# ANALYSIS AND DESIGN ACCOUNTING INFORMATION SYSTEM OF FUNDING AND FINANCING AT KOPERASI SERBA USAHA SYARIAH BAITUL MAAL WAT TAMWIL BAKTI NURUL HUDA

<sup>1</sup>Malicha Aulia Zatalini, <sup>2</sup>Imam Subaweh <sup>1,2</sup>Fakultas Ekonomi Universitas Gunadarma Jl. Margonda Raya No. 100, Depok 16424, Jawa Barat <sup>1,2</sup> ekbis@gunadarma.ac.id

#### Abstract

This research conducted at Kopsyah BMT Bakti Nurul Huda and applied a computerized system of funding and financing activities. The purpose of this research is to find out and analyze how the accounting information system of funding and financing activities have been running, whether the system has been running well and how alternatives system is effectively applied in Kopsyah. The research method used is descriptive analysis method with qualitative data. Data analysis techniques consist of literature study, observation, interview, and documentation. The primary data were collected from interviews, notes, and documents which related to accounting activities, while secondary data consist of organizational structure, job description, documents, forms, and accounting records. The analysis tool consists of system analysis and design system with DFD, ERD, normalization, database, and design input as well as output. The results show that Kopsyah has double positions on Baitulmaal between secretary with accounting and cashier or teller with the head of KUB, on Baitultamwil between the cashier or teller with accounting. Documents and the copies have been made, although there are some documents that do not have copies. Recording and data storage are analyzed with daily cash book, control card and Excel. The researcher proposes to separation positions by adding cashier or teller for Baitulmaal, one accounting and one finance manager. The researcher also proposed to replace membership book from manual to printed form, eliminate the function of some documents in Baitulmaal, such as daily cash book, control card, and letter of application to become member, add documents and copies, such as receipt which consists of two sheets, deposit slip, withdrawal slip, slip of disbursement financing and slip of installment financing consists of three sheets and use computerized system and server as well as data storage with database.

**Keywords**: Accounting Information System, Design, Financing, Funding

#### INTRODUCTION

Financial institutions have an important role in a state. Financial institutions contribute in protecting financial stability and economic growth. In Indonesia, financial institutions are growing very rapidly. This development is caused by many factors; one factor is

technology development. In general, financial institutions can be distinguished in two forms named bank financial institutions and non-bank financial institutions. Financial institutions can also be distinguished based on its type, they are conventional financial institutions and sharia financial institutions

(Wiroso, 2009 : 17). Sharia bankings grow

very rapidly which is marked with the acceptance of sharia transactions principles internationally. It was started from the application of profit and loss sharing system residing in Pakistan and Malaysia around 1940s (Antonio, 2007 : 18). In Indonesia it began in 1991 with the founding of Muamalat bank. Before 1992, it has been established a non-bank financial institutions whose activities applied sharia. Until 1998, there was one sharia bank and 78 Sharia Rural Bank (literally means Sharia People's Financing Bank) (Nurhayati, 2013 : 2-3). In running its operational activities, sharia banking is regulated by SFAS Number 59 concerning Sharia Banking Accounting.

Based on Statistics Indonesia (known as BPS in Indonesia) stated that Indonesian population in in 2010, Indonesia 237.641.326 people in total. With 87,18 % of 237.641.326 Indonesian people are Muslims, 6,96 % Protestant, 2,91 % Catholic, 1,69 % Hindu. 0.72 % Buddhist and 0.05 Confucianism (Khonghucu). This makes Indonesia a country with the largest Muslim population. This factor may affect the development of financial services and sharia-based economy. It has been reflected in the development of the sharia financial services industry in Indonesia in the last five years from 2010 to 2014 which shows in Figure 1 from the Financial Services Authority (known as OJK in Indonesia.



Figure 1. The Development of Sharia Financial Service Industry in Indonesia Year 2010 To 2014 Source: www.ojk.go.id

Sharia cooperative or Sharia Financial Services Cooperatives (known as Koperasi Jasa Keuangan Syariah in Indonesia) is one of the activities of non-bank sharia institutions. Baitul Maal Wat Tamwil (BMT) is called Sharia Financial Services Cooperatives which is regulated by the Decree of State Ministry of Cooperatives and Small and Medium Enterprises Number 91, 2004 and Law Number 25, 1992. In addition, the operational activities of the BMT also regulated by SFAS Number 101 until 107. Basic concept operational in BMT implements profit sharing system which is in accordance with the contract that has been approved and then it is used by the manager to pay salaries and BMT operational activities (Sholihin, 2010: 175).In running the business, institution or company requires a language that can communicate and activities from explain the corporate transactions. Williams, et.al (2011: 4) stated that accounting as a business language. Before technology is growing rapidly, the accounting system applied is a manual accounting system. The government and BMT parties shouldnotice and improve the performance and services for consumers to be better. This manual accounting system is not effective if it is still appliednowdays, especially in the bigger institutions. The changing system used from manual to computerization is one of alternatives that can implement by BMT or By implementing other institutions. computerized accounting information system, the preparation and report management is expected to be easier and more efficient.

Accounting information system is

closely connected with the organization or company to achieve the expected objectives. In accounting information system, accountants company should be able to design and implement good accounting information systems to manage company finances. This research aims are to find out the accounting information system of funding and financing at Kopsyah BMT Bakti Nurul Huda that has been running, to find out the good stages of accounting information system evaluation, to analyze the effectiveness of accounting information system of funding and financing that are already running at Kopsyah BMT Bakti Nurul Huda, and to suggest alternatives of accounting information system of funding and financing which is effective to be applied at Kopsyah BMT Bakti Nurul Huda.

# LITERATURE REVIEW

# Accounting Information System and Information System Development

A company needs a language that can communicate economic information. Williams, et.al (2011 : 4) stated that accounting as a business language. Clarke (2012 : 3) described accounting as follow "accounting is the process of collecting, classifying, recording, reporting, analysing and interpreting financial data to meet the information requirements of the various interests, or users,

concerned with the operation of a business both internally (within the business) and externally (outside of the business)". Accounting information system can distinguished based on the process, they are manual and computerized (Bodnar Hopwood, 2004: 1). According to Krismiaji (2001:4) accounting information system is a system that processes the data and transactions to produce useful information for planning, controlling and operating the business. Accounting information is needed by the company to evaluate its performance. The company requires a computerized accounting information system that effective and efficient. Therefore, need a system development from manual to become computerizedThe definition of system development according to Bodnar and Hopwood (2006: 437) is the process of modifying or replacing part or all of the information system. In developing the system, it is usually consists of three steps, named planning and system analysis, system design and system implementation.

According to Bodnar and Hopwood (2006: 437-438) system planning is the process of identifying subsystems that exist on information system which the development need special attentions and system analysis is the process of identifying the subsystems that will be developed. McLeod and Schell (2004: 140) describes the system design is the determination process and data required by the

new system. According to Bodnar and Hopwood (2006: 23) implementation of the system is the process of implementing the procedures and methods that has been designed into operation.

#### **System Documentation Technique**

In the system documentation technique explains how this system works. Documentation tool is also used extensively on the system development process. (Romney and Steinbart, 2012: 69-70).

- a. Flowchart. Bodnar and Hopwood (2006: 41) flowchart is a symbolic diagram showing the data flow and operation phases in a system. There are symbols that are used in the flowchart, are the basic symbols, specific of input or output symbols, special process symbols and additional symbols.
- b. Data Flow Diagram. Is a network that describes a system of automatic or computerized, manipulation or a combination of both, which graphically arranged in the form of collection of system component that interconnected in accordance with the rules (Sutabri, 2004: 163).
- c. Entity Relationship Diagram (ERD). ERD is "a graphical modeling tool to standardize ER modeling" (Sumathi and Esakkirajan, 2007 : 32).
- d. Normalization. According to Kristanto (2004: 24) the normalization process is the

process of grouping elements data into a table that shows the entities and relationships.

#### **Baitul Maal Wat Tamwil (BMT)**

Definition of BMT according to Ilmi (2002: 65), baitul maal is a socio-religiousoriented financial institution which its main activities to accommodate and distribute society's wealth in the form of zakat, infaq and sadaqah (ZIS) based on the established provisions on the Our'an and the Sunnah of His Apsotle.BMT has role, among others (Huda and Heykal (2010 : 364): (1) Alienate the society from non-Islamic economic practices; (2) Perform coaching and small business financing; (3) Releasing dependence on moneylenders; and (4) Maintain society's economic justice with equitable distribution.

BMT should have status and legal entity cleary and is recognized by the state. Since BMT has just established, it causes status assortment and legal entities used by BMT in running the operations. Until now BMT is included into the Sharia Financial Services Cooperatives.

#### **Funding and Financing On BMT**

There are some activities on the collection and distribution of funds in BMT. However, these activities are based on the

BMT with sharia principles one of which is prohibits interest, because the interest is usury. In the Minister of Cooperatives and Small and Medium Enterprises Number 14/Per/M.KUKM/IX/2015 has activities to raise funds based on sharia principles, those are:

- a. Al-Wadi'ah Saving. It is an agreement between the owner of the goods (mudi') and the recipient of consignment (wadi') to maintain the assets or capital (ida') from damage or loss and for the security of assets (Arifin, 2006: 26).
- b. Al-Mudharabah Saving. A saving where the deposite and the withdrawal withdrawal can be carried out in accordance with the agreements that has agreed in advance. (Nuryadin, 2004: 124).

Financing funds given by BMT can be called by credit financing. Financing products at BMT, among others (Yunus, 2009 : 36-38):

- a. Mudharabah Financing. The working capital financing that is given by BMT to members, where its business management is fully assigned to its members as the debtor customer.
  - b. Musyarakah Financing. It is financing some capitals out of all which is to be given to its members. BMT can be involved in the management process.
  - c. Murabahah Financing. Financing is provided to

members for the purchase of goods that will be used as working capital and given for a short period not more than six until nine months or more from than that.

- d. Bai' Bitsaman Ajil Financing. This financing is almost the same as Murabahah financing, the difference is the payment's pattern with installments in rather long time.
- e. Al-Qardhul Hasan Financing. Namely a soft financing given to members who is lack of the capital or in

#### RESEARCH METHOD

The object in this research is Koperasi Serba Usaha Syariah (Kopsyah) Baitul Maal Wat Tamwil (BMT) Bakti Nurul Huda. The object of the research that examined by researcher is a non-bank financial institution in the form of sharia-based cooperative. The method applied by the researcher in this research is descriptive analysis. This is a method which examines the status of a group of people, objects, system of conditions, system of thoughts or class of events in the present (Nazir, 2005: 54).

The type of data which collected in this research is the qualitative data. Qualitative data is data in the form of ideas, perceptions, opinions and people's beliefs which has been researched and it cannot be measured with numbers (Basuki, 2006 : 78). Source of data collected in this research are primary and secondary data. Primary data is data obtained

or collected directly in the field by people who do researches or concern to require it (Hasan, 2002 : 82). The primary data are transaction documents, notes that is related for accounting activities and data from the results of the interviews to financial department or other departments related to financial, while secondary data is data which collected by people who do research from sources that already exist (Hasan, 2002: 82). The secondary data are general overview the object, organizational structure, iob descriptions, standard operating procedures (SOP), books and accounting records, such as ledgers, financial journals, statements, documents or forms used on the system for funding and financing.

The technique applied by researcher is includeare field study. Includeare field study is experiment activity actual an on environmental conditions or naturally (Santoso, 2010: 17). To collect the data directly from the company, the method applied by the researcher are observation, interview and documentation. Literature study, is a process in understanding, observing, analyzing and identifying the existing knowledge in literature to support the research (Hasan, 2002 : 45). Collecting additional data and information by the author from the books or other that should have been provided by Kopsyah BMT Bakti Nurul Huda related to the analysis and design accounting information system of funding and financing in Baitul Maal Wat Tamwil.

In this study, the researcher applied a qualitative descriptive analysis. Analysis tool applied in this research are system and design analysis.

- 1. System analysis is the process of decomposition from a complete information system into their component parts in order to identify and evaluate the problems, opportunities, barriers that occur and the improvements are being proposed later (Hartono, 2005: 64).
  - a. Examine the ssystemsthat has been implemented. At this step, the researcher applies document flowchart.
  - b. Identify the need for information. The second step is the researcher applies flowchart system.
  - c. Identify the need for system. The third step, the researcher applies data flow diagrams (DFD).
  - d. Proposal system analysis. The last step is making a proposal from a system analysis that has been done at Kopsyah BMT Bakti Nurul Huda.
- 2. System design is the determination process and the data required by the new system (McLeod and Schell, 2004: 140).
  - a. Evaluate various design. At this step, the researcher will choose various design in

- accordance with the objectives and funding as well as financing activities.
- b. Prepare design specifications. After selecting, prepare the specification of the system design.
- c. Submit the system design specifications. The last step, the researcher defines the system design. In designing of the whole new system, the researcher applied some tools, such as DFD, ERD, normalization database and design of input as well as output.

# **RESULTS AND DISCUSSION**

#### **Company Profile**

With the spirit of devotion to Allah SWT, Koperasi Serba Usaha Syariah Baitul Maal Wat Tamwil Bakti Nurul Huda which established on October 15, 2009 and at the beginning of 2011 Kopsyah BMT Bakti Nurul Huda was active in running the business and on the May 2011. In the beginning Kopsyah BMT Bakti Nurul Huda is a mosque cooperative named Koperasi Mesjid Jami' Nurul Huda. Koperasi Masjid Jami' Nurul Huda is build in accordance with At-Tawba verse 18 with the hope to prosper the mosque and its members. Then the Prosperity Mosque Council developed Koperasi Masjid Jami' Nurul Huda became Koperasi Serba Usaha BMT BaktiNurul Huda which Syariah activities include the unit of Islamic financial services, the unit of baitul maal for social activities, the unit of baitul tamwil for rill sector activities. The establishment background of Kopsyah BMT Bakti Nurul Huda is expected to overcome the environmental problems that occur around Kopsyah BMT Bakti Nurul Huda.

# **Creating Logic Model Proposed**

#### 1. Context Diagram

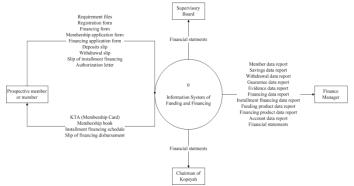


Figure 2. Context Diagram of Information System of Funding and Financing Source: Result proposed by researcher

# 2. Zero Diagram

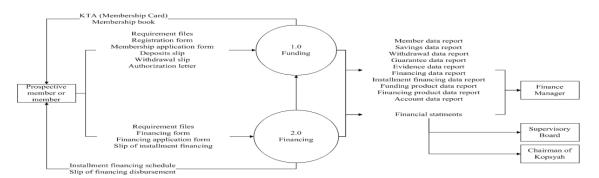


Figure 3. Zero Diagram of Information System of Funding and Financing Source: Result proposed by researcher

# 3. Level Diagram

This level diagram is for funding and financing process. There are 5 in the funding process and 4 in the financing process. Here are some of the processes in funding and financing.

# 1. Level Diagram 1 Process 1.0 In Funding Process

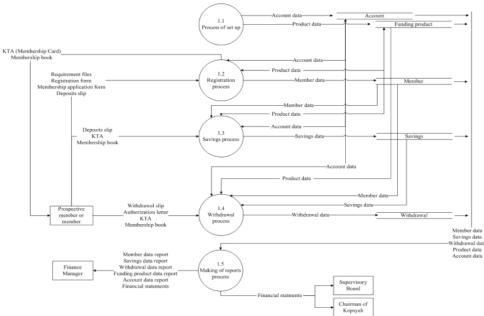


Figure 4. Level Diagram 1 Process 1.0 Source: Result proposed by researcher

# Level Diagram 2 Process 2.0 In Financing Process

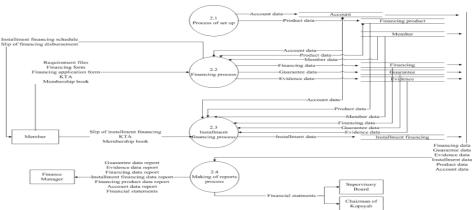


Figure 5. Level Diagram 2 Process 2.0 Source: Result proposed by researcher

# 2. Level Diagram 1 Process 1.2.0 In Registration Process

The process of registration in Kopsyah is distinguished into two, are in baitultamwil and baitulmaal. The first figure is process in baitultamwil and the second figure is process in baitulmaal.

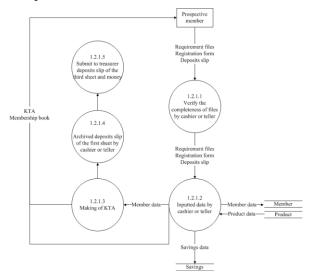
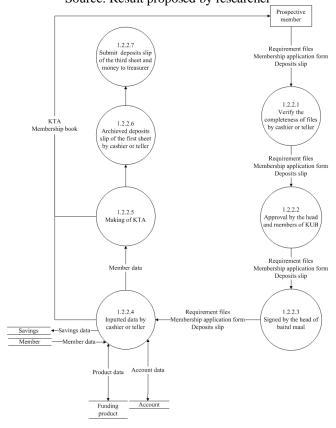


Figure 6. Level Diagram 1 Process 1.2.1.0 Source: Result proposed by researcher\_



# 3. Level Diagram 2 Process 2.1.0 In Process of Set Up



Figure 8. Level Diagram 2 Process 2.1.0 Source: Result proposed by researcher

# 4. Level Diagram 2 Process 2.2.0 In Financing Process

The process of financing in Kopsyah is distinguished into two, are in baitultamwil and baitulmaal. The first figure is process in baitultamwil and the second figure is process in baitulmaal.

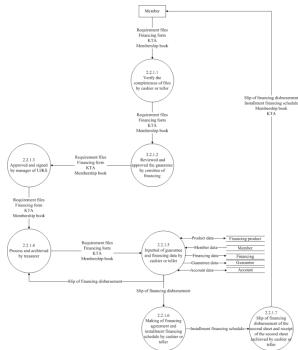


Figure 9. Level Diagram 2 Process 2.2.1.0 Source: Result proposed by researcher

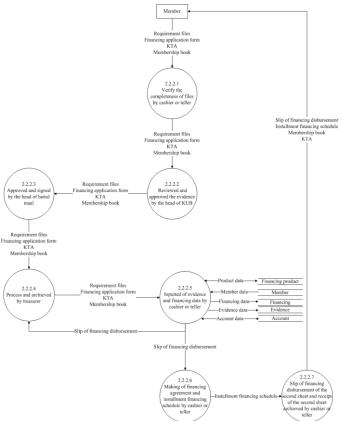


Figure 10. Level Diagram 2 Process 2.2.2.0 *Source:* Result proposed by researcher

# 5. Level Diagram 2 Process 2.3.0 In Installment Financing Process

In the process of installment financing also divided into two in baitultamwil and baitulmaal. This is the process in baitultamwil.

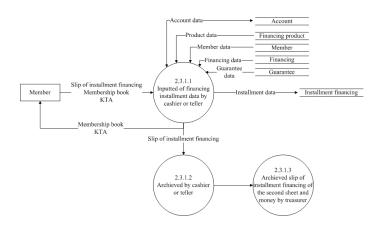


Figure 11. Level Diagram 2 Process 2.3.1.0 Source: Result proposed by researcher

#### 4. Making of Entity Relationship Diagram

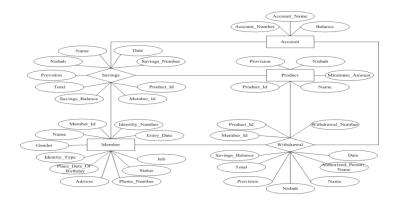


Figure 12.Entitiy Relationship Diagram of Funding Source: Result proposed by researcher

In Figure 4.17.shows the **Entity** Relationship Diagram (ERD) of funding. There are four relationships in the figure. The first relationship describes the member entity who has savings relation with the product entity. The relationship is one-to-many, while the second relationship describes the member entity who has savings relation with account entity. The third relationship is the member entity who has withdrawal relation with account entity. The second and third relationship has a relationship is one-to-one where each member can save and withdraw savings by using and updating one account or vice versa. The fourth relationship describes the member entity who has withdrawal relation with product entity. The relationship is one-to-many.

There are six relationships in financing

process. The first relationship in financing procedures is a member entity that has a financing relationship with an evidence entity. The second is that member entities have relationships with financing guaranteed entities. The third relationship is the member entity has a financing relationship with the product entity. The first, second and third relationships have one-to-one relationships. The fourth relationship is the member entity has a relationship with the installment entity. The fifth relationship describes a member entity having a financing relationship with an entity account and the sixth relationship is a member entity having installment an relationship with the account entity. The fourth, fifth and sixth relationship has one to many relationship.

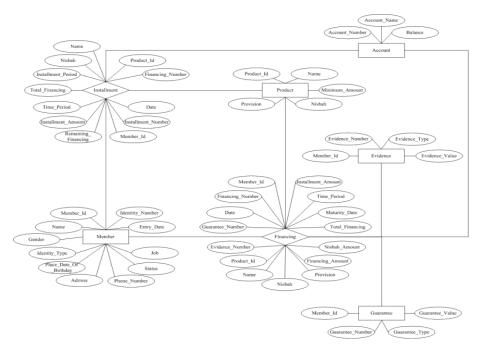


Figure 13.Entitiy Relationship Diagram of Financing Source: Result proposed by researcher

#### 5. Normalization

In normalization process consists of the first, second and third normal form. Here is a figure of normalization proposed in the third normal form.

# 1. Third Normal Form (3nf)

2.

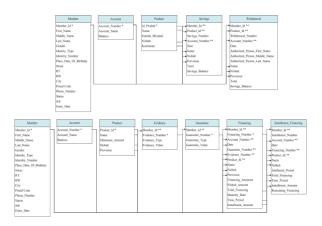


Figure 14. Third Normal Form of Funding and Financing Source: Result proposed by researcher

In the third normal form, the second normal form must have been fulfilled and may not have a transitive relationship or non-key attributes must not depend on other non-key attributes.

# 6. Design of Database System Proposed

There are nine design of database systems proposed. Here is one of the database designs.

#### 1. Member Table

Table 1. Member Database Design

No.	Field Name	Type	Length	Description
1	Member_Id	Integer	10	Member Id number
2	First_Name	Text	7	First name member
3	Middle_Name	Text	7	Middle name member
4	Last Name	Text	7	Last name member
5	Gender	Char	5	Gender of the member (male of female)
6	Identity_Type	Text	3	Identity type for registration requirement (identity card or driving license)
7	Identity_Number	Text	16	Identity number of identity card or driving license
8	Place_Date_of _Birthday	Date	14	Place, date of birthday
9	Street	Text	15	Street name, residential or complex of member
10	RT	Text	3	RT from address member
11	RW	Text	3	RW from address member
12	City	Text	10	City from address member
13	Postal_Code	Text	5	Postal code from address member
14	Phone_Number	Text	15	Phone number
15	Status	Text	5	Member status (married or single)
16	Job	Text	10	The work of member
17	Entry_Date	Date	14	Date of entry be member

Source: Result proposed by researcher

# 7. Design of Input System Proposed

There are eleven design of input systems proposed. Here are some forms of the input design.

#### 1. Main Menu Form 1



Figure 15. Main Menu Form 1 Source: Result proposed by researcher

#### 2. Member Data Form



Figure 16. Member Data Form Source: Result proposed by researcher

# 8. Design of Output System Proposed

There are eleven design of database systems proposed. Here is one of the output designs.

# 1. Member Data Report



Figure 17. Member Data Report Source: Result proposed by researcher

# CONCLUSION AND SUGGESTION

The accounting information system of funding and financing which runs in Kopsyah have done by manual system and be distinguished into two which are Baitulmaal and Baitultamwil. The funding procedures are member registration, savings and savings withdrawal, while the financing procedures are financing and installment financing. To conduct funding and financing procedures at Baitulmaal is through the head of the KUB as the intermediary between the members and the head of the Baitulmaal. The head of KUB serves in assessing and approving the prospective members or members who will register and apply for financing. The head of KUB along with other members of KUB are responsible if the member violates their obligations.

In addition, the head of KUB records the transactions on the daily cash book. After that, the head of Baitul maal and the cash card and control card, approve and save money. The treasurer deals with expenses and receives money to and from the head of Baitulmaal, and then the secretary makes the Baitulmaal's reports. This procedure is performed by cashier or teller to serves to input data into Excel, archive documents or forms of the first sheet. The financing committee assesses the amount of guarantee, then, UJKS manager considers the guarantee

value with the value of financing proposed then approves it. The treasurer deals with archive documents or forms of the second sheet as well as expenses and receive money to and from the cashier or teller.

The accounting information system of funding and financing that has already been running at Kopsyah BMT Bakti Nurul Huda is considered good. There are double positions. Although there double are positions, Kopsyah performance is still running well without fraud and mistake done employees. Double positions occur between the secretary section and accounting section, cashier or teller section and the head of KUB. The financial statements are conducted by the secretary. In serving and recording data relate to members are conducted by the head of KUB which should be done by the cashier or teller. While in Baitultamwil, it is between the cashier or teller and accounting section. The cashier or teller performs the function in recording the transactions that have occurred, achieving documents and forms as well as preparing financial statements. In the division of job description within the parties involved has been already running their respective functions. There is no double function.

The recording and reporting accounting are performed by manually. The needs of information

for both internal or external parties from Kopsyah with this manual condition have already been fulfilled. In Baitulmaal, the head of KUB is using daily cash book as well as control card to record and store data. In Baitultamwil, cashier or teller is using Excel to input and store members' data. The forms and documents at Kopsyah has been used properly. The numbered documents with copies have already been sorted, even though there are some documents that do not have any copy yet.

The researcher provides an alternative design of accounting information system of funding and financing activities in Kopsyah with flowcharts proposal, DFD, ERD, normalization, design of database, design of input for members, savings, withdrawals, set up products, evidence, guarantee, financing and installment financing as well as the design of output to member data report, savings data report, withdrawal data report, evidence data report, guarantee data report, financing data report, installment financing data report and financial statements consisting of balance sheet, income statement, cash flow statement, statement of economic promotion of member and notes of financial statements. In addition, for the design of input and output created with Otcreator software.

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