

The Analysis of Credit Application for SMEs using Business Process Improvement (BPI)

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Abstract

This study aims to identify the factors that hinder the MSME credit application process and provide recommendations to improve the efficiency and effectiveness of the credit application process. This study uses a qualitative method with a descriptive approach. In conducting the analysis, this study uses the Business Process Improvement (BPI) analysis method to analyze and improve the process. The results of the study show that there are 4 factors causing problems in the credit process, and in the process improvement analysis after streamlining and redesigning the process, there is a reduction of 17 activities and a total time of 67 hours or equivalent to 7 working days.

Keywords: Credit Process, Business Process Improvement, Streamlining

1. Introduction

In today's globalization era, Micro, Small, and Medium Enterprises (MSMEs) have been recognized as one of the main factors driving economic growth in several countries, including Indonesia. Despite the importance of the role of Micro, Small, and Medium Enterprises (MSMEs) in the economy has been widely recognized, there are still many major problems faced by this sector. Difficulties in obtaining business capital have become a recurring problem when discussing the challenges faced by MSMEs in banking (Harefa, 2015).

To overcome these problems, the government through Presidential Instruction No.6 of 2007 has initiated steps to improve access to financing sources for Micro, Small, and Medium Enterprises, and Cooperatives (MSMEs) to increase the country's economic growth. One of the solutions is to provide credit to MSME entrepreneurs to support their businesses. The government has assigned Banks throughout Indonesia to distribute the MSME credit program. The banks are chosen as credit distributors based on one of the functions of banking institutions in Article 3 and Article 6 of Law of the Republic of Indonesia Number 10 of 1998 concerning amendments to Law Number 7 of 1992.

In this study, the researcher chose the research object in the banking industry, namely PT Bank X, the bank with the Branch Offices in Denpasar. PT Bank X is one of the leading banks in Indonesia that has paid special attention to the MSME sector by providing various credit products that are adjusted to their needs, including Micro, Small, and Medium Enterprise (MSME) Credit and People's Business Credit (KUR). One of the products that will be discussed

in this study is Micro, Small, and Medium Enterprise (MSME) Credit. MSME Credit is a credit facility provided to entrepreneurs from both micro, small, and medium scales with the aim of additional working capital or investment with a financing limit of up to 5 Billion Rupiah

Despite the significant potential of MSME credit services in supporting business development at the micro and medium levels, the manual credit analysis process and the highly complex stages at Bank X remain obstacles that need to be addressed. This process not only tends to be quite time-consuming but also often exceeds the expected time standards, resulting in several MSME credit applications not being completed on time. At Bank X, even though the current administrative process for granting MSME credits has been set at a Service Level Agreement (SLA) of 24 days, there are still many credit applications still exceed this standard. The 24-day Service Level Agreement (SLA) standard in the credit administration process at Bank X is the time frame set by Bank X to process and approve credit applications for MSMEs.

In formulating recommendations for improving the MSME credit administration process, the researcher uses the Business Process Improvement (BPI) method. BPI provides a foundation for identifying, assessing, and improving each stage of the administrative flow that may hinder the credit granting process. BPI can help in providing a comprehensive view of the MSME credit administration process, reducing redundancy, and identifying potential streamlining or automation. This method not only describes the issues within the process but also offers actual solutions to enhance efficiency and responsiveness.

2. Literature Review

2.1 Business Process Improvement (BPI)

Business Process Improvement (BPI) is a methodical approach aimed at improving the functions within operational, administrative, and support processes. This approach uses various techniques such as process benchmarking, process redesign, and process reengineering. Harrington (1991) outlines five phases in the implementation of BPI that are useful in assisting research related to business processes.

- a. Organizing for Improvement - The main objective of this phase is to ensure that critical business processes requiring immediate improvement are identified. This determination is based on the importance of the activity within the process. The tools used to analyze this business process employ a weighted selection approach.
- b. Understanding the Process - The objective of this stage is to achieve a comprehensive understanding of the various dimensions inherent in the business processes conducted within the organization. This stage includes process time analysis, business process modeling, and the interconnectedness of each process stage.
- c. Streamlining - The concept of streamlining involves reducing unnecessary elements and focusing on every aspect that can potentially improve performance and quality. Through streamlining, operational processes can function with minimal disruption to the surrounding environment. Harrington (1991) explains that 12 tools can assist in streamlining a process, including (1) Bureaucracy Elimination, (2) Duplication Elimination, (3) Value-Added

Assessment, (4) Simplification, (5) Cycle-Time Reduction, (6) Error Proofing, (7) Upgrading, (8) Simple Language, (9) Standardization, (10) Supplier Partnerships, (11) Big Picture Improvement, and (12) Automation and/or Mechanization.

- d. Measurements and Control - The objective of this stage is to monitor the business process and ensure that the process is monitored to determine the need for continuous improvement. The Measurement and Control phase includes three main approaches: establishing process measurements and objectives to be achieved, building feedback mechanisms, and conducting regular process evaluations.
- e. Continuous Improvement - This phase represents a continuous development from the previous stage. If any obstacles arise during the implementation of the refined business process, an evaluation of the related process will be conducted. The evaluation and definition process encompasses various stages, such as identifying qualified business processes, monitoring their qualifications regularly, designing solutions for identified problems, evaluating implemented changes, and ultimately benchmarking different business processes.

2.2 Cause-and-Effect Diagram

The Cause-and-Effect Diagram provides a structured approach for teams to identify, explore, and graphically display, with increasing levels of detail, all potential causes associated with a problem to find its root cause (Fitzsimmons & Fitzsimmons, 2011:237). The shape of this diagram resembles a fishbone, with the fish's head serving to contain the existing problem, while the fishbone is used to contain the causes of the problem. There are also smaller bones that serve to contain the sub-causes of the problem (Auliandri & Alfiani, 2018). In the Cause-and-Effect Diagram, 6M serves as a well-established categorization framework (Dumas et al., 2018:237-238). The 6M are: (1) Machine, (2) Method, (3) Material, (4) Man, (5) Measurements, (6) Millieu.

3. Research Method

The research method used in this study was a qualitative method with a descriptive approach. The descriptive qualitative research method is used in this study to understand and describe a phenomenon or event in depth and detail about the research object. Descriptive research is research that is designed to provide characteristics, facts, or events related to the characteristics of certain groups or areas methodically and accurately (MSi et al., 2020).

The data sources used in this study are divided into 2 types, namely:

- a. Primary Data - Primary data is data that is obtained directly from the source being studied or the company being studied. The primary data used in this study includes data from interviews with management and related divisions related to the research and observation results of the implementation of the MSME credit application administration process.
- b. Secondary Data - Secondary data is a data source obtained through indirect or second-hand sources such as related journals and documents or archives from the company being studied

related to this research. The secondary data used in this study includes data from related journals and company data related to the MSME credit application administration process.

The data collection techniques used in this study include:

- Literature Study** - The research is conducted by searching and analyzing documents, journals, books, or other sources related to the research topic to gain a better understanding of the concepts and theories regarding this research topic.
- Interview** - Data collection conducted by interviews were conducted with relevant stakeholders, including Risk Managers, Credit Operations Officers, Credit MSME Heads, and MSME Sales personnel at Bank X's Denpasar Branch office to gather qualitative data for the study.
- Observation** - Direct observation was conducted to assess various aspects related to the research, such as the condition of facilities and infrastructure, employee activities during working hours, and the systems and procedures implemented in administration.
- Documentation** - Documents utilized in the research included organizational structure, MSME credit operational standard procedures, MSME credit business process flow framework, and various other data relevant to the study.

4. Finding and Discussion

4.1 Analysis of Process Hindering Factors:

The following Cause-and-Effect Diagram was employed to analyze the factors hindering the MSME credit process:

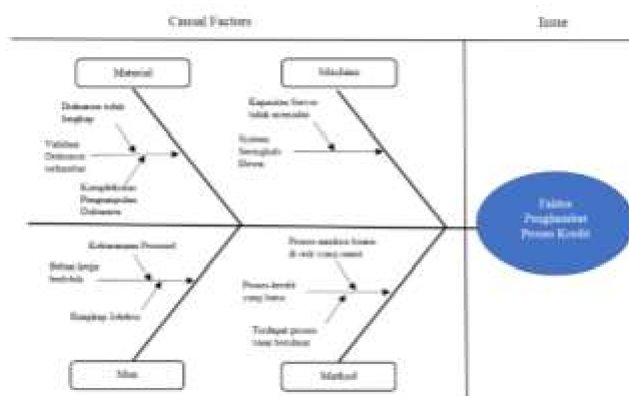


Figure 1. The Cause-and-Effect Diagram of MSME Credit Process Hindering Factors

Based on the cause-and-effect diagram above, the following explanations of the problems associated with each factor are provided:

- Material:** The most common material-related issue hindering the MSME credit process is document validation delays. This is attributed to incomplete documentation and the complexity of the credit application document collection system.

- b. **Machine:** Machine-related issues frequently encountered involve disruptions in the internal processing system, particularly during the end of the month when the internal workload necessitates extensive utilization of the eLoan system.
- c. **Man:** Employees involved in the MSME credit process perceive excessive workload as a significant human factor. This is due to personnel shortages in one division responsible for MSME credit processing, which necessitates handling two distinct credit segments simultaneously.
- d. **Method:** The method-related issue is the lengthy credit process. It is caused by the redundant or duplicate process stages that complicate the credit process flow. Additionally, certain process stages are overly intricate.

Based on the description of each factor above, the researcher will propose potential solution plans for each factor in the Fishbone Diagram above. The results are shown in full in the following table

Table 1. Potential Solutions to Credit Process Hindering Factors

Factors	Primary	Secondary	Potential Solutions
Material	Document Validation Delayed	Incomplete Documents	Provide clear guidelines to prospective borrowers regarding the necessary documents for the MSME credit validation process.
		Complexity in Document Collection	Combine both stages of document collection at the beginning of the MSME credit process.
Machine	System Frequently Down	Inadequate Server Capacity	Invest in updates and conduct regular maintenance on server hardware.
Man	Excessive Workload	Insufficient Personnel	Utilize systems and technology to automate administrative tasks.
		Overlapping Job Descriptions	Redesign job descriptions by expanding sub-units based on borrower/customer segmentation
Method	Lengthy Credit Process	Complex Business and Risk Analysis Process	Streamline by changing the credit analysis system from sequential to parallel processing.
		Redundant Processes	Streamline by eliminating duplicate activities in the MSME credit process flow.

4.2 Analysis of Business Process Improvement

1. Organizing for Improvement

The first stage of Business Process Improvement (BPI) involves evaluating the existing business processes to identify those that require enhancement. Selecting the processes to be improved is

Table 2. Assessment of MSME Credit Process Using the Weighted Selection Approach (reference: internal company, 2024)

Process Name	Changeability	Performance	Business Impact	Customer Impact	Total
Data Collection	2	3	4	5	14
Process, analysis & approval	5	4	5	4	18
Signing	5	4	5	3	17
Disbursement	3	4	4	5	16

As demonstrated by the evaluation results presented in the table above, the process, analysis, and approval stages exhibit the highest significance. Consequently, these stages will be prioritized in the BPI analysis, followed by the signing and disbursement stages. Based on the internal evaluation findings, the data collection stage is considered to have the lowest significance, implying that efforts to enhance this stage may not yield a substantial improvement in the business process

2. Understanding the Process

In Business Process Improvement, the second stage involves a comprehensive examination of the various dimensions of existing business processes. To create an As-Is Process Diagram, the researcher utilized Business Process Modeling Notation (BPMN) as a tool.

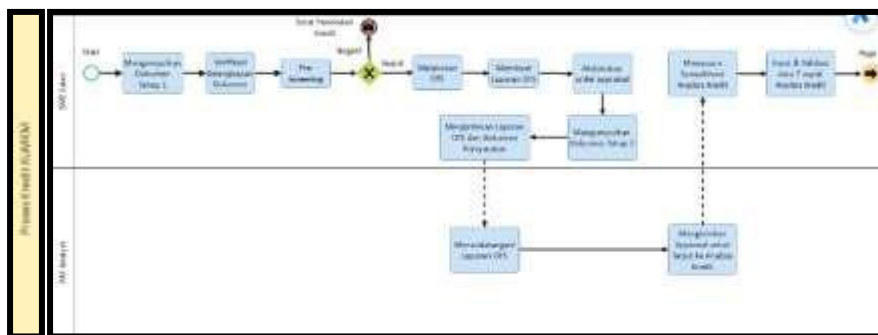


Figure 2. As-Is Process Diagram for SMEs

- a. The process begins with MSME Sales collecting the stage 1 credit application requirement documents from potential debtors, and then verifying the authenticity and completeness of

the credit requirement documents.

- b. SME Sales conducts a pre-screening of potential debtors' credit applications. If the pre-screening result is positive, the application will be processed further. However, if the result is negative, the credit application is rejected, and a Credit Rejection Letter will be sent to the Debtor.
- c. SME Sales conducts an On The Spot (OTS) visit to the potential project site and then prepares an OTS report and conducts a feasibility assessment of the OTS report based on an internal checklist.
- d. SME Sales places an order with the Bank's Internal Appraiser or Public Appraisal Institution (KJPP) for an appraisal.
- e. SME Sales contacts the Debtor to collect stage 2 documents (according to the credit checklist).
- f. SME Sales sends the OTS report, appraisal results, and document checklist to the Risk Management Analyst (RMA).
- g. The RMA signs the OTS report and sends an instruction to MSME Sales to proceed to the credit analysis stage.
- h. SME Sales prepares a spreadsheet based on the assessment of 7 business aspects in the credit analysis

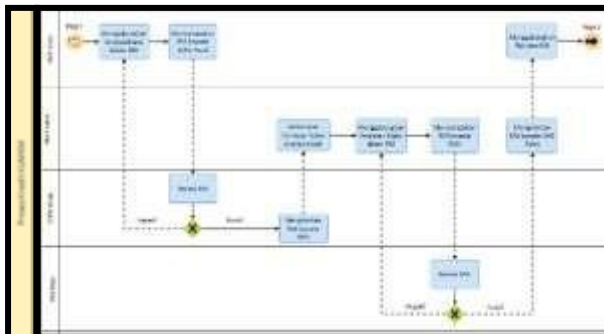


Figure 2. As-Is Diagram of MSME Process (continued)

- i. SME Sales consolidates the entire analysis into a Credit Analysis Assessment document and send the Credit Analysis Assessment results to the SCPU Head for review.
- j. The SCPU Head supervises the results of the Credit Analysis Assessment. If the results are positive, the SCPU Head will submit the Credit Analysis Assessment results to the RMA, but if the results are negative, the SCPU Head will resubmit the Credit Analysis Assessment improvement proposal to MSME Sales.
- k. The RMA then conducts a risk assessment of the 7 aspects, then the RMA provides a credit structure recommendation.

- l. The RMA sends the Risk Analysis Assessment results to the Risk Management Head (RMH) for review. If the results are positive, the RMH will consolidate the Credit Analysis Assessment and Risk Analysis Assessment sections into a single Credit Proposal Memo (MUK), but if the results are negative, the RMH will resubmit the Risk Analysis Assessment improvement proposal to the RMA.

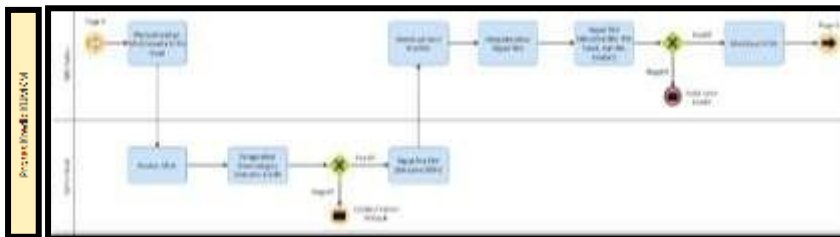


Figure 2. As-Is Diagram of MSME Process (continued)

- m. The RMA prepares the MUK and submits it to the MSME Credit Program Unit (SCPU) Head for review and recommendation.
- n. After the MUK is approved, the SCPU Head will check the Branch Office Decision Authority.
- o. The SCPU Head and/or Deputy Branch Manager (DBM) & RMA conduct a Pre-Credit Committee Meeting to discuss the credit proposal and prepare the Pre-Credit Committee Meeting results.
- p. SME Sales schedules a credit decision in the form of a Credit Committee Meeting.
- q. BM & RMH provide credit recommendations. If the results are positive, the process can proceed to the Credit Approval Letter preparation stage, but if the results are negative, there will be a review of the credit limit or the credit analysis assessment.
- r. SME Sales prepares the Credit Approval Letter

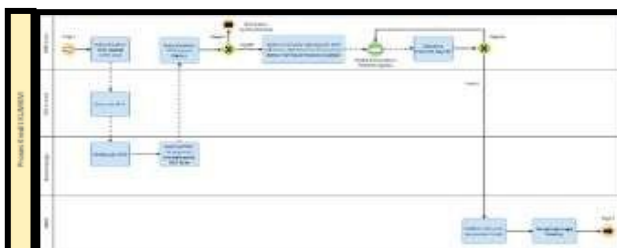


Figure 2. As-Is Diagram of MSME Process (continued)

- s. The SCPU Head supervises the conformity of the Credit Approval Letter with the Credit Committee Meeting results.
- t. The Branch Manager signs the Credit Approval Letter.
- u. SME Sales submits the Credit Approval Letter and its requirements to the potential debtor.

If the debtor agrees to the terms and conditions in the Credit Approval Letter, then the process can be continued, but if the debtor does not agree, they will be directed to the existing appeal process

- v. SME Sales direct the potential debtor to open an account and ask the potential debtor to submit collateral documents.
- w. SME Sales ensures the clearance or validity of the collateral documents. If the results are positive, MSME Sales will send all the required documents to CSDO. However, if the results are negative, MSME Sales will ask the debtor to follow up on the clearance process.
- x. CSDO verifies the completeness and formal correctness of the credit requirement documents.
- y. CSDO will coordinate with the notary, BM, and MSME Sales to schedule a legal meeting.

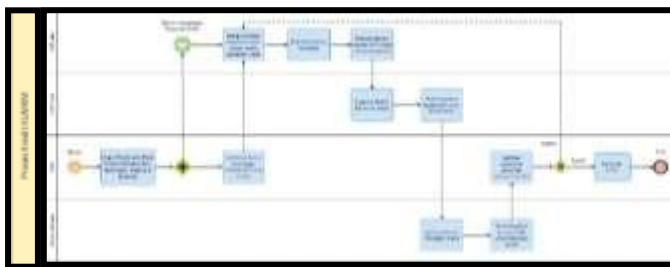


Figure 2. As-Is Diagram of MSME Process (continued)

- z. Conduct a legal meeting and credit agreement if all credit agreement requirements have been met at the legal meeting (attended by BM, MSME Sales, CSDO, Debtor, and Notary).
- aa. If the legal meeting goes smoothly, CSDO will create a Minutes of Legal Meeting and Credit Agreement. After that, the Debtor can send a request letter for credit disbursement
- bb. SME Sales collects documents for review of credit disbursement requirements, prepares a disbursement memo, and submits it to the SCPU Head for supervision.
- cc. The SCPU Head supervises the credit disbursement memo
- dd. BM signs the credit disbursement memo
- ee. CSDO verifies the conformity of the Credit Disbursement Documents with the Credit Disbursement Requirements following the Credit Agreement (PK)"

4.3 Streamlining

The streamlining phase involves implementing process simplification measures to enhance business process efficiency, effectiveness, and adaptability. Streamlining entails initiating business process changes to establish new, streamlined processes that achieve the same objectives.

Table 3. Streamlining the MSME Credit Process

Activity	Streamlining	Classification	Description
Gather Phase 2 Documents	Bureaucracy Elimination	NVA	Document Collection can be Combined with Stage 1 Document Collection
Create a Credit Analysis Spreadsheet	Automation or Mechanization	NVA	By digitizing the credit analysis process, the need to manually compile spreadsheets will be eliminated.
Input & Validate Management Aspect Data	Duplication Elimination	BVA	This stage will be combined with aspect assessment activities for business units.
Input & Validate Marketing Aspects of Data	Duplication Elimination	BVA	This stage will be combined with the business unit aspect assessment activity
Input & Validate Business Aspect Data	Duplication Elimination	BVA	This stage will be combined with the business unit aspect assessment activity
Input & Validate Legal Aspects of Data	Duplication Elimination	BVA	This stage will be combined with the risk unit aspect assessment activity.
Input & Validate Financial Aspects of Data	Duplication Elimination	BVA	This stage will be combined with the risk unit aspect assessment activity.
Input & Validate Repayment Capacity Aspect Data	Duplication Elimination	BVA	This stage will be combined with the risk unit aspect assessment activity.
Input & Validate Collateral Aspect Data	Duplication Elimination	BVA	This stage will be combined with the risk unit aspect assessment activity.
Review & Recommendation of Credit Assessment	Bureaucracy Elimination	NVA	This constitutes a duplication of activities during the subsequent MUK review stage.
Management Aspect Evaluation	Upgrading	BVA	SME Sales will assess 3 aspects in parallel credit analysis
Marketing Aspect Evaluation	Upgrading	BVA	SME Sales will assess 3 aspects in parallel credit analysis
Business Aspect Evaluation	Upgrading	BVA	SME Sales will assess 3 aspects in parallel credit analysis
Legal Aspect Evaluation	Upgrading	BVA	The risk unit will assess 4 aspects in parallel credit analysis
Financial Aspect Evaluation	Upgrading	BVA	The risk unit will assess 4 aspects in parallel credit analysis

Repayment Capacity Aspect Evaluation	Upgrading	BVA	The risk unit will assess 4 aspects in parallel credit analysis
Collateral Aspect Evaluation	Upgrading	BVA	The risk unit will assess 4 aspects in parallel credit analysis
Authorization Check for Approval	Bureaucracy Elimination	NVA	Internal parties can outline the decision-making authority in the SOP guidelines.
Pre-Credit Committee Meeting	Bureaucracy Elimination	NVA	Pre-Credit Committee Meetings can be combined with the Credit Committee Meeting Meeting for credit decision-making.
Prepare Pre-Credit Committee Meeting Results	Bureaucracy Elimination	NVA	This activity does not add value if the Pre-Credit Committee Meeting Meeting is eliminated.
Formal Document Requirements Completeness Verification	Bureaucracy Elimination	NVA	This constitutes a duplication of the document verification activity performed before the Credit Approval Letter.
Credit Disbursement Request	Bureaucracy Elimination	NVA	The debtor may submit a credit disbursement request along with a Credit Approval Letter approval.
Verification of Credit Disbursement Documents Compliance with Disbursement Requirements According to the Agreement	Duplication Elimination	NVA	This constitutes a duplication of the credit document review activity performed before the preparation of the credit Disbursement Memo

4.4 Measurements and Controls

In this phase, a recommended (To-Be) process flow for MSME credit applications will be proposed. This To-Be process is designed to address the shortcomings of the existing business process by eliminating or replacing inefficient processes. The objective is to create new and efficient business operations.

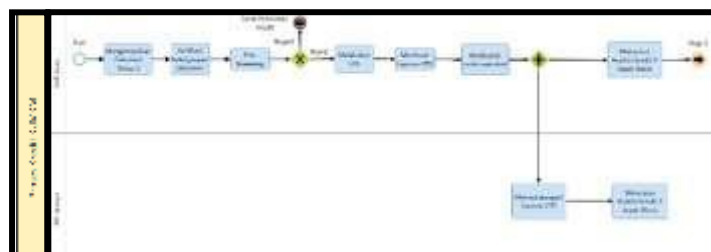


Figure 3. To-Be process for MSME credit applications

- a. The process starts with the MSME Sales collecting all required documents for the first stage of credit application from potential borrowers and verifying the authenticity and completeness of the credit application documents.
- b. SME Sales conducts a pre-screening of the credit application.
- c. SME Sales conducts an OTS visit to the prospective project site and prepares an OTS report. They also conduct a feasibility assessment of the OTS report based on an internal checklist.
- d. SME Sales places an order with the Bank's Internal Appraiser or KJPP for an appraisal.
- e. SME Sales sends all necessary documents for credit analysis to the Risk Management Analyst (RMA).
- f. SME Sales prepares spreadsheets for the assessment of three aspects of business analysis to compile the Credit Analysis Assessment. RMA also prepares spreadsheets for the assessment of four aspects of risk analysis to compile the Risk Analysis Assessment.

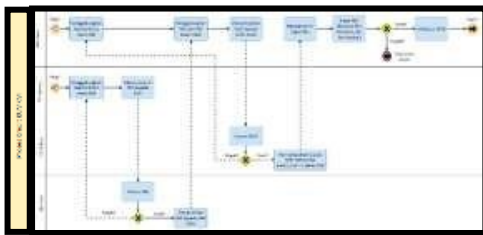


Figure 3. To-Be Process Diagram for MSMEs (Continued)

- g. SME Sales consolidates the overall analysis into a Credit Analysis Assessment document. Simultaneously, RMA consolidates the overall analysis into a Risk Analysis Assessment (PAR) document.
- h. RMA sends the Risk Analysis Assessment results to the Risk Management Head (RMH) for review.
- i. SME Sales receives the Risk Analysis Assessment results and consolidate the Credit Analysis Assessment and Risk Analysis Assessment sections into a single Credit Proposal Memo (MUK).
- j. RMA submits the MUK to the MSME Credit Program Unit (SCPU) Head for review and recommendation.
- k. SME Sales schedules a credit decision meeting in the form of a Credit Committee Meeting.
- l. BM & RMH provide recommendations based on the opinions of RMA and MSME Sales, as well as the Credit Proposal Memo (MUK) report.
- m. SME Sales prepares the Credit Approval Letter following the Credit Committee Meeting decision results and submits the Credit Approval Letter to the SCPU Head for supervision.

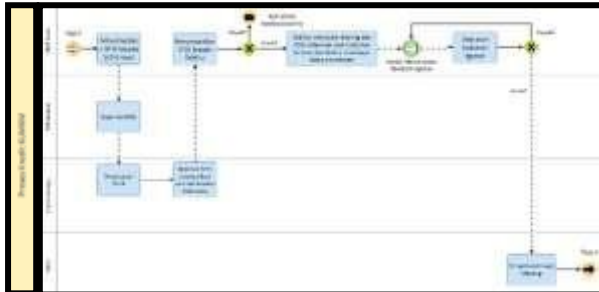


Figure 3. To-Be Process Diagram for MSMEs (Continued)

- n. SCPU Head supervises the compliance of the Credit Approval Letter with the Credit Committee Meeting results.
- o. The branch Manager signs the Credit Approval Letter.
- p. SME Sales communicates the Credit Approval Letter and its requirements to the potential borrower. If the borrower agrees to the terms and conditions of the Credit Approval Letter, the process can proceed further. However, if the borrower does not agree, they will be directed to the existing appeal process.
- q. Sales directs the potential borrower to open an account and requests the submission of collateral documents.
- r. SME Sales ensures the clearance or validity of collateral documents.
- s. CSDO will coordinate with the notary, BM, and MSME Sales to schedule a legal meeting and credit agreement.

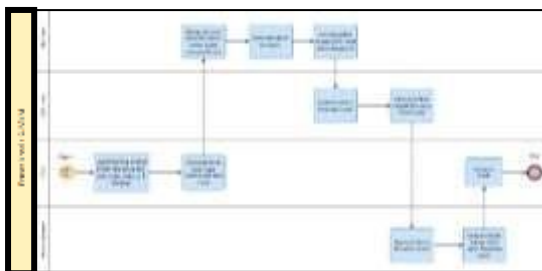


Figure 3. To-Be Process Diagram for MSMEs (Continued)

- t. Conduct a legal meeting and credit agreement if all credit agreement requirements are met at the time of the legal meeting (attended by BM, MSME Sales, CSDO, Debtor, and Notary).
- u. CSDO will prepare the Minutes of the Legal Meeting and Credit Agreement.
- v. SME Sales collects documents for review of credit disbursement requirements and prepares a disbursement memo, which is submitted to the SCPU Head for supervision.
- w. SCPU Head supervises the credit disbursement memo.

- x. BM signs the credit disbursement memo.
- y. CSDO follows up on the credit disbursement memo, and the borrower can receive the credit disbursement. The MSME credit application process is now complete.

4.5 Continuous improvement

Following the design of process improvements (To-Be) for the MSME application process, the final stage of Business Process Improvement will involve a comparative analysis of the process between the pre-improvement (As-Is) and post-improvement (To-Be) stages. This analysis aims to examine the temporal components associated with specific activities and to demonstrate the efficiency of the proposed new business procedure

Table 4. Comparative Analysis of Cycle Time between As-Is and To-Be Processes

No	Activity	As-Is Cycle Time		Activity	To-Be Cycle Time	
		Estimate (Hours)	Actual (Hours)		Estimate (Hours)	Actual (Hours)
1.	Gather Phase 1 Documents	2	2	Document Collection	2	2
2.	Document Completeness Verification	2	2	Document Completeness Verification	2	2
3.	Pre-screening	4	4	Pre-screening	4	4
4.	OTS (On-The-Spot) Evaluation	6	6	OTS (On-The-Spot) Evaluation	6	6.4
5.	OTS Report Preparation	2	2	OTS Report Preparation	2	2
6.	Conduct Appraisal Order (XOR Block) – Block 12 (probability 80%)		1.6	Conduct Appraisal Order (XOR Block) – Block 1 (probability 80%)	2	1.6
7.	Send a Letter of Credit Rejection (XOR Block) – Block 1 (Probability 30%)	2	0.4	Send a Letter of Credit Rejection (XOR Block) – Block 1 (Probability 30%)	2	0.4
8.	Conduct Appraisal	72	72	Conduct Appraisal	72	72
9.	Stage 2 Document Collection	2	2			
10.	Signing the On-The-Spot Report	1	1	Signing the On-The-Spot Report	1	1
11.	Compiling the Credit Analysis Spreadsheet	2	2			

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12.	Input and Validation of Management Aspect Data	6	6			
13.	Input and Validation of Marketing Aspect Data	5	5			
14.	Input and Validation of Business Aspect Data	5	5			
15.	Input and Validation of Legal Aspects Data	5	5			
16.	Input and Validation of Financial Aspect Data	6	6			
17.	Input and Validation of Repayment Capacity Data	5	5			
18.	Input and Validation of Collateral Aspect Data	6	6			
19.	Combining All Analyses into One Credit Analysis Assessment (Rework) (Probability 20%) (XOR Block) – Block 2 (Probability 30%)	2	0.5	Combining All Analyses into One Credit Analysis Assessment (Rework) (Probability 20%) (XOR Block) – Block 2 (Probability 30%)	2	0.5
20.	Review & Recommendation of Credit Analysis Assessment	1	1			
21.	Risk Assessment of Management Aspects	5	5	Evaluation of Management Aspects (AND Block) – Block 1	5	5
22.	Assessment of Marketing Aspects	4	4	Evaluation of Marketing Aspects (AND Block) – Block 2	4	0
23.	Assessment of Business Aspects	4	4	Evaluation of Business Aspects (AND Block) – Block 3	4	4
24.	Assessment of Legal Aspects	4	4	Evaluation of Legal Aspects (AND Block) – Block 1	4	0
25.	Financial Aspects Assessment	5	5	Evaluation of Financial Aspects (AND Block) – Block 2	5	5

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26.	Capacity Assessment	4	4	Evaluation of Repayment Capacity (AND Block) – Block 3	4	0
27.	Repayment Evaluation	5	5	Evaluation of Collateral Aspects	5	5
28.	Combining All Analyses into One Risk Analysis Assessment (Rework 20%) (XOR Block) – Block 3 (Probability 20%)	2	0.5	Combining All Analyses into One Risk Analysis Assessment (Rework 20%) (XOR Block) – Block 3 (Probability 20%)	2	0.5
29.	Review & Recommendation of PAR	1	1	Review & Recommendation of Risk Analysis Assessment	1	1
30.	Combining Credit Analysis Assessment and Risk Analysis Assessment into One MUK	2	2	Combining Credit Analysis Assessment and Risk Analysis Assessment into One MUK	2	2
31.	Review & Recommendation of MUK	1	1	Review & Recommendation of MUK	1	1
32.	Decision Maker's Authority Check	2	2			
33.	Pre-Credit Committee Meeting (XOR Block) – Block 4 (Probability 80%)	3	2.4			
34.	Preparing Pre-Credit Committee Meeting Results	2	3			
35.	Scheduling Credit Committee Meeting	1	1	Scheduling Credit Committee Meeting	1	1
36.	Credit Committee Meeting	4	5	Credit Committee Meeting	4	5
37.	Preparing Credit Approval Letter (XOR Block) – Block 5 (Probability 80%)	3	2.4	Preparing Credit Approval Letter (XOR Block) – Block 5 (Probability 80%)	3	2.4

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38.	Credit Approval Letter Supervision	2	2	Credit Approval Letter Supervision	2	2
39.	Submitting Credit Approval Letter & Handing Over Collateral Documents	4	4	Submitting Credit Approval Letter & Handing Over Collateral Documents	4	4
40.	Account Activation (XOR Block) – Block 62 (Probability 80%)	2	1.6	Account Activation (XOR Block) – Block 62 (Probability 80%)	2	1.6
41.	Collateral document clearance	2	2	Collateral document clearance	2	2
42.	Verification of the completeness of credit requirement documents	2	2			
43.	Scheduling of legal meetings and credit agreement	2	2	Scheduling of legal meetings and credit agreement	2	2
44.	Conducting the legal meeting and credit agreement	5	5	Conducting the legal meeting and credit agreement	5	5
45.	Preparing the minutes of the legal meeting and credit agreement (AND Block) – Block 1	2	0	Drafting Minutes for Legal Meetings and Credit Agreements	2	2
46.	Submitting the credit disbursement request (AND Block) – Block 1	3	3			
47.	Collecting documents for credit disbursement requirement review (rework 20%) (XOR Block) – Block 7 (Probability 80%)	2	2	Collecting of Documents for Review of Credit Disbursement requirements:	2	2
48.	Drafting the disbursement memo	3	3	Drafting the Credit Disbursement Memo	3	3
49.	Supervising the disbursement memo	1	1	Supervision of the Credit Disbursement Memo	1	1
50.	Verifying the compliance of credit disbursement documents with	2	1.6			

	disbursement requirements as per the Credit Agreement (XOR Block) – Block 7 (Probability 80%)					
51.	Credit disbursement	5	5	Credit Disbursement	5	5
Total Cycle Time As-Is Actual			220	Total Cycle Time To-Be Actual	153	

The results presented in the table above indicate that the cycle time for the As-Is process consists of AND Block and XOR Block activities, as well as several activities requiring rework. The total cycle time for this process is 220 hours. When converted to days, considering the number of working hours per day, the actual cycle time duration for the As-Is process of MSME credit application is 24.5 days. On the other hand, the cycle time for the To-Be process, which also consists of AND Block and XOR Block activities, as well as several activities requiring rework, is estimated to be only 153 hours. When converted to days, considering the number of working hours per day, the actual cycle time duration for the To-Be process of MSME credit application is 17 days.

5. Conclusion

Based on the research findings, several conclusions can be drawn regarding the factors hindering the MSME credit process. Internal factors were identified as causing delays and inefficiencies in the current credit process. Document validation procedures frequently impede MSME credit processing. Additionally, the Human Resources department faces excessive workloads due to insufficient personnel to handle MSME credit applications. Furthermore, issues with the smoothness of internal processing systems were identified, leading to occasional disruptions. The final issue identified relates to the lengthy credit processing duration, often attributed to redundant or unnecessary steps within the process flow.

Regarding the improvement of the MSME application process, an analysis of Bank X's MSME application process revealed 50 distinct activities. Among these activities, 12 were identified as RVA (Required Value-Added), 29 as BVA (Beneficial Value-Added), and 9 as NVA (Non-Value-Added). Subsequently, streamlining was conducted to eliminate activities that did not contribute value to the process. This was followed by the redesign of the 'To-Be' process for MSME applications. To compare the 'As-Is' and 'To-Be' processes, the researchers employed flow analysis, which revealed a reduction of 17 activities and a total time saving of 67 hours, equivalent to 7 working days.

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