Measuring Alternative Sources of Liquidity for Grameen-Based IMFI

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ABSTRACT. The purpose of this research is to compile and measure various alternative sources of liquidity assistance that can provide solutions to the liquidity problems of the Grameen-based KSPPS. To describe the problems of the Grameen-based KSPPS liquidity policy, the researcher used the ANP-BOCR research methodology. Interviews and literature studies were used as data sources for the preparation of the ANP model framework, followed by filling out a comparative questionnaire to obtain the choice of the most priority liquidity sources. Our research results show that the program dana bergulir and soft guarantee from the government are sources of liquidity with the main preference when viewed from the need for fund allocation. Meanwhile, when viewed from the variable, the program dana bergulir consideration is also a top priority. We also found that the crisis due to the Covid-19 pandemic greatly affected the liquidity problems of MFIs. Finally, this research also reveals that competition with PNM Mekar, which is a state-owned company, is a major problem both before and after the Covid-19 crisis.

Keywords: Measuring, liquidity, IMFI.

1. INTRODUCTION

The Grameen-based KSPPS is one of the success stories of Islamic economic applications in Microfinance Institutions in Indonesia. In less than 15 years, it has succeeded in growing with assets of more than hundreds of billions of rupiah and able to empower hundreds of thousands of members. Some examples of successful Islamic Grameen model MFIs include; first, KSPPS Benteng Mikro Indonesia, which already has more than one hundred thousand members, secondly KSPPS Abdi Kerta Raharja whose assets can grow to tens of billions of rupiah and empower more than 35,000 members in just 10 years.

However, this success story is not without obstacles, there are many obstacles and problems faced by this Grameen-based LKMS [Afriadi, 2018]. The problems that arise are ranging from human resources, institutional governance systems that are still “just running”, to limited capital [Irawan et al, 2013]. Regarding capital problems, many LKMS stated that they were pessimistic about being able to handle liquidity needs independently [Sakti, 2013]. Therefore, LKMS needs to find strategies to explore various alternative sources of capital, both members and non-members [Yusuf, 2016].

So far, the majority of the liquidity problems experienced by LKMS are due to the funding needs of LKMS members during religious holidays (39.09 percent) and the new school year (33.03 percent). The projection error factor is also quite prominent as the cause of the liquidity difficulties of LKMS [Sakti, 2013]. Another thing that needs to be considered is that the liquidity of the Grameen-based KSPPS really depends on the initial capital that is rolled out. The initial capital will continue to rotate and can cover operating expenses through contributions and donations from members. However, if the Grameen-based LKMS wants to increase the financing ceiling or add members, the liquidity adequacy ratio will be insufficient. In practice, LKMS has been actively looking for various alternative solutions to their liquidity problems.

Even though the LKMS has tried independently to meet its liquidity needs, the process of obtaining liquidity assistance is still considered to be a difficult problem that requires a solution [Sakti, 2013]. This liquidity problem becomes urgent because the strength of the capital and size of the LKMS have a significant positive effect on the overall technical efficiency of the LKMS [Ali and Ascarya, 2010].

The purpose of this research is to compile and measure various alternative policies for liquidity assistance models that can provide solutions to the liquidity problems of the Grameen-based KSPPS. More specifically, this study also aims to measure the priority weights of various alternative models of liquidity assistance to Grameen-based KSPPS. The research scheme chosen is a small...
domestic basic research scheme. This scheme was chosen because the objects to be examined are mostly scattered in the JABODETABEK area and its surroundings, although there are also some Grameen-based KSPPS that grow outside the island of Java such as West Nusa Tenggara and West Sumatra.

2. LITERATURE REVIEW

The choice of object for microfinance institutions is due to its particular role in reaching the micro level community which is expected to have an effect on reducing poverty levels and reducing levels of economic inequality. From microfinance institutions in general, then we narrowed down the object only to Islamic microfinance institutions. The choice of Islamic microfinance institutions is because the performance value of Profitability (NPM), Liquidity (Current Ratio), and Solvency (DER) of Islamic microfinance institutions is better than conventional [Junaedi, 2012]. In addition, Islamic microfinance institutions also have unique and different business models that are tailored to the needs of their members and the surrounding environment [Baga et al, 2012]. Finally, from the existing KSPPS, we only focus on Grameen-based KSPPS. The Grameen-based KSPPS was chosen for the following reasons:

1. The phenomenal Grameen is in some ways in accordance with the principles that Islam promotes: business persistence, independence, hard work, concern for education, health and environmental cleanliness, the urge to do justice and help others, discipline, mutual cooperation, and entrepreneurial encouragement [Rusydiana, 2011];

2. The basic characteristics of Grameen Bank are by prioritizing social capital over economic capital and the principles of discipline, unity, courage, and hard work and supported by a foundation of trust, honesty, openness, and helping to reduce poverty and increase economic growth [Yunus, et al, 2010];

3. The process of joint responsibility in Grameen-based LKMS provides many additional benefits including [Dzulkarnain, 2013];
   a. foster a sense of security and self-confidence in undertaking new initiatives;
   b. as the main vehicle for the participation of its members in project activities;
   c. as a source of pressure on its members to fulfill their obligations towards the bank, and to encourage them to have the courage to abandon unnecessary traditional attitudes and to prevent antisocial acts;
   d. through group formation, opportunities are opened for those who are weak to change their situation into collective strength.

Some of the results of previous research that are related to this theme are as follows: The first research by Sakti (2013) entitled "Mapping of Bmt Conditions and Potentials: Partnerships in the Context of Expanding the Market & Service Reach of Sharia Banks to Micro Enterprises" with appropriate research results as follows:

1. Liquidity problems experienced by the majority of LKMS so far are due to the funding needs of LKMS members during religious holidays (39.09 percent) and the new school year (33.03 percent);

2. The projection error factor is also quite prominent as a cause of liquidity difficulties for LKMS;

3. LKMS has been actively seeking various alternative solutions to their liquidity problems;

4. Even though the LKMS has made efforts to meet its liquidity needs independently, the process of obtaining liquidity assistance is still considered to be a difficult problem that requires a special solution for LKMS in Java. Specifically for LKMS in Java, the data are in accordance with table 1 below:

<table>
<thead>
<tr>
<th>Province</th>
<th>Owner</th>
<th>Other LKMS</th>
<th>Government</th>
<th>Islamic Bank Loan</th>
<th>Individual Loan</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Java</td>
<td>52.21%</td>
<td>10.62%</td>
<td>2.65%</td>
<td>13.27%</td>
<td>7.96%</td>
<td>13.27%</td>
</tr>
<tr>
<td>Central Java</td>
<td>30.49%</td>
<td>40.24%</td>
<td>2.44%</td>
<td>13.41%</td>
<td>7.32%</td>
<td>6.10%</td>
</tr>
<tr>
<td>West Java</td>
<td>42.37%</td>
<td>24.58%</td>
<td>4.24%</td>
<td>8.47%</td>
<td>7.63%</td>
<td>12.71%</td>
</tr>
<tr>
<td>Java (All)</td>
<td>42.81%</td>
<td>23.64%</td>
<td>3.19%</td>
<td>11.50%</td>
<td>7.67%</td>
<td>11.18%</td>
</tr>
</tbody>
</table>

Source: Sakti, 2013
The second research by Susilo (2017) entitled "Liquidity Management of Non-Bank Islamic Microfinance Institutions (BMT) with the Tawarruq Agreement" with the following research results:

1. The Tawarruq contract as a product of past thought by scholars can be self-revitalized based on current needs to meet the liquidity needs of non-bank Islamic microfinance institutions (BMT), which in practice do not yet have the right instruments to obtain liquidity funds, such as Islamic banking.

2. In organizing the biduq as a product to meet the liquidity needs of BMT by BMT Puskopsyah which has been formed and owned by BMT-BMT in one area, first involves the Puskopsyah SBU (Strategic Business Unit) and the owner of the funds (can be private investors, Islamic banks or BMT others who have excess liquidity) to cooperate in synergy and mutual benefit (symbiotic mutualism).

The third research by Ichsan (2013) entitled "Management of Islamic Bank Liquidity" with appropriate research results as follows: There are liquidity instruments that can be run by syar'i ah banks in order to meet liquidity obligations, namely: Minimum Statutory Reserves (GWM), Clearing and Bank Indonesia Liquidity Assistance (BLBI).

The fourth research by Mumek (2014) is entitled "Analysis of the Liquidity of the Kamangtawaya Savings and Loan Cooperative, Sendangan Village, Remboken District, Minahasa Regency" with suggestions from the appropriate research results as follows: It is recommended to seek additional capital from other parties, such as the Office of Cooperatives, BUMN, Banking, and other donor agencies.

3. METHODS

The objectives of this study is to compile and measure various alternative policies for liquidity assistance models that can provide solutions to the liquidity problems of the Grameen-based KSPPS. Thus, this research requires a research methodology that can analyze problems and alternative solutions as well as compare the priorities of the various models that have been obtained. The ANP BOCR method is suitable for use because it has three main functions which are very suitable to answer the problem formulation of this study. The three main functions are [Asacarya, 2009]:

1) Structuring complexity.
2) Measurement into the ratio scale.
3) Synthesis.

Analytic Network Process or ANP is a mathematical theory that allows us to deal with dependence factors and their feedback systematically. In other languages, ANP is one of the Multiple Criteria Decision Making (MCDM) methods [Saaty, 2013]. Surveys, interviews and literature studies are sources of data for the preparation of the ANP model framework. The ANP framework that has been compiled can only be completed after data and information on preferences / responses / opinions represented by the KSPPS experts / practitioners are available about the problems to be studied.

Of course, in looking at the various policy alternatives to this liquidity assistance model, it is necessary to consider the benefits, opportunities, costs and risks of each alternative, so that one can choose which alternative is most suitable to the current KSPPS conditions. ANP BOCR is specifically an ANP research methodology that can compare the benefits, opportunities, costs and risks of each of the alternative policies for the liquidity assistance model so that a priority model can be obtained in accordance with the conditions of the KSPPS.

Meanwhile, in obtaining the preference data needed to measure the priority of the liquidity assistance model used (questionnaires / direct interviews) to experts and practitioners. This data collection focuses on the Islamic Koperasi community and KSPPS practitioners to obtain the necessary data for qualitative analysis in the analytical framework that will be used. The type of data used in this study is primary data.

In order to complete this research, there are several steps that must be taken, and among them are [Asacarya, 2009]:

1. Conducting a literature study and in-depth interviews about the problems studied to experts and practitioners who understand and master the problems comprehensively;
2. Decomposition to identify, analyze and structure the complexity of the problem into the ANP network
3. Compile / make a comparison questionnaire (pair-wise comparison) based on the ANP network that has been made;
4. Conducting a second interview in the form of filling out a questionnaire to experts and practitioners;
5. Synthesize and process data (survey results in the form of filling out a questionnaire) using ANP software, namely super decisions; and
6. Analyze results and propose strategic
recommendations. The seven steps above are illustrated in Figure 1 below:

![Figure 1. Steps in the Research Process Using the ANP Methodology](image)

The data that has been collected is from literature study and interviews with KSPPS practitioners. Interviews were conducted with five Grameen-based KSPPS which include KSPPS Abdi Kerta Rahardja, KSPPS Ukhuwah Pro Ibu, KSPPS Baitu Tamkin Tazkia Madani, KSPPS Benteng Mikro Indonesia and finally KSPPS Baitul Ikhtiar.

Interviews were conducted twice where the first interview aimed to decompose the problem. At this stage the results of the interview are then combined with a literature review so that the problem can be mapped to an alternative decomposition network of liquidity sources. After the problem decomposition stage is carried out, a second interview is carried out which aims to confirm the results of the decomposition of liquidity sources as well as to fill out a comparative questionnaire.

The data obtained from this comparison questionnaire is then processed using super decision software to produce pairwise comparison and rater agreement values. The pairwise comparison value is useful for sorting / weighting / measuring the various alternatives that exist to then be displayed in a bar graph. Meanwhile, the rater agreement value reflects the uniformity of opinion among respondents. The higher the value of the rater agreement, the more it reflects the uniformity of opinion.

4. RESULTS AND DISCUSSION

4.1 Decomposition of alternative sources of liquidity on grameen-based LKMS

The first objective of this research is to find out what alternative models of liquidity assistance can be obtained with various considerations and allocation needs. Meanwhile, the second objective is to provide weights or measure which liquidity model is considered the most priority in terms of grameen-based LKMS practitioners. We have conducted literature studies and interviews with grameen-based LKMS practitioners to meet the first objective of this study. For a summary of the study literature, we present it in table 1, while the problem decomposition network can be seen in Figure 2.
The literature table is a summary of the literature that has been collected and studied in the context of the initial stages of problem decomposition. After conducting a literature study we received some very valuable pointers regarding the theory and practice of liquidity management. Departing from this literature study, the KSPPS liquidity problem will be easier to analyze and compared to practices in other institutions and places. We will upload the transcripts of interviews with KSPPS practitioners through Simlitabmas, while we present the literature table below.

#### TABLE II. Literature Table

<table>
<thead>
<tr>
<th>No</th>
<th>Literature Criteria</th>
<th>Source</th>
</tr>
</thead>
</table>
In contrast to previous research from [Sakti, 2013], we do not consider the school entry season and Idul Fitri season as conditions that cause liquidity problems in LKMS. This is because the grameen-based LKMS has published school savings and Idul Fitri savings products, where LKMS members will regularly save on school savings and Idul Fitri savings for which the savings are taken during Idul Fitri or new school years. School savings and Idul Fitri savings are very good in terms of liquidity management. With school savings and holiday savings products, grameen-based LKMS will easily predict when and how much liquidity is needed, while investing these funds when they are not being used.

4.2 Measuring the Preference of Grameen-Based LKMS Liquidity.

We have conducted a second interview with Grameen-based LKMS practitioners to confirm the results of the decomposition of liquidity sources as well as to fill out a comparative questionnaire. In addition to conducting a questionnaire comparing the preferences of liquidity sources in terms of the variable consideration and allocation needs, we also propose a questionnaire comparing the impact of the Covid-19 crisis on various sides that affect the liquidity of this grameen-based LKMS. We do this so that this research has added value and at the same time captures the latest phenomena. In order to provide a clearer perspective, we divided this comparison questionnaire into before and after the Covid-19 pandemic. By making a before and after comparison, it will be seen more clearly how the impact is felt due to the Covid-19 pandemic crisis.
4.3 Preference of Alternative Sources of Liquidity Based on Consideration Variables

The results of our comparison questionnaire begin with Figure 5 which shows the preference for liquidity sources based on the variable of consideration. From the perspective of the consideration variables (which include ease of access, ease of reporting and accountability, flexibility in the use of funds and quantity of binding regulations), the order of preference for grameen-based LKMS Practitioners from the most important to the last is as follows:

1) The program dana bergulir has the highest preference as the main choice of alternative sources of liquidity with an average preference value (3.1).
2) Alternative sources of liquidity in the second place, namely Islamic Banking Financing and Financing from other MFIs with an average preference value (3.05).
3) Soft loans from government and CSR funds rank third in preference for alternative sources of liquidity with an average preference value (2.85).
4) Meanwhile, the liquidity source from LAZ is the last priority with an average preference value of 2.8.

What we need to pay attention to is that the preference values from the most important to the last ones have a difference in values that is not too far away. Almost all preference values have values close to 3 on a scale of 0 to 5. From these results we can conclude that, from the perspective of the consideration variables, the preference values for alternative sources of liquidity are relatively uniform. In other words, we can conclude that all of these consideration variables are equally important and all of them are taken into consideration in choosing various alternative sources of liquidity.

Furthermore, if we look at the results of the rater agreement value for each of the consideration variables, we can see that almost all of the considered variables have a low rater agreement value. In the variable considering ease of access and disbursement, the resulting rater agreement value is (0.06). Meanwhile, the variables for consideration of ease of reporting and accountability resulted in a rater agreement value of (0.03). Each with a rating range of 0 to 5, where 0 means very difficult and 5 means very easy.

The variable considering the flexibility of the use of funds and the variable considering the quantity of binding regulations also has a low rater agreement value. Each value is (0.07) for the variable considering the flexibility of the use of funds and (0.08) for the variable considering the quantity of binding regulations. The low level of rater agreement on all the variables of consideration shows that each practitioner has various opinions, analyzes and considerations. This is very likely to happen for various reasons, among others, the size of the LKMS, the portfolio of capital sources, the level of knowledge of the management and the current condition of the MFI's liquidity.
1. Preference of Alternative Sources of Liquidity Based on Fund Allocation Needs

The results of the questionnaire comparison of preferences for alternative sources of liquidity based on the need for fund allocation generally have a wider distribution / range of values than preferences based on consideration variables. This shows that grameen-based LKMS practitioners have strong reasons for preferences and prioritization of each of the available alternatives. In more detail, the following is an order of preference for alternative sources of liquidity based on fund allocation needs:

a) The program dana bergulir has the highest preference as the main choice with an average preference value (4.4).

b) Alternative sources of liquidity in the second place are soft loans from the government with an average preference value (4.2).

c) While the alternative source of liquidity in the third place is Islamic banking financing with an average preference value (4.0).

d) CSR funds rank fourth in preference for alternative sources of liquidity with an average preference value (3.1).

e) The sources of liquidity from other MFIs and deposits of LKMS members are the fifth and sixth priority respectively with almost the same average preference values, namely (3.05) and (3.0).

f) Meanwhile, the liquidity source from LAZ is the last priority with an average preference value of 2.35.

Apart from having a wider distribution / range of values, each alternative source of liquidity based on the need for allocation of funds also has a much higher rater agreement value. This shows that the preference order of priority / weight of all respondents is uniform. Although not collected on an agenda such as FGD (Focus group discussion), here there is an understanding among grameen-based LKMS practitioners on the order of preferences mentioned above.

One by one, the rater agreement value of each variable for the allocation of funds is as follows. In terms of the need for expansion of new branch opening, the rater agreement value is (0.37). In terms of capacity building and member empowerment, the rater agreement value is (0.28). As for the increase in the financing ceiling for LKMS members, it has the highest rater agreement value, namely (0.52). While the latter, for liquidity needs due to the Covid-19 pandemic crisis, the rater agreement value is also quite high, namely (0.45).

Even though the rater agreement value and value range are different, there are similarities between preferences based on consideration variables and preferences based on allocation needs. The equation is at the highest rank and the lowest rank in the weight of preference. On both sides, both the program dana bergulir places the first preference and LAZ funds are the last preference. This can be an input for the government, that the program dana bergulir can be increased, especially recently, given the impact of the Covid-19 pandemic crisis.
4.4 Weight of Causes of Liquidity Problems Before and After Covid-19

We try to summarize from the literature and interview results related to several causes that can have an impact on the liquidity problems of grameen-based MFIs. As a result we found six things which include:

- a) Non performing financing problems
- b) Simultaneous withdrawal of deposits
- c) Regular meeting of members
- d) Debt / financing is due
- e) Competition with other LKMS
- f) Competition with PNM Mekar

Next, we asked the grameen-based LKMS practitioners about the impact of each of these causes on the liquidity of the LKMS both before and after the Covid-19 pandemic crisis. The result is that almost all causes have more than doubled their impact after the Covid-19 crisis. In general, it can be said that all causes experienced an increase in impact more than twofold, except for the causes due to competition, both competition with LKMS and competition with PNM Mekar. Before the crisis, all causes were considered to have no impact, as seen from the priority values which were in the range of two. However, after the crisis everything jumped to second place with a priority value (4.8). High spikes also occur at routine meetings, which is the main characteristic of grameen-based LKMS. The ban on gathering for regular meetings causes the power of “social capital” to decrease and weaken. Meanwhile, social capital is the soul of the grameen-based LKMS.

Prior to the crisis, routine meetings did not have any negative impact on the LKMS because there was a last priority along with debt / financing maturity with a priority value (1.8). However, after the crisis the prohibition on gathering increased to the 3rd priority with a priority value (4.6), likewise debt / financing due increased to become the fourth priority with a priority value (4.2).

A further finding that is interesting to discuss is that there is consistency both before and after the crisis, that competition from PNM Mekar has the highest impact on grameen-based LKMS. This happens because PNM Mekar is doing a tremendous expansion to add members. Of course their goals are actually good and noble, but several facts in the field show that PNM Mekar takes members from grameen-based LKMS.

Considering that the real goals are both noble and good, PNM Mekar in its expansion should not seize grameen-based LKMS members. It would be very good if PNM Mekar expanded into new areas, where LKMS had not yet entered there. Only in this way will a win-win solution be realized for all parties. The best thing is that PNM Mekar implements a cooperation scheme for expansion in areas that are close to or very close to the customer base of grameen-based LKMS. With this synergy, everyone will benefit, but if this continues, there will be many parties who will suffer losses.

5. CONCLUSION

The purpose of this research is to compile and measure various alternative sources of liquidity assistance that can provide solutions to the liquidity problems of the Grameen-based KSPPS. The first objective of this research is to find out what alternative models of liquidity assistance can be obtained with various considerations and allocation needs. There are seven alternative sources of

Meanwhile, the second objective is to provide weights or measure which liquidity model is considered the most priority in terms of grameen-based LKMS practitioners. 4 variable considerations, namely: 1. Ease of access and disbursement process; 2. Ease of reporting and accountability; 3. Flexibility in the use of funds; 4. Quantity of binding regulations; 4 alternative sources of liquidity based on allocations, which include: 1. Allocation of funds for expansion needs to open new branches; 2. Allocation of funds for capacity building and member empowerment; 3. Allocation of funds to increase the Financing plafond; 4. Allocation of funds for liquidity assistance needs of the Covid-19 crisis. The program dana bergulir is the main preference and LAZ is the last preference, while the other alternative preference positions are between the two.

Competition with PNM Mekar become a major problem before and after Covid-19. Meanwhile, almost all sides of the causes of liquidity were significantly affected after the covid-19 presence, especially in areas where the PSBB was implemented and schools were closed.

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