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Page 19 - 32

BUSINESS PROCESS REENGINEERING OF FUNDING ON INDONESIA'S ISLAMIC BANKS

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Abstract. Business Process Reengineering of Funding on Indonesia's Islamic Banks. *This research attempts to analyze the value chain of Islamic banking business processes and to develop a business processes model on depositors' funds in order to improve the performance of Islamic banks. Four models of Islamic banking operating in Indonesia are used as the objects of the study. This research applies qualitative study (exploratory) approach and utilizes primary data obtained from questionnaire and interviews. This data are then processed by value stream mapping and process activity mapping. This study shows that the waiting time for services is the sub-stage of business process that does not have value added and categorized as pure waste based on VSM criteria. The reengineering of business process of the third party fundraising may reduce collection time up to 1490 minutes for corporate customer and 22 minutes for individual customer.*

Keywords*: Islamic Banking; Business Process Reengineering; Value Stream Mapping*

Abstrak. Rekayasa Proses Bisnis dari Pendanaan pada Perbankan Syariah di Indonesia. *Penelitian ini bertujuan untuk menganalisis rantai nilai pada proses bisnis perbankan syariah dan melaksanakan pemodelan kembali proses bisnis penghimpunan dana pihak ketiga (DPK) untuk meningkatkan kinerja perbankan syariah. Obyek penelitian adalah empat model perbankan syariah yang beroperasi di Indonesia. Data berasal dari data primer yang diperoleh dari kuesioner dan wawancara. Tipe penelitian ini adalah kualitatif. Data yang diperoleh dari kuesioner dan wawancara diproses dengan pemetaan rantai nilai dan pemetaan proses berdasar aktifitas. Hasil penelitian menunjukkan bahwa sub tahapan proses bisnis penghimpunan DPK yang tidak memiliki nilai tambah adalah waktu tunggu. Rekayasa proses bisnis dapat memangkas 1490 menit pada proses bisnis penghimpunan DPK nasabah korporat dan 22 menit pada nasabah perorangan.*

Kata kunci*: Perbankan Syariah; Rekayasa Proses Bisnis; Pemetaan Rantai Nilai*

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Introduction

According to the number of Islamic banks, its development is very significant since its first operation in 1991. Statistical data on December 2014 indicates that the number of Islamic banks in Indonesia at the end of the year has reached 197 units, which consist of 12 units of Islamic Commercial Bank (BUS), 22 units of Islamic Business Unit (UUS) and 163 units of Islamic Rural Banks (BPRS) (OJK, 2014). However, in terms of assets, the market share of Islamic banking Indonesia is still low, which is still below 5 percent by the end of 2014. It is still far behind the targeted market share as mentioned in the blueprint of Bank Indonesia for 2015, which equals 15 %. Yet it is lower than the target for 2010 which is 10%, even though Islamic banking in Indonesia has been operating for more than two decades.

This low percentage of total Islamic banking assets is basically in line with the collected deposit fund. Indonesia's banking statistics shows that this third party fund of Islamic commercial banks and Islamic business units in December 2014 reach Rp. 217.87 trillion, which equal a market share of 5 percent compared to the total third party funds of entire national commercial banks amounting to Rp. 4,290 trillion. This limited amount of deposit fund consequently has direct impact to financing capacity to the customers. It also has indirect impact which is lack of contribution to the economic growth, particulary in real sector. The development of Islamic banking is identical with the development of the real sector. Based on growth of third party fund, assets and financing of Islamic banks on year to year basis, there is a tendency of declining growth started in 2010/2011 (Figure 1).

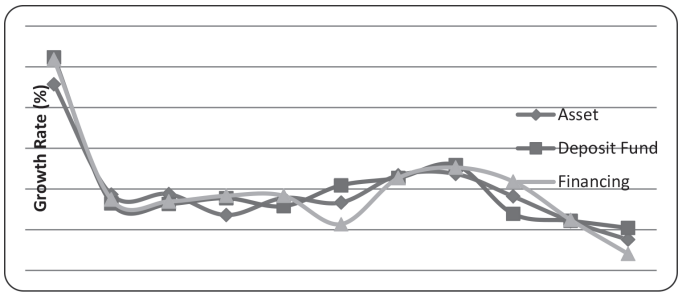

Figure 1. The growth of asset, deposit fund and financing of Indonesian Islamic Banking 2003 – 2014 (Source: Bank Indonesia)

The development of Islamic banking in Indonesia is actually affected by the capabilities of Islamic banks themselves. The internal problems, such as related to limitation of human resources (Ben, 2011), technical aspects like the Standard Operating Procedures as well as Information Technology (Puspito, 2008; Zuhdi, 2009; Ascarya, 2010), could impact the sub-stages of business process that do

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not have value added, and ultimately affect its development. Previous research on Islamic banks indicates that the growth of Islamic banking was influenced by assets, investments and human resources (Ramzan et.al, 2011).

The research problem is the gap of market share in term of deposit funds between the realities with the targets of Indonesia Central Bank. One of the possible causes is the internal problems such as limited human resources and technologies that lead to constraints on business processes. The obstacle of business processes can lead to slow service to customers such as the long line for customers when registering or depositing their savings in several branches of Islamic banks. This is likely to be one cause of the lack of interest of customers or prospective customers using Islamic bank in Indonesia. So even though Indonesia is one country with the largest Muslim population in the world, then the potential is not directly utilized Indonesian Islamic banks.

Based on the elucidation above, the problem statements which will be discussed in this paper are: *first*, how far the stages of the business process of Islamic banking that do not have value added? *Second*, how is the re-modeling of business process that can make the prospective customers have strong interest to open an account on the one hand and create customer interest for the fond of saving?

The purposes of this study, therefore, are to analyze the value chain of Islamic banking business processes and to develop a business processes model on third party fundraising in order to improve the performance of Islamic banking.

Literature Review

Islamic Banking Act No. 21 of 2008 define Islamic Banking as all matters related to the Islamic Commercial Bank and Islamic Business Unit, which also include their institutional design, business operation and all means and processes in the implementation of their business operation. Meanwhile Islamic Bank is defined as the bank which is conducting its business activities based on sharia principles and which consists of Islamic Commercial Banks and Islamic Rural Bank. Hamidi (2003) argues that the name of Islamic bank in Indonesia was known to public in 1998, while prior to that, i.e. in 1992, it was popular as the profit and loss sharing bank. Before 1992 it was known as interest free banking.

In general, the activities of Islamic bank can be grouped into three major activities, i.e. fundraising, fund distribution, and services. Each of these activities has a business process. Fund raising in Islamic banks can be done through three types of accounts i.e. current account, savings accounts and deposit accounts (investment accounts/ time deposit). The agreement used in the business process of fund raising comprises wadiah and mudharabah. Wadiah is used in the current and savings accounts, while mudharabah is used on savings accounts and deposits

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account (DSN, 2000; Karim, 2003; Sjahdeini, 2010; Ifham, 2015).

The business process is a collection of activities that require one or more types of input and create output which have value to the customer (Hammer and Champy, 1993, Vergidis et.al, 2008, Paul et.al, 1998). Davenport and Short (1990) define business process as a set of logically related tasks performed to achieve a defined business outcome. The purpose of the business process is the resolution of business issues (Havey, 2005), customer satisfaction by providing what customer needs (Cook, 1995). Jacka and Keller (2010) state that a process that only leads to action without transforming, is not a process that give value added. Thus, the key words of process are input, output, transformation, and value added.

Business processes modeling is one way that can be used to improve the performance of an organization. Business Process Reengineering (BPR) is the process of thinking and fundamental re-design to obtain a satisfactory improvement on the performance of companies that include cost, quality, service, delivery time and speed. BPR needs to be done if there are symptoms such as first the company facing major problems such as a high cost structure and poor customer service, second the company have a vision to anticipate the changes that would threaten the company in the future, third the company in peak condition and have ambitions to leave a competitor (Hammer and Champy, 1993). Changes in business processes can be understood to change and improve business models, strategies and objectives (Jaklic et.al, 2006). The method of improvement is the way in which different business activities are designed or managed (Islam and Ahmed, 2012). Several previous studies related to business processes re-engineering provide benefit for the organization such as increase in the customer satisfaction (Dignan, 1995), eliminating potential errors affecting cost reduction (Shin and Jamella, 2002), and improvement of efficiency and effectiveness (Islam and Ahmed, 2012).

Value Stream Mapping (VSM) is based on the fundamental principles of Lean Manufacturing, which has the meaning that the actions which do not provide added value to the products are categorized as waste and that must be eliminated or minimized. Lean manufacturing expert define VSM in the slightly different terminology though essentially similar. According to Browning (1998) VSM is all actions (whether having value added or not) required to bring the product, product group, which uses the same resources, the same way, by means of the main essential for every product, from raw materials up to customer destination. Sullivan, et.al. (2001) define the value stream as all action and/or information that have value added (VA) and non-value added (NVA) which required to bring a product, service or specific combination of products and services through business processes such as the design concept for the production of raw materials to customers. According to Rother and Shooks (1998), there are two

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types of value stream maps. Current State Maps illustrate the current state of the flow of product value, and use special icons and terminology to identify potential waste and areas of improvement. Future State Maps is a blueprint for lean transformation on the conditions expected in the future.

Methods

The research framework is based on some background issues such as low market share of third party fund and limited resources on Islamic banking which could produce hindrance to sub-stages of the business process. Area of business operations improved in this study is a business process that is based on Islamic law, the provisions of Bank Indonesia, VSM (Value Stream Mapping), BPR (Business Process Reengineering).

This type of research is qualitative approach. Primary data is obtained through questionnaires and/or in-depth interviews with respondents. Data are obtained from respondents representing four models of Islamic banks operating in Indonesia such as: *first*, the Islamic commercial bank which is subsidiary company of conventional state-owned commercial bank and represented by Bank Syariah Mandiri (BSM); *second*, the Islamic commercial bank which since its establishment has operated as full pledge Islamic bank and represented by Bank Muamalat Indonesia (BMI); *third*, the Islamic commercial bank which is subsidiary company of conventional private commercial bank and represented by Bank BCA Syariah (BCAS); fourth, Islamic business unit (UUS) from conventional commercial bank and represented by Bank Permata Syariah (BPS).

Data are collected through several stages. The first one is filling out the questionnaire by Islamic bank customers to get input of expectation/desired customer values. The second one is filling out the questionnaire or interviews with respondents who understand business processes of third party fund raising. The third is in-depth interviews with respondents who have qualified expertise coming from practitioners of Islamic banking and Indonesia Central Bank to verify and validate the research model, questionnaires, and business process improvement models. Questionnaire is made in a structured one, while type of interview is a semi-structured one.

The collected data were started from August 2014 to January 2015. Sampling method is purposive sampling. Respondents are taken from various backgrounds, such as customer respondents, respondents who represent the management of Islamic banks, Islamic bank staff who understand business processes and expert respondents. Customer respondents are utilized to determine customer expectations, while the management respondents used to determine the direction and policy of Islamic banking management. Meanwhile, Islamic bank staffs are used to map business process and measure completion time the phases of business process. Finally the

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expert respondents are the ones that will verify and validate business process models. Respondents are located in Jakarta, Bogor, Depok and Tangerang.

Some of the tools which used for data analysis are VSM (Value Stream Mapping) and PAM (Process Activity Mapping), to map the value chain and re-modeling of business processes, and Face Validity to verify and validate the model. VSM is a method for determining the value added to a business process flow. VSM is done by drawing a flow of business process and classify every stage of the business process, include the stages of value-added, non-value-added or not added value but it is still needed. The stages which should be followed by VSM are: *first*, determine process/sub process family; *second*, draw the current state map; *third*, determine and draw future state map; *fourth*, draft a plan to arrive at the future state. The depiction of the current state map is started from the determination of the specific desired value of customers, identify the value stream of each process/sub-process family, and make the process flow (Manos, 2006).

PAM is one tool that can be used to support the method of VSM. PAM is used through several stages: first, mapping the activity based on business processes; second, mapping the activity based on customer's needs and the Islamic bank that build upon their perception; third, mapping the sub stages based on value added categorize. Business process re-modeling of third party fundraising carried out with reference to the business process reengineering (BPR) developed by Harrison and Pratt (1993) which consists several stages such as: determination of customer needs and process objectives, mapping and measurement, analysis, redesign, and implementation.

Face validity is a method of verification and validation on business process models developed using in-depth interviews of the experts. Face validity is carried out by verification and validation of the model of the business process third-party fundraising that are developed through in-depth interviews with experts.

Results and Discussion

In relation with the improvement goals of service and performance of Islamic banks in the future, then the highest value that becomes customer expectations is the need for quick response in providing services (33.8%), followed by friendly attitude in services (32.3%) and low cost (32.3%). Meanwhile, based on interviews with the management of Islamic banks, Islamic banks remain committed to improve SLA (service level agreement) in order to increase responsiveness.

The mapping of the business process third-party fundraising is done by using the PAM (Process Activity Mapping). Womack and Jones (2005) define the value as an activity that consumers are willing to pay because it is absolutely necessary to solve the problem. Womack (2006) argues that each stage of the process should be valuable

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meaning that it should create value from the standpoint of the customer. The simplest measurement of this value is to find out the satisfaction level of customers when process steps are removed, whether they are satisfied or less satisfied. Based on questionnaires that filled out by respondents and interviews with the management of Islamic banks related to business process mapping of third party fund raising, the business process value chain in third-party fundraising can be mapped in detail (Table 1).

Results of mapping the value chain of third party fundraising business process shows that the sub-stages of the business process can be grouped into three categories: *First*, Value added (VA) activities are approval of the amount of profit sharing ratio, contract, depositing funds, and book/ deposit certificate issuing; *Second*, Non-value added (NVA) activity is pure waste, such as waiting time; *Third*, Necessary but non-value added (NNVA) activities are form filling, data collection, and verification.

Table 1. Process Activity Mapping of Business Process of Funding

No	Activity	Customer Needs	Bank Needs	Value
1.	Customer arrival	Important/Not Important	Important	NNVA
2.	Queuing/Waiting time	Not Important	Not Important	NVA
3.	Form filling	Not Important	Important	NNVA
4.	Waiting time	Not Important	Not Important	NVA
5.	Data collection	Not Important	Important	NNVA
6.	Waiting time	Not Important	Not Important	NVA
7.	Verification	Not Important	Important	NNVA
8.	Waiting time	Not Important	Not Important	NVA
9.	Approval of the amount of profit sharing ratio	Important	Important	VA
10.	Waiting time	Not Important	Not Important	NVA
11.	Akad	Important	Important	VA
12.	Waiting time	Not Important	Not Important	NVA
13.	Depositing funds	Important	Important	VA
14.	Book/deposit certificate issuing	Important	Important	VA

NNVA activities may be wasteful but are necessary under the current operating procedures. Even though no value for customer, this sub stages cannot be eliminated due to the fulfillment of the provisions of Indonesia Central Bank Indonesia (BI) and Financial Service Authority (OJK) in relation with principle of KYC (know your customer). Moreover, this is fit with the concept of application of sharia values associated with the brotherhood principle that includes introduction (*ta'aruf)* and mutual understanding *(tahaluf)*.

DOI: 10.15408/aiq.v8i1.2506

Table 2. Completion Time of Current Business Process of Funding

Customer Type	Completion time (minute)		
	VA	NVA dan NNVA	Total Time
Individual	16	39	55
Corporate	2 973	1 579	4 552

Measurement is conducted based on the data that obtained from the Islamic bank staffs through questionnaires and interviews. Data completion time of each sub-stage of business process is processed by using tables and VSM. In general, the typical customer deposits can be classified into groups of individual customers and corporate customer. The completion time of third-party fundraising processes in Islamic bank under current circumstances can be found in the Table 2.

Table 3. The Technology Type of Indonesian Islamic Banking

No.	Technology Type	Technology Availability							
		BSM		BMI		BCAS		BPS	
		Av	NA	Av	NA	Av	NA	Av	NA
1.	ATM	V		V		V		V	
2.	CDM		V		V		V		V
3.	Phone Banking	V		V			V	V	
4.	SMS/m-Banking	V		V		V		V	
5.	Internet Banking	V		V			V	V	
6.	EDC		V		V	V		V	
7.	Debit Card	V		V		V		V	
8.	Credit Card		V		V		V		V
9.	Prepaid Card		V		V		V		V
10.	SSBM		V		V		V		V
11.	Core banking	V		V		V		V	

Note: Av = Available, NA = Not Available

Mapping is performed in relation to application of information technology at Islamic banks. The application of information technology will become the input for the re-design of business processes modeling. Mapping the application of information technology in Islamic banks in Indonesia is based on interviews and questionnaires by internal respondents of Islamic banks who understand the business processes and information technology.

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It is found that each Islamic bank observed has its own core banking system that is different from its parent bank. Besides using core banking system in supporting business processes, some Islamic banks have been equipped with several technologies like internet banking and mobile banking as supporting system for existing core banking. Data compilation from internal respondents of Islamic banks related to application of technology is shown in Table 3. Based on the data in Table 3, all Islamic banks who become respondent are found to have no CDM (cash deposit machine) and SSBM (self service banking machine). Result of this study also shows that online system registration is still scarce.

In order to facilitate the analysis of the value chain, VSM (Value Stream Mapping) is used. The mapping of business process of third-party fund raising based on VSM can be found in the Figure 2. Business Process is designed to add value for the customers and therefore should not include unnecessary activities (Eke and Achilike, 2014).

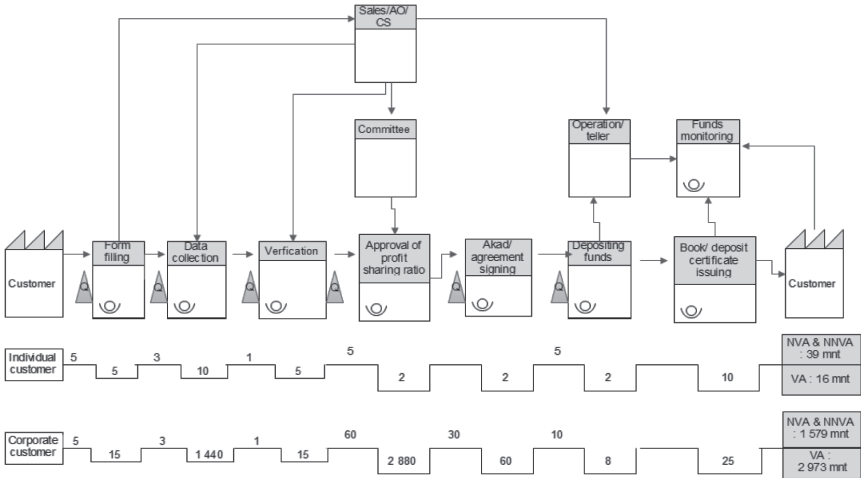

Figure 2. Current State Map - Business Process of Funding

Critical stages in the process of third-party fundraising business for corporate customers occur in sub stages of approval of the amount of profit sharing ratio, data collection and waiting time. For the individual customers, critical stages occur in sub stages of data collection and waiting time/queuing. Approval of the amount of profit sharing ratio is categorized as sub stages that have value added since it is important for customer to know the percentage of profit-sharing ratio. The completion of sub-stages of approval of the amount of profit sharing ratio for corporate customers are not solely determined by the bank, but also should be agreed by the customer, especially if the customer negotiate for that ratio. Therefore,

based on the consideration that this sub-stage has value added, the stage should not be changed. However, management of Islamic banks should speed up completion of this sub-stage, especially the speed of deciding the amount of profit sharing ratio proposed and expected by customers.

The customer data collection is an important sub-stage for Islamic banks, especially in order to comply with Indonesia Central Bank or OJK regulation related to KYC principle (Know Your Customer). On the other hand, from the customer's perspective, this sub-stage is not important. Therefore, this sub-stage can be re-engineered but still maintaining rules imposed by the provisions of the Indonesia Central Bank. Meanwhile, the waiting time/queuing is a sub-stage which is not desired by the customer. Waiting time or queue will be depending upon the service capacity of the branch office, and the volume of activities or the number of customer transaction. Limited capacity of Islamic banking services, such as limited number of branch offices, service lines, number of counters and/or the amount of human resources, consequently shall cause additional waiting time/queue. According to the rules of lean principle, it is undeniable that the waiting time is a waste category (Hines and Rich 1997; Keyte and Locher 2004). Therefore, the waiting time should be eliminated as much as possible.

Generally, there are two major groups of activities in the business process of third-party fundraising, i.e. account opening process, which is performed once at the beginning of business processes, and depositing of funds that can be repeated as often as desired by customers.

The mapping of information technology as elaborated in the previous part shows that all Islamic banks that become sample in this study do not have SSBM (Self Service Banking Machine) and CDM (Cash Deposit Machine). SSBM is a machine that has the technology to allow potential customers to register the account opening. While the CDM is a machine that may receive cash deposit funds from customers. Both machines are important things that should be prepared by Islamic banks since this machine may replace the role of customer service or tellers. SSBM and CDM will assist in improving access of Islamic banking customers or potential customers without being limited by the presence of branches and the operation time.

Based on the analysis of existing conditions, the corrective actions that can be done on the redesign are the proposal to change business process by developing application of information technology. The application of information technology will become the enabler of business process changes. The proposal of business processes changes is the result of business process reengineering that is designed according to customer needs, but still in line with the provisions of Bank Indonesia/

Financial Services Authority. As for the proposal to change funding business process, it is extremely important to eliminate waiting time, which is the sub-stage that provides no value-added and to re-setting the sub-stages that are necessary but not value-added (NNVA), such as filling registration form, data collection and verification. Restructuring of the NNVA sub-stages should be supported by strong technology application, such as online registration and/or SSBM installation. Areas that received improvement are those getting the mark of *kaizen burst* on the sub-stages of form filling, data collection and verification, which are part of the activities of account opening, as well as sub-stages of depositing funds. Based on the proposal, the future business process of funding, as portrayed in Figure 3, should be modified from three sub-stages to one sub-stage that covers form filling, data upload and verification.

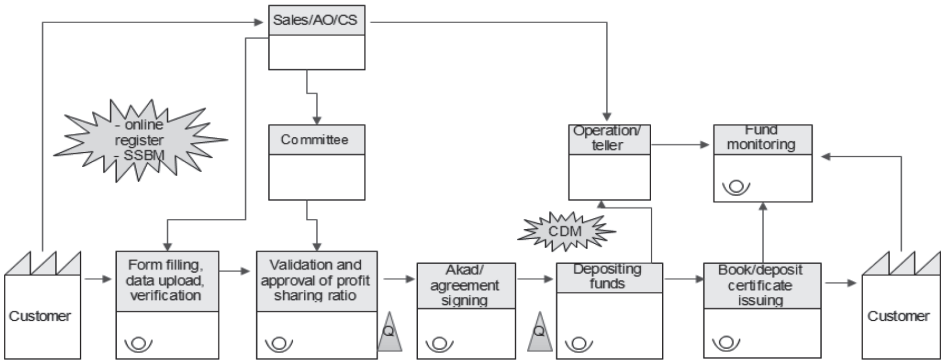

Figure 3. Future State Map – Business Process of Funding

Technological development on account opening activities may be conducted through two alternatives, i.e. the application of online registration and account opening through SSBM. Application of online registration may require the usage of internet network, while SSBM technology application is conducted by installing the SSBM machine at the branch office. Furthermore, installation of the CDM is needed to improve customers' easiness to frequently deposit their funds in Islamic bank. CDM can serve as an engine to verify and accept deposits without involving the teller function. Technological development such as online registration, SSBM and CDM will assist customer or prospective customers who have limited time to visit the office during working hours. In addition, it may also help Islamic banks that have limited branches and personnel's. Based on business process reengineering plan of funding, then it can be estimated the time reduction in the sub-stages that do not have value added (vide Table 4).

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Table 4. Time Reduction Estimation due to Business Processes Reengineering (BPR)

Customer Type	Time completion (minute)						
	VA			NVA and NNVA			Total TR*)
	Existing	After BPR	TR*)	Existing	After BPR	TR*)	
Individual	16	16	0	39	17	22	22
Corporate	2 973	2 967	6	1 579	95	1 484	1 490

*) TC: Time Reduction

Implementation plan on re-modeling of business process of funding can be executed with condition that two requirements are in their place. The first requirement is for large size Islamic bank, in which they have to implement business processes by installing SSBM or online system registration independently. Meanwhile, for small size Islamic bank, it may change business process by improving institutional connectedness with the parent bank or information technology provider.

The second requirement is the fulfillment of KYC (Know Your Customer) as the provisions of Central Indonesia Bank Regulation. As the implications, it still needs face to face interaction with customers after the online registration or SSBM processes. This is done in order to conduct final validation of the customers' data. Implementation of this requirement may be fulfilled by setting up, for example, a meeting plan with customer service for this validation.

The waiting time provides no value-added stage for customers and shall be eliminated. Management of Islamic bank should always pay attention to the strategy of attracting prospective customers to become customers and maintaining customer loyalty. The results imply that Islamic banks should regularly conduct survey to obtain input from their customers especially with regard to bank services aspect. The survey can be conducted by independent third party in a way that makes the customer open and feel no hesitation in giving input.

The management of Islamic banks should also produce a breakthrough policy to further accelerate the completion of the stages of business process that have not been accommodated in the re-modeling design. For example, the policy to overcome the problem of long duration sub-stage, such as approval of profit sharing ratio, agreement signing, and issuance of deposit certificates, especially for corporate segment.

Conclusion

Analysis of the value chain of sub-stages of the funding business process can be classified into three, such as: first, sub-stages which have added value, i.e. the approval of profit sharing ratio, agreement signing, depositing funds, and book/

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certificate issuing; second, sub-stages that do not have value added but still required, i.e. form filling, data collection, verification, monitoring of funds; and third, sub-stage that does not have value added such as waiting time. Elimination of sub-stages is only performed on non value added process, namely waiting time.

Business process reengineering of funding is directed through two strategies, i.e. to increase the accessibility of prospective customers with the aim to make them interested in saving the money in Islamic banks, as well as to increase customer accessibility to fond of saving. Business process reengineering should be supported by the development of information technologies such as the use of online registration system and/or SSBM (self-service banking machine) and installation of CDM (cash deposit machine) to improve the accessibility of customers. The business process reengineering of funding will be able to reduce waiting time until for 1,490 minutes for corporate customer and 22 minute for individual customer.

This study is confided to analysis and reengineering of business process of funding. In order to provide continuous feedback to the Islamic banking industry in Indonesia, it is also necessary to conduct further research to the business processes of financing.

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