

# The Internal Factors to Improve and Accelerate the Cycle Time of Credit Business at Indonesian Commercial Bank

Musriha<sup>\*1</sup>, Siti Rosyafah<sup>2</sup>, Wanda Gema PAH<sup>3</sup>, Gilang<sup>4</sup>

<sup>1</sup>Professor, Faculty of Economics and Business, University of Bhayangkara Surabaya, Indonesia.

<sup>2</sup>Senior Lecturer, Faculty of Economics and Business, University of Bhayangkara Surabaya, Indonesia.

<sup>3</sup>Lecturer, Faculty of Economics and Business, University of Bhayangkara Surabaya, Indonesia.

<sup>4</sup>Researcher, Faculty of Economics and Business, University of Airlangga, Indonesia

E-mail: \*ningmusriha19@gmail.com

**Abstract** — This research aims at studying the shortcomings of business processes at Bank X Surabaya's Commercial Banking Center and to accelerate the cycle time of business processes through redesigning processes that remove obstacles and improve service quality. This research examines business processes using a case study method. Its primary data were gathered through individual interviews and focus group. Furthermore, the secondary data were collected from company document investigations and observations of existing business processes. The analysis used Process Flow Diagrams, Cause & Effect Diagrams, Value Added Analysis and Flow Analysis to analyze enabler processes and to improve and redesign existing processes. This study found that the business process at Bank X Surabaya's Commercial Banking Center requires around 48.85 days to completing from the application process to the credit disbursement. Then the To-Be design of business processes is carried out on existing business processes. The proposed process reduces the existing processing time and the calculated cycle time is 30.05 days. The proposed business process effectively reduces cycle times and uses organizational resources to achieve better customer satisfaction.

**Keywords** — Business Process Improvement; Process Flow; Process Enabler; Commercial Banking Center.

## 1. Introduction

Bank X is one of the largest government-owned banks in Indonesia, and has a vital role in building and developing the financial and banking sectors in Indonesia. Bank X is a major player and has a tradition of experienced banking and financial services and plays a long role in economic development in Indonesia. Credit is the provision of money or bills that can be equalized based on an agreement or loan agreement between the bank and another party that requires the borrower to repay the debt after a certain period of time with interest. (Banking Act No. 10 of 1998). In line with the above conditions, Bank X implements a Strategic Business Unit (SBU) that handles credit above Rp50 billion namely Commercial Banking. Bank X's Commercial Banking Center is spread in major cities in Indonesia, one of them in Surabaya, which has been active since 2000 (source: Bank X). In the process of granting credit at Bank X, there are rules that must be used by interested parties. In addition to internal regulations in the form of SOPs (Standard Operating Procedures) and SPK (Special Credit Standards), there are also regulations from Bank Indonesia (as the Central bank in Indonesia). There are two types of credit processes, the first is the process of extending existing debtor facilities (working capital facilities with a period of one year), and the lending process for new customers. At the Surabaya Commercial Banking Center (CBC),

during the year in 2013, credit extension data was obtained as follows:

**Table 1. Commercial Banking Credit Extension Process of Bank X**

Extension Effectiveness						
Explanation	Past the due date	due date	Up to 7 days before the due date	> 7 days before the due date	>1 month days before the due date	Total
Number of debtors	6	12	17	10	14	59
Percentage	10%	20%	29%	17%	24%	100%

Source: Bank X

20 percentage of the total credit extension process, only effective (extended) at the deadline due and 10percentage past the due date. In the process of granting new customers, data is obtained as follows:

**Table 2. Commercial Banking New Credit Process of Bank X**

Explanation	Length of the Process			Total
	<2 months	> 2months < 3months	> 3 months	
No. of new debtors (4 blns.dAgs 13)	1	3	2	6
Percentage	17%	50%	33%	100%

Source: Bank X

33.33percentage of new debtors (4 out of 6) are processed more than 2 months since the process of making credit analysis, but include the negotiation process and waiting for the complete data from the debtor to affect the length of the process. Data regarding the estimation of credit processes at other banks according to information obtained from customers as follows:

**Table 3. Comparison of credit processes**

	<b>Bank X</b>	<b>Bank A</b>	<b>Bank B</b>	<b>Bank C</b>
Average length of credit process	± 2,5 month	±2 s.d. 3month	± 2 month	± 1,5 s.d. 2 month

Source: customer in depth interview

Based on the data stated above, the estimation of both new and extended lending processes requires a relatively long time compared to other banks and there is an extension process that is overdue, which will be a barrier to credit expansion and compliance with appropriate service standards SLA(Service Level Agreement). In the banking industry, particularly credit, SLA or service level agreement is one of the important factors that shape the company's competitive advantage, regarding how and how long management wants a business process or activity to be carried out (Ahmed,Islam,2012). The credit process at Bank X, especially the Commercial class (loans above Rp 50 Billion) is a unified process that starts from the complete data received by the Business Unit (Commercial Banking Center) from the debtor or prospective debtor, analysis process, credit committee, risk management, checking, data input, credit agreement, collateral binding, to lo an disbursement. There are several employee officers and credit breaker officials involved in the process, including from the supporting and risk management units of different departments with the Commercial Banking Center. In this study, a further qualitative approach to the factors that can hinder business processes, especially in the service industry (banking) and national scale companies, will be investigated. This research was conducted at Bank X because it is one of the Largest Banks in Indonesia, with research areas at the regional commercial area level of Surabaya.

The formulation of the problem in this study are: (1)"What are the internal factors that inhibit credit business processes at Bank X's Commercial Banking Center in Surabaya?" (2)"How can the business credit process be improved at Bank X's Commercial Banking Center in Surabaya?" The objectives of this study are: (1) To be able to identify the cause of the duration of the

credit business process at the Bank X Commercial Banking Center in Surabaya. (2) Propose improvements in credit business processes at the Bank X Commercial Banking Center in Surabaya.

## 2. Literature Review

### 2.1 Business Process Management

Business Process Management (BPM) is the process and knowledge of how work should be done in an organization or company to ensure consistent results and to take advantage of opportunities for improvement (Dumas,et al.,2013). BPM life cycle as shown in the picture below is not about improving the way each activity is carried out, but about managing the whole chain of events, activities and decisions which ultimately adds value to the organization and its customers (Dumas,etal.,2013).

BPM is a continuous cycle consisting of the following stages (Dumas et al, 2013): (1) Process Identification. At this stage, business problems are raised, processes that are relevant to the problems handled are identified, limited and linked to each other. (2) Process Discovery. (referred to as process modeling). At this stage, the actual state of each relevant process is documented, usually in one form or several models of As- Is. (3) Process Analysis. In this phase, issues related to As-Is processes are identified, documented and if possible measured using performance measures. The output of this stage is a structured data collection of problems. These issues are usually prioritized in terms of their impact, and sometimes also in terms of the efforts needed to overcome them. (4) Process Redesign (also called process improvement). The purpose of this phase is to identify the changes needed in the process that will help to overcome the problems identified in the previous stage. The output of this phase is usually the Model To-Be process, which serves as the basis for the next stage. (5) Process Implementation. In this phase, the changes needed to move from the As-Is process to the To-Be process are prepared and implemented. The process implementation includes two aspects: organizational change management and process automation. (6) Process Monitoring and Controlling. After are designed process runs, relevant data is collected and analyzed to determine how well the process is being carried out in relation to perform measures and performance objectives. Some principles of process management according to Hammer (2010), in Brocke & Rosemann, (2010) which can help to summarize the concept of process management as follows : (1)All work is process work, (2) Any process is better than no process, (3) A good process is better than a bad process, (4) One

process version is better than many, (5) Even a good process must be performed effectively, (6) Even a good process can be made better, (7) Every good process eventually becomes a bad process.

## 2.2 Process Improvement

Business Process Improvement or BPI, aims to establish a system that can help simplify business processes, with the hope that internal and external customers from the organization will get better output than before (Harrington,1991). Cook (1995) explains that Business Process Improvement is a method for perfecting the way or how a business activity unit is designed and regulated. Sharp and McDermott (2012), explain this as "Framing Process" and statement of a number of important attributes of the process. Cycle time is a good measure for process improvement because it identifies the involvement of critical resources that create congestion(Tennant,2002). The performance of a process can be improved through reducing or eliminating waiting times both before and after each activity or activity (Cassidy and Guggenberger in Islam & Ahmed, 2007). A process is chosen to be improved based on the following things (Harrington,1991): the existence of complaints or problems from customers, better ways or processes, high-cost processes, availability of new technology, management rules to implement new methods, processes with long cycle times.

## 2.3 Workflow-Driven Methodology

The methodology used by Sharp & Mc Dermott (2009) for a process improvement is divided into three stages, namely:

1. Establish process context, scope and goals,
2. Understand as-is process – workflow and other enablers,
3. Define to-be process characteristics and requirements.

## 2.4 Framing the Process

Companies or researchers must be able to explain the boundaries and context, problems and objectives, and some important facts that will be studied, Sharp & Mc Dermott (2009) call it "framing the process". This activity has three main stages (Sharp & McDermott, 2012): (1) Finding a series of business processes that are related to ensuring the context of the problem when studying individual processes. (2) Determine the limits of each business process that is learned. (3) Determine the problems in the As-Is process and objectives of the To-Be process. Companies or researchers can use the

process map or swim lane diagram to describe business processes, by defining the scope, boundaries and identification of stakeholders (Berman,2014). Identification of processes can be done through 7 stages (Sharp & Mc Dermott,2012): (1) Get started, (2) Conduct pre-session interviews, (3) Prepare for first session, (4) Initiate first session, (5) Analyze terms and find the nouns, (6) Identify activities,(7) Link the activities and determine business process.

## 3. Analysis and Discussion of Research Results

IdentificationandUnderstandingofCreditBusinessPr  
ocessCurrentConditions To be able to better understand in detail the business processes being studied, identification and clarification of the process is carried out by mapping the actual condition process or called "As-Is Process". In analyzing specific business processes, it generally starts with an analysis of what has been done now. Generally referring to process diagrams that document the current process, this is called "As-Is process diagram" (Sharp & McDermot,2009). For this reason, a sketch diagram has been done that shows the basic process of applying for commercial credit.

Based on documentation and observations conducted in the field, data obtained regarding stakeholders involved in the credit process are as follows: (1) Features: Obtaining credit disbursement in accordance with the nominal submitted, obtaining fast and efficient services, getting better quality banking services. (2) Business Unit: determine the target market and look for prospective / feasible debtors to be financed, initiate and manage the credit process, ensure the validity of documents and completeness of data, conduct a rating on (prospective) debtors to assess customer risk, conduct credit feasibility evaluations submitted and check the provisions related to the proposed credit proposal. (3) Risk Management: evaluates and carries out risk assessments of various aspects of each proposed Commercial segment credit proposal, analyzes credit risk for the credit application on the Analysis Note, verifies the results of the rating disam p.4. (4) Level I Credit Committee: Conduct early termination of the proposed credit. (5) Level II Credit Committee: Make a final termination based on the initial termination of the proposed credit. (6) Credit Operation Unit: Perform document verification formally to fulfill credit decision (compliance review) and credit withdrawal (disbursement) requirements, conduct collateral verification, carry out credit administration functions, credit documentation and archives. (7) Legal Officer: provide legal advice to business unit and review of documents and credit requirements.

### 3.1 Cause Analysis & Effect Diagram

The cause-effect diagram is known as the fishbone diagram. This diagram is useful for analyzing and determining the factors that have a significant effect in determining product quality characteristics based on rational categories. Besides that it is also useful to find the real cause of a problem. Through cause and effect diagrams can be analyzed the root cause of the problem which includes six factors, namely man, machine, method, material, measurement, and environment (Meran, 2013).

Based on the cause and effect diagram, a description of each factor can be given as follows: (1) Measurement, namely a description of the problem that occurs with the measurement problem related to the determination of the target goal for each employee's personal setting, where the goal setting target is not achieved. (2) Material, a problem related to material that often occurs is data error in the analysis process which causes a less comprehensive analysis. (3) Machine, the problem that still occurs with the equipment factor is the execution of computers that work slowly. (4) Method, related to method factors, the thing that is still a problem is the lack of product information and provisions. (5) Man, problems that still occur related to human factors or employees who handle work assignments are errors in conducting credit analysis. (6) Environment, problems involving environmental factors that are still occurring are related to the risk of setting credit limits.

### 3.2 Value Added Analysis

Value-added analysis generally consists of two stages, namely value classification and elimination of

waste (Meran,2013). In summary, value-added analysis techniques are techniques for analyzing processes, examining each step in the process and classifying these steps into three categories, namely: (1) Value-adding (VA), this step will produce value or satisfaction for consumers. When determining whether a step is value adding, the question that can help is by asking Are consumers willing to pay for this activity? (2) Business value-adding (BVA). This step is needed or useful so that the business can run smoothly, or is needed because of the rules of the business environment. (3) Non-value adding (NVA), a step that is not included in the two categories above. Based on the As-Is diagram can be classified as value-adding (VA), business value-adding (BVA), and non-value adding (NVA) activities conducted by discussion of focus groups with officers in Commercial Banking, Risk Management and Credit Operation which has been validated by process actors and superiors.

### 3.3 Improvement Process

Based on the value-added analysis that has been done previously found activities that provide added value (value adding), activities that are business value-adding and activities that do not provide added value (non value-adding). In the following table detailed activities that do not provide value-added and description of the underlying analysis.

In addition to activities that do not provide Non Value adding, there are also some activities which are Business Value-Adding where this step is needed or useful so that the business can run smoothly. Further analysis is carried out on Business Value- Adding activities described in the following Table.

**Table 4. Analysis of Business Value-Adding activity**

No	Activity	Subject	Analysis
1	Legal Review	Legal Officer	Legal Review does not need to be done first at the initial stage of the credit process, because the Analysis process has not been carried out, Legal Review can be carried out simultaneously in parallel with the Credit Analysis Note process carried out by the Business Unit, so as to shorten the credit processing time
2	Review of Collateral Appraisal	Credit Operation Unit	Collateral Assessment Review is an activity that is needed as a guide for the Business Unit in preparing Analysis Notes. According to the analysis carried out, the collateral review can be carried out in parallel with the process of making the Analysis Note carried out by the Business Unit. The Analysis Process can be carried out first by the Business Unit without waiting for the collateral review, while the results of the collateral assessment conducted by the Credit Operation Unit can be entered during the Final Analysis Note preparation process by the Business Unit, which can shorten the process stages and waste time waiting.
3	BI Checking	Credit Operation Unit	Similar to the explanation in point 1, BI checking activities can be carried out in parallel and checking results can be entered during the process of making the Final Analysis Note by the Business Unit.
4	Running	Risk Management	Risk assessment is also a business activity that is needed, but can be done without waiting for the analysis process carried out by the Business Unit. The Business Unit can deliver in parallel the documents received from the debtor to risk management, so that risk management can carry out risk assessment and financial analysis in parallel with the making of the Analysis Note carried out by the Business Unit, and the process stages can be Shortened.

5	Financial Analysis	Risk Management	Similar to the explanation in point 3, this activity can be carried out in parallel and financial analysis and the results of the risk assessment can be included during the preparation of the Final Analysis Note by the Business Unit.
---	--------------------	-----------------	---

Source: Researchers, 2017

Based on value-added analysis, then activities can be eliminated that do not provide added value.

Based on the table, it appears that the total activities that occur in the As Is credit process are as many as 31 activities, with many activities that have XOR block, AND block and some activities that require rework. The total cycle time in the As Is process is 48.65 days. While based on the To Be process it can be seen that activities with XOR block, AND block and rework have been reduced. Activities with AND block only occur twice in block 1 and block 2. Activities with XOR block also occur only twice in block 3 and block 4. As for rework activities only occur once. The time needed is more efficient, and the total cycle time after the To Be process is 29.05 days. When compared with the As Is process there are large differences, the difference in time is 18.6 days. Comparison of credit processes at Bank X, when compared with Bank Y and Bank Z can be seen in the following Table. Comparison here only compares credit process activities in general, because there are differences in the details of credit process activities for each bank. Activity data on Bank X here uses data in the As Is process.

**Table 5. Differences in Activity Time in Loan Process of Bank X (The Bank under Investigation), Bank A, Bank B and Bank C**

	Bank X		Bank A	Bank B	Bank C
	As-Is	To-Be			
Average Credit Process Duration	48,65 Day (± 2,5 Month)	30,05 Day (±1,5 Month)	± 2 s.d. 3 Month	± 2 Month	± 1,5 s.d. 2 Month

Source: in depth interview customers.

Based on the Table, it can be seen the difference in the credit processing time of Bank X, Y, and Z, where the As-Is credit process on Bank X, which is 48.85 days (+ 2.5 months) takes longer than Bank A which only requires time + 2 sd 3 months, Bank B which only takes +2months, Bank C which only takes +1.5minutes. 2months. However, if the process has been improved as in the To Be process, Bank X will be more competitive with Banks A, B and C because it only requires a processing time of 30.05 days (+1.5 months). With the advantage of faster estimation of processing time, Bank X will provide competitiveness for faster credit expansion while maintaining measurable risks in accordance with the stages of activities that provide

added value. Faster processing time is expected to provide more satisfaction for customers and answer customer complaints that occurred in the previous period.

#### 4. Conclusion

In the existing credit process (As-Is) at CBC Bank X Surabaya the process stages are too long, causing the credit process to be long. There is a process that is a duplication of other processes so that waste occurs. Several stages of the process such as legal review, recommendations for repairing notes by risk management, fulfillment of effective credit conditions, fulfillment of disbursement requirements are simplified by making the process parallels othatitc an shorten process time without reducing the value of the benefits of the process. With the design of the As-Is credit process in the Bank X Surabaya Commercial Banking Center takes longer if compared to the To-Be design process of around 48.85 days to complete the credit process starting from the application until the credit disbursement. Then the To-Be design of business processes is carried out on existing business processes. The proposed process reduces the existing processing time and the calculated cycle time is 30.05 days. The proposed business process effectively reduces cycle times and uses organizational resources to achieve better customer satisfaction.

#### 4.1 Suggestion

In identifying process improvements (To-Be) analysis and understanding are needed in a deeper process flow. Process improvement analysis can take into account other factors such as the length of each stage of the process, and identification of sub processes in each stage of the process so that the analysis of the process improvements made can be more accurate. Furthermore, it can be included in the cost factor issued by the company in each process so that their pair process can be more in- depth on a case-by-case basis and can measure the impact on the company financially. To improve the human resources factor, better coordination can be carried out between each unit and re-evaluate the job description, add personnel to operational work areas that have not been handled properly, re-record employees who have received training and those who have not, and the types of training that have been obtained, and inventorying program terms and tutorials that are not yet included in the Knowledge Management System.

## Reference

- [1] Ariyanti, et al.2008. *Credit Management of Commercial Banks: Theories, Problems, Policies and Applications Complete with Credit Analysis*. Bandung: Alfabeta.
- [2] Brocke, J.V., & Rosemann, 2010. M. *Handbook on Business Process Management I*.Berlin: Springer.
- [3] Berman, P.K.2014.*Successful Business Process Management*. New York: AMA. Cook, S.1995. *Process Improvement: A Handbook for Managers*. Gower Publishing, Aldershot.
- [4] Dumas, M., La Rosa,M., Mendling, J.& Reijers, H.A.2013. *Fundamentals of Business Process Management*. Berlin :Springer.
- [5] Hammer, M.2010. "The Process Audit." *Harvard Business Review* 85(4): 111-123.
- [6] Hammer, Michael and Champy, James(2007),. *Reengineering the Corporation: A Manifesto for Business Revolution*. Harper Business
- [7] Harrington, H.J1991. *Business Process Improvement: The Breakthrough Strategy for Total Quality, Productivity, and Competitiveness* , McGraw-Hill, New York, NY. Islam, S., Ahmed, M.D.2012. Business Process Improvement Of Credit Card Department: Case Study of A Multinational Bank. *Business Process Management Journal*. Vol.18 No.2, 2012, pp. 284-303.
- [8] LawNo.10of1998concerningAmendmenttoLawNo.7of1992onBanking,Articles 1, 3, 5 & 6.
- [9] Meran,R.,Alexander,J.,Roenpage,O.,&Staudter,C.2013.*SixSigma+LeanToolset, Mindset for successful Implementation Of Improvement Projects*. Berlin : Springer.
- [10] Sharp, A. and Mc Dermott, P.2012. *Development, Workflow Modeling: Tools for Process Improvement and Application*. Artech House. Boston, MA.
- [11] Sharp, A. and Mc Dermott, P.2009. *Workflow Modeling: Tools for Process Improvement and Application Second Edition*. Artech House. Boston, MA.
- [12] Sokovic, M., Jovanovic, J., Krivkokapic, Z., &Vujovic, A.2009. Basic Quality Tools in Continuous Improvement Process. *Journal of Mechanical Engineering* p 55.
- [13] Tennant, G.2002. *Design for Six Sigma: Launching New Products and Services Without Failure*. Gower Publishing, Burlington, VT.
- [14] Yong Ma, Jae., Wan Kim, Byeong., Seong Leem, Choon, & Moon, Hyungjoon. 2012. An Integrated Method for Business Process Improvement. *International Journal of Innovative Computing, Information & Control*. Vol 8, No.7B.