senior directors with twenty or more years of board service, are almost twice as likely to occupy a 'management-affiliated' profession compared to the rest, and that they are also more likely to staff the firm's nominating and compensation committees. Senior director participation in the compensation committee is associated with higher pay for the CEO, especially when the CEO is

more powerful in the firm. These results are consistent with the management-friendliness hypothesis, and highlight a need for setting term limits for directors.

Return On Asset (ROA)

According to Kasmir (2007), the ratio of profitability is called business profitability. This ratio is used to measure the efficiency of a firm and the profitability achieved by banks. The profits gained from the activities are the representation of a company's performance. In this research, the ratio of profitability will be represented by the return in assets (ROA) ratio. Focus of the previous research which measures the performance of the company was on return on assets and Return on Equity (ROE) (Habelian and Finkelstein, 1993; Michel and Hambrick, 1992). ROA is chosen because it shows the ability of the bank performance and it also measures the effectiveness of the company in getting the income from the asset management. The higher the ROA, the better performance of the bank.

Capital Adequacy Ratio (CAR)

Solvability of a company shows the company's sufficiency to fulfill its financial obligation both in short and long terms if the company is liquidated. A solvable company means that the company has an adequate assets or properties to pay all its debts. In order to measure the solvability, Białas and Solek (2010) states that CAR was first legalized as the measuring instrument of banking health in July 1988 by the Basel Committee on Banking Supervision under the guidance of Peter Cook, thus making it named Cook Ratio. A bank is considered in good condition if the CAR value is above 8%. Since then, CAR is widely employed in banking business. Capital Adequacy Ratio (CAR) was employed in this research as the dependent variable to measure the performance of the Indonesian Bank as one of several indicators of healthy bank issued by the Bank of Indonesia. A bank with a low CAR value will be warned by Bank of Indonesia and within certain periods it will get some sanction if it cannot make any improvement. The sanction is in the form of liquidation from the Bank of Indonesia.

Non-Performing Loan (NPL)

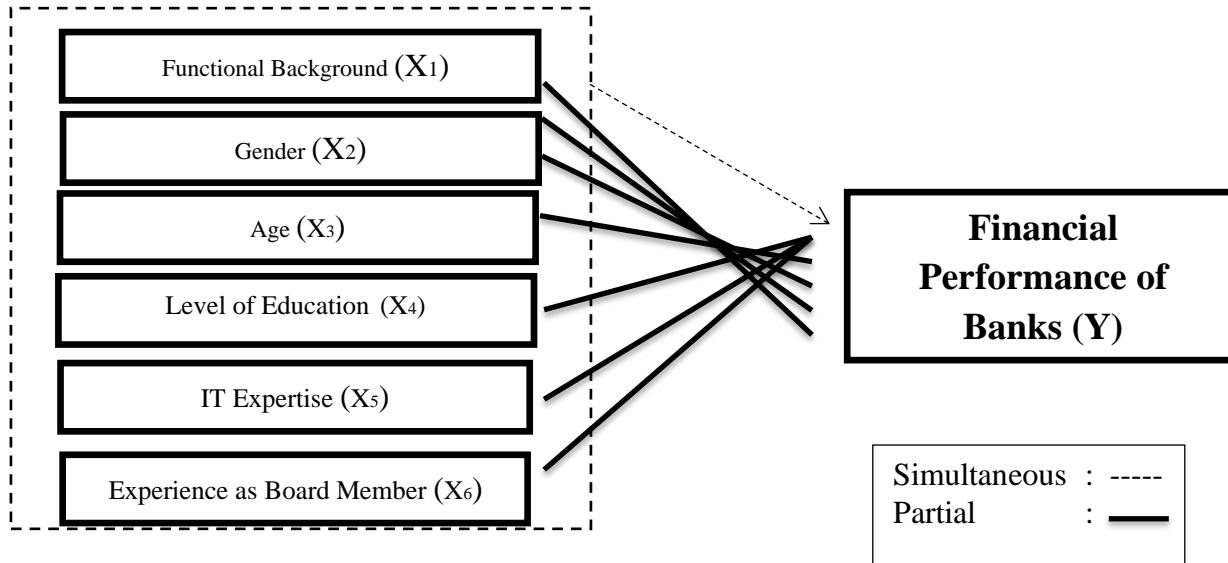
Assets quality is also called Earning Assets. The meaning of asset quality means total assets in rupiah and foreign exchange owned by the bank in the purpose of earning certain amount of income. However, in banking industry, several of the assets where in this case loaned to the third party, usually does not perform well and profits from these assets seems questionable. Those assets are called Non-Performing Loan (NPL) or bad credit. It is defined as a loan that is difficult to pay as the result of intentional factor and or external factor beyond the control of the debtor (Siamat, 2001). The ratio shows the ability of the bank management in managing the bad credits given by the bank. It means that the higher is the ratio, the worse is the quality of the credit of the bank. It may lead to higher amount of bad credit and thus increasing the possibility the greater loss due to bad credits. The ratio shows the quality of credit asset, meaning that when the collectability of the total credit is poor, doubted, and bad, then the bank is facing a bad credit. The higher is the ratio, the higher is the amount of uncollected loan. It leads to the decrease of the bank income.

Previous Researches

Based on "upper echelons theory", Tulung & Ramdani (2016) investigates the relation between top management team composition and BPD performance. For top management team characteristics, we employ age, level of education, background of education, gender, and functional background, while for measured the BPD performance we employ return on asset (ROA), return on equity (ROE), capital adequacy ratio (CAR), net interest margin (NIM), loan to deposit ratio (LDR), non-performing loan (NPL) and operation expenses to operation income (BOPO). The results show that all characteristics have positive significant influences on BPD performance. Saerang, Tulung, & Ogi (2018) also provides information regarding effective composition of the board of directors and board of commissioner and all bank officials in SulutGo Bank. The population and samples are SulutGo Bank officials consisting of boards of commissioners, boards of directors, division leaders and branch leaders of all the Banks of SulutGo. They consist of 4 Commissioners, 5 Directors, 2 Heads of Department, 19 Heads and Divisional Representatives, plus 94 head offices (head office, branch offices and sub-branch offices) scattered throughout the provinces of North Sulawesi, Gorontalo, DKI Jakarta and East Java. In measuring the performance of BPD, Capital Adequacy Ratio (CAR), Return on Assets (ROA) and Return on Equity (ROE) are employed. The results show age, education level, work period and gender

have a positive relationship with CAR, but there is no relationship with ROA, ROE and Total Assets. The same with the F-test, simultaneously age, education level, work period and gender has a positive relationship with CAR but there is no relationship with ROA, ROE and Total Assets. Furthermore, Caluwe & Haes, (2019) found that digital transformation is becoming pervasive, resulting in the intertwine of organizational strategy with IT strategy and increasing importance of IT risk. This falls into the domain of the board of directors, who are ultimately accountable for strategy and control. Yet, research shows that the involvement of boards in governing digital assets is low. In order to address this topic, the paper summarizes the state-of-the-art of this research domain and identifies an agenda for future research that will discuss the relationship between Corporate Governance and the importance of IT Expertise.

Conceptual Framework



Research Hypothesis

H₁ : Functional Background, Gender, Average Age, Level of Education, Educational Background, IT Expertise, Average Tenure, Average Experience, and International Experience affect the Financial Performance of banks simultaneously.

H₂ : Functional Background of the TMT members affect the affect the Financial Performance of banks partially.

H₃ : Gender diversity among TMT members affect the Financial Performance of banks partially.

H₄ : Average Age of the TMT members affect the Financial Performance of banks partially.

H₅ : Level of education of the TMT members affect the Financial Performance of banks partially.

H₆ : IT Expertise among the TMT members affect the Financial Performance of banks partially.

H₇ : Average Experience of the TMT members affect the Financial Performance of banks partially

RESEARCH METHOD

Research Approach

This research is using a quantitative approach. According to Earl R. Babbie (2010), Quantitative research is methods that emphasize objective measurements and the statistical, mathematical, or numerical analysis of data collected through polls, questionnaires, and surveys, or by manipulating pre-existing statistical data using computational techniques. Quantitative research focuses on gathering numerical data and generalizing it across groups of people or to explain a particular phenomenon. This study also uses a deductive research method as a methodological approach. A deductive study requires prior conceptual development and structural theory and is tested through empirical observation, it involves beginning with a theory, developing hypotheses from that theory, and then collecting and analysing data to test those hypotheses (Gill & Johnson, 2002).

Population, Sample and Sampling Technique

Population refers to the entire group of people, events, or things of interest that the researcher wishes to investigate. It is the group of people, events, or things of interest for which the researcher wants to make inferences based on sample statistics. The population in this research is 120 Banks in Indonesia that currently are listed in OJK and Bank Indonesia (BI). The sample is a portion of the population and is considered able to represent the population. Purposive sampling technique is one of the techniques in determining a sample that uses certain considerations in selecting the sample. The sample selection in the purposive sampling technique uses the bases determined by the researcher in order to get a sample that is suitable for the research.

Sample size refers to how many entities to the population that have been analyzed. The sample of this research are 32 selected banks, that consist of Conventional Banks (State Owned and Private), Regional Development Banks, and International Banks that are operating in Indonesia.

Type of Data and Data Source

This research uses secondary data. Secondary data is research that already available or existing data which is collected by the previous research and use to support the statements that are used in this research analysis. The type of data of this research is also classified as panel data. Panel data is a combination of cross section data and time series data (Kuncoro, 2011).

Data Collection Method

To collect the research data, the techniques are separated into two as follows:

1. Documentation technique, namely taking data obtained through documents. These data are in the form of Annual Reports of each Commercial Bank from 2014-2018 period, that consist of the data regarding the TMT members Team and Financial Statements of selected banks.
2. Literature study is a data collection technique by conducting a review study of books, literature, journals, notes and reports that are related to the problem being solved.

Measurement of Research Variables

Referring to Tulung and Ramdani (2016) and Saerang *et al* (2018), the measurement to identify background diversity is to groups them based on professionals' bankers or experienced management team, Academician, Military and Bureaucrats; Secondly, level education is grouped from high school diploma to doctoral degree. The average Age of the TMT members is classified based on (Howe & Strauss, 1991) classification of generation, starts from silent generation (1920s-1945), Baby Boomers (1965-1976), Generation (1965-1976), Generation Y or Millennials (1977-1995). Furthermore, tenure and experiences are measured based on the average years of tenure and experience of the TMT members (Tihanyi, Ellstrand, Daily, & Dalton, 2000). The rest of the variables which are gender diversity and IT expertise are measured using dummy variables (Draper & Smith, 1998), where 0 indicates absence and 1 indicates presence.

Reliability

Reliability test is used to determine whether the measurement items in the data collected are highly related to each other. Moreover, the relationship between individual items in the scale can be determined significantly. Reliability refers to the extent to which scale procedures provide consistent results if repeated measurements are free from random. By using reliability test, Cronbach's Alpha is adopted by averaging the coefficient that results from all possible combinations of split halves (Malhotra and Peterson, 2006). Cronbach's Alpha coefficient provides the most that is ranging from 0 to 1. The higher the coefficient, the more reliable the items are in measuring the constructs. A value of 0.6 or less generally indicates unsatisfactory internal consistency and reliability. The internal consistency can be seen at the Cronbach's Alpha Parameter with ideal score above 0.6.

Panel Data regression

Panel (data) analysis is a statistical method, widely used in social science, epidemiology, and econometrics research to analyze the combination of cross sectional and time-series panel data (Maddala, 2001). The data are usually collected over time and over the same or different entity and then a regression conducted over these two dimensions. Multidimensional analysis is an econometric method in which data are collected over more than two dimensions (typically, time, individuals, and some third dimension) (Davies & Lahiri, 1995).

According to (Gujarati, 2012) The formula of linear regression (panel data regressions) in panel data as follows:

$$Y_{it} = \alpha + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 X_{5it} + \beta_6 X_{6it} + \varepsilon_{it}$$

Description:

Y = Dependent Variable (ROA, CAR, NPL)

X₁ = Functional Background

X₂ = Gender

X₃ = Age Classification

X₄ = Level of Education

X₅ = IT Expertise

X₆ = Experience

β_n = The regression coefficient of each variable

i = Individual entity

t = Time Variable

ε = The combination of Error Term from time series dan cross section

α = Constant

Random Effect General Least Square (RE GLS) Regression Model

Random Effect model approach with the assumption that each research subjects has different intercepts; which intercepts are random or stochastic variables. This model is very useful if the individuals (entities) taken as a sample are chosen randomly and are representative of the population. This technique also takes into account that errors may correlate across cross sections and time series. According to (Ekananda, 2016), Random Effect model regression uses Generalized Least Square (GLS) approach, which is a technique used to estimate parameters that are unknown in a linear regression model when there is a certain degree of correlation between residues in the regression model. In such cases, the use of OLS in common effect model and fixed effect model, and also weighted least squares is statistically inefficient, or even leads to misleading conclusions. According to (Aziz, 2012), it is proven that the GLS method still produces the Best Linear Unbiased Estimator (BLUE) estimator even though the data contains autocorrelation. (Ekananda, 2016) also stated that GLS approach in the Random Effect regression, cures the problem of heteroscedasticity and helps to overcome the problem of individual heterogeneity in the error, therefore, classical assumption test is no longer necessary. The justification of RE model usage also has to be proven in Breusch-Pagan Lagrange multiplier test.

Breusch-Pagan Lagrange multiplier (LM) test

According to (Widarjono, 2009) and (Torres-Reyna, 2007), in order to clarify which regression model that fits the research that are using panel data, the Breusch-Pagan Lagrange multiplier (LM) test has to be conducted. The LM test helps to decide between a Random Effect (RE) regression model and a simple Common Effect model that uses Ordinary Least Square (OLS) regression. The test is based on the residual value of the Common Effect method.

The LM test is based on the Chi-Squares distribution with degrees of freedom (df) equal to the number of independent variables. The first hypothesis is that the right model for panel data regression is the Common Effect, and the alternative hypothesis is the right model for panel data regression is the Random Effect. If the calculated LM value is greater than the critical value of Chi-Squares, the null hypothesis is rejected, which means that the right model for panel data regression is the Random Effect model. According to (Torres-Reyna, 2007), if the value of Prob > χ^2_{α} is below ($\alpha = 0.05$) indicates that H₀ is rejected therefore the Random Effect regression model is eligible over simple OLS regression. And conversely, if the calculated Prob > χ^2_{α} is greater than ($\alpha = 0.05$), H₀ is accepted which means that the right model for panel data regression is the Common Effect model. The null hypothesis (H₀) in the LM

test is that variances across entities is zero. This means there is no significant difference across units (i.e. no panel effect).

Testing the goodness of fit in Random Effect regression model: Coefficient of Determination (R-sq.)

Coefficient of determination is used to show the percentage of variability in Y that can be explained by regression equation (Newbold & Granger, 1974). The value of the coefficient of determination reflects how much the variation of the dependent variable can be explained by the independent variable. If the value of the coefficient of determination is equal to 0, it means that the variation of the dependent variable cannot be explained by the independent variables at all. Meanwhile, if the value of the coefficient of determination is equal to 1, it means that the variation of the dependent variable as a whole can be explained by the independent variables. Thus, the good or bad of a regression equation is determined by its R-squares which have values between zero and one.

F-test

A F-test is the statistical test intended to determine whether the independent variables simultaneously influence the dependent variable (Maholtra, 2007). To test the regression coefficient simultaneously, it used the statistical test of F_{test} as follows:

- a. If $F_{count} \geq F_{table}$ as confidence level of 10% ($\alpha = 0.1$), 95% ($\alpha = 0.05$), 99% ($\alpha = 0.01$), it means that all the independent variables have a significant effect on the dependent variable simultaneously. Thus, the original hypothesis H_0 is rejected and the alternative hypothesis H_1 is accepted.
- b. If $F_{count} < F_{table}$ as confidence level of 10% ($\alpha = 0.1$), 95% ($\alpha = 0.05$), 99% ($\alpha = 0.01$), it means that all the independent variables have a significant effect on the dependent variable simultaneously. Thus, the original hypothesis H_0 is accepted and the alternative hypothesis H_1 is rejected.

t-test

A t-test is any statistical hypothesis test in which the test statistical has a T-distribution if the null hypothesis is true. The Ttest is used to determine the effect of each independent variable to dependent variable individually, considering the other variables remain constant.

- a. If $T_{count} \geq T_{table}$ as confidence level of 10% ($\alpha = 0.1$), 95% ($\alpha = 0.05$), 99% ($\alpha = 0.01$) it means that the independent variable has a significant effect on the dependent variable partially. Thus, the original hypothesis H_0 is rejected and the alternative hypothesis H_1 is accepted.
- b. If $T_{count} < T_{table}$ as confidence level of 10% ($\alpha = 0.1$), 95% ($\alpha = 0.05$), 99% ($\alpha = 0.01$), it means the independent variable has a significant effect on the dependent variable partially. Thus, the original hypothesis H_0 is accepted and the alternative hypothesis H_1 is rejected.

RESULT AND DISCUSSION

Description of Research Respondent

The data of this research are obtained from annual reports of 32 banks that contains the profile of 348 TMT members and 5 years financial summaries of each banks with the total of 160 financial summaries. The characteristics of those 348 TMT members are characterized based on their Functional Background, Gender, Age, Level of Education, IT Expertise, and Experience members.

Table 1. Description of Research Respondent

Profile	Classification	Frequency	Min.	Max.	Percent	Mean
Functional Background	Professionals/ Bankers	292			83.9	
	Academician	22	1	4	6.3	1.35
	Bureaucrats	32			9.2	
	Military	2			0.6	
Gender Diversity	Females	60	0	1	17.2	.83
	Male	288			82.8	
Average Age	Silent	9			2.6	
	Boomer	190	30	84	54.6	56.17
	X	140			40.2	
	Y	9			2.6	
Education Level	SMA	6			1.7	
	S1 (Bachelor)	114	0	3	32.8	1.78
	S2 (Master)	180			51.7	
	S3 (Doctor)	48			13.8	
IT Expertise	No	303	0	1	87.1	.13
	Yes	45			12.9	
Experience Directors			0	49	49	8.30

Source: Data Processed (2019)

The data above shows the average age of the TMT members are 56 years old and the average experience of the TMT members is 8 years of experience working as TMT members in any firms. The table shows that the majority of 83.9% of TMT members in Indonesian Banks in general are professionals in business world or bankers. commonly they are people who have past experience as TMT members in financial related or not-related firms. Then followed by Bureaucrats (9.2%), academician from educational institution by 6.3%, and lastly from Military background (0.6%). Furthermore, the majority of the TMT members from the data collected are males with 82.8%, and then followed by females as minority of 17.2% proportion. According to the data, majority of the TMT members are Baby Boomers (54.6%), then followed by the proportion of X Generation (40.2%), and equally followed by Y and Silent Generation (2.6%) Most of of the subjects in this research already had their master degree (51.7%), followed by those who only reached bachelor degree, then followed by doctors (13.8%), and lastly High-School graduates (1.7%). Lastly, most of the members did not any experience or expertise in IT related field (87.1%), while only 12.9 of the TMT members have at least experience working in IT related department or got at least one IT related degree.

Reliability Test

Reliability test is used to check the consistency of the measurement instrument. To see whether the data is reliable or not, Alpha Cronbach test is utilized as reliability test in this research.

Figure 2. Realibility Statistics

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Test scale = mean(unstandardized items)
Reversed items:  NPL BOPO x3 x7 x8 x9

Average interitem covariance:      5.567212
Number of items in the scale:      16
Scale reliability coefficient:      0.6168
    
```

Source: STATA Output (2019)

The output of STATA shows that the value of Cronbach’s Alpha of 16 items used in this research is 0.6168. The data is considered as reliable since the value of Cronbach’s Alpha is above the minimum value which is 0.6.

Random Effect Model Regression

To do random effect model regression analysis, calculation is conducted by using STATA version 14 (v.14) software. The data will be processed is the data of 32 group of banks with each their own financial ratios from 2014-2019, and also the data of 348 TMT members listed in the 5 years annual reports collected. The calculation ensures the accuracy of the analysis. Recall that the Random Effects General Least Square regression model is used to determine the effect of several independent variables on a dependent variable. The computation was done using STATA v.14 software. The computerized calculation ensures the accuracy of the analysis.

Table 2. Random Effect model regression Results

Variables	Bank Financial Performances					
	ROA		CAR		NPL	
	Coef.	t	Coef.	t	Coef.	t
Constant	1.580	0.629	39.345	0.003	-5.469	0.139
Functional Background X_1	2.068	0.149	0.379	0.920	-0.574	0.592
Gender X_2	-0.954	0.690	-10.067	0.111	4.103	0.022**
Generation Classification X_3	-3.622	0.046**	-10.689	0.026**	4.103	0.003***
Level of Education X_4	1.314	0.426	0.991	0.820	-0.306	0.804
IT Expertise X_5	-1.172	0.565	12.337	0.022**	1.106	0.467
Experience X_6	-0.007	0.930	-0.020	0.927	0.042	0.488
<i>Prob > chi2</i>	0.0426		0.0022		0.1908	
<i>R²</i>	0.2157		0.2679		0.0365	

Note: * p<.1; ** p <.05; *** p<.01

Source: Data Processed (2019)

The interpretation of the results above as follows:

1. The first hypothesis (H₁) states that all independent variables have simultaneous effect towards the financial performances. The results show that all independent variables simultaneous relationship towards five of the seven financial performance ratios namely ROA (0.0426, with p < 0.05) and CAR (0.0022, with p < 0.01) are significant. However, there are no simultaneous relationship between the independent variables with NPL. Based on this regression analysis, we accepted the H₁.

2. Secondly, hypothesis 2 (H₂) states that the functional background of the TMT members will positively influence the financial performance. The result shows that X₁ does not have any significant effect with any indicator, therefore H₂ is rejected.
3. Thirdly, the hypothesis 3 (H₃) examines the influence of Gender diversity towards bank financial performances and the results show that gender diversity influences the performance of NPL (0.022, with p < 0.05), therefore the H₃ is accepted.
4. The fourth hypothesis, (H₄) examines the influence of the average age of the TMT members towards bank financial performances and the results show that average age in the board room influences the financial indicators of ROA (0.046, with p < 0.05), CAR (0.026, with p < 0.05), and NPL (0.003, with p < 0.01) so the H₄ is accepted.
5. The fifth hypothesis, (H₅) examines the influence of Level of Education of the TMT members towards bank financial performances and the results show that it does not influence any financial indicators, therefore H₅ is rejected.
6. The sixth hypothesis (H₆), examines the influence of IT Expertise of the TMT members towards bank financial performances and the results show that it does have significant influence towards financial indicator of CAR (0.022, with p < 0.05) therefore H₆ is accepted.
7. The seventh hypothesis (H₇), examines the influence of Average Experience of the TMT members towards bank financial performances and it does not influence any financial indicators, therefore H₇ is rejected.
8. The table also shows the coefficient of determination (R-sq.) for each regression, and it shows that the variation of all independent variable explains 0.2628 (26.2%) of variation in ROA, 0.3047 (30.4%) of variation in CAR, and 0.2264 (22.6%) of variation in NPL, while the remaining percentage is explained by other factors outside the model or not discussed in this research.

Regression Equations

$$\begin{aligned} \text{ROA} &= 2.394 + 2.068x_1 - 0.954x_2 - 3.622x_3 + 1.314x_4 - 1.172x_5 - 0.007x_6 + e \\ \text{CAR} &= 39.345 + 0.379x_1 - 10.067x_2 - 10.689x_3 + 0.991x_4 + 12.337x_5 - 0.020x_6 + e \\ \text{NPL} &= -5.469 - 0.574x_1 + 4.102x_2 + 4.103x_3 - 0.306x_4 + 1.106x_5 + 0.042x_6 + e \end{aligned}$$

Source: Data Processed(2019)

Description:

Dependent Variable = (ROA, CAR, NPL)

X₁ = Functional Background

X₂ = Gender

X₃ = Age Classification

X₄ = Level of Education

X₅ = IT Expertise

X₆ = Experience

e = The combination of Error Term from time series dan cross section

The interpretation of the regression result using ROA as the example for the other interpretations, as follows:

1. Constant value of 2.394. This means that if Functional Background (X₁), Gender (X₂), Age Classification (X₃), Level of Education (X₄), Educational Background (X₅), IT Expertise (X₆), Tenure (X₇), Experience (X₈), International Experience (X₉) is 0 (zero), it will increase Financial Performance (ROA) by 2.394.
2. X₁'s coefficient value of 2.068 means that if there is an unit increase in Functional Background (X₁) then the Return on Asset (Y) will increased by 2.068.
3. X₂'s coefficient value of -0.954 means that if there is an unit increase in Gender (X₂) then the Return on Asset (Y) will decreased by 0.954.

4. X_3 's coefficient value of -3.622 means that if there is an unit increase in Age (X_3) then the Return on Asset (Y) will decreased by 3.622.
5. X_4 's coefficient value of 1.314 means that if there is an unit increase in Level of Education (X_4) then the Return on Asset (Y) will increase by 1.314.
7. X_5 's coefficient value of -1.172 means that if there is an unit increase in IT expertise (X_5) then the Return on Asset (Y) will decreased by 1.172.
9. X_6 's coefficient value of -0.007 means that if there is an unit increase in Experience (X_6) then the Return on Asset (Y) will decreased by 0.007.

The same model interpretation however, also applied for other dependent variables, which are: CAR, and NPL.

Breusch-Pagan Lagrange multiplier (LM) test

The LM test helps to decide between a random effect's regression and a simple OLS regression. The null hypothesis (H_0) in the LM test is that variances across entities is zero. This is, no significant difference across units (i.e. no panel effect). According to Torres-Reyna (2007), if the value of Prob > chibar2 is below ($\alpha= 0.05$) indicates that H_0 is rejected therefore the Random Effect regression model is eligible over simple OLS regression.

Table. 3 Breusch-Pagan Lagrange multiplier (LM) tests

<i>Variables</i>	Prob > chibar2
ROA	0.000
CAR	0.000
NPL	0.000
<i>N</i>	160

Note: * p<.1; ** p <.05; *** p<.01

Source: Data Processed (2019)

The result of LM test on Financial Performance ratios (Y) shows that all Prob> chibar2 is below the value of ($\alpha= 0.05$), therefore H_0 which is the usage of common effect Ordinary Least Square regression model is rejected and the Random Effect General Least Square regression model is justified.

Discussion

The situation of the status quo, urged banks to adjust their composition of the TMT members with the challenge and the relevance of time. In this current situation, the risk of liquidation and other risks are still haunting the strategic decision makers in banks to adjust their business model, so that they will always able to accommodate the interests of the shareholders. The crucial role of banks also plays an important role in the macroeconomics situation. A substantial problem that affect the sustainability of a particular bank could bring a systematic negative impact to the economic situation of a particular country. Therefore, a reliable structure of TMT members in banks is an absolute mandatory. However, the formulation of the exact component in corporate governance have to be concluded from researches to determine the effective composition of TMT members.

Functional Background and The Financial Performance

Cited from the research by Crouch (1975), during the new order era (1966-1998) under president Soeharto, The term *Dwi Diarma* (dual duty) doctrine with the primary purpose of saving the country from crisis have legitimized the army's activities government but it has also served to justify the involvement of military men in economic affairs. The participation of army officers in economic administration and management, which commenced in the 1950s, expanded in the 1960s and 1970s into all kinds of business endeavors, as the army's political strength grew. As the era changed, this research found that there is no longer significant presence of TMT members with military

background in the boardroom This research has found that the hypothesis of the influence of the background diversity in the boardroom does not have any significant effect towards financial ratios.

Gender Diversity and The Financial Performance

Carter et al. (2003) found that firms with two or more women in TMT members have higher corporate values than firms with fewer women in TMT members of less than two. The result shows that the proportion of females in the boardroom does significantly affect the increase of management of unproductive loans in the company. This can be concluded that females often avoid to lend the company's capital to risky entities. The proportion of females however does not have any substantial effect towards company's profitability and capital adequacy.

Average Age and The Financial Performance

Pegels and Yang (2000) suggest that older managers tend to avoid risk Vroom and Pahl (1971), states young managers tend to conduct something riskier, and innovative growth strategies. Seniority of the TMT members might have different information, experience and perspective in making a company's decision to strategic issues.

This research proved that seniority does really matter since it really affects the company's ability to retain profits, control capital adequacy, and strongly associated with risk of controlling the Non-Performing Loan. This prove the point that seniority tend to make reactionary or conservative decision in order to avoid risks that necessarily equals to strategically profitable. Most of the perspective of the senior TMT members in this research however, are suspected to be able to bring a much more benefit for the company.

Level of Education towards Financial Performance

This research has found that level of education surprisingly does not significantly affect the financial performance of banks. The most appropriate explanation about this, is that the assumption of formal degree of education that has been taken by a particular individual doesn't necessarily means that it could make a person a better and eligible board member. According to the data and the quantitative data processing, there are possibilities that firms with the average of TMT members who doesn't took higher level of education, has better financial ratios or does not necessarily affects the financial ratios.

IT Expertise and the Financial performance

The progressive market nowadays has made business world holistically continue to adjust themselves with the market demand and the technology development. Therefore, in order for the banking industry to be able to create innovative IT related products or software that could possibly help the business activities. (Caluwe & Haes, 2019) states that one of the possible ways to measure the effectivity of IT expertise in the boardroom is by analyzing the significance between IT expertise and financial performance of any type of firm. The findings of this research found there is a significant relationship between IT expertise with capital adequacy ratio. This could possibly mean that digital innovation by the boardroom teams can increase both deposits and equity. For instance the digital banking application that make deposits possible from anywhere, or the IT expertise in the boardroom could convince a larger portion of shareholders to invest their asset in the firms with the assumption that the firm will have a positive amount of profitability ratio in the future since the firms structure has progressively adjust itself with the status quo of digital development.

Average Experience towards the Financial performance

The longer a particular individual manage a firm, the longer they understand the complexities of that company. A longer a person being a board member, the more they understand the strategic decision-making process in the board level. This underline the hypothesis of the relationship between tenure and experience towards Financial performance of banks. The results indicate that a better understanding of the boardroom environment, might help with the insight of the exact policy that should be implemented in the business process of bank that involve the formulation of strategic interest rate for credit and deposits in order to maximize profitability. However, the relationship between years of experience and financial performances are insignificant. It would seem that experience in the boardroom does not necessarily bring positive towards the financial performance. There are possible circumstances where despites of

experienced TMT members, externalities or other factors still affects the firm significantly. Sometimes, experience also does not equal knowledge or better understanding of the industry or the firm. The data obtained actually found out that there are several TMT members that are experienced measured by years, however the firms under their management turn out to be owned by their own family or private entity that made these particular acquire their TMT membership for a very long period. Thus, making the measurement method might be inaccurate.

CONCLUSION AND RECOMMENDATION

Conclusions

After examining the findings and discussing the result, the conclusions based on this research can be formulated as follows:

1. All independent variables simultaneously affect financial performance indicators of ROA and CAR.
2. Functional Background does not have any significant relationship towards any financial indicator.
3. Gender diversity partially have positive relationship and significant effect on NPL.
4. Average Age have positive relationship and significant effect on ROA, CAR, and NPL.
5. Level of Education have negative relationship and no significant effects on financial performance of banks.
6. IT Expertise partially have positive relationship and significant effects on CAR.
7. Average Experience does not have any positive relationship and significant effects any dependent variable.

Recommendation

1. As discussed above, Functional background does not have significant impact towards return on company's equity. This research confirms that firms that have a diverse functional background in the boardroom, does not effectively affect the financial performance of banks, probably due to the diverse perspective in the boardroom that could generates conflicts of perspective and affect the strategy formulation process.
2. Secondly, the proportion of females in the boardroom as the part of gender diversity has positive relationship and significant effect on NPL. It shows that gender plays an important role as that affect the non-performing loan. The involvement of more diverse females in a firm's boardroom could gave a tendency to lend the firm's assets to a right entity.
3. Average Age have positive relationship and significant effect toward almost all financial indicators. Seniority based on age is totally distinguished with seniority based on experience as TMT members. In most cases, several TMT members are old loyal employees that made their way to the boardroom, and thus they might have little experience as TMT members. However, the results show that seniority give a significant impact towards the firms' profitability which means that the high level of seniority in the firms might affect the ability of the company in making profits. Furthermore, it also affects the company capital adequacy which means that seniority helps the firm in providing adequate capital for the business operation. The ratio of non-performing loan also affected by the seniority of the TMT members which means that older TMT member might tend to implement strategies to carefully lend the company assets to wrong entities.
4. The significance rate level of education is questionable in this research, proves that level of education does not necessarily equals to better banks' performances. level of education and Educational background however is highly distinguished with expertise in banks related field or economic expertise. The index of dummy variable and grouping index in quantitative data processing might not be enough in measuring the significant relationship between level and background of education towards bank's financial performance.
5. IT Expertise of the TMT members has a significant impact towards the capital adequacy, means that the banks' ability to increase the liquidity by adding a significant portion of additional capital. This could possibly mean that digital innovation by the boardroom teams can increase both deposits and equity. For instance the digital banking application that make deposits possible from anywhere, or the IT expertise in the boardroom could convince a larger portion of shareholders to invest their asset in the firms with the assumption that the firm will have a positive amount of profitability ratio in the future since the firms structure has progressively adjust itself with the status quo of digital development. However, due to limited index that could measure the impact of IT expertise towards firm's performance, a more complex and sophisticated index and measurement method is recommended for a better result.

6. The significance rate of average years of experience is also questionable. It would seem that experience in the boardroom does not necessarily bring positive towards the financial performance. There are possible circumstances where despites of experienced TMT members, externalities or other factors still affects the firm significantly. Future research measuring TMT experience in year is not recommended.

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