MAINTAINING MARKET LIQUIDITY OF ASEAN-6 BANKING COMPANIES THROUGH MANAGEMENT DISCLOSURES

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Submission date: 16-Dec-2024 08:07PM (UTC-0500)
Submission ID: 2546426416
File name: CP_Maintaining_Market_v.2.0_FULL_ISBN.pdf (805.88K)
Word count: 16006
Character count: 92463

A. Increasing Market Liquidity Through Intellectual Capital Disclosure (ICD)

Global challenges that occur in ASEAN countries is caused by the conversion of the policy framework made by the countries. As one of the challenges, financial crisis in ASEAN countries is well-faced and is marked as a success for ASEAN region. The success is due to the implementation of the broad range of economic and financial sector programs. Some of these programs also affect the monetary independence of ASEAN countries to be better and make them ready to face any external shocks. The policies applied in the program is usable to create local financial markets which then help to minimize the risk of currency exchange rate mismatches. The existence of the global crisis prepares ASEAN countries to be well-respond for any systematic risks that often occurs. In order to preserve the financial stability, ASEAN applies a policy carries out a management policy for regional financial integration to maintain on suppressing the risk while still can take benefit. As an effort to keep the stability of the countries' financial, ASEAN creates The ASEAN Economic Community (AEC).

The AEC agreement started to be implemented in 2016 and since then, there have been several changes in the business field, such as urbanization. Urbanization is the migration of citizens includes the workers in each ASEAN country.

According to Alhadab and Nguyen, urbanization is a result of an event that also affect the economic condition in the area involved (Alhadab & Nguyen, 2018; Nguyen & Nguyen, 2018). There are a lot of people join the urbanization since it provides workers with prominent income both in cash and in-kind both in rural and migration areas but with lower cost to reach big gap (Munshi & Rosenweig, 2016). The often this urbanization happens, workers in urbanization destination areas are threatened because the competitiveness level to get job is increasing. However, companies in ASEAN that is located in the urbanization destination areas gains benefit since it provides them excellent managerial human resources (Sun et al., 2019). In contrast, companies must have a great workforce management, so that they can maintain to keep their employee (Alhadab & Nguyen, 2018). Urbanization causes ASEAN to be a potential market that catch foreign businesses' attention. The phenomenon of urbanization becomes a way to exchange information. The advantage of this exchange proves by the quality of the society which have been equipped with the ability and skills in a specific field, so it is economical for the companies since it can save its operational cost (Masron, 2017; Alhadab & Nguyen, 2018).

By having AEC, it also creates rapid technology development which make people feel more comfortable in doing their activities (Johns & Perrot, 2008). The convenience leads people demand better quality and service while using products or services. Technology development makes companies work more as they have to keep developing their products or services to give better experience for the customers. The change caused by AEC generates a new economic environment known as knowledge-based economic environment (Wang et al., 2016; Cabrita et al.,

2017; Alfraih, 2018a; Joshi et al., 2018). The knowledge-based economic environment must be adjusted to suit the current technology development since the behavior of users who use banking products are also change. It leads a lot of banking industry developing their digital products. Enlarging the knowledge-based environments to develop banking products proves that it is indeed influential. Current technology commonly transfers the tangible asset role to an intangible asset role. As it is a continuous development, the role of intangible assets becomes the main reason banking companies create and manage the competitive advantages (Inkinen, 2015; Kamath, 2017; Poh et al., 2018).

Among the intangible assets, intellectual asset called intellectual capital (IC) is one of the main assets. Intellectual capital (IC) consists of four components, such as *Human Capital (HC), Structural Capital (SC), Relational Capital (RC), and voluntary risk disclosure*. According to Singh, intellectual capital can be used to increase a company's competitive advantages (Singh et al., 2016). Seeing on its success, intellectual capital is used by managers to make corporate strategic decisions in the future (Ahmed Haji & Mohd Ghazali, 2012). In order to be able maintaining company's level, workers need to find an effective strategic, so they can compete in the highly competitive business world. IC indirectly increases the company's value and becomes trend among the investors since it helps them to decide the right thing to discipline company's management, so they can achieve their goals (Yang, 2018; Alfraih, 2018a). Even though IC plays a big role, it cannot be explicitly included in the financial report based on International Accounting Standard (IAS) 38 since it is an intangible asset (Nimtrakoon, 2015). Yang stated that, as IC

has become an important aspect in maintaining a company, it needs to be included in the company annual report as an additional value of a financial report (Yang, 2018).

Bank is a crucial industry that plays as the main role in economic industry. Its role is necessary since it helps to run the companies. The absence of banking will stop any economic recovery. Thus, this study is limited to examinate the role of banking industry. Based on a study, financial service industry, like banking, depends on intellectual capital in competing within the industry (Bontis et al., 2009; Lim & Dallimore, 2004). One of the impactful components in a banking company is customers' trust which help the companies running by keeping their old customers as well as gaining new customers. As an effort to get customers' trust, build a healthy relationship is the key. Thus, it is important to present the *Human Capital* (HC) component by providing the best employee who serve the customers (Bontis et al., 2009).

Intangible assets become influential that makes tangible assets are no longer the main drive. However, a company needs tangible assets to run the company by making some innovations to maintain its credibility for the customers. Innovations created by the company often needs a big amount of money since it is a large investment. Thus, it cannot rely on company's internal fund. In order to fulfill the needs for the innovations, company needs to seek for investors or creditors. However, both investors and creditors will fund or invest in a company with low risk. In this case, Market Liquidity (ML) is measured to examine the market risk level. High level of market liquidity and stable stock price have higher possibility in being accepted by the investors or

creditors. The higher and stronger market liquidity encourage investors to accept and join the investment in the market (Elshandidy et al., 2018).

Intellectual Capital Disclosure (ICD) does bring impacts on banking industry considering its components are used in some parts to increase the level of market liquidity, such as ICD quality and company characteristics. The effects caused by ICD is provided in empirical evidence, so it can be studied. ICD is beneficial for the market prices because it causes a fluctuative market prices. The data provided are data of registered banking company from listed ASEAN countries, such as in Indonesia, the Philippines, Thailand, Singapore, Malaysia, and Vietnam. All data provided proves that either financial and non-financial information in the company's annual report help the managers, investors, and regulators in taking decisions.

B. Overview of the ASEAN-6 Banking Industry

- Regulatory environment and challenges faced by banking companies in the ASEAN-6

Banking companies in the ASEAN-6 countries (Indonesia, Philippines, Thailand, Singapore, Malaysia, and Vietnam) operate within a diverse and evolving regulatory environment. The regulatory environment plays a crucial role in shaping the operations and strategic decisions of these companies. By analyzing the regulatory landscape, key challenges in compliance, risk management, digital disruption, and financial inclusion can be identified. Understanding these challenges is essential for policymakers, regulators, and banking institutions to navigate the complexities of the ASEAN-6 banking sector effectively.

The regulatory environment for banking companies in the ASEAN-6 is influenced by various factors that impact regional banking integration. Regional-level institutions of banking regulation play a vital role in fostering collaboration and standardization across borders (J. Morgan, 2020). Regulatory quality, bank size, and global credit risk are among the main drivers of banking integration in the region, highlighting the importance of harmonized regulations for a stable financial system (Ha, et al., 2020). It is crucial to recognize that the regulatory environment goes beyond mere compliance; changes in policies can present opportunities for businesses to innovate and enhance their operations (HSBC, 2024).

Challenges in regulatory compliance pose significant hurdles for banking companies in the ASEAN-6. The implementation of the countercyclical buffer is one such challenge, aiming to ensure that capital requirements for banks reflect the macro-financial environment they operate in (Basel Committee, 2010). Combatting money laundering and terrorism financing remains a costly and complex endeavor, with current methods often proving ineffective and burdensome in terms of regulatory requirements. Additionally, cybersecurity has emerged as a critical aspect of operational risk management, especially in the digital economy, where the protection of sensitive financial data is paramount (ASEAN, n.d).

Risk management presents a unique set of challenges for banking companies in the ASEAN-6. Bank credit risk management faces regulatory hurdles, data integrity issues, and the need to adapt to technological advancements. To mitigate market risk, banks must explore strategies such as diversification of investment portfolios and stress-testing positions to withstand adverse market conditions. Operational risk can be managed through the implementation of robust internal controls, routine risk assessments, and comprehensive training programs for employees.

The banking sector in the ASEAN-6 is undergoing significant digital disruption, bringing about technological challenges for traditional institutions. Fintech innovations have revolutionized digital payments, lending, and regulatory compliance, reshaping the competitive landscape of the industry (Wang, et al., 2024). Technological disruptions, as highlighted by Professor Xavier Vives, have a profound impact on competition and customer experiences within the banking sector, urging companies to adapt to the changing environment (Vives,

2020). Cybersecurity remains a critical concern in the digital era, necessitating robust measures to safeguard sensitive financial information from cyber threats (ASEAN, n.d).

Financial inclusion poses a complex challenge for banking companies in the ASEAN-6, as they strive to provide inclusive and accessible financial services to underserved populations. Digitally inclusive financial services play a crucial role in enhancing access to financial products, stimulating household consumption, and supporting small and medium-sized enterprises (Ong, et al., 2023). Strategies such as National Financial Inclusion Strategies (NFIS) are instrumental in promoting financial integration and stability in the region, aligning with the objectives of the ASEAN Economic Community (ASEAN, n.d). The promotion of financial inclusion is integral to fostering economic growth and reducing disparities in access to financial services across the ASEAN-6 countries (ASEAN, n.d).

Competition and consolidation trends in the banking sector in the ASEAN-6 have a significant impact on the financial stability and strategic choices of commercial banks in the region. The influence of competition on financial stability has been a subject of examination, emphasizing the need for banks to navigate fundamental challenges to their business models (Noman, et al., 2017). The 2024 banking and capital markets outlook highlights the testing of banks' strategic choices amidst multiple challenges, underscoring the importance of adaptability and resilience in the face of evolving market dynamics (Wade, et al., 2023). Increased competition often drives banking institutions to accelerate the consolidation process to protect their market power, leading to concerns regarding market concentration and competition regulations (Noman, et al., 2017).

Corporate governance poses challenges for banking companies in the ASEAN-6, with implications for risk management, oversight, and financial stability. In Malaysia, listing rules mandate the disclosure of board composition policies in annual reports, emphasizing the importance of diverse skills and expertise within governance structures (OECD, 2023). Research focusing on risk governance underscores the significance of oversight roles in audit committees and risk management functions, highlighting the interplay between governance practices and risk mitigation strategies within banking institutions (Nguyen & Dan, 2022). Noncompliance with corporate governance standards has been associated with financial crises and scandals in the banking industry, indicating the crucial role of effective supervision and governance mechanisms in maintaining stability (Zulfikar, et al., 2020).

Sustainability and environmental challenges present pressing issues for banking companies in the ASEAN-6, requiring a concerted effort to integrate sustainability principles into financial practices. The financial sector is urged to mobilize swiftly to finance sustainability initiatives and act as a catalyst for environmental stewardship (ASEAN, 2020). Several ASEAN central banks have issued directives mandating the integration of environmental and social risks into financial institutions' risk management frameworks, signaling a growing emphasis on sustainability considerations in banking operations (Anwar, et al., 2020). Previous investigations have highlighted the intrinsic link between business practices and sustainability, emphasizing the need for banks to align their strategies with environmental objectives (Cakti, et al., 2023).

Cross-border challenges present complexities for banking companies in the ASEAN-6, necessitating a nuanced

understanding of regulatory frameworks and market dynamics across borders. Initiatives like the Capital Markets Development (CMD) aim to foster cross-border collaborations among ASEAN capital markets, addressing issues related to regulatory harmonization and market integration (ASEAN, n.d). Businesses seeking cross-border opportunities must navigate diverse requirements concerning tariffs, taxation, and employment laws, underscoring the importance of compliance with local regulations in facilitating seamless cross-border transactions. The establishment of cross-border banking operations requires adherence to regulatory frameworks and operational standards, highlighting the imperative of regulatory compliance in fostering regional financial integration (HSBC, 2024).

Financial stability challenges and regulatory responses in the ASEAN-6 are pivotal in ensuring the resilience and soundness of the banking sector amidst evolving market dynamics. Vulnerabilities and future challenges in financial stability frameworks necessitate a robust policy agenda for strengthening financial resilience within the ASEAN-6 countries. Policymakers and regulators play a crucial role in addressing systemic risks and enhancing regulatory frameworks to safeguard financial stability, highlighting the importance of proactive measures in mitigating potential threats. Strengthening financial stability frameworks in the ASEAN-6 requires a coordinated effort among stakeholders to promote transparency, risk management, and regulatory compliance, fostering a resilient and stable banking sector (Corbacho & Peiris, 2018).

Future outlook and regulatory reforms for banking companies in the ASEAN-6 are shaped by ongoing developments in the financial landscape, driven by technological advancements and evolving consumer preferences. These developments have

benefited from innovation initiatives by regulators, fostering a conducive environment for digital transformation within the banking sector (Deloitte, n.d). Greater consumer acceptance of digital services has propelled the adoption of fintech solutions and alternative banking platforms, challenging traditional banking models and necessitating regulatory adaptations to accommodate these shifts (OECD, 2022). The future outlook for banking companies in the ASEAN-6 entails navigating regulatory reforms that align with market trends, customer demands, and emerging technologies to enhance competitiveness and sustainability (Deloitte, n.d).

Banking companies in the ASEAN-6 face a myriad of regulatory challenges that impact their operations, risk management, and strategic decisions. The regulatory environment in the region plays a pivotal role in shaping the governance, compliance, and sustainability practices of banking institutions. Challenges such as regulatory compliance, risk management, digital disruption, financial inclusion, and cross-border operations require concerted efforts from policymakers, regulators, and industry players to foster a resilient and stable banking sector. Moving forward, it is imperative for banking companies in the ASEAN-6 to adapt to regulatory reforms, embrace technological innovations, and prioritize sustainability to thrive in an ever-evolving financial landscape. By addressing these key challenges and leveraging opportunities for reform, banking institutions can enhance their competitiveness, financial stability, and service offerings to meet the diverse needs of customers in the ASEAN-6 countries.

- Market liquidity trends in the ASEAN-6 banking sector

The ASEAN-6 countries, comprising Indonesia, Philippines, Thailand, Singapore, Malaysia, and Vietnam, have witnessed significant developments in their banking sectors over the years. Market liquidity plays a crucial role in the efficient functioning of these economies, influencing investor confidence and transactional capabilities. Market liquidity in the ASEAN-6 banking sector can be assessed through measures of banking integration, such as Banking Openness degree and Overall Balanced indicators (Ha, et al., 2020). Liquidity is essential for investors as it reflects their confidence in executing transactions and understanding associated risks. The integration of banking systems within the ASEAN-6 countries is a crucial aspect of regional economic integration, facilitating cross-border transactions and fostering economic growth (Ha, et al., 2020).

Various factors influence market liquidity in the ASEAN-6 banking sector, including market structures, financial policies, and regulatory frameworks (Internasional Organization of Securities Commission, 2007). Empirical evidence suggests that the loan to deposit ratio has a significant positive effect on firm value, while factors like liquid asset ratio and interest rates also play a role in shaping liquidity trends (Olalere, et al., 2019). Understanding these factors is essential for policymakers and financial institutions to enhance market liquidity and stability in the banking sector.

Analyzing liquidity risk through metrics like the Loan to Deposit Ratio (LDR) provides insights into the financial performance of banks in the ASEAN-6 countries (Laili, et al., 2023). Comparative studies on liquidity trends before and during significant events like the Covid-19 pandemic offer valuable

insights into the resilience of banking sectors across different countries (Fatria, et al., 2022). By examining the effects of liquidity on bank lending, policymakers can better understand the dynamics of liquidity management in the ASEAN-6 banking sector (Kuttner & Yetman, 2016).

Technological advancements have revolutionized the banking sector, with the adoption of mobile technologies and FinTech playing a significant role in enhancing market liquidity (Wu, et al. 2024). FinTech development has been shown to promote liquidity creation, enabling banks to provide more efficient and accessible services to the public (Guo & Zhang, 2023). The digital transformation in banking has not only improved connectivity and computing power but has also reduced costs, making financial services more accessible to a broader population (Feyen, et al., 2021).

Despite the benefits of market liquidity, banks in the ASEAN-6 region face various risks associated with liquidity management. Liquidity risk, stemming from the inability to meet financial obligations, poses a significant challenge to the stability of the banking sector (ASEAN, 2010). Assessing liquidity-related costs and risks is crucial for banks to ensure the smooth functioning of financial markets and mitigate potential crises (ASEAN, 2010). By addressing these challenges proactively, banks can strengthen their liquidity management practices and enhance the stability of the ASEAN-6 banking sector.

Market liquidity has a lasting and positive impact on economies, influencing the overall financial stability and growth trajectory (Peterhoff, et al., n.d). As liquidity remains high in developed markets, emerging economies like those in the ASEAN-6 region are also focusing on enhancing liquidity across various financial products to attract investments and foster

economic development. Research indicates that liquidity risk can have a positive effect on bank performance, highlighting the intricate relationship between risk management and liquidity (Huong, et al., 2021). Understanding the importance of liquidity to the financial markets and banking sector is crucial for policymakers and financial institutions to navigate future challenges effectively (ASEAN, 2010).

The financial market turmoil that emerged in the mid-2007 period underscored the significance of market liquidity for the stability of the banking sector (ASEAN, 2010). The interconnection between financial markets and liquidity levels influences the overall resilience of banks in the face of economic uncertainties. Banking integration within the ASEAN-6 countries is pivotal for enhancing market liquidity and promoting economic cooperation at the regional level. By examining data from Indonesia, Malaysia, Thailand, Singapore, the Philippines, and Vietnam over the years 2002-2021, insights can be gained into the liquidity dynamics within the ASEAN-6 banking sector (Ha, et al., 2020).

Traditional measures of market liquidity, such as trade volume, market turnover, bid-ask spreads, and trading velocity, provide valuable insights into the liquidity landscape. Understanding the relationships between market structures, financial policies, and regulatory frameworks is essential for shaping liquidity trends in the ASEAN-6 banking sector (Internasional Organization of Securities Commission, 2007). By closely examining these factors, policymakers can design strategies to enhance liquidity levels and promote financial stability within the banking sector.

In Indonesia, the relationship between liquidity, FinTech development, and credit risk in the banking industry is a critical

area of study (Yudaruddin, et al., 2024). The mining sector in Indonesia has experienced significant growth, aligning with the trend of commodity exports and impacting liquidity levels in the banking industry (OJK, n.d). Understanding the dynamics of liquidity management in Indonesia's banking sector is vital for assessing the overall resilience and performance of the financial system.

Liquidity stress faced by non-financial corporations in the Philippines can have spillover effects on banks, emphasizing the interconnectedness of liquidity dynamics (IMF, 2020). The Philippine banking system has demonstrated robust performance, with sustained growth in assets, deposits, and profits contributing to overall sector stability (Anonim, n.d). Addressing liquidity, valuation, and investment issues within the Philippines' banking sector is crucial for enhancing market liquidity and ensuring financial resilience (Anonim, 2023).

The liquidity coverage ratio in Thailand's banking sector remained robust at 192% by the end of 2022, indicating a strong buffer against liquidity risks. Recent revisions in Thailand's GDP forecast to 4.0% by Fitch Ratings suggest positive economic prospects that can further bolster market liquidity. Despite potential funding pressures, Thai banks exhibit resilience to significant liquidity withdrawals, underpinning the sector's stability. Stress tests affirm the substantial resilience of the Thai banking system against severe shocks, with major banks demonstrating the capacity to withstand adverse scenarios (IMF, 2019). These liquidity trends reflect the overall strength and preparedness of Thailand's banking sector in navigating uncertainties and maintaining stability.

Market liquidity trends in Singapore's banking sector has demonstrated resilience across corporates, households, and

financial institutions, with a strong overall credit quality (MAS, 2023). The Monetary Authority of Singapore (MAS) plays a pivotal role in ensuring liquidity stability through S$ liquidity facilities that mitigate interest rate fluctuations and support the smooth operation of payment systems (MAS, 2023). MAS's initiatives in managing liquidity underscore the commitment to sustaining a conducive financial environment conducive to growth and stability. Singapore's financial markets have a robust history and are well-positioned to address future challenges (Chuen & Phoon, 2014). By maintaining strong credit quality, liquidity facilities, and regulatory frameworks, Singapore's banking sector remains well-equipped to navigate evolving market conditions and uphold financial resilience.

C. Factors that Affect Market Liquidity and Its Roles

1. Disclosure Factors on Market Liquidity

a. Intellectual Capital Disclosure (ICD)

A market that is able to determine its values is an efficient market (Ahmed Haji & Mubaraq, 2012). Company needs to provide as many information as needed to determine its value. According to Gamerschlag, the asymmetric information shown in the market between internal parties and investors is due to how investors view the company (Gamerschlag, 2013). There are a lot of assets that become criteria for the investors in viewing the company, such as ICD. ICD is categorized as an intangible or unseen asset in form of information that becomes additional value for both performance and business success (Mondal & Ghosh, 2012). ICD consists of three dimensions, such as *Human Capital Disclosure* (HCD), *Structural Capital Disclosure* (SCD), and *Relational Capital Disclosure* (RCD).

There are studies that examine the impact of ICD quality on the company's financial performance. According to Alfaih, the examination of the listed companies (including financial institutions) at the Kuwait Stock Exchange significantly influences company's financial performance measured by ROA and Market to Book (2018). There are more than 40 industries listed their

companies' performances which significantly influenced by ICD quality at the Tehran Stock Exchange since 2012 (Asiaei et al., 2018). It was measured by the performance measuring system. Companies in European countries with highest gross domestic products are also influenced by ICD quality (Bianchi Martini et al., 2016). The ICD quality influences both market liquidity and market's value. Each company has their financial report and its stock price is used to measure the relevant values for the first three months of each fiscal year (Alfraih, 2017; Vafaei et al., 2011). In accordance to Vafaei, rather than industry grouping factors, specific country factors influence the ICD quality the most (Vafaei et al. 2011). The studies done by Alfraih (2017) and Gamerschlag (2013) proves that who tested the impact of ICD quality significantly influences company's stock price. It is also stated that variable *Earning per Share* (EPS) and *Book Value per Share* (BVS) prove that ICD quality has a positive and significantly moderating effect (Alfraih, 2017).

b. Risk Disclosure (RD)

Risk management is one of crucial things in company's report. Risk management shows the company's management and its risk. By making this as a disclosure, it helps attract investor to invest in the company and lessen the capital cost as it shows the uncertainty level is decreasing (Nahar et al., 2016). RD has two types called mandatory risk disclosure and voluntary risk disclosure. As a legal company, it is obligated to disclose company's risk management that is based on the applicable laws and

regulations and is called as mandatory risk disclosure. However, as an effort to gain investors' trust, company also disclose another risk management categorized as voluntary risk disclosure (Elshandidy & Neri, 2015). By doing that, the company can show their risk level and is easier for the investors to make decision whether to invest in the company or not. Managing risk level is a must and need to be included in the bank's annual report.

Either mandatory or voluntary RD indeed increase the market liquidity (Elshandidy & Neri, 2015). According to Nahar, banking companies are continuously improving RD (Nahar et al., 2016). There are some factors that affect RD level, such as the company's size (Elshandidy et al., 2018). According to agency theory, the larger the company is, it is obligated to disclose more information since it will decrease agency costs and information asymmetries.

ASEAN Banking Integrated Framework (ABIF) acknowledges that banking industry in Southeast Asia is widely open. It is also approved by the ASEAN financial and monetary authorities in 2011. The open and unlimited agreement open more big chance for banks in the Southeast Asian region to become more famous. The open state creates a fiercer competition among the banking companies. In banking industry, it is important to provide decent risk management report since it affects company's ability to compete with other banking companies. Banking industry is crucial with its risks since it manages money from a lot of people. Public funds should be managed well. People rotate their funds in form of various investments,

such as providing credit, purchasing securities, and investing other funds. Thus, the bank is responsible for its safety and risk, such as market risk, credit risk, liquidity risk and other risks.

c. Market Liquidity (ML)

Market liquidity is used to help people understand a company's background. There are four categories of parameters that is used to view ML, such as transaction costs, volume-based, price-based equilibrium, and market-impact (Sarr & Lybek (2002). The transaction cost method contains transaction cost for financial assets and price gaps around the secondary stock market. Volume-based measurement includes the comparison of transaction volume and price variation. Price-based equilibrium is used to measure the resistance of price by analyzing the regular movement of stock prices towards equilibrium prices. Market-impact measurement is used to distinguish price movements generated by the level of liquidity from factors like general market conditions or the arrival of new information, so it can determine the speed of price discovery of these two elements.

2. Components that Affect Market Liquidity

a. Firm Size

A large company is obligated to disclose more information than the one provides by the small company. It is important to do so because the disclosure of the company's activities will reduce both asymmetric information and agency costs (Elshandidy et al., 2018). The company cost is used to monitor the management

performance, so that it will be optimal. The amount of the cost depends on how big the company is. The bigger the company the higher agency cost they will have (de Oliveira Malaquias & Hwang, 2018). In order to minimize the company cost, company need to provide information disclosure like ICD. A better quality of To reduce agency costs due to their size, companies use the benefit of information disclosure. The better the quality of an information disclosure will make the shareholders spend lesser cost (de Oliveira Malaquias & Hwang, 2018). According to Wang, the ICD information needed in company's annual report depends on the company's type of industry and its size (2016). By this information, big company needs to disclose more information.

Firm size has been examined and is proven that large companies are incentivized to provide information in a higher quality than small company which includes the companies' activities as well as its risk in details (Elshandidy et al., 2018). According to Bruggen et al., large companies own a sound management information system that help them provide better risk disclosure than small companies. Thus, this study aims to analyze the probability of larger companies have higher quality level of ICD and RD.

b. Risk

Company has specific capital and it is different from one with another. Yang stated that the disclosure of intellectual capital becomes an effective code for the market because the ICD in each company is unique and cannot be copied (Yang, 2018). Companies with high risk

often disclose intellectual capital in a wider range to minimize information asymmetry that can maintain investor confidence on the company (Zhang & Shi, 2017). Disclosing more information helps the company with high risk to avoid unnecessary losses caused by stock fluctuations. According to Elshandidy et al., disclosing risk as an open disclosure strategy gives company more benefits that can be used for the future of the company's performance (2016). Company with high risk management often disclose more of its information to avoid misunderstandings among investors (Elshandidy et al., 2013). Thus, this study aims to analyze that companies with higher level of risk bring positive impacts both for ICD and RD.

c. Capital Structure

Capital structure plays an important role in a business industry as it is the root of a company to run their business and gain maximum profits for its stakeholders. Kyissima stated that, the optimal combination of equity and debt is used to get lowest capital cost, so that the company's goal can be achieved (Kyissima et al., 2019). In signaling theory, creditors can be satisfied through in detail information disclosure of the company with high risk (Elshandidy et al., 2018). To keep the in-line understanding, companies with high benefit disclose more information, so it can keep the investors (Elshandidy et al., 2013). Companies with high benefit willing to disclose risk disclosure as an effort to reduce agency costs (Whiting & Miller, 2008). Thus, this study aims to analyze the

possibility of companies with higher debt-of equity ratio affect the ICD and RD in a positive way.

d. Growth

Growth of the company determine how capable the management is. A high-growth company often caused an occurrence of asymmetric information and high agency cost. The asymmetric information occurs because companies' disclosure contains more information as they aim to prove that their stocks are not overestimate. In order to analyze the growth of the company, it uses Book-to-Market (BTM) as a representative in knowing the possibility level of the company's growth (Elshandidy et al., 2018). The use of BTM ratio is to capture substantial variations in stock returns during an extended period. According to Simlai, investors are interested and prefers companies with higher market value than equity book (Simlai, 2009). Companies that start running business need more funds, especially the growing companies so that it can expand its business (Soon Yau et al., 2009). Investors are the key point in this field and as an effort to gain their interest, companies need to build a good relationship by being transparent about their companies. Disclosure of the company's activities and risk management in annual report as a transparency to the investors is intangible yet increases the stakeholder's confidence to get their funds. The existence of risk disclosure positively relate with BTM ratio (Cheng & Courtenay, 2006). Elshandidy stated that, companies with high-growth of financial are more interested to disclose their risk management information to the investors (Elshandidiy et al., 2018). This is also to

avoid information asymmetry. This study aims to analyze the possibility of BTM ratio brings negative effect for ICD and RD quality of companies.

e. Market Liquidity

The instability of market prices is marked by the coefficient of market efficiency. Price change is likely easier to happen in a market with high liquidity (Elshandidy et al., 2018). To reach small percentage of ask-bid spread, companies need to have more liquid of shares. Ask-bid Spread is used as a mechanism in selling and purchasing stocks market to protect the market price (Elshandidy & Neri, 2015). The decrease of asymmetric information as a voluntary disclosure by the company succeed in increasing the market liquidity. The increase of the market liquidity is followed by broader ICD. A more detail and complete ICD is highly helping to decrease information asymmetry, reduce capital costs, and improve company reputation (Brüggen et al., 2009). Based on signaling theory, to convince the investors, company decides to provide guidance about the company's prospects (Yuliza, 2018). Spence (1973) stated that, a good company is willing to disclose company's information to the investors as an effort to show off company's performance. By providing the investors with intellectual capital and risk disclosure, the company is likely presenting their company that will help the investors in makin decision. A better quality of risk disclosure benefits the company because there is potential of the investors to return for a same project in the future. Moreover, good quality of risk disclosure helps reduce the spread of ask-

bid prices (Easley & O'Hare, 2004). Miihkinen (2013) declared that detail risk information disclosure is significantly increasing market liquidity. The same goes for voluntary risk information disclosure provided by the company will also increase market liquidity (Elshandidy & Neri, 2015). Investors considers risk disclosure as one of the essential in making decision. Thus, this study aims to analyze the impact of better ICD and RD quality in making market liquidity be more liquid.

D. The Impact of Macroeconomic Factors on Market Liquidity in ASEAN-6 Banking Companies

- Overview of market liquidity in ASEAN-6 banking companies

Market liquidity plays a crucial role in the functioning of financial markets, including banking sectors in the ASEAN-6 countries, namely Indonesia, Philippines, Thailand, Singapore, Malaysia, and Vietnam (Ha, et al., 2019). Defined as the ability to buy or sell assets quickly without causing a significant change in their price, market liquidity is essential for maintaining an efficient and stable financial system (Verma & Bansal, 2021). In the context of banking companies, market liquidity refers to their ability to convert assets into cash quickly to meet financial obligations, manage risks, and seize investment opportunities (Teoh & Kumar, 2023). Understanding and analyzing market liquidity in the banking sector is vital for assessing financial stability and overall economic health (Vuong, et al., 2024).

The significance of market liquidity in banking extends beyond individual financial institutions to impact broader macroeconomic factors in the ASEAN-6 region (Fan & Liu, 2021). Changes in market liquidity can influence stock market performance, capital adequacy, interest rates, and currency exchange rates (Hassan, et al., 2024; Le, et al., 2024). For example, a positive shock to market liquidity can lead to an appreciation pressure on domestic currencies and a short-term

rise in interest rates, highlighting the interconnectedness of liquidity with various economic variables. Moreover, the relationship between market liquidity and stock market performance underscores the importance of liquidity management for sustainable economic growth and financial stability (Huang, et al., 2023).

The ASEAN-6 banking companies, comprising Indonesia, Philippines, Thailand, Singapore, Malaysia, and Vietnam, operate within dynamic economic landscapes that are influenced by both domestic and global macroeconomic factors. These countries have shown an increasing trend in market liquidity relative to GDP since the end of the Asian financial crisis, indicating a growing emphasis on liquidity management in the region (Ekananda, 2023). By examining the impact of macroeconomic variables on market liquidity in ASEAN-6 banking companies, researchers and policymakers can gain insights into how external factors shape liquidity dynamics and financial resilience in the region (ASEAN, 2005). Understanding these relationships is essential for fostering a stable and resilient banking sector that can support sustainable economic development in ASEAN-6 countries.

- Macroeconomic factors affecting market liquidity in ASEAN-6 banking companies

Interest rates play a crucial role in influencing market liquidity within banking companies in the ASEAN-6 region (Hicklin, et al., 1997). When interest rates rise, borrowing becomes more expensive, leading to a potential decrease in lending activities and liquidity in the market. Conversely, a decrease in interest rates can stimulate borrowing and investment, thereby enhancing market liquidity. In the short

term, a positive shock to market liquidity can result in an appreciation pressure on domestic currencies and a temporary increase in interest rates (Le, et al., 2024). This dynamic relationship between interest rates and market liquidity underscores the importance of monitoring interest rate movements for banking companies operating in ASEAN-6 countries to effectively manage liquidity risks and optimize financial performance.

Inflation rates also significantly impact market liquidity in ASEAN-6 banking companies, with studies indicating a negative correlation between inflation and stock market performance (Hassan, et al., 2024). High inflation rates can erode purchasing power, increase production costs, and lead to economic uncertainty, negatively affecting market liquidity. On the other hand, stable or low inflation environments tend to promote confidence among investors and businesses, supporting market liquidity. Understanding the interplay between inflation rates and market liquidity is essential for banking companies in ASEAN-6 countries to develop robust risk management strategies and adapt to changing economic conditions effectively.

Foreign exchange rates represent another macroeconomic factor that influences market liquidity in banking companies across the ASEAN-6 region (Hicklin, et al., 1997). Fluctuations in foreign exchange rates can impact the competitiveness of banking institutions, affect the valuation of assets and liabilities denominated in foreign currencies, and introduce volatility into the market. For countries like Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam, monitoring foreign exchange rate movements is vital to managing liquidity risks, optimizing capital allocation, and safeguarding financial stability. By actively assessing and responding to changes in

foreign exchange rates, banking companies can enhance their resilience to external economic shocks and maintain adequate levels of market liquidity.

- The relationship between macroeconomic factors and market liquidity in ASEAN-6 banking companies

Interest rates play a crucial role in influencing market liquidity within banking companies in the ASEAN-6 region. A positive shock to market liquidity can lead to appreciation pressure on domestic currencies and a temporary increase in interest rates (Le, et al., 2024). This dynamic relationship between interest rates and market liquidity can have a significant impact on the financial stability and performance of banking companies in countries such as Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam. The fluctuation of interest rates can affect borrowing costs, investment decisions, and overall market conditions, thereby influencing the liquidity levels within banking institutions.

Inflation rates also have a notable influence on market liquidity in ASEAN-6 banking companies, with studies pointing to a negative correlation between inflation and stock market performance in countries like Singapore, Malaysia, and Indonesia. The stability of inflation rates is essential for maintaining market liquidity and financial stability within banking companies, as excessive inflation can erode the purchasing power of currencies and disrupt economic conditions (Hassan, et al., 2024). Understanding and managing inflation rates are crucial for banking companies in the ASEAN-6 region to ensure optimal market liquidity levels and sustainable financial performance.

Foreign exchange rates represent another macroeconomic factor that significantly impacts market liquidity in ASEAN-6 banking companies (Hicklin, et al., 1997). Changes in foreign exchange rates can affect the value of assets and liabilities denominated in different currencies, posing risks and opportunities for banking institutions operating in diverse markets (Huang, et al., 2023). For countries like Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam, managing foreign exchange rate exposure is vital for mitigating risks and maintaining adequate market liquidity levels (AMRO, 2023). By monitoring and analyzing the effects of foreign exchange rate fluctuations, banking companies can make informed decisions to optimize their liquidity positions and enhance overall financial resilience.

- Strategies for managing market liquidity in ASEAN-6 banking companies

Effective liquidity risk management practices are essential for banking companies operating in the ASEAN-6 region, including Indonesia, Philippines, Thailand, Singapore, Malaysia, and Vietnam (Le, et al., 2024). By implementing robust risk management strategies, banks can ensure adequate liquidity levels to meet their financial obligations while maintaining stability and resilience in the face of market fluctuations. Key liquidity risk management practices that banking companies in ASEAN-6 can adopt include regular monitoring of liquidity positions, stress testing and scenario analysis to assess potential liquidity risks, establishing liquidity buffers to mitigate short-term funding challenges, and diversifying funding sources to reduce reliance on specific funding channels. These practices can

help banking institutions proactively manage liquidity risks and maintain financial stability in dynamic market environments.

Compliance with regulatory requirements is another crucial aspect of managing market liquidity for banking companies in ASEAN-6 (Lim & Reyes, 2014). Regulatory frameworks play a significant role in shaping liquidity management practices and ensuring the soundness and stability of financial institutions. Banking companies must adhere to capital and liquidity regulations set forth by regulatory authorities to maintain adequate liquidity levels and meet regulatory standards. Key regulatory compliance requirements that banking companies in ASEAN-6 need to consider include bank capital adequacy ratios, liquidity coverage ratios, compliance with international accounting standards, and adherence to safety and soundness standards for financial firms. By staying abreast of regulatory developments and complying with established requirements, banking companies can enhance their liquidity management practices and promote financial resilience.

Incorporating technology and automation solutions can streamline liquidity management processes and enhance operational efficiency for banking companies in ASEAN-6 (Teoh & Kumar, 2023). Advancements in financial technology have provided innovative tools and solutions that can help optimize liquidity management practices and improve decision-making processes. By leveraging technology and automation, banking companies can implement real-time liquidity monitoring systems, utilize predictive analytics for liquidity forecasting, automate liquidity reporting and compliance processes, and integrate liquidity management tools with other financial systems for seamless operations. These technology-driven solutions

enable banking companies to make data-driven decisions, enhance liquidity management practices, and adapt to evolving market dynamics effectively.

E. The Future of Management Disclosures and Market Liquidity in ASEAN-6 Banking Companies

- Current status of management disclosures in ASEAN-6 banking companies

Management disclosure practices in the banking sector across ASEAN-6 countries vary in their levels of transparency and comprehensiveness (Tjondro, et al., 2022). An overview of management disclosures in these countries reveals the following key points, such as different approaches to disclosure practices, varied levels of detail in financial reporting, diverse methods of communicating financial information to stakeholders, and varying degrees of adherence to international disclosure standards. While some countries may excel in certain sectors like health, education, or finance, the consistency and quality of management disclosures in banking companies can play a crucial role in ensuring market transparency and investor confidence (Asia, n.d). Understanding the current state of management disclosures is essential for evaluating the effectiveness of regulatory frameworks and guidelines aimed at enhancing transparency and accountability in the banking sector.

A comparison of disclosure levels across ASEAN-6 countries highlights significant variations in the extent and depth of information provided by banking companies (Tjondro, et al., 2022). Key points to consider in this comparison include variations in the types of disclosures made by banking

companies, differences in the frequency and timeliness of reporting, variances in the accessibility of disclosed information to investors and regulators, and discrepancies in compliance with international best practices and standards. Countries such as Malaysia, Singapore, Thailand, and Vietnam may stand out as key beneficiaries due to their high trade openness and exposure to electronics markets, potentially influencing their approach to management disclosures and market liquidity (Han Teng & Rao, 2024). Analyzing these discrepancies can shed light on areas for improvement and harmonization of disclosure practices across the ASEAN-6 banking sector.

The regulatory framework and guidelines governing management disclosures in ASEAN-6 banking companies play a critical role in shaping transparency, market liquidity, and investor confidence (Lim & Reyes, 2014). Key aspects to consider within the regulatory framework include safety and soundness standards for financial firms, bank capital and liquidity regulations, compliance with international accounting standards, and capital market integration efforts within ASEAN countries. Countries within the ASEAN region have made strides in capital market integration, with measures in place to enhance market liquidity and efficiency (ASEAN, 2015). Understanding the regulatory landscape and guidelines for management disclosures is essential for assessing the overall governance framework and risk management practices in the banking sector across Indonesia, Philippines, Thailand, Singapore, Malaysia, and Vietnam (Lim & Reyes, 2014). By identifying areas of strength and opportunities for enhancement, regulators and stakeholders can work towards fostering greater transparency, stability, and resilience in the banking industry.

- Relationship between management disclosures and market liquidity in ASEAN-6 banking companies

The relationship between management disclosures and market liquidity in ASEAN-6 banking companies is crucial for shaping market perception and investor confidence (Tjondro, et al., 2022). Transparent disclosure practices play a pivotal role in influencing how stakeholders perceive a company's financial health, risk management practices, and overall governance (ASEAN, n.d). In the context of banking companies in ASEAN-6, effective management disclosures can enhance investor confidence by providing clear and comprehensive information about the institution's operations, financial performance, and risk exposure (Tjondro, et al., 2022). This increased transparency can lead to improved market perception, ultimately affecting market liquidity through heightened investor trust and participation (Asia, n.d).

The influence of transparency on market liquidity within ASEAN-6 banking companies is significant, as it directly impacts trading activity and market efficiency. Transparent and timely disclosures can enhance market liquidity by reducing information asymmetry between market participants, thus fostering a more liquid and efficient market environment (Lim & Reyes, 2014). Market liquidity is essential for ensuring price stability and facilitating smooth trading, which are vital components of a well-functioning financial system (Almekinders, et al. 2015). In the context of ASEAN-6 banking companies, high-quality disclosure practices can contribute to deeper and more liquid markets, attracting a broader range of investors and enhancing overall market resilience (ASEAN, 2023).

The link between disclosure quality and liquidity risk management in ASEAN-6 banking companies highlights the importance of effective risk disclosure practices in mitigating liquidity-related risks (ASEAN, n.d). By providing comprehensive and transparent information about liquidity risk exposure, banking institutions can better manage and monitor their liquidity positions, ensuring they have sufficient liquidity buffers to withstand adverse market conditions (Nguyen & Dan, 2022). Robust disclosure practices related to liquidity risk management not only enhance the institution's ability to anticipate and respond to liquidity challenges but also instill confidence in investors and regulators regarding the bank's overall financial stability (ASEAN, n.d). This proactive approach to disclosure can help mitigate liquidity risk concerns, contributing to enhanced market liquidity and overall financial system resilience.

- Future trends in management disclosures in ASEAN-6 banking companies

In the evolving landscape of management disclosures in ASEAN-6 banking companies, one significant trend is the increasing adoption of international best practices in disclosure standards (ASEAN, n.d). As banking institutions in countries like Indonesia, Philippines, Thailand, Singapore, Malaysia, and Vietnam strive to enhance transparency and accountability, they are looking towards established global benchmarks for guidance. By aligning their disclosure practices with international standards such as those set by the International Financial Reporting Standards (IFRS) and the Basel Committee on Banking Supervision, these banks can improve the quality and

comparability of their disclosures, thereby fostering greater investor confidence and market trust.

Technological innovations and the shift towards digital reporting are reshaping the landscape of management disclosures in ASEAN-6 banking companies (Tjondro, et al., 2022). With the rapid advancement of digital technologies, banking institutions are leveraging digital platforms and tools to enhance the efficiency, accuracy, and accessibility of their disclosure processes. From interactive online reports to real-time data analytics, digital innovations are revolutionizing how banks communicate vital information to stakeholders. This transition towards digital reporting not only streamlines disclosure procedures but also enables banks to adapt to the changing information consumption preferences of investors and regulators.

As the regulatory landscape continues to evolve, there is a growing emphasis on enhancing disclosure requirements for banking companies in the ASEAN-6 region (Lim, et al., 2013). Regulators are increasingly focusing on promoting greater transparency and risk disclosure to ensure the stability and resilience of the financial system. By imposing stricter guidelines on disclosure practices, regulators aim to provide investors and stakeholders with comprehensive insights into the financial health and risk profiles of banking institutions. These evolving regulatory requirements underscore the importance of proactive and robust management disclosures in fostering market liquidity and investor confidence.

- Strategies for improving management disclosures and market liquidity in ASEAN-6 banking companies

Enhancing investor education and awareness on the significance of management disclosures is a crucial strategy for

improving transparency and market liquidity in ASEAN-6 banking companies (IFRS, 2024). By educating investors about the importance of comprehensive and timely disclosures, banking companies can foster trust and confidence in the market, leading to increased liquidity and investor participation (ASEAN, 2023). Some key points to consider for effective investor education include highlighting the role of disclosures in promoting market efficiency, educating investors on how to interpret financial reports and disclosures, emphasizing the impact of disclosures on investment decisions, and providing resources and tools for investors to access and analyze disclosures. Creating a well-informed investor base can contribute to a more liquid and efficient market environment, benefiting both the banking companies and investors alike.

Collaboration among regulators, industry players, and stakeholders is essential for enhancing management disclosures and market liquidity in ASEAN-6 banking companies (ASEAN, n.d). By working together, these key entities can establish common standards, best practices, and guidelines for disclosures, ensuring consistency and transparency across the industry. Some collaborative strategies to consider include regular dialogues and consultations between regulators, industry associations, and banking companies, sharing of information and resources to improve disclosure practices, conducting joint workshops and training sessions on disclosure requirements, and establishing mechanisms for feedback and continuous improvement. Through effective collaboration, stakeholders can collectively enhance management disclosures, promote market liquidity, and strengthen the overall financial ecosystem in the ASEAN-6 region.

Continuous monitoring and evaluation of disclosure practices play a vital role in ensuring market transparency and liquidity in ASEAN-6 banking companies (Climate Bond Initiative, 2020). By regularly assessing the quality, relevance, and timeliness of disclosures, banking companies can address gaps, improve communication, and build investor confidence (Lim & Reyes, 2014). Some key aspects of monitoring and evaluation include implementing robust reporting mechanisms to track disclosure practices, conducting internal audits and reviews of disclosure processes, seeking feedback from investors and stakeholders on the adequacy of disclosures, and benchmarking disclosure practices against industry standards and peers. Through ongoing monitoring and evaluation, banking companies can adapt to changing market dynamics, enhance transparency, and maintain liquidity, positioning themselves competitively within the ASEAN-6 banking sector.

F. The Role of ICD and RD in Banking Companies of ASEAN-6 Countries

1. Banking Companies in ASEAN Countries

There are a lot of banking companies in ASEAN countries and the chosen six countries consists of Indonesia, Philippines, Thailand, Singapore, Malaysia, and Vietnam. According to the World Population Review, these six countries own the highest gross domestic product (GDP) shown in Table I. In those six countries, there are banking specific banking companies listed in stock exchange period 2012-2018, such as Indonesia Stock Exchange (IDX), Philippine Stock Exchange (PSE), The Stock Exchange of Thailand (SET), Singapore Exchange Limited (SGX), Malaysia Stock Exchange (MYX), and Hanoi Stock Exchange (HNX).

As per 2019, there are 101 banking companies listed in the stock exchange in the Philippines, Indonesia, Malaysia, Singapore, Thailand, and Vietnam. However, there are criteria that limit the banking companies to be analyzed. Those criteria are banking companies which have market liquidity measurement and have completed annual reports in English language for the whole period. This filtering shows only 58 banking companies are eligible. The annual reports that are posted on the company's website will be analyzed. The data collection of ICD quality is focused on the annual reports and the

company's governance data. The financial data of each company is taken from Bloomberg.

Table I. GDP of ASEAN Countries

Rank	Name	GDP (IMF '19)
1	Indonesia	$1.15 trillion
2	Thailand	$520.07 billion
3	Malaysia	$402.61 billion
4	Singapore	$367.78 billion
5	Philippines	$355.74 billion
6	Vietnam	$264.94 billion
7	Myanmar	$74.97 billion
8	Cambodia	$26.63 billion
9	Laos	$20.06 billion
10	Brunei	$14.79 billion

Table II. Data of ASEAN Countries' Observation

	Indonesia	Philippines	Thailand	Singapore	Malaysia	Vietnam	Total
Total Population	41	19	11	3	9	18	101
(-) Total not meeting the selection/criteria:							
IPO Not Relevant	12	7	0	0	2	16	
AR Incomplete	2	4	0	0	0	0	
Language not International	0	0	0	0	0	0	
Total Sample	27	8	11	3	7	2	58
(x) Years Observed (2012 - 2018)	7	7	7	7	7	7	
Total Observations	189	56	77	21	49	14	406

2. Components as Influence in Market Liquidity

a. Intellectual Capital Disclosure (ICD)

Company annual report contains content analysis of the company which is used in this study. The content analysis codes qualitative and quantitative information into set categories in order to analyze its patterns of presentation and information disclosure. According to Alfraih, in analyzing the disclosed information it needs to be done systematically, objectively, and reliably (Alfraih, 2017). The general and standard ICD are set into three components, such as *Human Capital (HC)*, *Structural Capital (SC)*, and *Relational Capital (RC)*. Those three components are used as the base in measuring and improving IC (Wang et al., 2016; Sharma & Dharni, 2017).

- ***Human Capital (HC) (21 indicators)***

  Human capital is one of the bases in creating good ICD. This disclosure is about the human resource who work for the company. It includes human knowledge and ability which is gained through each individual's education, experience, attitude, and other personal characteristics. HCD contains the employees' attitudes, commitment for the company, satisfaction in working, qualification, education, skills, and capabilities (Abhayawansa & Abeysekera, 2008). As globalization improves, there are developments in technology that affect customers' behavior including those in financial and banking industry. This technology developments caused the appearance of new financial technology called FinTech companies. FinTech companies become the opponent of banking companies as it works on financial field too. The usage of FinTech is easier and can be accessed everywhere. This

condition proves that banking companies need to develop their system on digitalisation to keep their customers' trust (Gupta & Xia, 2018). The purpose of human capital is needed in this phase because the employees is obligated to develop by creating innovation to fix this urgency (Khan et al., 2014).

- ***Structural Capital (SC) (23 indicators)***

  SC is the internal knowledge creates by the human resource of the company. It includes the system in the company which is made through processes and procedures appplied in the company. Accroding to Singh, SC is about all systems of the company, such as patent, concept, model, and computer and administration that is also includes the company's habits, practices, processes, information systems, work ethics, and database (Singh et al., 2016). Asiaei stated that, SC as one of the main property of the company also converts the knowledge and embeds it into the company's information system, such as database and process descriptions (Asiaei et al., 2018). SC acts like a backbone of the human resource's performance in which it supports to cover the mechanism and employees' supporting structure, organisation knowledge and technology elements (for instance, information system and database), routines, procedure and proces, company culture, approach, business improvement plan, intellectual capital (such as patent, copyright and trademark), strategies, company's structure, manual and programs (Inkinen, 2015)

- ***Relational Capital (RC) (21 indicators)***
  External capital (RC) corresponds with company's relationship with external parties creates by the employees and company's connection. In mantaining a good relationship, company offers great products through a transaction. The transaction involves external parties, such as customers, suppliers, competitors, government and society creates connection with the company which then called as relational capital (Joshi et al., 2018).

In company's annual report is disclosed the quality of IC as one of the independent variables which is counted through this equality:

$$ICD_{i,t} = \underline{x}(\underline{x}HCD_{i,t} + \underline{x}SCD_{i,t} + \underline{x}RCD_{i,t})$$

In which:

$\underline{x}HCD_{i,t}$ = mean of *Human Capital Disclosure company i in year t*

$\underline{x}SCD_{i,t}$ = mean of *Structural Capital Disclosure company i in year t*

$\underline{x}RCD_{i,t}$ = mean of *Relational Capital Disclosure company i in year t*

The ICD measurement has score range between 0-3 for each component. 0 is given if the item is not disclosed in the annual report. Score 1 given if the item is disclosed in the financial annual report and score 2 if the item disclosed into numbers in the company financial report. The highest score is 3 will be given if the item disclosed in form of currency in the financial annual report.

b. Risk Disclosure (RD) (16 indicators)

ASEAN economic community is a large field. It needs effective management in managing its activities. Banking industry is one of the most important components that supports the activity. Banking companies provide savings and loans as a program to support the business process. Savings is a debt for banking companies; thus, banking liquidity must be maintained. As for loans, the risk is default on credit. RD disclosure contains information about companies' opportunity, prospects, risk, and threats which possible to affect company in the future. By having risk disclosure, it helps the direction board who responsible in monitoring material risks of a company by providing current or the latest information. According to Nahar, the risk disclosed may affects the company's financial level and risk management strategy, but it helps in making decision for investors (Nahar et al., 2016). There might be asymmetric information among investors, thus, companies who have higher risk tend to disclose more detail information (Elshandidy et al., 2018).

$$RD_{i,t} = \underline{x}RDi,t$$

The RD measurement has score range between 0-3 for each component. 0 is given if the item is not disclosed in the annual report. Score 1 given if the item is disclosed in the financial annual report and score 2 if the item disclosed into numbers in the company financial report. The highest score is 3 will be given if the item disclosed in form of currency in the financial annual report.

The ASEAN banking industry exhibits risk disclosure characteristics that are comparable to those of other countries worldwide, with some modifications that account for the unique

economic conditions, policies, and regulations of each country. Each ASEAN member country has a different approach to risk disclosure. However, in general, risk disclosure in this region is influenced by regulations issued by national financial authorities and international standards such as Basel III.

Following are some key aspects of risk disclosure in the ASEAN banking industry:

1. Credit Risk

   Credit risk is one of the biggest risks faced by banks in ASEAN. Banks in ASEAN are required to disclose their credit portfolios, including Non-Performing Loan (NPL) ratios, exposure to high-risk sectors, and credit risk management and mitigation strategies. Central banks and financial authorities such as Bank Negara Malaysia (BNM) and the Monetary Authority of Singapore (MAS) set strict guidelines on credit risk management.

2. Liquidity Risk

   Disclosures related to liquidity risk focus on the bank's ability to maintain sufficient liquidity to meet short-term obligations. Under the Basel III standards, banks in ASEAN must disclose liquidity ratios such as the Liquidity Coverage Ratio (LCR) and the Net Stable Funding Ratio (NSFR). This regulation aims to ensure that banks have sufficient access to liquidity sources in times of crisis.

3. Market Risk

   Banks in ASEAN, especially in financial centers such as Singapore, face significant market risks due to fluctuations in interest rates, exchange rates and commodity prices. Banks in the region are required to

disclose their exposure to market volatility and how they manage the sensitivity of their portfolios to price changes in financial markets.

4. Operational Risk

Operational risks include internal failures such as technological errors, processes, or failures in managing human risk. ASEAN countries such as Singapore and Malaysia are very focused on the use of technology in managing these risks, especially related to cybersecurity and fraud detection. Banks are required to disclose mitigation measures, major incidents that occur, and how they improve their operational risk infrastructure.

5. Complience Risk

Banks in ASEAN face significant compliance risks, particularly related to international regulations such as Anti-Money Laundering (AML) and Countering the Financing of Terrorism (CFT). Banks in countries such as Malaysia, Singapore and the Philippines are required to disclose their efforts to comply with these regulations, including monitoring suspicious transactions and mandatory reporting to authorities.

6. Systemic Risk

ASEAN, like other regions, is also working to reduce systemic risk, which is the risk that can impact the entire financial system. Banks that are Systemically Important Banks (SIBs) in the region must provide more in-depth disclosures regarding their stress testing, as well as recovery plans in the event of a crisis that could destabilize the financial system.

c. Company Characteristic

Company characteristics includes company size and capital structure. In an agency, the agent responsible in managing the resources. High increasement of resources is beneficial for the company as it helps to increase the company's operational activities. However, it is also increasing the agency cost in ensuring an optimal performance of the company. To lessen the agency costs, large companies provides more detail information than smaller companies (Elshandidy et al., 2018).

d. The Role of Corporate Governance in Risk Disclosure

A success of a company and its performance is connected with corporate governance (CG). It is confirmed that corporate governance is beneficial for company's performance. The main function of CG is to protect stockholders' interest and reduce the agent's main problems. The better the CG quality, the better result will come out. Based on Stuebs & Sun, the mechanism of CG affects reporting dimensions and financial performance (Stuebs & Sun, 2015). There are two components of CG that is used to analyze banking companies in ASEAN-6 countries, such as Audit Quality and State Ownership. In choosing an auditor, there are characteristics need to be fulfilled including ethics, commitment, freedom, competency, and experience owned by the auditor (Kusumawati & Syamsuddin, 2018). Auditors' company background affects investors' trust on company. Companies whose financial report is audited by a well-known auditor from a trust worthy agency will increase investors' trust and interest. State Ownership in this study involves the role of government ownership for banking company (Elshandidy et al., 2018).

e. Market Liquidity of Banking Companies in ASEAN-6 Countries

The market liquidity level is described through market efficiency coefficient. The higher market liquidity the higher opportunity it has for having price change. Disclosure level of annual reports and press release is able to decrease level of asymmetric information between stockholders and buyers since liquidity security can be improved by the disclosure that will also stabilize the ask-bid price at a particular price level (Lakhal, 2008). Through this process, it will gain higher level of trust for the investors who want to purchase the stocks in the (Elshandidy et al., 2018). Considering the wide scope of banking companies and its role in ASEAN economic community, most of banking companies are owned by the government. Thus, government will support in managing any circumstances, especially crises. As it owns by government, investors are interested in banking companies

Table III. ICD and RD Measurement and Sources

Variable	Measures and Definition
Continuous variables	
Firm Risk (RS)	Risk is measured by beta, in which the covariance is company market return compared to the market index of related companies from March to July
Capital structure (CS)	Capital structure is measured as the log of leverage, in which leverage as measured by debt to equity
Book-to-market (BTM)	Book-to-market is measured as the ratio of the book value of equity divided by its market value
Market	

indicators	
Market liquidity (ML)	Market liquidity, measured as the three-month average of relative spreads from the beginning of May to the end of July
Trading volume (TV)	Trading volume measured as the daily trading volume divided by the number of outstanding shares. This variable is used as the dependent variable for the robustness test.
Dichotomous variables	
Firm size (FS)	Firm size is dummy variable, in which score 1 is given when the company's total revenue is over total revenue median of each country and each year.
Audit quality (AQ)	Audit quality is a dummy variable, in which score 1 is given when the external auditor is from one of the Big Four audit firms.
State ownership (SO)	State ownership is a dummy variable, in which score 1 is given when the government owns the company

Data used in this study are taken from companies' annual report and Bloomberg. Bloomberg is used to get data about companies' risk, capital structure, book-to-market, market liquidity, trading volume, and size. Meanwhile, both ICD and RD qualities taken from the disclosure of companies' annual report. There are two steps in analyzing the data done by different people who expert the field. First step is to read and collect the items included in the disclosure. Next, the head of the study and two other experts evaluate the result of first step. This is to prevent the result from being biased.

f. Empirical Model Development

Ahead of this study, there is also a same study analyzing the same problem in Portugal and China, Cabrita et al. (2017) and Elshandidy et al. (2018). Through this study, it can prove the effect of company characteristics in determining ICD quality as well as analyzing its effect in market liquidity through smallest regression square. There are two main equality used in this study:

$$\text{ICD}_{it} = \beta_0 + \beta_1 FS_{it} + \beta_2 RS_{it} + \beta_3 CS_{it} + \beta_4 BTM_{it} + \beta_5 AQ_{it} + \beta_6 SO_{it} \quad (1)$$

$$\text{RD}_{it} = \beta_0 + \beta_1 FS_{it} + \beta_2 RS_{it} + \beta_3 CS_{it} + \beta_4 BTM_{it} + \beta_5 AQ_{it} + \beta_6 SO_{it} \quad (1)$$

To get ICD score, all ICD components includes HCD, RCD, and SCD are added to get its average score. As for RD score, it is the average result of market risks, liquidity risks, operational risks, and equity risks in total. Other components, such as Firm Size (FS), Risk (RS), Capital Structure (CS) and growth (BTM), Audit Quality (AQ), and State Ownership (SO) are set as control variables.

$$(\text{ML})_{i,t+1} = \beta_0 + \beta_1 ICD_{it} + \beta_2 RD_{it} + \beta_3 FS_{it} + \beta_4 RS_{it} + \beta_5 CS_{it} + \beta_6 BTM_{it} + \beta_7 AQ_{it} + \beta_8 SO_{it} \quad (2)$$

The above equation is an equation which $(\text{ML})_{i,t+1}$ is the ask-bid price in three months counted from early May till end of July in year t+1 for company i. (ICD) is ICD scale is the addition of the average item in ICD components (HCD, RCD, SCD, RD) of company i in year t. Firm Size (FS), Risk (RS), Capital Structure (CS), Growth (BTM), Audit Quality (AQ), and State Ownership (SO).

G. The Change of Market Liquidity Using ICD and RD

1. Empirical Data on Variables of ICD and RD

Table IV. Descriptive Statistics of ICD and RD Variables

Panel A: continuous variables

	N	Min.	Max.	Mean	Std. Deviation
Reporting incentives					
Risk (RS)	406	-1.27	4.06	0.33	0.46
Debt-to-equity	406	0.00	4.89	0.95	0.75
Capital structure (CS)	406	-3.15	0.69	-0.22	0.57
Book-to-market (BTM)	406	0.18	10.17	1.07	1.04
Market indicators					
Market liquidity (ML)	406	0	7.74	0.79	1.19
Trading volume (TV)	406	0	2.43	0.30	0.37

Panel B: dichotomous variables

	Yes (%)	No (%)
Firm size (FS)	218 (53.7%)	188 (46.3%)
Audit quality (AQ)	316 (77.8%)	90 (22.2%)
State ownership (SO)	202 (49.8%)	204 (50.2%)

Table IV provides descriptive statistics for ICD and RD components that affect the market liquidity. Panel A shows the continuous components that is permanently attached to the company, such as company characteristics, corporate governance, and market indicators. The scoring includes observations on minimums, maximums, averages, and standard

deviations. On the other side, panel B includes three sampling components, such as Firm Size, Audit Quality, and State Ownership, showing frequencies. The risk variable has a range of -1.27 to 4.06 and is measured using beta. Beta score 1 indicates sensitivity of the company's stock returns is the same as the benchmark. Meanwhile, beta score that is not equal to 1 indicates that stock prices are fluctuative and is different with the movement of the benchmark. Companies that are being analyzed in this study have beta score other than 1. The capital Structure variable is exploited then it changes to log to fit the normality test. The capital structure of the sample banking companies is around -3.15 to 0.69. That number means that the ratio of the composition of debt in corporate funding is between 0 to 4.89. capital structure with its negative value indicates that the companies' debt equity is around 0.1 to 0.99. The average of debt-to-equity is 0.95 means that the average total debt is equivalent with the total equity. The lowest value of Market Liquidity is 0, indicating that companies whose share values in a particular observation year do not have the ask bid price. The liquidity of the stock depends on the spread of ask price, so the wider it is, the more illiquid the stock is. The minimum total volume of trading is 0 means that there is no trading share within the period.

Table IV shows that there are 218 observations in firm size that has higher total revenue compared to the median of annual total revenue of each ASEAN-6 country. And State Ownership shows 202 observations owned by the government. Descriptive test results show that both of the company's size and state ownership variables are quite balanced. The balance of those two variables indicates that this study observes balance amount of

government and non-government ownership. The audit for most of the chosen banking companies is done by Big-4 public accounting firms.

Table V. The Average Score of ICD

	Score	HCD	SCD	RCD	RD
TOTAL 2012-2018	0	182.76	113.78	120.90	177.08
	1	105.86	222.57	199.10	100.75
	2	87.14	53.87	65.76	19.75
	3	30.24	15.78	20.24	108.42

The average disclosure from three ICD components that have criteria between 0-3 are presented in Table V. In term of currency, RD is expressed the most compared to ICD and its elements. As for numerical disclosure, the HCD is broadly expressed. SCD becomes the most expressed components through its narrative.

Table VI presents the mean difference of intellectual capital disclosure between banking which owned by state and non-state. The difference is statistically significant at the 5% level (0.096; p = 0.028). It proves that bank with government ownership has better ICD disclosure than banks with no government ownership. In contrast with the mean difference, the result of the HCD component includes the mean difference of human capital disclosure between the state-owned and the non-state-own banks is statistically insignificant (0.799; p = -0.013). Through the measurement, it shows that HCD disclosure quality in banks with government ownership is lower and insignificant. The mean difference of risk disclosure between bank with government ownership and non-ownership is statistically

significant at the 10% level (-0.139; p =0.083). It means that better quality of risk management disclosure is owned by non-government ownership banks. The risk disclosure presented contains policies and procedures applied in the bank, information disclosed regarding loans given to debtors, and information related to remaining contract liabilities. Table VI shows that the country with best quality of risk management is Indonesia. However, among six countries in ASEAN, Indonesia is only ahead of Thailand and Vietnam in term of intellectual capital disclosures' quality. Philippines own the bank with the best quality of relational capital activities disclosures. Compared to Vietnam, Philippines and Malaysia own better disclosure quality in all intellectual capital indicators.

Table VI. Mean Difference Among State-Ownership with Non-State Ownership

Variables	ICD	HCD	SCD	RCD	RD
Mean Difference	.096	-.013	.022	.146	-.139
p-Values	0.028**	.799	.621	0.001***	0.083*

*p-values < α = 10%; **p-values < α = 5%; ***p-values < α = 1%

It is in accordance with the pattern of ICD in tourism an hospitality industries. The number of ICD in Indonesia is higher than Thailand (Hatane et al., 2023).

Table VI. Mean Difference of Banks in ASEAN-6

Countries	Variables	Total ICD	HCD	SCD	RCD	RD
Indonesia	Philippines	.014	0.181*	.084	-.042	.863***
	Thailand	.525***	.620***	.475***	.308***	1.212***
	Singapore	-.111	-.069	-.148	.624***	1.190***
	Malaysia	.134	.503***	.076	.243***	1.218***
	Vietnam	.817***	.931***	.638***	.601***	1.024***

Countries	Variables	Total ICD	HCD	SCD	RCD	RD
Philippines	Thailand	.511***	.438***	.391***	.351***	.349***
	Singapore	-.125	-.250	-.232	.667***	.327
	Malaysia	.120	.321***	-.008	.286***	.355**
	Vietnam	.804***	.750***	.554***	.643***	.161
Thailand	Singapore	-.636***	-.688***	-.623***	.316**	-.022
	Malaysia	-0.391***	-.117	-.399***	-.065	.006
	Vietnam	.292	.312	.162	.292	-.188
Singapore	Malaysia	.245	.571***	.224	-.381**	.027
	Vietnam	.929***	.999***	.786***	-.024	-.167
Malaysia	Vietnam	.684***	.429**	.561***	.357**	-.194

*p-values < α = 10%; **p-values < α = 5%; ***p-values < α = 1%

Table VII shows that bank in Indonesia and Philippines owned by the government have the best average quality of risk management disclosure. The intellectual capital and risk management of banks in two countries have no significant differences. Large banks own by government in both countries also have the best intellectual capital disclosure In term of relational capital, Indonesia is better than Philippines. The average disclosure quality of intellectual capital and its components for bank with government ownership in Thailand is lower than Singapore government banks.

Table VII. Mean difference of Big State Ownership Banks in ASEAN-6

Countries	Variables	ICD	HCD	SCD	RCD	RD
Indonesia	Philippines	0.000	0.016	-0.066	0.164	-0.234
	Thailand	0.618***	0.840***	0.552***	0.429***	1.211***
	Singapore	0.000	0.016	-0.066	1.164***	1.623***
	Malaysia	0.179	0.766***	0.077	0.664***	1.373***
Philippines	Thailand	0.618***	0.824***	0.618**	0.265	1.445***
	Singapore	0.000	0.000	0.000	1.000***	1.857***
	Malaysia	0.179	0.750***	0.143	0.500	1.607***
Thailand	Singapore	-0.618***	-0.824***	-0.618**	0.735***	0.412
	Malaysia	-0.439***	-0.074	-0.475***	0.235	0.162
Singapore	Malaysia	0.179	0.750***	0.143	-0.500	0.250

*p-values < α = 10%; **p-values < α = 5%; ***p-values < α = 1%

2. Regression Results

In assessing data collected through the panel data, it needs estimating method. There are three inquiries used to decide the most suitable estimating model while referring to Ordinary Least Square (OLS) as the basis. First, the Chow Test or F- test used to choose proper model among Pooled OLS and Fixed Effect to get panel data estimation. Second, the Breusch-Pagan Test used to estimate panel data using suitable model between Pooled OLS and Random Effect. Last step is Hausman Test used to decide best model between Fixed Effect and Random Effect. There are two other tests needed to find regression model of panel data called heteroscedasticity and multicollinearity test. In order to testify the existence of the same variants in confounding variables, it uses the Heteroscedasticity test (Wooldridge, 2012; Khasawneh & Dasouqi, 2017; Hatane et al., 2019).

Table VIII presents the test result of Panel model. Based on the test, the VIF values is less than 10 which means that the three models are free from multicollinearity. As for the heteroscedasticity, both model 1 and model 2 have it because its *p*-values of heteroscedasticity tests are below 0.05. from the tests on all panel data shows that the best estimating model is a fixed-effect model. Since there are two models contain heteroscedasticity, the panel data test employs Weighted Least Square (WLS). The CG components in this model are time-variant variables which is hard to change, so it is not suitable to use a fixed-effect model (Mathew et al., 2018; Hatane et al., 2019).

Table VIII. Panel Tests on ICD, RD, and ML Variables

Dependent variables	Model 1 ICD	Dependent variables	Model 2 RD	Dependent variables	Model 3 Market Liquidity
Firm Size	1.233	Firm Size	1.233	Intellectual Capital Disclosure	1.178
Risk	1.055	Risk	1.055	Risk Disclosure	1.360
Capital Structure	1.177	Capital Structure	1.177	Firm Size	1.295
Book-to-Market	1.075	Book-to-Market	1.075	Risk	1.093
Audit Quality	1.069	Audit Quality	1.069	Capital Structure	1.350
State Ownership	1.158	State Ownership	1.158	Book-to-Market	1.101
Heteroskedasticity	0.000026	Heteroskedasticity	0.000000	Audit Quality	1.083
Fixed Estimator	7.42E-101	Fixed Estimator	2.28E-143	State Ownership	1.176
Breusch-Pagan Test	8.92E-162	Breusch-Pagan Test	2.17E-168	Heteroskedasticity	0.000211
Hausman Test	0.0754063	Hausman Test	3.18E-05	Fixed Estimator	3.13E-37
Summary	Weighted Least Square	Summary	Weighted Least Square	Breusch-Pagan Test	2.26E-54
				Hausman Test	6.26E+00
				Summary	Weighted Least Square

Table IX. Testing Results on 3 Models' Variables

Model 1		Model 2		Model 3	
Dependent:	ICD	Dependent:	RD	Dependent:	ML
Constanta	1.02947 ***	Constanta	0.781533***	Constanta	0.803749***
Firm Size	0.0959734***	Firm Size	0.299989***	Intellectual Capital Disclosure	0.0286426
Risk	-0.0356897	Risk	-0.147315***	Risk Disclosure	0.0959611***
Capital Structure	-0.00897022	Capital Structure	-0.297214***	Firm Size	-0.271460***
Book-to-Market	-0.0975969***	Book-to-Market	-0.0050264	Risk	-0.0277594
Audit Quality	-0.108339***	Audit Quality	-0.00385992	Capital Structure	-0.0358647
State Ownership	0.0579783***	State Ownership	-0.0426651	Book-to-Market	-0.0548855***
Panel Model	WLS	Panel Model	WLS	Audit Quality	-0.0301017
F-test & Asymptotic test statistic (*p*-value)	2.81e-26	*F*-test & Asymptotic test statistic (*p*-value)	3.85e-13	State Ownership	-0.315510***
Adjusted R-Square	0.271761	Adjusted R-Square	0.147835	Panel Model	WLS
				F-test & Asymptotic test statistic (*p*-value)	8.35e-37
				Adjusted R-Square	0.365596

*p-values < α = 10%; **p-values < α = 5%; ***p-values < α = 1%

The result on adjusted R-Square in Table IX indicates that the explanatory strengths of independent variables of the 2 models are relatively low. Audit Quality (AQ) used as control variable and from Table IX it shows that AQ does not affect RD and ML. It also means that the audit quality grouping does not have confounding effects on either RD or ML. The results of the

test do not confirm the results of Hakim & Omri (2010); Lei et al. (2013). Even though AQ does not have confounding effect, it affects the ICD negatively. The studies of Nurunnabi et al. (2011), Lei et al. (2013), and Elshandidy et al. (2018) cannot be confirmed using the result of this test. Another control variable is State-Ownership that significantly affects both ICD and ML in negative way. According to the result, it shows that government ownership is able to increase market liquidity of the company but reduces the ICD which goes in line with the findings of Alfraih (2017); and Ding & Suardi (2019). However, State Ownership does not have affect RD quality which shows that it does not match the theory of Alfraih (2018b) and Elshandidy et al. (2018).

From Table IX it is showed that firm size significantly affects ICD quality in positive way. It supports the previous studies (Abeysekera, 2010; Nurunnabi et al., 2011; Kamath, 2017). Based on agency theory, bigger company often reduce its cost using intangible capitals disclosure which is align with the H1a result as shown in the table. On the other side, result of H1b indicates that firm size also positively affects RD quality. This result proves that the previous studies (Elshandidy et al., 2018).

The result from the test shows that company risk has no effect on the ICD quality which suitable with the previous study by (Nurunnabi et al., 2011). Thus, company risk is not affecting ICD performance. This statement is different with the result of the study done by (Elshandidy et al., 2013) and (Elshandidy et al., 2018). In contrast, company risk affects the quality of RD negatively. As quality of RD is affected by company risk significantly, big companies in ASEAN-6 countries minimizing the company risk performance to be disclosed when the risk is

increasing. According to Linsley & Shrives (2006), company with more risks often avoid the market attention by reducing companies' risk in the disclosure for the annual report.

In accordance to studies by Nurunnabi et al., companies' way to get fund by using debt does not affect companies' ICD quality (2011) and Kamath (2017). The debt does not affect since the companies' intellectual capital does not interested for the debtholders (Elshandidy et al., 2018). On the other side, according to Whiting & Miller (2008), companies' voluntary disclosures are made to reduce the companies cost and companies with high leverage level give incentive, to disclose the voluntary disclosures. According to Elshandidy et al., debt in companies' financing is adverse since it affects the RD quality of the company. The use of debt caused harm for company because it increases the company bankruptcy risk. Thus, investors will not be interested on it and managers will cover it up in the market

In a study, it is stated that company growth and ICD quality are correlated (Nimtrakoon, 2015; Dženopoljac et al, 2016; Kamath 2017). To strengthen the study, this study proves that company growth measured by the BTM ratio gives negative effect on ICD quality. As a result, it is proven that the level of overvalued company's stock influences the ICD quality which the higher it is, the lower ICD quality is. ICD quality is one of the main components in seeing a good company. Thus, company will see in a lower level if their ICD quality is not good. As seen in Table XI, BTM has no influence for RD quality and this result is contrast with the agency theory. According to agency theory, companies with high growth choose to disclose more detail

information to avoid information asymmetry with the investors. These results are not proving the H4.

This study yields some results to support the possibilities occur before. Through the result, it is shown that ICD quality in ASEAN-6 countries is influenced by the company characteristics. However, the ICD quality of the company does not affect the market liquidity. Market liquidity is affected by the quality of RD which is different with the signaling theory. The results of this study do not strengthen the statement from Miihkinen (2013), Campbell et al. (2014), Elshandidy et al. (2013), and Elshandidy et al. (2018).

3. Sturdiness Test

There are different components of market liquidity that is not measured. A sturdiness test is conducted to ensure that those components does not influence the test result by using trading volume as an additional parameters of market liquidity. As seen in Table X, the volume of shares traded in the market diminishes the ICD and RD quality. However, the correlation between ICD quality and market liquidity is not linier because ICD quality has no effect in market liquidity. ICD does not influence market liquidity since it uses the ask-bid price. In fact, market liquidity will go lower when the ICD quality is higher. In contrast, the result shows consistency for the relation between RD quality and market liquidity. Based on the measurement using spread of ask-bid price and trading volume, RD is proven to affect market liquidity.

Authorities in each ASEAN country follow the Basel III standards in risk management and disclosure, with some local adjustments. Singapore, as one of the leading financial centers in

ASEAN, has a very comprehensive risk disclosure regulation through the Monetary Authority of Singapore (MAS), while countries such as Indonesia, Malaysia, and Thailand are also continuing to develop stricter and more detailed regulations through the OJK, Bank Negara Malaysia (BNM), and Bank of Thailand.

Table X. Multiple Regression for Volume of Trading as Dependent Variable

Dependent variables:	Trading Volume
Constanta	0.274177***
ICD	-0.0974482***
RD	-0.0684087***
FS	0.00286415
RS	-0.0288690*
CS	0.114197***
BTM	0.0419657***
AQ	0.0957276***
SO	0.0994180***
Panel Model	WLS
F-test & Asymptotic test statistic (*p*-value)	7.49e-59
Adjusted R-Square	0.511100

*p-values < α = 10%; **p-values < α = 5%; ***p-values < α = 1%

H. The Importance of ICD and RD in Investment Decision

There are two different parameters used to measure the effect of ICD and RD quality in market liquidity. the measurement using ask-bid spread shows that ICD does not affect the market liquidity since its level cannot influence the liquidity. however, RD quality is able to lessen the liquidity of the companies' market liquidity. The other measurement is using trading volume which generates different result with the ask-bid price measurement. Based on its result, either ICD or RD quality are significantly adverse effect the trading volume. Through this study, it is better for investors to consider ICD and RD when they do background checking of a banking company to put some investment especially bank company that is risky. ICD and RD both includes variables as an information about the banking company that can be used as an investment protection for investor. Current condition with technology, especially financial technology, has increased a lot. However, the risk of financial technology is also big as the excessive reliance is high. The high reliance leads to cybercrimes, such as losing money from its saving and overcharging on credit card. Companies will reconsider to disclose their intellectual capital if they have weak technology defense. Technology defense is an important component since it is used to protect people's private data. Best digital technology with great security system made by talented human resource. Thus, it is important for a banking company to seek competent human resources. Competent human resources

help to make best disclosure. High quality of IC disclosure and great risk management disclosure receive positive response from stakeholders and increase company's market confidence in term of bank services.

Banking companies in ASEAN-6 countries have different risk management and intellectual capital. Those disclosure is related to the market liquidity of the companies. From the analysis, it is proven that company size according to its income level significantly increases ICD quality but lessen the market liquidity of the company. As for RD quality, it is decreased by the high level of company risk that leads to low market liquidity. The level of company risk does not affect the ICD quality. These results might cause the capital gained by the investors, so that government need to cover it up. In contrast with company risk, debt composition in corporate funding significantly decrease the RD quality and does not influence the ICD quality and market liquidity. These results lead to the possibility of lowering investors' interest that caused information asymmetry between investors and management as insiders. However, both ICD and RD disclosure is useful for both company and investor. By having those disclosure as intangible asset, it increases market liquidity of the company and is easier for investor to review the company's background before deciding to invest. The other variable that negatively affects ICD quality is companies' growth, yet does not influence both RD quality and market liquidity.

Company size and government ownership are two characteristics of company that have a role. In order to see those characteristics' role in a market liquidity, a test is done with the

quality of ICD, HCD, SCD, RCD, and RD as its comparisons. All variables are grouped by country. Government ownership significantly affects the quality of HCD and RD in banking companies in Philippines. Different with HCD and RD, the quality of RCD in Indonesia and Thailand is partially affected by the government ownership. As for company size of banking companies owned by government, its significant differences are found in Malaysia and Philippines. In Malaysia, company's size affects only the HCD and RCD quality of the banking company. As for the banking company in Philippines, the only variable affected by the company's size is the RD quality. There are only three components in two countries affected by company's size. It indicates that company size is not that crucial in increasing quality. However, government ownership is more needed since it significantly affects the quality of ICD and RD.

Banking industry usually dominates financial system structure of countries since it controls the wheels of the country's economy. Banking industry needs to be highly ruled and supervised as it holds crucial capital as well as money of a lot of people. From all of the data listed in this study, 49.8% are owned by the government, regardless of the percentage of government ownership in the company's share ownership structure. In a country, the government responsible to manage the banks in their country, especially managing the health of the banks. The percentage number shows that it is balanced between banks owned by the government and non-government ownership banks. According to Borisova, banks owned by the government is easier to get funds as its capital, so that the market liquidity is well managed (Borisova et al., 2015). Through the privilege, the bank

performance can be guarantee and increasing the market interest (Holland, 2018; Ding & Suardy, 2019).

Business complexity and risk in banking companies is increasing due to digital technology nowadays. In order to avoid any serious problem, banking in Indonesia adopts a risk-based supervision system (RBS). In using this system, banking company needs to attach risk management disclosure to prevent losses and anticipate other potential risk in the future. This system needs to improve its management system; thus, it needs management to improve the quality of risk management as well as its information system and human resources. This system has been applied and as a result, the quality of ICD and RD in Indonesia are higher than other countries. Large bank in Philippines has better risk disclosure than the small bank because the large bank is supported by assets owned by the company.

There are a lot of benefits from this study that can change banking companies' management and system. As the first study that analyze the impact of ICD to market liquidity, this study helps banking companies in ASEAN-6 countries to improve the management as well as its annual report. Both financial and non-financial information are important to improve banking companies' management, especially to create regulations, make investment planning, decide the right decisions, and minimize the risk faced. Considering both types of information helps to prevent company from facing risky problem in the future. ICD and RD disclosure help investors to consider when making decision to have investment. It is stated that the quality of ICD in banking companies in ASEAN are mostly low. Thus, banking companies' management need to enhance its ICD quality.

Moreover, market liquidity of the bank needs an improvement since non-fluctuative stocks often being considered by investors. Highly fluctuative stocks may bring negative impact in the future that make investors lost interest on it.

I. Maintaining Market Liquidity Through Intangible Disclosure

Banking companies in ASEAN-6 countries includes Indonesia, Philippines, Thailand, Singapore, Malaysia, and Vietnam have different conditions. Each bank's market liquidity is different. To analyze the factor causes the differences, the quality of ICD and RD of the banking companies are used. There are others sub-factors of ICD and RD that is used to ensure its causality toward the market liquidity, such as FS, RS, CS, BTM, AQ, and SO. The clearest characteristic is the company size which significantly effects the ICD quality and RD quality in positive way. It is linier with agency theory, that states large companies provide more detail ICD and RD disclosures in order to avoid asymmetry information and cover up companies' problem. The measurement of beta shows that company risk does not significantly affect ICD, but negatively affects RD quality. Considering the casualty above, a low level-of-share companies disclose more detail risk management to avoid asymmetric information with the investors. Meanwhile, company with high debt gets low RD quality but the ICD quality remains the same. This is caused by no notice about risk from the management when debt dominates its funding sources. The growth opportunity of the company adverse effect the quality of ICD, but has not the RD quality. Each sub-factor of ICD and RD has its own effect. However, ICD and RD quality affect the market liquidity differently. ICD quality does not have a significant effect on market liquidity. Moreover, the RD quality has negatively affected the market liquidity.

Standard setters can issue guidelines and frameworks that define best practices for voluntary disclosures. For ASEAN banks, having regional or international standard setters like the International Financial Reporting Standards (IFRS) Foundation or the ASEAN Corporate Governance Scorecard can help ensure consistency in disclosures across different markets.

In the context of ASEAN, standard setters can work on harmonizing voluntary disclosure standards across member countries. This would reduce discrepancies in reporting practices and make it easier for investors to analyze and compare banks operating in different ASEAN countries. Harmonization encourages cross-border investments within the ASEAN region, leading to greater liquidity in the region's banking sector.

The ICD measurement is analyzed with a subjective nature; thus, there might be different valuing. In order to minimize the subjectivity, cross-checking method is also used. The deterministic coefficient values (R Square) are quite low. There are other variables excluded that can be used to analyze ICD and RD quality, so it might give different result on the market liquidity.

MAINTAINING MARKET LIQUIDITY OF ASEAN-6 BANKING COMPANIES THROUGH MANAGEMENT DISCLOSURES

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