

Risk Assessment of MSME Credit Process Digitalization Program of PT Bank XYZ West Sumatra Region

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ABSTRACT

The economic development of Micro, Small Medium Enterprise (MSMEs) cannot be separated from the real performance faced by most businesses, especially micro, small and medium enterprises in Indonesia. The most prominent is the low level of productivity, added value, and product quality. Despite this, MSMEs provide employment for the majority of Indonesians. The contribution of MSMEs in national output is still categorized as low. The factor that causes the low contribution of MSMEs in producing low output of goods and services is the type of decision-making that is fast and does not consider other factors at a later date. The decision-making of MSME entrepreneurs who use intuition rather than normal business calculations results in decisions being made quickly and the execution of these decisions takes a short time. In order to build the excellence of MSMEs by providing additional capital that is the right amount and the right use, PT Bank XYZ developed a digital credit analysis that provides a comprehensive and thorough credit analysis, one of which is to reduce the risk of default. The research aims to Analyze the risk of AAKD in the speed of microcredit analysis, Analyze AAKD on the accuracy of PKM microcredit analysis and Formulate policies to be able to improve the AAKD system. Data analysis using House of Risk which consists of House of Risk stage 1 and stage 2. The results showed that in the first stage of the house of risk there were 30 causes of risk, and three dominant risks were obtained, namely errors in granting credit, credit process errors and cost changes. After obtaining the

dominant risk causative agent, the second stage of the House of Risk is carried out, namely mitigation steps. Mitigation steps that can be taken by Bank XYZ in order, namely Improving communication both internally and externally, creating a regular HR education schedule, Consistent in the implementation of education, Increased supervision in monitoring HR performance, especially the credit section, Evaluating the work of the credit section and related sections and Preventive errors in the submission and credit process.

Keywords: MSMEs, Bank XYZ, House of Risk, AAKD, Risk Management, Mitigation

INTRODUCTION

Small and medium enterprises (SMEs) are the pillars of the Indonesian economy that have been tested reliably in facing the crisis in 1998, 2008, and 2020, economic strength supported by a large number of business people with small business scales. According to data from the Ministry of Cooperatives, Small and Medium Enterprises (Ministry of SMEs, 2021) in 2018, the number of MSME players was 64.2 million or 99.99% of the number of business actors in Indonesia. The micro business sector is a major part of the Indonesian economy in terms of the large number of business units. The number of units and labor absorbed by the business category. The absorption has also experienced an increasing trend over the past 5 years. The increase in the number of

MSMEs from 2015 to 2019 amounted to 6.2 million businesses or an increase of 10% over 4 years. Micro enterprises also have a very large contribution to Gross Domestic Product (GDP) with a high contribution value and continues to increase. This shows the importance of developing the micro business sector because of its large contribution as a driver of the national economy (Central Statistics Agency, 2021). Of the many positive roles of micro enterprises, entrepreneurs are not yet familiar with banking practices formally. This is due to unbankable faster process even with high interest. With the speed of MSME entrepreneurs in making decisions in the development and process of saving businesses, in crisis conditions are better able to survive when compared to other businesses form of deposits and distributes them to the public in the form of credit and or other forms in order to improve the standard of living of the community (Law 1998). The presence of MSMEs parties and various other considerations. In addition, the nature of MSME entrepreneurs does not have a mature development plan so they see business development opportunities at any time. Not infrequently they are more inclined to take loans to non-bank on the grounds of a faster process even with high interest. With the speed of MSME eterpreeurs in making decisions in the development and process of saving businesses, in crisis conditions are better able to survive when compared to other businesses.

The role of banking as a business entity that collects funds from the public in the banking services in a region can increase and accelerate economic growth. Bank XYZ as a bank with 83.86% of the loan portfolio in the MSME sector has started lending in the sector in 1986 through the Mass Guidance credit program (Bimas) with the issuance of Presidential Instruction No. 4 of 1973. Starting in 1986, it began to distribute microcredit commercially to MSME entrepreneurs. For 31 years, the microcredit analysis process has been carried out

manually by the Microcredit Officer (PKM) of Bank XYZ. The credit process takes no sooner than 10 working days to be able to carry out the credit process from data collection to the microcredit disbursement process. To be able to accelerate the credit process, in 2018 began to develop a mobile and digital credit processing application. With the digitization process, simplifying the credit stages which initially required 13 stages to 7 stages with this simplification is expected to accelerate the credit process to 3 working days. The digital credit analysis application (AAKD) also takes a comprehensive risk approach.

The role of banking as a business entity that collects funds from the public in the form of deposits and distributes them to the public in the form of credit and or other forms in order to improve the standard of living of the community (Law 1998). The presence of banking services in a region can increase and accelerate economic growth. Bank XYZ as a bank with 83.86% of the loan portfolio in the MSME sector has started lending in the sector in 1986 through the Mass Guidance (Bimas) credit program with the issuance of Presidential Instruction No. 4 of 1973. Starting in 1986, it began to distribute microcredit commercially to MSME entrepreneurs. For 31 years, the microcredit analysis process has been carried out manually by the Microcredit Officer (PKM) of Bank XYZ. The credit process takes no sooner than 10 working days to be able to carry out the credit process from data collection to the microcredit disbursement process. To be able to accelerate the credit process, in 2018 began to develop a mobile and digital credit processing application. With the digitization process, simplifying the credit stages which initially required 13 stages to 7 stages with this simplification is expected to accelerate the credit process to 3 working days. The digital credit analysis application (AAKD) also takes a comprehensive risk approach. In addition to using prospective debtor risk scoring (CRR), the application also considers the credit initiator's scoring. With the

acceleration and simplification of the microcredit analysis process through AAKD, it is necessary to conduct studies related to risk mitigation and PKM prudential principles when conducting manual credit analysis and analysis using AAKD.

To find out what risks arise in credit initiatives using AAKD, various methods can be used. One of the methods used is the house of risk result of failure mode and effect analysis (FMEA). FMEA is an engineering technique used to establish, identify, and to eliminate known failures, problems, errors, and the like from a system, design, process, and/or service before it reaches consumers (Stamatis, method. This model is a modified 1995) and adapts the House of Quality to prioritize which risks need to be addressed first and select the most effective actions to reduce risks that potentially arise in the credit process by using AAKD so that it can carry out a priority scale of risk mitigation in the MSME credit process. The implementation of technology carried out by Bank XYZ in digitizing credit processes into daily business processes often produces various unwanted things. While digital risk is not new, the nature of such risk can magnify the scale and speed of overall organizational risk. Digital risk can affect organizations with manifestations according to the digital transformation journey in that organization. Therefore, the study of risk identification methods using the House of Risk digitizing the MSME credit process in banking is important to be studied in depth. The purpose of this research is Analyze AAKD risk in minimizing risk to credit analysts, Analyze AAKD against the accuracy of analysts is microcredit PKM and Formulate policies to be able to improve the AAKD system.

The scope of this study discusses that AAKD can minimize credit analysis that supports PKM in conducting a more accurate analysis so that it can formulate AAKD system policies and improve the microcredit analysis process at Bank XYZ.

This research is only limited to the AAKD risk analysis stage in microcredit analysis which is expected to improve the AAKD system so that the microcredit analysis process can run quickly and accurately for PKM in addition to that policies can be formulated for the process of improving AAKD risk analysis at Bank XYZ, and the results of the implementation analysis are submitted to the management of Bank XYZ.

METHODS

The research will be carried out at Bank XYZ located in Sumatra Barat. Research and data collection activities were carried out during November- December 2022. This research is limited to loans made by prakasa at 143 Micro Service Offices (KLM) of Bank XYZ in the West Sumatra region spread across the West Sumatra region. The data used are data two years before using AAKD and two years after AAKD is used by PKM, data from 2016-2020. The respondents of this study are workers related to the credit process including PKM and Sub Branch Supervisor (SBS).

This research uses two types of data, namely primary data and secondary data, both in the form of qualitative data and quantitative data. Primary data were collected specifically through in-depth interviews using questionnaires to respondents who were sampled in this study. These respondents are expert resource persons selected based on expertise considerations, namely Executive Vice President Risk and Compliance and Executive Vice President IDENT Macro Business. The secondary data used in this study were data reports two years before AAKD was used and two years after AAKD was used, then previous research literature studies, books, theses and journals.

The determination of respondents in this study used the pareto method. The population of this study amounted to 147 respondents consisting of KLM and PKM at the West Sumatra branch office. In pareto there is a determination consisting of, 20% of the population can affect 80% of the

existing population. 147 office respondents $\times 20\% = 28$ PKM respondents. For KLM respondents $= (28 \times 4) \times 20\% = 23$ KLM respondents. Thus, this study used a sample of 28 PKM people from 23 KLM in the West Sumatra region. In addition, the determination of respondents in the study used judgment sampling techniques. This technique considers the selected respondents to have knowledge, expertise and experience in the field under study (Sugiyono 2013). Respondents are parties who will answer various questions for research purposes. The respondents used in this study were respondents related to Bank XYZ.

House of risk (HOR) is a supply chain risk management model using the House of Quality concept method and Failure modes and effects analysis (FMEA) to develop a framework in managing supply chain risk (Pujawan & Geraldin, 2009). This HOR approach is focused on preventive measures to reduce the probability of risk agents occurring. Risk arises as a result of being triggered by risk agent factors. Thus, by reducing risk agents means reducing the incidence of some existing risk events. Before going to the HOR method, there are also stages that must be undergone using FMEA using 3 assessment criteria. First, severity is the severity or seriousness of the effects caused by the failure mode.

Next, proceed to the HOR method. For the house of risk method, only 2 variables are used, namely severity and occurrence. The House of risk approach consists of 2 phases, namely House of risk phase 1, This phase 1 pade is the risk identification phase. The risk identification phase is used to determine which risk agents are prioritized for preventive actions. The first stage in this phase is to identify supply chain activities based on the SCOR model. The second stage identifies risk events contained in the company's supply chain activities. The third stage is to identify the level of impact (severity) of a risk event and assess severity with the assessment rank. The fourth stage identifies the risk causative agent that

triggers the emergence of risk and identifies the probability of occurrence of risk agents with an assessment rank. The fifth stage is to identify the correlation between a risk event and the risk causative agent with the correlation value. The sixth stage determines the value of Aggregate risk potential (ARP). The value is to determine the priority of risk agents that need to be addressed first. And the last stage in this phase is to sort risk agents based on ARP values.

Severity is a rating of the seriousness of the consequences of failures that occur. Weighting the severity value on risk events on a scale of 1 to 10 where 1 has no impact and 10 means dangerous or extreme impact. The severity assessment table can be seen in table 2 earlier. After weighting the severity value then weighting the occurrence value. Occurrence or likelihood is the possible rate of frequent occurrence of a cause of failure. Weighting the occurrence value on the risk source (risk agent) on a scale of 1 to 10, where 1 means almost never occurs and 10 means that it occurs frequently. Next, the weighting of the correlation value. Correlation is a rating of the relationship between the risk event and the source of risk (risk agent). Weighting the correlation value between risk event and risk agent with the correlation value scale.

House of Risk Phase 2, next is the House of risk phase 2, at this stage there will be a selection of a number of effective actions to reduce the probability of risk agents. The first stage in this phase is to select a number of risk agents based on the highest ARP value for each risk agent. The second stage identifies effective preventive measures to deal with the occurrence of risk agents. The third stage determines the magnitude of the correlation between each action and the risk agent. The fourth stage calculates the total value of effectiveness in each action. The fifth stage determines the level of difficulty in carrying out each preventive action. The sixth stage calculates the total effectiveness to difficulty ratio.

According to Notoatmodjo, research instruments are tools used to obtain and collect data. The following research instruments used in this study are:

1. Questionnaire

A questionnaire is an instrument in the form of a series of questions collected from respondent data in a structured manner. The questionnaire is formed and designed in a valid, reliable and non-fake manner, so that the data obtained can be validated

2. Interview

Interviews are research instruments conducted through verbal interaction. Researchers meet respondents with a series of questions and equipment used during the interview period can be tape recorders, laptops, cellphones, stationery and paper and so on. The advantage of this instrument is that it can produce a high response rate.

3. Observation

This method is used by researchers to observe individual behaviors and situations. The observations made are participant observations so that they examine in the form of groups. This type of method is more flexible but demands active cooperation from the object of the researcher so that the results can be relied upon by the researcher. In this study, research instruments in the form of questionnaire questions and interviews came from the author by observing data and actual conditions first in the work unit of Bank XYZ. The matrix reference used in the questionnaire comes from the matrix house of risk (Pujawan, 2009).

RESULTS

PT Bank XYZ Overview

BANK XYZ has more than 120 years of experience, providing convenience and speed in responding to various customer needs. Supported by excellent banking services, millions of customer transactions are managed 24 hours a day 7 days a week through service facilities that are widely

spread throughout the country. Along with the growth of this country, BANK XYZ dynamically continues to innovate to meet all forms of banking service needs while remaining consistent with our determination to be the main partner for the Indonesian people in developing their economy. BANK XYZ itself focuses on, 1) Focus on the Micro, Small and Medium enterprises segment; 2) Sustainable growth and maintained asset quality supported by strong capitalization; 3) Provide high returns to shareholders; 4) Have the largest customer base with public deposits dominated by cheap funds; 5) Professional and experienced management; 6) Prudent implementation of GCG and Risk Management; 7) Strong Brand Recognition and Brand Loyalty; 8) Competent human resources and reliable HR management; 9) Complete and diverse banking products and services; 10) The largest and widest network in real-time online throughout Indonesia. BANK XYZ in carrying out operational activities, BANK XYZ is guided by the vision and mission that helps the Company to remain focused on achieving success.

This vision and mission help BANK XYZ to always strive to achieve idealism by reminding management and employees that they work together for the same goals, which will contribute to the long-term success of the Company. BANK XYZ has a vision to become a leading commercial bank that prioritizes customer satisfaction with a mission of 1) Conducting the best banking activities by prioritizing services to Micro, Small and Medium Enterprises to support the improvement of the community's economy; 2) Providing excellent service to customers through a widespread network supported by professional human resources and reliable information technology by implementing appropriate risk management and good corporate governance practices; 3) Provide optimal benefits and benefits to interested parties (stakeholders).

The Micro, Small and Medium Enterprises segment is BANK XYZ's core strength. Through the development of reliable

information systems and banking technology, professional human resources, complete multi-level supervision systems, implementation of marketing methods that are in accordance with micro customer culture but still uphold the principles of Good Corporate Governance, BANK XYZ has been able to serve the MSME sector commercially for more than three decades. To meet customer needs, BANK XYZ innovates and develops banking products and services. BANK XYZ serves loans for all sectors of the economy with the aim of using working capital and investment designed as needed (customized products) such as Franchise Loans, Gas Station Loans, Construction Loans. The Micro, Small and Medium Business segment is the core business of BANK XYZ and we will continue to maintain and develop. As the market grows, it opens opportunities for BANK XYZ to develop its Consumer Business unit.

BANK XYZ always supports the Government in developing and improving the economy. Through the Business Program dedicated specifically to support Government programs, especially in the fields of food security, plantation revitalization and the provision of vegetable energy raw materials, BANK XYZ is always present to serve every side of society. Here is the organizational structure of BANK XYZ.

Risk Identification

From the activities of the MSME credit process digitization program at Bank XYZ above, the severity of risk events and also the level of risk agent occurrence were identified. Then an assessment is carried out to determine the value of severity, occurrence, and correlation value. Risk identification is carried out by conducting interviews with experts who will then conduct an impact assessment related to the severity (severity) of risk events and also the level of occurrence of risk agents. Identification of risk events that occur at Bank XYZ is obtained through interviews

with key experts related to problems in the MSME credit process digitization program and are willing to be respondents. In this study, the identification of risk events is based on the SCOR model because this model can describe in detail business processes, especially the MSME credit process digitization program that occurs at Bank XYZ. In this business process, there are 5 parts, namely plan, source, make and deliver which will be identified.

The first part in this HOR analysis is source, after identifying activities related to the MSME credit process digitization program that occurs at Bank XYZ based on the source process, there are four, namely Potential Borrowers (CPP), data receipt from prospective debtors, analysis of in-depth business and debtor business cycles. Lack of understanding about the timeliness of payments by the debtor to the creditor, resulting in delays in payments by the debtor. The next process is a plan related to the planning of the company. The identification results show activities related to the MSME credit process digitization program that occurred at Bank XYZ based on the plan process there are two, namely Potential Borrower Planning (CPP) and Credit Initiative Planning. The obstacles experienced by Bank XYZ are the wrong amount of CPP planning, the incompatibility of CPP with credit realization and the error of credit realization plan. Other obstacles are also experienced in the credit initiative planning process, namely business analysis errors, changes in loan ceilings and term and changes in the type of collateral.

The third stage in HOR 1 is make. Identification was carried out on activities related to the MSME credit process digitization program that occurred at Bank XYZ based on the make process, there were three, namely visit scheduling, credit processing and business re-checking. The problem of scheduling a visit at Bank XYZ is usually related to the scheduled appointment time, but there was an error in scheduling the visit by the credit analysis

breaker. The credit process has problems with delays in providing data, collateral does not match banking criteria, credit usage analysis does not match reality, there are other loan arrears based on the Financial Information Service System (SLIK) OJK and does not match the application and the amount of credit from the analysis. The fourth identification is deliver, after identification, activities related to the MSME credit process digitization program that occur at Bank XYZ based on the delivery process are twofold, namely the realization process and the disbursement process. The realization process usually has several obstacles in the process, namely not paying attention to the correctness of the spouse brought by the prospective debtor, not being submitted payment during the credit contract, costs are not explained in detail and collateral documents are not checked for similarity with the copy provided. The disbursement process has problems not crossselling other products, the money from the disbursement is withdrawn in full cash and the buildup of the disbursement process at the end of the month.

Identification of severity (severity) is the magnitude of disruption caused by risk events (E) at the activity stage of the MSME

credit process digitization program at Bank XYZ. Value or scale level from 1 to 10 The value of 1 means that it can be ignored and has no effect on performance and the value of 10 means that it can hurt consumers or employees. This stage identified 30 risk events. Risk events that have been identified, there are sources of risk (risk agents) that will also be identified through an assessment of the level of potential sources of risk that can occur. This assessment is carried out by distributing questionnaires to be filled out by PKM Bank XYZ.

Risk Analysis Using House of Risk (HOR)

This risk evaluation aims to determine the dominant risk agent to be handled based on the aggregate risk potential value that has been processed previously can be seen in table above. The risk evaluation carried out will use a pareto chart. In a pareto chart, a classification of data will be sorted from left to right in order of highest to lowest. Pareto diagrams help in finding a problem that will be prioritized to be addressed. The pareto diagram has an 80:20 concept, namely by improving 20% of dominant risk sources is expected to minimize 80% of other risk sources. The following is a pareto chart showing the most dominant risk agents:



Figure 1 Pareto Diagram

There are some of the most dominant risk agents that can be addressed. There are three dominant risk agents based on the pareto

diagram above which can be solved by designing a risk mitigation strategy according to these risk agents. Based on the

pareto concept, 20% of the main causal risk agents are obtained which is expected to reduce the other 80% of risk agents. The three dominant risk agents are A30 (Error in credit), A23 (Error in credit process) and A9 (Cost change).

A30 risk is an error in lending and A23 is an error in the credit process and A9 is a change in cost is the most dominant risk cause among other risk factors. However, the impact is mapped on the risk analysis matrix, A30 and A23 are in the orange zone with a significant risk level which means immediate corrective action must be taken and finally for A9 is in the yellow zone with a medium risk level which means routine and appropriate corrective action must be

taken. The identification results in HOR stage 1 will be carried out, namely what and finally for A9 is in the risk mitigation must be done by Bank XYZ on the identified risk causes.

After conducting HOR phase 1, which is identifying risks and obtaining priority risk agents, the next stage is the house of risk phase 2. HOR phase 2 is used to determine the most effective risk mitigation to minimize the likelihood of risk events based on risk agents. Several mitigation actions are obtained through references from various sources and direct interviews with experts by considering the level of difficulty and effectiveness when applied.

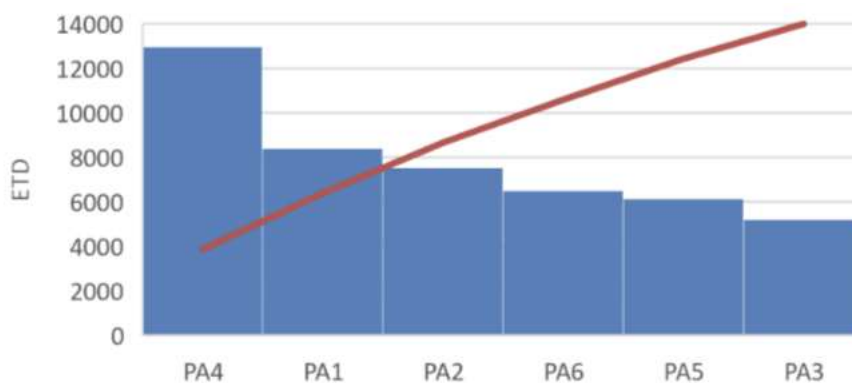


Figure 2 Pareto Mitigation Diagram

Based on figure 3 above, by considering the effectiveness of mitigation strategies in their implementation, the prioritized mitigation strategies taken as many as 3 mitigation strategies produce effectiveness of above 50% of the total cumulative value of ETD. So that the 3 main mitigation strategies that can be applied are as follows:

The first strategy with an ETD value of 12974 is to improve communication both internally and externally (PA4) to avoid miscommunication between fellow employees and also with customers. This is in accordance with research conducted by Agustini NA and Ninuk P (2020) which states that internal communication in building organizational culture, one aspect is the power of leadership which is a good example for its employees. The role of a strong leader to provide direction and start

with a good communication process, will get a positive response from employees at work and produce maximum work results. Therefore, communication is something important both internally and externally because it will increase continuity and smoothness in doing things, especially on credit. In addition, systematic and conducive communication needs to be built between creditors and debtors both when borrowing by debtors until collection by creditors does not occur miscommunication which will eventually become a prolonged problem. In addition, communication needs to be formed in a directed manner to overcome the occurrence of customers who take loans that are not in accordance with the rules, should have clear data or are sheltered by the community or have even opened a deposit account at PT Bank XYZ.

The second strategy with an ETD value of 8409 is to make a regular HR education schedule (PA1). This can be done by PT Bank XYZ to increase HR capacity to mitigate mistakes from small to large, one suitable strategy is to always prepare HR education scheduling. This can be done by means of on the job training, in class training, e- learning, and out bound. Meanwhile, human resource development is used to develop an employee's career through panel techniques that have been carried out at PT Bank BCA Tbk Solo Main Branch Office Slamet Riyadi (Iswara MF 2020). Meanwhile, at the complex level, it can be done to credit officers by means of service excellence education which aims to provide the best service to customers / prospective customers and socialization of e-KTP access which aims to find out whether the nik of customers / prospective customers has been registered in the disdukcapil which has been done at PT Bank Lampung KCP Natar (Fitriana SN, 2019).

The last strategy, which is the third with an ETD value of 7528 is Consistent in the implementation of education (PA2). Education is very important for human resources to maintain capacity and improve service to customers and to minimize errors that will occur in carrying out the credit process, both verification and nominal credit. This is in accordance with research conducted by Wijaya SF and Johnson D (2022) stating that the consistency of education in banking employees must continue to run and companies can conduct education online, both for internal and external programs by using online learning methods using the zoom application and education through Learning Management System is an effective and efficient system and questionnaire as an evaluation of education. Furthermore, according to Fibriany FW (2019) stated that consistency in education will improve employee performance at PT Bank Bukopin Tbk, Jakarta. Therefore, PT Bank XYZ must maintain consistency in conducting

education regularly within a year. This education aims to reduce human error in conducting the credit process.

CONCLUSION

1. Risk analysis on AAKD and its mitigation to minimize risk in credit analysis that occurs at PT Bank XYZ is obtained through respondents and interviews with experts. The identification of risk events is based on the SCOR model because this model can describe in detail business processes, especially the MSME credit process digitization program that occurs at PT Bank XYZ. There are 30 causes of risk when risk identification with the most dominant risk agents are errors in credit, errors in the credit process, and changes in costs. The mitigation used uses House of Risk (HOR) analysis. HOR is divided into two, namely the first HOR identifies risks that become dominant risk agents while the second HOR is a continuation of the first HOR to formulate mitigation.
2. The accuracy of microcredit analysis using AAKD is based on the accuracy of inputting data received in the field. There are risks that cause inaccurate analysis including a. credit errors due to miscommunication between PKM and prospective borrowers; b. errors in the credit process caused by rapid updates to credit policies and application enhancement; and c. is There is a change in costs caused by differences in credit suitability expected by customers and the results of AAKD analysis. Mitigation carried out so that AAKD is accurate in analyzing and inputting appropriate data by PKM, namely in the form of improving communication both internally and externally, making HR education schedules regularly and consistently in the implementation of education.
3. Policies that can be taken to improve AAKD as a step to minimize or minimize risk are contained in several

strategies. The first strategy is to improve PKM communication skills both internally and externally to avoid miscommunication between workers or customers. Policy The second strategy with the value of Creating a schedule of HR education periodically. This can be done by PT Bank XYZ to increase HR capacity to mitigate mistakes from small to large, one suitable strategy is to always prepare HR education scheduling. The last strategy, which is third, is Consistent in the implementation of education. Education is very important for human resources to maintain capacity and improve service to customers and to reduce errors that will occur in carrying out the credit process, both verification and nominal credit.

Declaration by Authors

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REFERENCES

1. Law] Law of the Republic of Indonesia Number 10 of 1998 concerning Banking, Jakarta.1998.
2. [Law] Law of the Republic of Indonesia Number 10 of 1998 concerning Banking, Jakarta.1998.
3. [Law] Law of the Republic of Indonesia Number 20 of 2008 concerning Micro, Small and Medium Enterprises. 2008.
4. Agustini NA and Ninuk P. 2020. The Influence of Internal Communication in Building Organizational Culture. *Journal of Development Communication*. 16(1):89-109.
5. Arthur, J.Keown et al. 2000. *Basics of Financial Management*. Jakarta: Salemba Empat. Central Bureau of Statistics. (2021, 06 15). Taken back from bps.go.id: https://www.bps.go.id/pressrelease.html?kat subjek=11&Brs%5Btgl_rilis_ind%5D=&Br s%5Btahun%5D=&yt0=Cari
6. Bank Indonesia. 2003. Bank Indonesia Circular: No. 5/21/DPNP dated 29 September 2003. Regarding the implementation of risk management for commercial banks. Jakarta.
7. Bramantyo Djohanputro; Manalu, Sonta Frisca. 2012. *Integrated corporate risk management: a guide to implementation and development*. Jakarta: PPM.
8. David FR. 2011. *Strategic Management: Concepts*. Jakarta: Salemba Empat
- Featherman, M.S. and Pavlou, P.A., 2003. Predicting e-services adoption: a perceived risk facets perspective. *International journal of human-computer studies*, 59(4), pp.451-474. 53
9. Agustini NA, Ninuk P. 2020. The Influence of Internal Communication in Building Organizational Culture. *Journal of Development Communication*. 16(1):89-109.
10. Ariffin, S.K., Mohan, T. and Goh, Y.N., 2018. Influence of Consumers' Perceived Risk on Consumers' Online Purchase Intention. *Journal of Research in Interactive Marketing*.
11. Ariffin, S.K., Mohan, T. Goh, Y.N., 2018. Influence of Consumers' Perceived Risk on Consumers' Online Purchase Intention. *Journal of Research in Interactive Marketing*. 8(4):45-56.
12. Kusumawardhani T. 2021. Analysis of the Role of Internal and External Organization Communication in Mustikasari Village, Bekasi. *Interpretation*. 2(1): 1-11.
13. Ling, R. and Yen, D.C., 2001. Customer relationship management: An analysis framework and implementation strategies. *Journal of computer information systems*, 41(3), pp.82-97.
14. Mamduh Hanafi and Abdul Halim.2004. *Financial Statement Analysis*. Yogyakarta: AMP YPKN
15. Martins, C., Oliveira, T. and Popovič, A., 2014. Understanding the Internet banking adoption: A unified theory of acceptance and use of technology and perceived risk application. *International journal of information management*, 34(1), pp.1-13.
16. Pearce, John A and Robinson RB. 2009. *Strategic Management 10*. Salemba Empat: Jakarta
17. Porter M. 1980. *Competitive Strategy, Techniques for Analyzing Industries and Competitors*. New York: The Free Press.
18. Pujawan, I. N., & Geraldin, L. H. (2009). *House of Risk: a model for proactive supply*

- chain risk management. *Business Process Management Journal*, 953-967.
19. Rastogi and Trivedi MK. 2016. PESTLE technique—a tool to identify external risks in construction projects. *International Research Journal*. 3(5): 98-110.
 20. Ryu, H.S., 2018, January. Understanding benefit and risk framework of fintech adoption: Comparison of early adopters and late adopters. In *Proceedings of the 51st Hawaii International Conference on System Sciences*.
 21. Stamatis, DH. 1995. *Failure Mode and Effect Analysis (FMEA) From Theory To Execution*. Wisconsin: ASQ Quality Press.
 22. Sugiyono. 2013. *Quantitative, Qualitative and R&D Research Methods*. Bandung: CV Alfabeta.
 23. Susilo, L. J. & Kaho, V. R. 2017. *ISO 31000 Based Risk Management*. Jakarta: PPM. Thaker, M.A.B.M.T., Thaker, H.B.M.T., Rahman, M.P.B., Amin, M.F.B., Pitchay, A.B.A. and
 24. Olaniyi, N.O., 2019. Factors Affecting Investors' Intention to Invest in Peer-to-Peer Lending Platform in Malaysia: An Extended Technology Acceptance Model.
 25. Verona G and Ravasi D. 2003. Unbundling dynamic capabilities: an exploratory study of continuous product innovation. *Journal of Industrial and Corporate Change*. 12(3): 577-588.
 26. Widjajani, W. and Yudoko, G., 2008. Small Industry Competitive Advantage in Traditional Small Industry Cluster with Resource-Based Approach: Case Study of Kiara Condong Small Metal Industry Entrepreneur, Bandung. *Journal of Industrial Engineering*, 10(1), pp.50-64.
 27. Wijaya SF and Johnson D. 2022. Educational Methods in the Banking Industry during the Covid-19 Pandemic: *Journal of Science and Humanities Research and Development*. 5(2):204-211.

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