

# Risk Mitigation of Disease Pandemic in the Indonesian Banking Industry: In Response to COVID-19

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## *Risk Mitigation of Disease Pandemic in the Indonesian Banking Industry: In Response to COVID-19*

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### **ABSTRACT**

As an intermediary institution, the banking industry plays a critical function in the economy. Unpredictable conditions such as disease pandemic, exemplified from the unprecedented COVID-19 outbreak, result in loss to the banking industry due to the weakening of the national economy. In the future, then, the banking industry requires early preventive action for a similar case through specific risk mitigation towards disease pandemic. This paper aims to discuss the urgency of the risk mitigation towards the pandemic in the banking industry, following the risk mitigation scheme in facing the pandemic with its relevant regulation. This paper shows that the pandemic's responsive risk mitigation has become essential to strengthen the banking's intermediary function and performance during the pandemic. The existing risk mitigation regulation solely relates to the non-performing loan in normal conditions. In the meantime, disease pandemic like COVID-19 is excluded because it is beyond the normal situation. Its adverse impact has leveraged more significant extent due to emergency conditions. In case of a disease pandemic, the bank can soon take early preventive action before the pandemic strikes within the domestic territory without waiting for central government-specific regulation, but it should. However, it remains practiced under the relevant laws.

**KEYWORDS:** Risk Mitigation, Disease Pandemic, COVID-19, Banking Industry, Indonesia.



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## I. INTRODUCTION

Until 23 July 2020, positive confirmation of Coronavirus Disease 2019 (COVID-19) in Indonesia reached 93,657 people, with 4,576 deaths.<sup>1</sup> Since March 2020, COVID-19 has been declared a pandemic that has spread throughout the world. The vast impact of this pandemic is unlike a geographically restricted and transient disaster. It is because a pandemic spreads worldwide for months or more than a year. Rather, it is periodic and affects global communities. The impact of a severe pandemic may be more comparable to war or a widespread economic crisis than hurricanes, earthquakes, or acts of terrorism.<sup>2</sup> Infectious disease outbreaks can easily cross borders, threatening financial and regional stability, as it has been shown historically by human immunodeficiency virus (HIV), 2009 H1N1 influenza, H5N1, and the SARS epidemic and pandemic.<sup>3</sup> On the other hand, vaccine development and approval are offset by disease onset. It needs a long period against initial infection to result in significant mortality.<sup>4</sup>

A large-scale pandemic impacts the economy, and it is across wider regions for two reasons: the infection itself widespread and market integration ultimately triggering cross-border economic shocks.<sup>5</sup> The epidemic of diseases that have hit the world several times should have been used as a meaningful lesson to prevent and deal with these impacts. They do not stop at the health sector, which concerns human. From national economic interest, the banking sector should prevent pandemic's risks to the post-pandemic period. As an intermediary institution, the banking industry becomes one of the main benchmarks for the Indonesian economy. Banks can reach all levels of society and have spread throughout the country. Thus, the banking industry plays a vital role in society's economic development, including in the case of the recently COVID-19 Pandemic. This pandemic influences both directly and indirectly, the bank's balance sheet.

A bank's balance sheet has an asset and a liability. The liabilities consist of giro, deposits, liabilities, securities, and other accounts. Meanwhile, the assets are cash, claiming on other banks, bank securities, investment, or equity to the distributed credit funds.<sup>6</sup> In terms of liabilities, the period of Large-Scale Social Restrictions or *Pembatasan Sosial Berskala Besar* (PSBB), panic buying, and supplies scarcity in food and medicine made customers withdraw their funds for daily consumptive needs. On the other hand, customers face difficulties in paying credit installments, leading to a non-performing

<sup>1</sup> Kementerian Kesehatan, *Situasi Terkini Perkembangan Coronavirus Diseases (COVID-19)*, (2020), online: <<https://covid19.kemkes.go.id/category/situasi-infeksi-emerging/info-corona-virus/#.X4KF99AzbiU>>.

<sup>2</sup> Homeland Security Council, *National Strategy for Pandemic Influenza: Implementation Plan* (Washington: Homeland Security Council, 2006) at 2.

<sup>3</sup> George Verikios et al., *The Global Economic Effects of Pandemic Influenza* (Venice, 2011) at 1.

<sup>4</sup> *Ibid.*

<sup>5</sup> Federal Reserve Bank of San Francisco et al., "Longer-Run Economic Consequences of Pandemics" (2020) ERWP 01-16, online: <<https://www.frbsf.org/economic-research/publications/working-papers/2020/09>> at 3.

<sup>6</sup> Nurul Badriyah, *Peran Intermediasi Perbankan Terhadap Usaha Mikro Kecil dan Menengah (UMKM)*, (2009) 7:2 *Jurnal Ekonomi Pembangunan* 183, at 184.

loan (NPL) and a decrease in customers applying for credit. It is they prefer to meet their daily consumptive needs.

In the United States, the COVID-19 pandemic has caused economic disruptions that pose unprecedented and unpredictable challenges for banks.<sup>7</sup> A similar condition might happen in other countries, including Indonesia because this virus has become pandemic. This paper then expects that the banking industry needs to design superior mitigation related to a disease pandemic that is likely to come in the future. Risk mitigation is a series of procedures and methodologies used to identify, measure, monitor, and control risks arising from bank business activities. The application of risk management aims to avoid a loss caused by a threat.<sup>8</sup> A pandemic disease condition is an abnormal condition for an unpredictable period when it will be recovered. Then, the role of an intermediary institution is inevitable. In Indonesia, Law Number 2/2020 ratified from Government Regulations in Lieu of Law Number 1/2020 on State Financial Policy and Financial System Stability for Handling COVID-19 can be a reference for the formation of regulations for each bank to mitigate the risk of pandemic disease. Based on this background, it is necessary to assess the urgency of risk mitigation against pandemic diseases and describe appropriate risk mitigation and responsiveness in dealing with the disease pandemic's impact on the Indonesian banking Industry.

## II. THE URGENCY OF DISEASE PANDEMIC RISK MITIGATION IN THE BANKING INDUSTRY

### *A. Bank as an Intermediary Institution*

According to Rose and Hudgins, a bank is a business that offers deposits. It can carry out withdrawal requests, use a check or make electronic transfer funds, and distribute them in commercial credit. Banks collect funds from the public in the form of deposits and then distribute them to the public and the form of loans or other forms to improve many people's lives.<sup>9</sup> Thus, there are three bank's core activities. First, deposit collection, namely collecting funds from the public in the form of demand deposits, savings, and time deposits. Second, payment services, providing financial services, namely payment traffic, the money transfer process. Third, for loan underwriting, channeling funds to the public in the form of credit.<sup>10</sup>

The role of an intermediary institution reflects the main activities of the bank. First, collecting funds from the community. Second, invest the funds it manages in various productive assets, such as credit. Third, providing payment traffic services, especially for commercial banks and other banking services. These activities are the bank's internal

<sup>7</sup> Congressional Research Service, *COVID-19, and the Banking Industry: Risks and Policy Responses* (2020).

<sup>8</sup> Amanita Novi Yushita, *Implementasi Risk Management Pada Industri Perbankan Nasional*, (2014) 6:1 *Jurnal Pendidikan Akutansi Indonesia*.

<sup>9</sup> Addinul Haq Yaqub et al., *Limitation of Foreign Investment in the Banking Sector in Indonesia*, (2019) 10:1 *Jurnal Hukum Novelty* 52, at 57.

<sup>10</sup> Rennywati Siringoringo, *Karakteristik dan Fungsi Intermediasi Perbankan di Indonesia*, (2012) *Buletin Ekonomi Moneter dan Perbankan*, at 64.

<sup>11</sup> activities, which lead to its primary objective to seek profit.<sup>11</sup> The primary function of banking is financial intermediation, like purchasing surplus funds from the business sector, government, and households, channeled to deficit economic units. The financial intermediation function arises from the high cost of monitoring, liquidity costs, and price risk due to asymmetric information between household or net savers and the company fund users (corporations or net borrowers). As a result, an intermediary party must accommodate the needs of both parties. Then, Saunders argues that financial intermediation's function and role are as a broker, asset transformers, delegated monitor, and information producer.<sup>12</sup>

In particular, according to Konch, lending has a vital role in the economy's movement and facilitates economic growth. At the macroeconomic level, a bank is a tool in determining monetary policy. In contrast, at the microeconomic level, the bank is the primary financing source for entrepreneurs and individuals. Bikker and Wesseling's research shows that banking intermediation has changed due to changes in the economic environment and developments in financial markets, especially in industrialized countries like countries in the European Union.<sup>13</sup> Scholtens and Wensveen argue that information technology, deregulation, liberalization, and internationalization cause financial intermediation theory irrelevant to current business practices. These factors reduce transaction costs and asymmetric information between savers and investors, contrary to the classic financial intermediation function.<sup>14</sup> However, for Buchory, the intermediation function can be carried out optimally if supported by adequate capital. Because even though the third party funds collected are huge, the bank will be limited in extending credit if they are not balanced by additional capital. Thus, the growth in credit distribution was influenced by the size of the bank (assets) and bank capital (leverage ratio), by the addition of equity (own capital).<sup>15</sup>

#### B. Endemic, Epidemic, and Pandemic Disease

Endemic is a disease that spreads in an area or a group of people. Endemic becomes a common disease within a particular population or geography. For example, the endemic in Indonesia is malaria and dengue hemorrhagic fever (DHF). Meanwhile, an epidemic is a contagious disease that spreads rapidly over a large area and causes many victims—an above-normal increase in disease rates that usually occur suddenly in certain geographic populations. For example, it is the Ebola virus in the Democratic Republic of Congo in 2019.<sup>16</sup> On the other hand, the word pandemic comes from ancient Greek society, meaning “all people.” According to Honigsbaum, this word usually refers to a broad

<sup>11</sup> Badriyah, *supra* note 6 at 184.

<sup>12</sup> Siringoringo, *supra* note 10 at 64–65.

<sup>13</sup> Renniwaty Siringoringo, *Analisis Fungsi Intermediasi Perbankan Indonesia (Studi Kasus Bank Umum Konvensional yang Tercatat di BEI Periode 2012-2016)*, (2017) 1:2 *Jurnal Inspirasi Bisnis dan Manajemen* 135.

<sup>14</sup> *Ibid.*

<sup>15</sup> *Ibid.*

<sup>16</sup> Novrina W. Resti, *Memahami Istilah Endemi, Epidemi, dan Pandemi*, (2020), online: *Itjen Kemendikbud* <<https://itjen.kemdikbud.go.id/public/post/detail/memahami-istilah-endemi-epidemi-dan-pandemi>>.



epidemic of infectious diseases across the country with broader impacts, including its spreading to more continents. According to the Epidemiology dictionary, a pandemic is an epidemic that occurs throughout the world, or in a vast area, across international borders and usually affects a large number of people.<sup>17</sup> The United States Centers for Disease Control and Prevention describes a pandemic as an epidemic in vast areas, either several countries or continents. It usually affects a large population.<sup>18</sup> A pandemic's characteristics consist of geographical existence, movement diseases, high attack and explosion rate, minimal population immunity, invention, infections, contagious, severity.<sup>19</sup>

### C. Risk Mitigation to Strengthen Bank's Intermediary Function

Beyond the consequences, debilitating, fatal pandemics have adverse social, economic, and political consequences for those directly affected.<sup>20</sup> For example, it is the impact of an influenza pandemic. It is H1N1 in 2009, which did impact not only mortality but also the health care system, animal health, agriculture, education, transportation, tourism, and financial sector. In short, a pandemic threatens all aspects of the economic and social order.<sup>21</sup> Other examples were SARS in 2003 and the Ebola in 2013 and 2015, which disrupted the economy and social fabric in China and West Africa, causing death and disease. Ebola and other pandemics have reduced the quality of life of families and communities. So too, it disrupted essential services such as education, transport, and tourism. It also reduced the West African economy and isolated population, impacting Africa, and global efforts to contain the outbreak.<sup>22</sup>

Indirect costs are also hefty. Pandemic includes everything that contributed to the decline in Gross Domestic Product (GDP). In the SARS case that impacted the region, it affected China's 2003 annual GDP decreased by 1%, and Southeast Asia's GDP decreased by 0.5%. Therefore, Lee and McKibbin estimated income losses of between USD 12.3-28.4 billion for East and Southeast Asia in the SARS outbreak in 2003.<sup>23</sup> In New Zealand, the Treasury examining pandemics with an attack rate of 40 percent and a case fatality rate of 2 percent, concluding that GDP in the year would be reduced by 5-10 percent. Some economic sectors may be more affected than others. It was estimated that the air transportation industry would suffer losses of nearly 20 percent or USD 7.9 billion if U.S. residents cut back on travel. Thus, a pandemic has both immediate and long-term effects that can damage the economic life for years to come. The psychological and economic

<sup>17</sup> W. Qiu et al., *The Pandemic and its Impacts*, (2017) 9 Health, Culture, and Society 1-11, at 3.

<sup>18</sup> David E. Bloom & David Canning, *Epidemics and Economics*, (Vatican City: Pontificiae Academiae Scientiarum Scripta Varia, 2006) at 10.

<sup>19</sup> Jeffery K Taubenberger & David M Morens, *Influenza: The Once and Future Pandemic*, (2010) 125:3 suppl Public Health Report 15-26; O Shafey, S Dolwick & Guindon GE, *Tobacco Control Country Profiles*, second ed (Atlanta: American Cancer Society, 2003).

<sup>20</sup> W. Qiu et al., *supra* note 16 at 5.

<sup>21</sup> *Ibid.*

<sup>22</sup> *Ibid.*

<sup>23</sup> *Ibid* at 7.

<sup>1</sup> impact of ineffective filtering at airports was substantial, which affected the airport business directly in the 2003 SARS outbreak.<sup>24</sup>

The economic and social disruption of an influenza pandemic can be significant. Absence in various sectors related to personal illness, illness in family members, fear of transmission, or public health measures to limit contact with others can threaten critical infrastructure. It also dealt with the movement of goods and services and institutions operation such as schools and universities. The pandemic has significant implications for the economy, national security, and society's primary function.<sup>25</sup> Pandemics, particularly influenza, are so-called a global threat, requiring an international response. Given the rapid pace of transmission and the human population's universal vulnerability, a pandemic influenza outbreak anywhere is a risk to any community. Substantial obstacles exist for implementing a rapid response to incipient human pandemics in many countries. The threat of an influenza pandemic may not be widely recognized or understood.<sup>26</sup>

Many countries lack the resources or expertise to detect and respond to outbreaks independently. They lack vital public health and communications infrastructure, pandemic preparedness plans, and logistics capabilities. International mechanisms to support effective global surveillance and response, including to provide accurate and timely coordinated information to the public, are also inadequate.<sup>27</sup> In most industrialized countries, infectious diseases rank after cancer and heart disease as the leading causes of death. Despite developments in medicine, rates of infectious disease are increasing due to changes in human behavior, more massive and denser cities, increased trade and travel, inappropriate use of antibiotic drugs, and new and emerging pathogens.<sup>28</sup>

Many research pieces find that population health, as measured by life expectancy, infant and child mortality, and maternal mortality. They relate to economic well-being and growth.<sup>29</sup> The relationship between health and wealth is well established. Industrialized countries tend to have healthier populations than in developing countries.<sup>30</sup> To be sure, there are many ways in which an outbreak of infectious disease affects the economy. The disease's direct and indirect economic costs are often the subject of health economics studies of disease burden. Conventional approaches use the information on mortality and occupational disease to estimate future income loss due to mortality and disability.<sup>31</sup> Time and income losses by carers and direct medical care and support services are added to obtain estimated costs economics associated with this

<sup>24</sup> *Ibid.*

<sup>25</sup> Homeland Security Council, *supra* note 2 at 1.

<sup>26</sup> *Ibid* at 4.

<sup>27</sup> *Ibid.*

<sup>28</sup> Verikios et al, *supra* note 3 at 1.

<sup>29</sup> Warwick McKibbin & Roshen Fernando, *The Global Macroeconomic Impacts of COVID-19: Seven Scenarios*, (2020) at 3.

<sup>30</sup> Bloom & Canning, *supra* note 18 at 3.

<sup>31</sup> McKibbin & Fernando, *supra* note 29 at 3.

disease. This conventional approach underestimates the true economic costs of infectious diseases—the proportion of highly contagious epidemics and for which there is no vaccine (HIV/AIDS, SARS, and pandemic influenza).<sup>32</sup>

Of course, banks are vulnerable in times of economic crisis due to the possibility of bad credit. In an extreme case, the bank may run. Lagoarde-Segot and Leoni developed a theoretical model that shows the likelihood of a banking industry collapse in developing countries increases due to the combined prevalence of the pandemic's significant increase. Most microfinance institution group loans and bank loans to the poor will be suppressed during the epidemic. All group members will be stopped by aggregate shock. Banks will target rural financial institutions during floods or crop failures.<sup>33</sup>

Experience from previous disease outbreaks provides valuable information on how to think about the implications of COVID-19.<sup>34</sup> Economic theory presumably indicates that a pandemic can be felt in a temporary downward shock at natural levels on such a horizon: investment demand is likely to decrease, as labor scarcity in the economy suppresses the need for high investment.<sup>35</sup> The flu pandemic will result in higher long-term staff absences arising from illness, death, fear, and caring commitment, mostly if schools are closed. This can affect cash distribution, retail bank branches, claims processing, and other areas that depend on people in the financial sector. Apart from people, the financial industry is also dependent on other people, such as telecommunications, information and technology, and transportation. It is also likely to be affected by staff absences, affecting normal service levels, maintenance work, and response to technical difficulties.<sup>36</sup> The banking system plays a potentially important role in the severity of the decline in order and production capacity. A healthy banking system can provide liquidity, reducing the severity of decreasing demand and production.

However, if the shock leads to widespread default, it may stress the banking system and cause a lending contraction. In this regard, bank losses can act as a vital amplification mechanism by reducing credit availability. In addition to the effects through credit, a persistent economic slowdown leads to a decrease in overall demand for loans and credit.<sup>37</sup> In Indonesia, the condition of financial system stability in the first semester of 2020 showed an increased risk due to the initial spread of the COVID-19 worldwide, resulting in a threat to global and domestic macro-financial stability. The global contagion of COVID-19 also affects Indonesia, especially through tourism, trade, export, and investment routes. Meanwhile, efforts to break the chain of transmission of COVID-19 in Indonesia can reduce production and economic activities and put further

<sup>32</sup> *Ibid.*

<sup>33</sup> John W Goodell, "COVID-19 and Finance: Agendas for Future Research, (2020) 35 Finance Research Letters 101512, at 3.

<sup>34</sup> McKibbin & Fernando, *supra* note 29 at 3.

<sup>35</sup> Federal Reserve Bank of San Francisco et al., *supra* note 5 at 3.

<sup>36</sup> *COVID-19 Pandemic : Financial Stability Implications and Policy Measures Taken* (Financial Stability Board, 2020).

<sup>37</sup> Sergio Correia et al., "Pandemics Depress the Economy, Public Health Interventions Do Not: Evidence from the 1918 Flu" (2020) SSRN, at 11.



<sup>1</sup> pressure on the domestic financial system.<sup>38</sup> The COVID-19 pandemic has had a significant impact on the banking sector. Lending, which becomes one of the core banking businesses, is more or less stuck due to uncertainty and a drop in economic activity, impacting money circulation.<sup>39</sup>

Abdullah explains that the impact of the COVID-19 pandemic on the economy began with a blow to the real sector. When economic activity decreases, the production of goods and services plummets. At the same time, consumption becomes low, and companies suffer liquidity problems that impact their credit. The impact of credit included in the list of banking assets can be categorized as non-current, which will result in pressure on bank liquidity. It is not to mention that banking capital is also affected because the principal and interest installments have been restructured from the original deadline.<sup>40</sup> One of the most readily available indicators of forecasting the global economic impact of COVID-19 is movements in the financial market indices. Since the early outbreak, financial markets have continued to respond to daily developments regarding pandemic worldwide. In particular, the stock market has demonstrated investor awareness of industry-specific impacts. Fitch Ratings reported a revision of banks' ratings in Indonesia in the capital market to BB+ from BBB. For example, P.T. Bank Central Asia, Tbk became BBB- from previously BBB. Banking stocks on Tuesday (24/3/2020) experienced a significant net sell. The shares of P.T. Bank Rakyat Indonesia, Tbk. experienced a net sale of IDR 190.6 billion to fall 5.73 percent to the level of IDR 2,470 per share.<sup>41</sup> The shares of P.T. Bank Negara Indonesia, Tbk. experienced selling pressure worth IDR 110.8 billion and was corrected by 6.78 percent to the level of IDR 3,160 per share. P.T. Bank Mandiri, Tbk. shares were corrected by 6.99 percent to the level of IDR 3,860 per share.<sup>42</sup>

Therefore, it is necessary to develop risk mitigation guidelines to deal with the possible upcoming disease pandemic. This is because the banking industry plays a significant role as an intermediary institution and influences economic conditions. Indeed, banks need to take preemptive action and wait for the policy directions from stakeholders and supervisory institutions such as OJK, the Indonesian Deposit Insurance Agency or *Lembaga Penjamin Simpanan* (LPS), and Indonesia Central Bank or *Bank Indonesia*. It is also important to note that long before the COVID-19 pandemic, the banking industry can take concrete steps to anticipate all the worst possibilities and prepare for the pandemic until the post-pandemic-recovery process.

<sup>38</sup> Feni Freycinetia Fitriani, *Bos BI: Risiko Stabilitas Sistem Keuangan 2020 Bisa Meningkat Akibat COVID-19*, (2020), online: <<https://ekonomi.bisnis.com/read/20200428/9/1233707/bos-bi-risiko-stabilitas-sistem-keuangan-2020-bisa-meningkat-akibat-covid-19>>.

<sup>39</sup> Vincent Fabian Thomas, *Efek Corona pada Perbankan: Kredit Dikurangi, Cabang Tutup Temporer*, (2020), online: <<https://tirto.id/efek-corona-pada-perbankan-kredit-dikurangi-cabang-tutup-temporer>>.

<sup>40</sup> *Ibid.*

<sup>41</sup> Hafid Fuad, *IHSG Menunggu Mitigasi Sektor Perbankan dari Pemerintah*, (2020), online: <<https://ekbis.sindonews.com/berita/1568131/178/ihsg-menunggu-mitigasi-sektor-perbankan-dari-pemerintah>>.

<sup>42</sup> *Ibid.*

### III. RISK MITIGATION OF DISEASE PANDEMIC SCHEME IN THE BANKING INDUSTRY

#### A. General Risk Mitigation

Based on any risk priority level, we can assess whether a risk is avoidable. We can plan for mitigation as a means to avoid the particular risk.<sup>43</sup> Risk represents uncertainty resulting from decisions and current conditions. Because of all management levels' decisions, even by all employees following the authority, risks may arise across management layers. Diversity makes it arduous to identify and classify all the stakes in a company. The most advanced risk management is in the banking industry. All banking risks are part of the company's general risk.<sup>44</sup>

Mitigation, according to Black's Law Dictionary, means to make less severe or intense.<sup>45</sup> These risks can be systematic and unsystematic. The systematic risk occurs due to certain macro conditions or situations, such as changes in the political situation, government economic policies, changes in the market situation, crisis, or recession situations, impacting economic conditions in general. The latter is a unique risk that is attached to a particular company or business.<sup>46</sup>

Typically, banks will face some risks. *First*, market liquidity risk arises because the bank cannot make certain offsets due to inadequate market liquidity conditions or market disruptions. *Second*, risks that arise due to changes in market variables, such as interest rates, exchange rates, equity prices, and commodity prices, so that the value of the bank's portfolio or assets decreases. *Third*, credit risk, where the risk arises due to the default from other parties (customers or debtors) in fulfilling their obligations. *Fourth*, operational risks arising from the lack of an information system or internal control system that will result in unexpected losses. *Fifth*, compliance risk arises from non-compliance with applicable or established internal and external regulations or provisions. *Sixth*, legal risk is related to a bank's risk-bearing losses due to a lawsuit and weakness in legal or juridical aspects. *Seventh*, reputation risk arises from negative publications related to bank business activities or the bank's negative perceptions. Lastly, strategic risks because of the establishment and implementation of the bank's business strategy that is not right, making business decisions that are not right or unresponsive banks against external changes.<sup>47</sup>

Stress test principles are recognized in risk management, a crucial risk management element for banks and bank supervisors, and macroprudential authorities. Stress testing is an integral part of risk management bank supervision. A stress test will warn the bank management and supervisory authorities against unexpected things that

<sup>43</sup> Basit Shahzad & Sara Afzal Safvi, "Risk Mitigation and Management Scheme Based on Risk Priority" (2010) 10:4 Global Journal of Computer Science and Technology 108–113, at 108.

<sup>44</sup> Yushita, *supra* note 8 at 80.

<sup>45</sup> Henry Campbell Black, "Black's Law Dictionary" (1934) 20:4 Virginia Law Review 493.

<sup>46</sup> Tasriani & A Irfan, *Penerapan dan Pengelolaan Manajemen Resiko (Risk) Dalam Industri Perbankan Syariah: Studi Pada Bank BUMN dan Bank Non-BUMN*, (2015) 12:1 Sosial Budaya: Media Komunikasi Ilmu-Ilmu Sosial dan Budaya 102–116, at 105.

<sup>47</sup> *Ibid.*

<sup>1</sup> arise from various risk types.<sup>48</sup> A stress test is a technical analysis designed to assess the level of fragility of capital and liquidity of the banks against “all” potential future bad scenarios, to support the supervisory authority and bank management to evaluate the bank’s capital adequacy in the future about the predetermined risk level.<sup>49</sup>

In the process of financing risk mitigation, it includes: (a) financing policies and guidelines that are implemented correctly and in an orderly manner; (b) the limit policy to decide on financing under the system set by the Board of Directors through the Financing Committee; (c) the financing review process is carried out by the Risk Management Division Financing and Investment Risk Management Review Section; (d) at the portfolio level, it is carried out monitoring the engagement of financing risk, including concentration on certain industrial sectors, types of collateral, financing schemes, and implementation of the internal rating system; (e) limit policies. In addition to being carried out on each customer, transactions, currency, transaction volume, open positions, losses, intraday, related parties, and the company or economic sector and region are also carried out according to Maximum Credit Lending.<sup>50</sup>

#### *B. Risk Mitigation of Disease Pandemic in the Banking Industry*

Starting from March 2020, COVID-19 has affected the banking industry’s performance. The decline in performance occurred on average in March-April 2020 and began to recover in June 2020. The banking industry is one of the sectors that remains to operate during the pandemic and even amidst the government’s measure to impose Large-Scale Social Restrictions despite changes in activity patterns in the banking industry—starting from the employee shifting system and changes in service hours, services, and the use of digital and internet transactions. However, banking activities that are heavily affected are the credit sector.<sup>51</sup> Therefore, the government issued the Government Regulation in Lieu of Law Number 1/2020 on Financial Policy State and Stability for Handling COVID-19 as part of the emergency state. Then, this emergency law was ratified to Law Number 2/2020. Article 20 Law Number 2/2020 outlines the government’s safeguard to the banking industry, in which the Indonesian Deposit Insurance Corporation (IDIC) is given the authority to prepare for handling and intensify the preparations. In the meantime, the Financial Services Authority (OJK) addresses the bank solvency problems. This government measure includes taking actions about sales or repo of Government Securities held to Bank Indonesia issuing debt securities, loans to other parties, and/or loans to the government. The conditions if the IDIC is expected to experience liquidity difficulties for handling failed banks.

<sup>48</sup> *Stressing Testing Principles*, BIS papers no. 99 (Basel: Bank for International Settlements, 2018).

<sup>49</sup> Giuseppe Montesi & Giovanni Papiro, “Bank Stress Testing: A Stochastic Simulation Framework to Assess Banks’ Financial Fragility” (2018) 6:3 *Risks* 82.

<sup>50</sup> Mella Katrina Sari, “Determinan Risiko Pembiayaan Bank Umum Syariah di Indonesia,” (2016) 2:2 *Journal of Islamic Economics Lariba* 55–64, at 59.

<sup>51</sup> Anisa Indraini, “3 Peringatan Resesi Ekonomi Buat Indonesia,” (2020), online: <<https://finance.detik.com/berita-ekonomi-bisnis/d-5105523/3-peringatan-resesi-ekonomi-buat-indonesia>>.

Moreover, Article 20 Law Number 2/2020 governs that decision-making whether to carry out rescues a bank other than a systemic bank declares failed by taking into account, *inter alia*, economic conditions, the complexity of bank problems, handling, availability of investors, and/or effectiveness of handling bank problems, not only considering the least cost test. It also formulates and implements a deposit insurance policy for customer groups by considering the source of funds and/or allotment of deposits and the amount of guaranteed value for that customer group by the government regulation. Moreover, the risk mitigation in the OJK regulations focuses on determining asset quality and credit or financing restructuring policies about risk management. In addition, banks must have guidelines in determining debtors affected by the pandemic, either directly or indirectly, in the Financial Services Authority Regulation (POJK) Number 11/POJK.03/2020 on the national economic stimulus as a countercyclical policy on the impact of the COVID-2019 outbreak.

On Tuesday, 24 March 2020, the government announced a series of stimulus and incentives for the public to maintain purchasing power. The stimulus package included credit relaxation with a value of under USD 706.478 (IDR 10,000,000,000) for business purposes.<sup>52</sup> The credit relief is reduced interest and a delay in loan installments for up to one year. The announcement was followed by the POJK Number 11/POJK.03/2020, which came into effect on 16 March 2020. The OJK also issued two policies indirectly functioned to strengthen banking institutions amidst the COVID-19 pandemic. The POJK Number 13/POJK.03/2020 deals with the amendment of the POJK Number 38/POJK.03/2016 on the application of risk management in the use of information technology by commercial banks, which took effect on 31 March 2020.<sup>53</sup> Thus, there are two regulations relating to risk mitigation; first, POJK Number 18/POJK.03/2013 on the application of risk management for commercial banks; second, Bank Indonesia Regulation Number 11/25/PBI/2009 on the amendment of Bank Indonesia Regulation Number 5/8/PBI/2003 on the implementation of risk management for commercial banks.

According to the Banking Industry Profile Report for Quarter I-2020, banking resilience is maintained by a high capital level. It is believed to be quite good at absorbing potential risks. The banking risk profile is still maintained in line with improving liquidity risk.<sup>54</sup> However, the COVID-19 pandemic is a non-natural disaster whose resolution cannot be predicted with certainty. Reflecting on several countries that have reportedly experienced a recession, such as Singapore, Japan, Germany, France, and Italy,<sup>55</sup> Indonesia must be aware of the future's various potential risks. Various risk mitigation schemes need to be prepared, including the banking industry.

<sup>52</sup> RI Humas, *Keterangan Pers Presiden RI mengenai Kebijakan Pemerintah dalam Menghadapi Pandemi COVID-19*, (2020), online: <https://setkab.go.id/kebijakan-pemerintah-dalam-menghadapi-pandemik-covid-19-24-maret-2020-di-istana-merdeka-provinsi-dki-jakarta/>.

<sup>53</sup> *Laporan Industri Perbankan*, by Otoritas Jasa Keuangan (Otoritas Jasa Keuangan, 2020a).

<sup>54</sup> *Ibid.*

<sup>55</sup> Virdita Rizki Ratriani, *Selain Singapura, Jepang dan Jerman Juga Alami Resesi Akibat Corona*, (2020), online: <https://amp.kompas.com/tren/read/2020/07/15/115704665/selain-singapura-jepang-dan-jepang-juga-alami-resesi-akibat-corona>.



<sup>1</sup> The OJK data shows 56 conventional commercial banks, 13 sharia commercial banks, seven regional credit banks, 64 rural or Islamic rural banks, and 110 finance companies committed to providing restructuring. The four state-owned banks, *inter alia*, BRI, BNI, Bank Mandiri, and BTN, have respectively restructured IDR 14.9 trillion from 134,258 debtors, IDR 6.9 trillion from 6,238 debtors, IDR 4.1 trillion from 10,502 debtors, and IDR 2.8 trillion from 17,481 debtors. Meanwhile, data from the Ministry of Finance shows that the Micro, Small Medium Enterprise (MSME) segment's total credit restructuring has reached IDR 75.05 trillion.<sup>56</sup> For example, P.T. Bank Negara Indonesia, Tbk. conducts regular stress tests to determine the potential impact of the outbreak on the possibility of a decrease in credit quality. This method includes identifying sectors that are directly and indirectly suspected of being affected by COVID-19.<sup>57</sup> A quantitative assessment is also conducted to determine the debtor's resilience with several assumptions: a decrease in sales volume and the cost of goods sold. Besides, it mitigates moral hazard. Until April 2020, the realization of restructured loans increased significantly to IDR 69 trillion, with 103,447 debtors.

The largest affected sectors were trade, restaurants, and hotels, amounting to 38.4 percent or IDR 26.8 trillion, the industrial sector (18.4 percent or IDR 12.8 trillion), transportation, warehousing, and communication sector (16.2 percent or IDR 11.3 trillion).<sup>58</sup> Meanwhile, based on segmentation, the most affected are the small segment with the realization of restructuring amounting to IDR 27.4 trillion or 39.3 percent of the total reorganization up to April 2020. The debtors' assessment is carried out on a case-by-case basis to suit the financial capacity or cash flow. The restructuring can be provided to lower interest rates, extend the credit period, postpone principal installments, or a combination thereof. Meanwhile, when referring to the performance presentation in the first quarter of 2020, it was recorded that BNI's total credit of IDR 545.48 trillion was 26.9 percent or IDR 146.67 trillion, eligible credit for restructuring.<sup>59</sup>

P.T. Bank Mandiri, Tbk., has provided a restructuring of the People's Housing Credit or *Kredit Perumahan Rakyat* (KPR). Until June 2020, the company restructured credit for 500,000 accounts with a value of up to IDR 100 trillion,<sup>60</sup> restructuring scheme in the form of postponement of payment of principal and flower. In addition, Mandiri

<sup>56</sup> Dina Mirayanti Hutaeruk & Tendi Mahadi, *Beban Restrukturisasi Kredit Bisa Menekan Likuiditas Perbankan*, (2020), online: <<https://keuangan.kontan.co.id/news/beban-restrukturisasi-kredit-bisa-mene kan-likuiditas-perbankan?page=2>>.

<sup>57</sup> Maria Elena, *Hingga April 2020, BNI Sudah Restrukturisasi Kredit Rp 69 Triliun*, (2020), online: <<https://finansial.bisnis.com/read/20200519/90/1242676/hingga-april-2020-bni-sudah-restrukturisasi-kredit-rp69-triliun>>; Merdeka, *103.447 Nasabah BNI Ajukan Restrukturisasi Kredit Senilai Rp69 Triliun*, (2020), online: <<https://www.merdeka.com/uang/103447-nasabah-bni-ajukan-restrukturisasi-kredit-senilai-rp69-triliun.html>>; Laurensius Marshall Sautlan Sitanggang & Wahyu T. Rahmawati, *BNI: Segmen Kredit Kecil Paling Kena Dampak Virus Corona*, (2020), online: <<https://keuangan.kontan.co.id/news/bni-segmen-kredit-kecil-paling-kena-dampak-virus-corona>>.

<sup>58</sup> Elena, *supra* note 57; Merdeka, *supra* note 57; Sitanggang & Rahmawati, *supra* note 57.

<sup>59</sup> Elena, *supra* note 57; Merdeka, *supra* note 57; Sitanggang & Rahmawati, *supra* note 57.

<sup>60</sup> Ni Putu Eka Wiratmini, *Bank Mandiri Nilai Restrukturisasi Jatuh Tempo Jadi Tantangan Tahun Depan*, (2020), online: <<https://finansial.bisnis.com/read/20200630/90/1259686/bank-mandiri-nilai-restrukturisasi-jatuh-tempo-jadi-tantangan-tahun-depan>>.



bank has made preparations for a new normal since May 2020 by increasing Mandiri Online products and innovations that serve various customer financial transactions.<sup>61</sup> This product is equipped with a biometric login feature with a fingerprint scan and face recognition for transaction security. In addition, the latest Mandiri Online version displays detailed information on user deposits or loans. Furthermore, Bank Mandiri customers who will open an account at Bank Mandiri simply scan the Q.R. code or directly access *join.bankmandiri.co.id* on each personal device. Thus, individuals can immediately make transactions through the Mandiri Online application.<sup>62</sup>

At P.T. Bank Rakyat Indonesia, Tbk., actions taken in the face of the COVID-19 pandemic follow the POJK on credit restructuring by mapping affected customers, assigning customer categories, and determining the relaxation scheme needed. This condition will make it easier for this bank to choose an effective and targeted restructuring scheme.<sup>63</sup> The complete details of the credit restructuring scheme at this bank version can be seen in Table 1. The bank also provides credit restructuring services through the online form and the BRISPOT application to comply with physical distancing and social distancing orders. This bank then assesses the business conditions in the field based on the restructuring proposal. In addition, this bank continues to monitor customers, both those who received restructuring and those who did not receive restructuring through consultation and debtor assistance. Other than that, this bank develops digital business through BRI Stars, BRISIM, and BRISMART.<sup>64</sup>

Table 1. Credit Restructuring Scheme of P.T. Bank Rakyat Indonesia, Tbk.  
As of 26 May 2020.<sup>65</sup>

Number of Debtors	Credit Amount (IDR)	Schematic Pattern	Restructuring	Information
1.16 million micro	56,07 T	1. 30% decrease in turnover	1. The usual type of restructuring	Common restructuring = reduced interest and postponement of installments
1.04 million KUR <sup>66</sup>	18,67 T	2. Decreased turnover of 30-50%	2. Postponement of principal installments, interest is reduced & still paid.	
78,4 thousand	57,52 T	3. 50-75% reduction	3. Postponement of principal & interest for six months.	
		4. Decrease > 75%		

<sup>61</sup> Monica Wareza, *Senilai Rp 58 T, Bank Mandiri Restrukturisasi 300.000 Debitur*, (2020), online: <<https://www.cnbcindonesia.com/news/20200529172742-4-161909/senilai-rp-58-t-bank-mandiri-restrukturisasi-300000-debitur>>.

<sup>62</sup> *Ibid.*

<sup>63</sup> Ni Putu Eka Wiratmini, *Catat! Begini Rincian Skema Restrukturisasi Kredit BRI*, (2020), online: <<https://finansial.bisnis.com/read/20200417/90/1228678/catat-begini-rincian-skema-restrukturisasi-kredit-bri>>.

<sup>64</sup> Rahajeng Kusumo Hastuti, *BRI Restrukturisasi Kredit 23 Juta Debitur*, (2020), online: <<https://www.cnbcindonesia.com/market/20200605205146-17-163500/rp-14024-t-bri-restrukturisasi-kredit-23-juta-debitur>>.

<sup>65</sup> *Ibid.*

<sup>66</sup> *Kredit Usaha Rakyat (KUR) or People's Business Credit.*

			4. Interest & principal are delayed 12 months	
1				
26 thousand Consumer	6,77 T	1. 10% decrease in income 2. Decreased income 10-30% 3. Decreased income > 30%	1. Extension of the maximum credit period. 12 months. 2. Postponement of principal installment payments 3. Postponement of principal and interest installment payments	
42 Middle and corporation	1,19 T	1. Decreased turnover of 20% & not affected by exchange rate fluctuations 2. Decreased turnover > 20% & not affected by exchange rate fluctuations	1. Scheduling principal installments & lowering interest rates 2. Scheduling principal installments & lowering minimum interest rates with a referenced payment scheme	

Although restructuring can be considered risk mitigation for bad credit amidst the COVID-19 pandemic, risk management's general scope is in conditions outside the pandemic. According to POJK Number 18/POJK.03/2016 on the application of risk management for commercial banks, the substance of the policy includes active supervision of the Board of Directors and the Board of Commissioners; adequacy of risk management policies and procedures and determination of risk limits; the adequacy of the processes of identification, measurement, monitoring and control of risk, and the risk management information system; and a comprehensive internal control system.

However, there are demands for a 'new normal life era. In reality, the COVID-19 pandemic is still ongoing with an increasing number of positive cases every day. The report on economic growth in the first quarter of 2020 it only rose 2.97 percent,<sup>67</sup> and it is feared that there will be an economic recession due to the second quarter, predicted to decline to minus 3.8 percent.<sup>68</sup> Besides, the World Health Organization (WHO) confirmed that COVID-19 also spread via airborne,<sup>69</sup> which means the possible outbreak

<sup>67</sup> Redaksi Lombok Post, *Ekonomi Indonesia Minus 1,3 Persen, Jurang Resesi di Depan Mata*, (2020), online: <<https://lombokpost.jawapos.com/nasional/24/07/2020/ekonomi-indonesia-minus-13-persen-jurang-resesi-di-depan-mata/>>.

<sup>68</sup> CNN Indonesia, *Pengamat Ramal Indonesia Masuk Jurang Resesi Tahun Ini*, (2020), online: <<https://www.cnnindonesia.com/ekonomi/20200721182437-532-527295/pengamat-ramal-indonesia-masuk-jurang-resesi-tahun-ini>>; Indraini, *supra* note 51; Sorta Tobing, *Menguatnya Sinyal Resesi di Sejumlah Proyeksi Pertumbuhan Ekonomi RI*, (2020), online: <<https://katadata.co.id/sortatobing/finansial/5ef1e030e9de3/menguatnya-sinyal-resesi-di-sejumlah-proyeksi-pertumbuhan-ekonomi-ri>>.

<sup>69</sup> Rosmha Widiyanti, *Kata WHO Soal Kemungkinan COVID-19 Airbone, Sampai Mana Vaksin Corona?*, (2020), online: <<https://health.detik.com/berita-detikhealth/d-5087299/kata-who-soal-kemungkinan-covid-19-airborne-sampai-mana-vaksin-corona>>; World Health Organization, *Modes of Transmission of the Virus Causing COVID-19: Implications for IPC Precaution Recommendations*, (2020), online:

will result in a larger number. This condition proves that financial stability in Indonesia is still not secure. Moreover, the credit restructuring regulation is given for a maximum of 12 months. Meanwhile, the new COVID-19 vaccine is planned to be ready for mass production in early 2021,<sup>70</sup> considered as the end of the pandemic.

There is still much uncertainty about the future as a result of the pandemic itself. Therefore, risk mitigation management, primarily related to credit risk, must become a standard rule by providing an early warning for the banking industry, facing the worst possible pandemic. According to the bank group, the details of MSME and MSM credit NPLs since February-April 2020 have continued to increase. In February 2020, the total NPL of all banks was IDR 40,045 billion, followed by March 2020, which reached IDR 40,890 billion. In April 2020, NPL amounted to IDR 41,526 billion. (Financial Services Authority, 2020b: 182, Table 3.27.a. 'Loans and Non-Performing Loans Details of MSME and MSM Loans According to Bank Group in Rupiahs (IDR). Thus, credit risk mitigation needs to be made as early as possible. This is because the banking industry no longer needs to wait for the central government's credit issues policies. Apart from the long bureaucratic system and the emergence of legal uncertainty for the customers themselves, this avoids the parties' efforts. Those who are not responsible take advantage of the pandemic situation to avoid credit payments. Insofar, the disease pandemic has a more severe impact on credit risk. Then, the policies issued are limited to credit restructuring. At the same time, the banking industry has digitalized the public service. However, development is still slowing down because not all customers are accustomed to using internal digital technology to take advantage of banking services. Society is necessary to more friendly to digital transactions, and vice versa. The banking industry is competing to update digital electronic transaction services to make them more efficient, appropriate, and acceptable for all ages and educational backgrounds.

There are no specific provisions regarding the statutory protection level of personal data in Indonesia. In the POJK Number 13/POJK.03/2020 that amended the POJK Number 38/POJK.03/2016 on the application of risk management in the use of information technology by commercial banks, Article 21 paragraph (5) stipulates that banks must ensure the data used in the electronic system placed at data centers and/or disaster recovery centers outside the territory of Indonesia are not used for that purpose other than those referred to in paragraph (3). Thus, in practice, data security guarantees must be ensured by the bank, especially to customers. This is also to increase customer confidence in the bank.

As previously described, banking institutions need to create a risk mitigation scheme for the impact of a pandemic disease, which does not stop at the issue of credit alone. In this scheme, the bank needs to create guidelines for the steps taken in a disease pandemic. As lessons from this pandemic, Coelho & Prenio group made

<https://www.who.int/news-room/commentaries/detail/modes-of-transmission-of-virus-causing-covid-19-implications-for-ipc-precaution-recommendations>.

<sup>70</sup> Akhdi Martin Prataman, Erick Thohir: *Vaksin Covid-19 Baru Bisa Diproduksi Awal 2021*, (2020), online: <https://money.kompas.com/read/2020/07/25/172104126/erick-thohir-vaksin-covid-19-baru-bisa-diproduksi-awal-2021>.

<sup>71</sup> recommendations dealing with a pandemic.<sup>71</sup> This grouping is taken by sampling from several policies of several relevant authorities in several countries. Some of these recommendations are related to efforts to maintain the sustainability of banking business activities, divided into several categories involving ensuring customers and Bank employees' safety and analyzing contingency plans' suitability to deal with pandemic scenarios. Conducting an assessment of telecommunication capabilities and increasing cyber resilience, identifying crucial financial workers, coordinating with critical third-party service providers, and maintaining smooth communication with internal and external parties.

Risk mitigation policies, such as the one above, should be developed as a form of vigilance in facing future disease pandemics, or even in the event of a second wave of the COVID-19 pandemic. Risk mitigation schemes that need to be prepared by bank institutions consist of six schemes. *First*, analyze the real and financial sectors as soon as there is an announcement or news about an endemic in an area. Why since 'endemic' happened? International trade seems to be free trade without borders, both between entrepreneurs (B to B) and the government. Therefore, one party's business activities in a country may be affected because of the endemic of an area in a particular country. On the contrary, it is precisely this free and borderless trade that can become a medium for the spread of an endemic disease into an epidemic and a pandemic. For example, the current acceleration of the spread of COVID-19 is due partly to economic globalization. It is argued that the spatial organization of economic globalization is at the heart of the paradox that characterizes the COVID-19 Pandemic. As with the worst-case scenario analysis, this analysis model is expected to describe when an endemic quickly spreads to other areas to become an epidemic or even a pandemic.

In addition, learning from the experience of handling the COVID-19 pandemic, the banking industry needs to be better prepared for the effects of the very rapid spread of the disease. In this process, the bank has analyzed or identified the risk of a crisis when an epidemic or pandemic occurs, namely the real sector, economic growth, debtor performance, and other aspects affecting banks' health.<sup>72</sup> *Second*, Banks need to proactively coordinate with customers, especially those who have affected debtors or even those who are 'likely' to be affected by a pandemic. For example, debtor customers whose businesses are tied to import and export activities from countries experiencing endemic or epidemic conditions. This is necessary to provide an overview for the bank and customers to determine what steps will be taken, for example, the possibility of compiling a restructuring scenario and efforts to rescue other debtors and banks.<sup>73</sup> This

<sup>71</sup> Rodrigo Coelho & Jermy Prenio, *Covid-19 and Operational Resilience: Addressing Financial Institutions' Operational Challenges in A Pandemic*, 2 (Financial Stability Institute Briefs, 2020) at 2.

<sup>72</sup> *Ibid* at 34.

<sup>73</sup> Mochammad Januar Rizki, *4 Langkah Bagi Perbankan dalam Hadapi Risiko Krisis Akibat COVID-19*, (2020), online: <<https://www.hukumonline.com/berita/baca/lt5ebf7b5c58alc/4-langkah-bagi-perbankan-dalam-hadapi-risiko-krisis-akibat-covid-19>>; Sulistiyo, *Strategi Bank Menghadapi COVID-19*, (2020), online: <<https://analisis.kontan.co.id/news/strategi-bank-menghadapi-covid-19>>.



is quite significant in order to maintain bank operational resilience.<sup>74</sup> *Third.* Banks also need to provide guidance and assistance to business partner customers, especially MSMEs. As an intermediary institution that bridges those with excess funds and short of funds, the bank has a moral responsibility towards both parties. To depositor customers, the bank must be responsible for the funds deposited or invested by the customer in the bank, which is then distributed to the debtor customer in the form of credit. As a form of accountability, Banks need to provide guidance and assistance to debtor customers so that the funds channeled are genuinely productive for both the customer and the bank. In a disease pandemic condition, Banks need to provide more guidance and/or assistance to their customers.<sup>75</sup>

*Fourth.* In applying for new credit, Banks need to increase vigilance in conducting credit analysis. Banks should focus on prospective industries for financings, such as health, medicine, and basic commodities. Of course, this can apply when policies from the government or related authorities support by enacting countercyclical policies, such as those issued by the OJK, in overcoming the impact of the current COVID-19 pandemic.<sup>76</sup> *Fifth.* Increasing the digitalization of banks and information technology infrastructure. Apart from being driven by technological developments in the 4.0 era, this is also very useful for overcoming barriers to economic activities in both the real and financial sectors. Reflecting on China when facing the SARS epidemic in 2003, China then developed digital payments and e-commerce methods. The epidemic has even triggered large companies in China, such as Ele.me and Alibaba.<sup>77</sup> In addition to facilitating economic activities, digitizing banking benefits are also beneficial in a disease pandemic by implementing social distancing or physical distancing policies. *Sixth.* Increase operational resilience, such as cyber resilience. The pandemic situation, which requires physical distancing, has caused banks to be more active in using and improving information technology infrastructure. Increased use of digital platforms must be accompanied by increased cyber resilience. A pandemic can trigger an increase in cyberattacks due to prolonged use of the information technology infrastructure and various online services, including third parties' services. Banks must be able to increase the security of customers' data and employees by identifying and protecting fragile systems, including detecting, responding to, and repairing the consequences of cyberattacks. The security of customer data, employees, and the bank itself must be guaranteed.<sup>78</sup>

<sup>74</sup> Coelho & Prenio, *supra* note 71 at 5–6.

<sup>75</sup> Rizki, *supra* note 73; Sulistiyo, *supra* note 73.

<sup>76</sup> *Ibid.*

<sup>77</sup> Yan Xiao & Martin Chorzempa, How Digital Payments Can Help Countries Cope with COVID-19, Other Pandemics: Lessons from China, (2020), online: <<https://www.weforum.org/agenda/2020/05/digital-payments-cash-and-covid-19-pandemics/>>.

<sup>78</sup> Coelho & Prenio, *supra* note 71; Rizki, *supra* note 73; Sulistiyo, *supra* note 73.



#### IV. CONCLUSION

Given banks' significant role and function as intermediary institutions, risk mitigation of disease pandemic in the banking industry becomes urgent to be regulated by both the relevant authorities and the internal banks. The bank shall shortly prepare the risk mitigation towards the pandemic and plan the risk mitigation in response to endemic in a certain territory. The disease pandemic is an abnormal situation; the losses' impact is more significant than any other emergency. In that case, banks can immediately take precautions long before the disease pandemic hits the country without the need to wait for central government regulations but still comply with and within the corridors of applicable laws and regulations.

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#### COMPETING INTERESTS

The authors declare that they have no competing interests.

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