OPERATIONAL RISK MANAGEMENT DESIGN OF GENERAL REINSURANCE FACULTATIVE ADMINISTRATION PT. XYZ

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Abstract:

Background: The facultative administration of general reinsurance of PT. XYZ has experienced several operational risks, such as scattered and incomplete bargaining documents between companies and emails from insurance companies that were not promptly responded to. However, in practice, the facultative administration of general reinsurance of PT. XYZ has not implemented operational risk management.
Purpose: The purpose of this study is to identify operational risks and their causes, analyze the priority level of handling, and recommend handling operational risks.
Design/methodology/approach: This research was conducted from November 2023 to January 2024 and required 9 respondents. Furthermore, the information received based on the respondents' statements will be processed using Fishbone Diagram, FMEA (Failure Mode and Effect Analysis), and Pareto Diagram methods.
Finding/Results: 11 risk sources were identified and grouped into process, human, system, and external risk categories, of which 3 were prioritized for handling, namely the risk that emails related to offers from insurance companies were not responded on time, an error occurred on the company's website database, and the information in the business offer slip did not explain in detail the coverage value of each risk to be reinsured.
Conclusion: Some of the handling efforts proposed in this study include adding competent human resources, carrying out regular system maintenance, and providing reminders to insurance companies.
Originality/value (State of the art): The facultative administration of general reinsurance of PT XYZ does not escape the existence of several operational risks that fall into the categories of process, human, system and external risks.

Keywords: facultative administration, FMEA, operational risk, Pareto diagram, risk priority

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INTRODUCTION

The history of reinsurance development cannot be separated from the history and development of insurance, where these two institutions coexist (Parera, 2020). According to Law of the Republic of Indonesia Number 40 of 2014 concerning Insurance article 1, reinsurance is defined as a reinsurance service business for risks faced by insurance companies, guarantee companies, or other reinsurance companies. PT. XYZ is one of the reinsurance companies in Indonesia where one of its products and services is general reinsurance, which aims to protect customers from risks with a broad scope of various lines of general insurance business through a risk transfer mechanism. The general reinsurance products offered by PT. XYZ are property, motor vehicle, transportation and ship frame, aviation, health, liability, personal accident, guarantee and credit, engineering, and energy, oil and gas insurance.

The reinsurance method is divided into two categories: treaty and facultative. The treaty method is a method where the insurance company automatically provides a session or part of the coverage value submitted to the reinsurance company and the reinsurance company automatically accepts without negotiation in accordance with the written contract. Whereas in the facultative method, insurance companies and reinsurance companies have the freedom to accept a session or risk, where risks are offered by insurance companies on a case-by-case basis to reinsurance companies (Indonesia Financial Group, 2022). In the facultative method, the offer from the insurance company begins by sending a slip or complete information about the risk to be reinsured so that the reinsurance company can determine whether to accept or reject the offer (Parera, 2020).

At PT. XYZ, general reinsurance facultative business offers offered by insurance companies are received in the form of emails, which are then registered by the administrator according to the information contained in the offer document. Then, an analysis process is carried out by the underwriter. An underwriter assesses the eligibility of prospective customers for insurance benefits based on document completeness and risk evaluation. The underwriter will make negotiations regarding the terms and conditions offered by the insurance company before accepting the offer. If the business offer is rejected, PT. XYZ will inform the insurance company regarding the rejection of the business offer, while if the business offer is accepted, it will be continued with the issuance of a letter of confirmation of cooperation between the insurance company and PT. XYZ. After the letter of confirmation of cooperation is issued, the facultative administrator will receive a closing slip from the insurance company, and check whether the closing slip is in accordance with the previously approved letter of confirmation of cooperation.

In supporting the business processes of a company, one of the roles that has the responsibility of providing data and information is the administrator (Apandi et al. 2020). Based on what has been explained previously, the role of the general reinsurance facultative administrator of PT. XYZ is also very much needed. Starting from checking and inputting bargaining documents, agreement documents, to the final document in the form of a slip between the insurance company and PT. XYZ.

According to Haryadi (2009), administration is the activity of systematically compiling and recording data and information with the aim of providing information and making it easier to retrieve it as a whole, where the data and information in question relate to organizational activities. Kamaluddin (2017) states that administration is the entire process of cooperation between two or more people in order to achieve predetermined goals. So, it can be concluded that administration is defined as an activity that records various important data and information in an organization or business concerned. The Ministry of Finance of the Republic of Indonesia (2022) explains that data and information have uses for organizations and companies, including as a determinant of policy direction, as supporting information in predicting trends or risks that will be experienced, generating innovation, and for evaluating and fixing existing problems. An organization or company collects data from clients, customers, employees, and vendors (Forbes, 2022). To ensure that the data and information provided by the administrator is precise and informative, the role of data entry is needed. Data entry is the process of digitizing data by entering it into a computer system for organizational and management purposes, which is an important basic skill (Khan et al. 2014). However, in its implementation, the data entry process also has risks that can completely damage, change, and cancel statistical results and conclusions

(Barchard et al. 2011). The existence of risks in the data entry process can hinder the conversion of data into useful information (Plutoshift, 2018).

According to Siahaan (2009), the risks faced by companies come from internal and external factors. Risks from internal factors occur due to changes or disturbances originating from within the company such as employees, raw materials, tools, and machinery. Meanwhile, risks from external factors are caused by changes or disturbances from outside the company such as natural disasters, government policies, and competitor factors. The increasing complexity of the company's business activities results in an increasing level of risk faced by the company. Here, the role of risk management is needed to protect the company against losses that may arise from the business activities carried out.

Based on PT. XYZ's business processes, administration is one of the important roles in optimizing company performance. Administration plays a role in providing data and information if needed at any time. However, in its implementation, the administration carried out by the general reinsurance facultative of PT. XYZ has not implemented operational risk management for early detection, overcoming, reducing, and avoiding risk factors that may occur and can hinder company performance. Thus, this research aims to identify operational risks, their causes, analyze the priority level of handling, and recommend the handling of priority operational risks.

METHODS

This research was conducted at one of the reinsurance companies in Indonesia, namely PT. XYZ which is located in the South Jakarta area, DKI Jakarta. The determination of the research location was carried out intentionally with the consideration that PT. XYZ is one of the largest reinsurance companies in Indonesia. The research was conducted in November 2023 - January 2024.

The research methods used in this research are descriptive qualitative and quantitative research approaches. In this method, researchers focus on collecting data through observations, interviews, and observations of research participants selected based on the fulfillment of certain criteria. While quantitative methods use data in the form of numbers as a tool to analyze information, where in this study the Failure Mode and Effect Analysis (FMEA) and Pareto Diagram methods are used.

The analysis was conducted by identifying operational risks experienced by the facultative administration of general reinsurance of PT. XYZ. In determining the priority of operational risks, it is carried out using the Failure Mode and Effect Analysis (FMEA) method and Pareto diagram to help focus more on the factors that cause failure at a higher priority. Meanwhile, to identify and propose alternative strategies for handling operational risks that occur in the facultative administration of general reinsurance of PT. XYZ will be carried out using the Focus Group Discussion (FGD) method, which was attended by 9 respondents, namely IT Database & Reporting Team, Underwriter Team, Operation Support Team, and IT Development Team.

Failure Mode and Effect Analysis (FMEA) is used to identify and eliminate failures, problems, errors, and so on from systems, designs, processes, and/or services before they reach customers (Stamatis, 2019). The main focus in the FMEA method is to proactively assess the risk of potential failure modes so that appropriate corrective actions can be taken before failure occurs. FMEA provides qualitative and quantitative information about risks. FMEA is a systematic way to examine and prevent as many failure tendencies as possible (Li et al. 2011). Any event that may lead to failure can be interpreted as a failure mode. FMEA is used to help design, refine, and improve a company's business scheme. FMEA is formulated to discover, identify, and prevent business failures (Liu et al. 2020). RPN ensures that companies focus on the most critical failure modes or have higher RPN values (Stamatis, 2019). At this stage, the product calculation is carried out from the product of the multiplication of severity, occurrence rate, and detection rate which calculated as attached below. The value is used to rank potential risk sources.

RPN critical value = (Severity rate) * (Occurrence rate) * (Detection rate)

The results of the RPN calculation are used as a reference in ranking each risk source. Then, the RPN critical value calculation is carried out to determine the priority of handling of each existing risk, where risks with RPN values above the critical value are included in

the risks that require further handling. The calculation of the critical value of RPN is the average result of the RPN calculation of all existing risks, which is shown in the following equation.

Critical value RPN = (RPN' s Total)/(Amount of Risks)

Pareto diagram, a very effective tool in the form of a bar chart, to determine the causes of problems that occur with the general principle of "80/20", which means that approximately 80% of the problems that arise can come from 20% of the causes (Germanova 2020). By knowing the dominant causes, it is possible to determine the priority of improvement, which will have a greater impact than solving causes that are less significant. The diagram is organized from highest to lowest, from left to right, where the left side of the bar chart is relatively more important than the right side.

Focus Group Discussion (FGD), FGD is a method used to explore broader insights and ideas that emerge in groups of individuals on a particular issue guided by a moderator (Glitz, 1997). According to Einasto (2014), the advantages of using the FGD method are that it provides data quickly, is richer, and provides added value to the data that is not obtained when using other data collection methods, especially in quantitative research.

The analysis was conducted by identifying operational risks experienced by the facultative administration of general reinsurance of PT XYZ. In determining the priority of operational risks, it is carried out using the Failure Mode and Effect Analysis (FMEA) method and Pareto diagrams to help focus more on the factors that cause failure at a higher priority. Meanwhile, to identify and alternative strategies for handling operational risks that occur in the facultative administration of general reinsurance of PT XYZ will be carried out using in-depth interview and Focus Group Discussion (FGD) methods. Figure 1 shows the framework of this research.

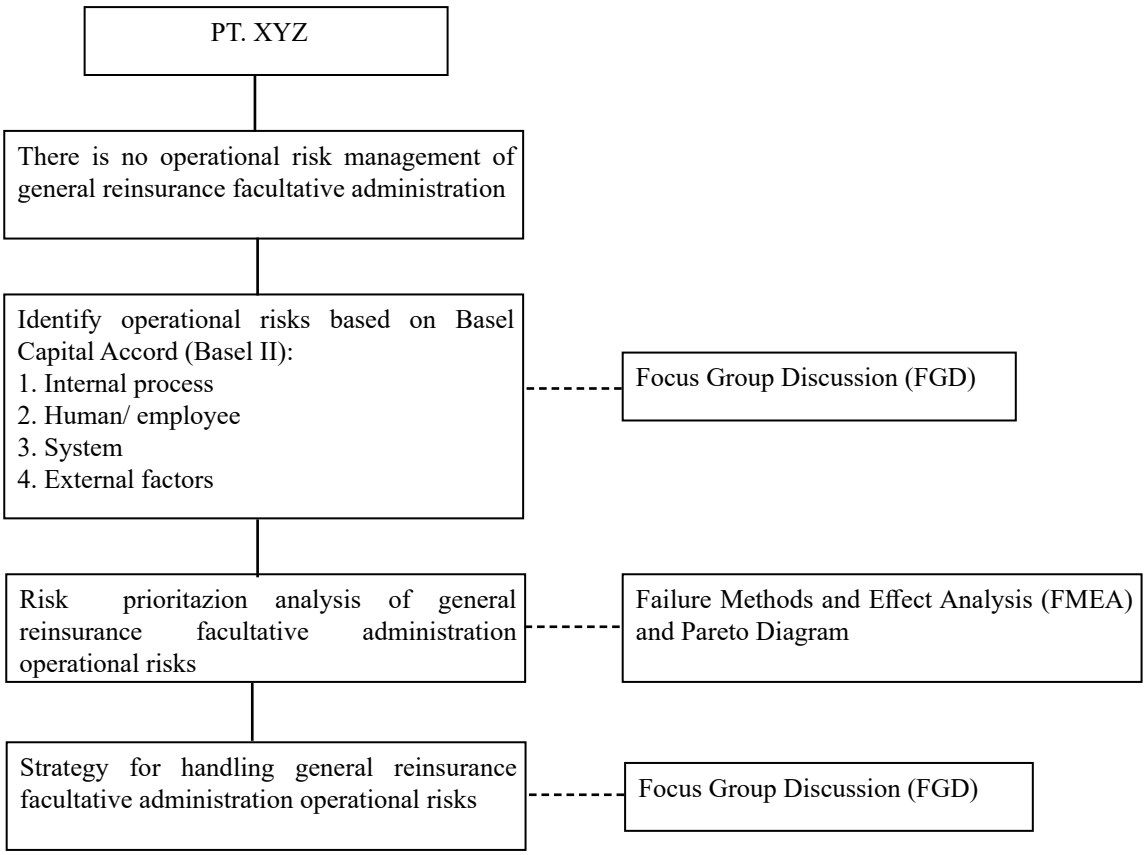

Figure 1. Research framework

RESULTS

Establishment of Risk Management Scope, Context, and Criteria

Establishing the risk management context is the initial stage in the risk management process. At this stage, researchers conducted interviews with internal parties of PT XYZ, especially with respondents related to the general reinsurance facultative administration to find out the business processes carried out, which will be risk assessed, the main scope of risk management activities to be carried out, the purpose of implementing risk management to be carried out, and determining the risk criteria measured. The business process to be risk assessed is the operational activities of the general reinsurance facultative administration of PT XYZ. The purpose of implementing risk management to be carried out is to detect early, overcome, reduce, and avoid risk factors in the facultative administration of general reinsurance that may occur and can hinder the performance of the company PT. XYZ.

The risk criteria included in the operational risk of the general reinsurance facultative administration business process of PT XYZ are risks originating from process factors, human factors, system factors, and external factors that can result in disruption of business processes. Operational risks will be measured for probability, impact, and detection.

Risk Identification Results

Based on the Table 1, these risks are further categorized based on four factors, namely:
Process risk is a risk associated with disruption to the business processes carried out by the general reinsurance facultative administration of PT XYZ. The risks included in this group are as follows.

a) The data input process for multiple locations is performed manually due to frequent errors in the automatic upload system, causing several effects such as the process of inputting information on the company's website database to be inefficient, prone to typos when inputting information on the company's website database, and policies that are missed to be inputted into the company's website database.
b) It is difficult to find files that match the data you want to repair, which is caused by too many files stored in the e-document and the files are not stored in order according to the incoming email, causing the search for files related to the data you want to repair to take a long time.

Table 1. Risk register and the results of the calculation of RPN values related to the operational risk of general reinsurance facultative administration PT. XYZ

Risk	S	O	D	RPN
Emails related to offers from insurance companies are not responded on time	6	10	8	480
Information in the business offer slip does not explain in detail the risks that you want to reinsure	4	5	8	160
The format of the file sent cannot be copied and pasted	2	6	2	24
Data input process for multilocation must be done manually	3	6	4	72
Files related to business offers are not stored in the company's e-document website	3	8	4	96
It is difficult to find files that match the data you want to correct	3	8	6	144
Scanned documents are not clearly legible	2	4	2	16
The difference in premium value between the slip and the calculation results on the company's website database	5	10	3	150
There is an error on the company's website database	6	8	5	240
Incomplete or inaccurate information inputted related to offering slip	4	6	3	72
Incorrect input of offering slip information	5	7	2	70

c) Scanned documents are not clearly legible due to errors in the document scanning process, causing several effects such as the data in the document being difficult to read and the process of inputting information on the company's website database taking longer.
d) The difference in the premium value between the slip and the calculation results on the company's database website is caused by several factors, namely the difference in the value of the premium rate and the value of the reinsured coverage, the difference in the value of the commission, and the difference in currency exchange rates between years, causing less accurate company bookkeeping statistics.

Human risk is a risk caused or sourced from humans that causes disruption to the general reinsurance facultative administration business process of PT XYZ. The risks included in this group are as follows.
a) Emails related to offers from insurance companies are not responded to in a timely manner due to a lack of human resources, causing several effects such as hoarded emails from insurance companies, increasing admin deadlines per day in responding to emails, to lost business opportunities.
b) Files related to business offer slips are not stored in the e-document of the company's database website due to admin's negligence in storing the documents and errors in the company's database website, causing the tracking of related business offer slip documents to be difficult when needed.
c) Incomplete or inaccurate information inputted related to the business offer slip caused by the admin's inattention in reading the business offer slip and the admin is too focused on the number of business offer slip records that must be inputted, thus causing several effects such as inaccurate data that will be used by the underwriter to conduct risk assessment and hampering the risk assessment process carried out by the underwriter.
d) Errors in inputting business offer slip information caused by the absence of a double check by the admin after inputting business offer slip information and errors in the typing process, which causes several effects such as information mismatches when the underwriter will conduct a risk assessment and allow risk assessment errors to be made by the underwriter.

System risk is the risk posed by the company's system used to run the PT XYZ general reinsurance facultative administration business process. The risks included in this group are as follows.
a) There is an error on the company's database website caused by the use of many users at once on the company's database website, the internet network is down, the server memory is full, and there is a bug on the company's database website, causing several effects such as the process of inputting information on the company's database website to be inefficient, the number of business offer slips from several insurance companies that have been submitted to the company. number of business offer slips from several registered insurance companies is not optimal, and the work of all divisions is delayed.

External risk is a risk that is generated and sourced from outside the company and outside the company's control. A non-conducive environment causes disruption to PT XYZ's general reinsurance facultative administration business process. The risks included in this group are as follows.
a) The information in the business offer slip does not explain in detail the coverage value of each risk to be reinsured, which is caused by the inaccuracy of the insurance company, causing the information input process on the company's website database to be less detailed.
b) Some file formats sent could not be copy-pasted due to errors in the file format, causing several effects such as the information input process on the company's database website being inefficient and prone to typos when inputting information on the company's database website.

Also, based on the Table 1, it is known there are 11 sources of risk that have the potential to cause failure of the PT XYZ's general reinsurance facultative administration business process. It can be seen that the email risk source related to offers from insurance companies is not responded to in a timely manner has the highest RPN value with a score of 480, followed by an error on the company's database website with a score of 240, the information in the business offer slip does not explain in detail the coverage value of each risk you want to reinsure with a score of 160, the difference in premium value between the slip and the calculation results on the company's database website with a score of 150, difficult to find files that match the data you want to correct with a score of 144, files related

to business offer slips are not stored in the company's e-document website with a score of 96, the data input process for multilocation must be done manually and incomplete or inaccurate information inputted related to business offer slips with a score of 72, input errors in business offer slip information 70, the format of the file sent cannot be copied and pasted with a score of 24, and scanned documents are not clearly readable with a score of 16.

Based on the Figure 2, it is obtained that the Pareto distribution for potential failures in human factors which include emails related to offers from insurance companies are not responded on time, the risk of files related to business offers not being stored in e-documents on the company's database website, incomplete or inaccurate information inputted related to business offer slips, as well as errors in inputting business offer slip information, has the highest total RPN of 718 or with a total percentage of 47%. Followed by process factors which include the risk of the data input process for multilocation must be done manually, it is difficult to find files that match the data you want to correct, scanned documents are not clearly legible, and the difference in premium value between the slip and the calculation results on the company's database website, has a total RPN of 382 or a total percentage of 25%, system factors with the risk of errors on the company's database website, has a total RPN of 240 or a total percentage of 16%, and external factors which include the risk of information in the business offer slip not explaining in detail related to the risk you want to reinsure and some file formats sent cannot be copy-pasted, has a total RPN of 184 or a total percentage of 12%.

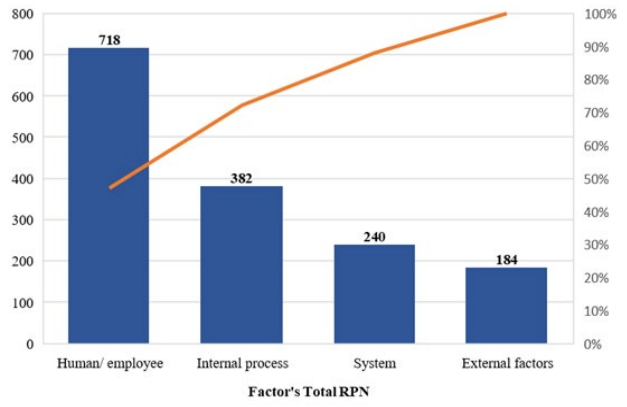

Figure 2. Pareto diagram of potential failures of general reinsurance facultative administration PT. XYZ

Calculation of Critical Value Risk Priority Number (RPN)

After knowing the RPN value of each existing risk, the critical value calculation will be taken from the average RPN value of all risks to determine the high risk priority. The critical value of risks based on calculations is as follows.

RPN critical value = (480+160+24+72+96+144+16+150+240+72+70)/11 = 1524/11 = 138.545455

Based on the calculation of the critical value above, the critical value of RPN is 138.545455, then the risks that have a critical value above the critical value will be grouped. Which based on the Pareto principle, 20% of the total potential source of risk will be selected as the top priority in determining operational risk handling strategies. In this study, 3 potential risks were obtained as the top priority that will determine the strategy for handling operational risks.

The first potential source of risk that is considered a priority risk is related to email offers from insurance companies not being responded on time. Based on recommendations for handling operational risks related to email offers from insurance companies not being responded on time, it is proposed to add human resources. According to research conducted by Yoni et al. (2013), to catch up with delays in work completion, the system of increasing the number of workers is more effective when compared to overtime work because the total cost incurred is much less than the addition of working time (overtime hours). To create competent human resources, training is a method used to develop human resources (Sendawula et al. 2018). This is in line with research conducted by Lisnawati et al. (2023), where in their research it was concluded that training has an influence of 67.4% on employee performance.

The second potential source of risk that is considered a priority risk is an error on the company's website database. Based on the recommendations for handling operational risks related to errors on the company's database website, it is proposed to carry out regular system maintenance to reduce the possibility of damage, disruption, and keep facilities in standard conditions (Muhtadi, 2009). In addition, it is proposed to monitor the server, this is in line with research conducted by Michael et al. (2019), where in their research it was concluded that server monitoring is able to provide

information about monitored server activities which are then used to ensure the server is running optimally. Setting up server backups is necessary as a step to anticipate data loss or damage (Yuliono et al. 2021).

The third potential source of risk that is considered a priority risk is the information in the business offer slip that does not explain in detail the coverage value of each risk you want to reinsure. Because the source of potential risk comes from external factors that PT. XYZ cannot control, so in handling the information in the business offer slip that does not explain in detail the coverage value of each risk that wants to be reinsured, the following steps can be taken, which provide information and reminders to the insurance company and create a clear standard operating procedure regarding the provision of detailed information on the business offer slip from the insurance company.

Managerial Implications

This research is the author's contribution to provide an overview of operational risks in general reinsurance facultative administration at PT. XYZ. The results of this study found 11 operational risks identified, which consisted of 4 process risks, 4 human risks, 1 system risk, and 2 external risks. Based on the calculation of Failure Mode and Effect Analysis (FMEA) and Pareto diagrams, there are three potential risks that are prioritized with the highest RPN value, including the risk of emails related to offers from insurance companies not being responded on time, errors on the company's website database, and information in the business offer slip does not explain in detail the coverage value of each risk you want to reinsure. In this study, researchers provide recommendations in the form of suggestions and strategies that can be carried out by PT. XYZ regarding risk management based on ISO 31000: 2018. Risk handling efforts are expected to manage risk, reduce the likelihood of risk occurrence, and minimize the impact of risk occurrence on PT. XYZ's general reinsurance facultative administration operations. This will drive the company's performance in a positive direction and increase the chances of achieving company goals.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Eleven potential sources of risk were identified in the facultative administration of general reinsurance of PT XYZ. Based on operational risk factors, potential sources of risk in facultative administration general reinsurance administration of PT XYZ is divided into 4 process risks, 4 human risks, 1 system risk, and 2 external risks. Based on the calculation of the Risk Priority Number (RPN) and the critical value of RPN on the 11 identified sources of potential risk, the critical value of RPN is 138.55, where based on the Pareto principle, 20% of the risk will be selected as a priority risk. Thus, 3 potential sources of risk were found with the highest number of RPNs with values of 480, 240, 160, respectively, namely emails related to offers from insurance companies were not responded to on time, errors occurred in the insurance company. responded in a timely manner, there was an error on the company's website database, and the information on the information in the business offer slip does not explain in detail the coverage value of each risk you want to reinsure. risk that you want to reinsure. Specific risk controls have been recommended for each identified priority risk. These controls are expected to mitigate the likelihood and impact of risks, ensuring the continuity and efficiency of PT. XYZ's general reinsurance facultative administration processes.

Recommendations

PT. XYZ is advised to develop a comprehensive strategy for managing operational risks related to administrative facultative general reinsurance through discussions with the risk management committee. In addition, this research is limited to general reinsurance facultative administrative operational risk, so further research is expected to conduct further analysis for other fields or divisions.

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