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Investigating the Impact of Business Development Fund Ltd's Credit Guarantee on Small and Medium Enterprises in Rwanda: A Comprehensive Analysis

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ABSTRACT

In Rwanda, the Business Development Fund Ltd aims to support the initiation, growth, and success of Small and Medium Enterprises (SMEs) by providing credit guarantees, facilitating their access to bank financing. This study explores the efficacy of the credit guarantee fund in stimulating SME growth in Rwanda, particularly within Kigali City. It delves into the accessibility of the BDF Ltd credit guarantee fund for SMEs, assesses its correlation with employment generation, evaluates its influence on SMEs' sales turnover, and analyzes its responsiveness to borrower demands from 2011 to 2013. Employing an explanatory research approach, this study employs a mixed-methods approach, combining qualitative and quantitative methodologies for data collection. A sample of 98 units was selected, utilizing interviews for primary data and document analysis for secondary data. Statistical analysis, including SPSS and tools like Kendall's tau correlation and regression analyses, was employed to scrutinize the relationship between various variables. The findings indicate significant hurdles faced by SMEs in Kigali in accessing the fund, with 95.2% of respondents citing challenges such as prolonged application processes, increased collateral requirements, low bank utilization of the fund, additional bank prerequisites, and perceived inequities. The research reveals a noteworthy positive relationship ($r = .37$, $p < .05$, one-tailed) between the guaranteed amount for SMEs in Kigali and employment creation, where an estimated 3,333,333 RWF guaranteed amount predicts the creation of an additional job. Moreover, the study underscores that credit guarantees contribute positively to the beneficiaries' sales turnover and notes that the BDF Ltd has effectively met borrower demands during the 2011-2013 period. This research presents a comprehensive analysis of the impact of credit guarantee funds on SME growth in Rwanda, shedding light on challenges faced by SMEs in accessing these funds and highlighting the fund's substantial role in fostering employment and bolstering sales turnover within the SME sector.

Keywords: Business Development Fund Ltd, SMEs, Credit guarantee fund, Kendall's tau correlation, Banks.

INTRODUCTION

As globalization proceeds, transition and developing countries and their enterprises face major challenges in strengthening their human and institutional capacities to take advantage of trade and investment opportunities. While governments make policies in trade and investment areas, it is enterprises that trade and invest. Therefore, supply-side bottlenecks in the trade and investment areas and how governments, development partners and the private sector itself address these constraints have direct implications on

the economic growth potential of transition and developing countries [1]. The foundation for balanced, sustainable economic growth is dependent on many factors, including an economic environment which encourages diversified economic activities, competitive opportunities, entrepreneurial drive and the availability of credit facilities to support business initiatives [2, 3]. All researchers recognize Small and Medium Enterprises (SMEs) as engines of economic growth by creating new business, new employment opportunities and raise productivity, hence, poverty reduction. According to [2], they provide the entrepreneurial vibrancy and vitality which drive economic activity across different industries.[4] argue that SMEs Contribute significantly to development and growth which in turn reflects on the economy itself and eventually increases in Gross National Product. Generally, SMEs represent above 90% of total projects worldwide. In Rwanda, the SME sector, including formal and informal businesses, comprises 98% of the businesses and 41% of all private sector employment [5]. Despite their importance to economic growth, access to financing continues to be one of the most significant challenges for the creation, survival and growth of SMEs, especially innovative ones. The problem is being exacerbated by the most severe financial and economic crises in decades [6]. Numerous studies highlight access to finance as one of the driving factors of an enabling economic environment. The World Bank and the International Finance Cooperation (IFC) rank economies according to their ease of doing business; in this framework, the ability of businesses to get credit is an important criterion. The Global Entrepreneurship Monitor (GEM) Entrepreneurship Framework Condition also highlights entrepreneurial finance, defined as the availability of financial resources for SMEs in the form of debt and equity, as one of the key factors for stimulating and supporting entrepreneurial activity [7]. Access to finance helps all firms to grow and prosper. The Investment Climate Surveys of the World Bank show that access to finance improves
firm performance. It not only facilitates market entry, growth of companies and risk reduction but also promotes innovation and entrepreneurial activity. Furthermore, firms with greater access to capital are more able to exploit growth and investment opportunities. In other words, aggregate economic performance will be improved by increasing access to capital [7]. [8] has reported that accessing finance is a challenging task for firms. However, these financing constraints tend to be more difficult for SMEs to overcome than for larger firms. This limited access is mainly associated with the high administrative costs of small-scale lending, the underdeveloped financial system, the high-risk perception attributed to small enterprises, asymmetric information and small firms" lack of collateral.

The development of an efficient private sector directed by competitiveness and entrepreneurship is an important pillar in Rwanda's Vision 2020. Small and Medium Enterprises (SMEs) comprise over 90 % of private sector establishments and employ the majority of the population, indicating that expansion in the sector is of strategic importance in achieving inclusive growth and reducing the Balance of Payments and fiscal deficits [9]. Unfortunately, SMEs are strongly restricted in accessing the capital that they require to grow and expand, with nearly half of SMEs in developing countries rating access to finance as a major constraint. They might not be able to access finance from local banks at all, or face strongly unfavourable lending conditions, even more so following the recent financial crisis [7]. Even though there is a Business Development Fund to cater for SME growth in Rwanda, the country's SME policy has reported that there is an under-utilization of this fund at a rate of 1.3%. This can explain the slow growth of SMEs shown by the fact that: - The average value of capital employed by an establishment in Rwanda is RWF 16.3 million (US$26,080), which is relatively small compared to the US$35,087 lower-end turnover of a small enterprise as defined by the RRA, - 72% of all establishment in Rwanda employ one worker while 92.6 of all establishment employ 1-3 workers. - And 60% of the SMEs have a turnover of less than 50 million Rwandese Francs [9]. After realizing that, the researcher decided to conduct a study to assess the reason for this under-utilization and to evaluate the contribution of BDF Ltd on SME growth in Rwanda especially in Kigali.

METHODOLOGY

Research Design

A research design is a general plan of how the researcher will go about answering the research question(s). It contains clear objectives, derived from the research question(s), specifies the sources from which she intends to collect data, and considers the constraints that she will inevitably have [10, 11]. The purpose of this study is explanatory research to study the effectiveness of BDF Ltd SME's guaranteed funds to the growth of SMEs. It used both qualitative and quantitative methods in data collection. While quantitative research uses techniques and measures to produce quantifiable data, through qualitative methods, data are more in the form of words rather than numbers and these words are grouped into categories at the time of recording [12]. The researcher used qualitative methods to collect information from SMEs in Kigali city, BDF Ltd and banks to get their views, perceptions and opinions on what they perceive as the accessibility to BDF Ltd SMEs Guarantee Fund. A quantitative method was used to measure the growth of SMEs and their capacity to meet the demands of borrowers. The researcher collected both primary and secondary data to make sure that all the relevant materials on information required for the study were acquired and utilized.

Study Population

The target population was made of 1312 respondents composed of 1279 SMEs localized in Kigali City, 1 employee from each of 9 commercial banks partner to BDF Ltd and 24 employees of BDF Ltd.

Table 1: target population

Population category	Population Under sturdy	Selected sectors			SMEs with financial information	Sample size
		Gisozi	Kacyiru	Nyarugenge		
SMEs	1279	53	53	278	88	88
Commercial banks	9					9
BDF Ltd	24					1
Total	**1312**	**53**	**53**	**278**	**88**	**98**

Source: researcher 2014

Sample size

Table 1 shows that the sample size of this study was 98 units composed of 88 SMEs revealed to have financial information. To gain a clear picture of how difficult it is for SMEs to access BDF, the researcher could not only ask SMEs who accessed finance from the fund but also those who did not get finance. Thus, among 88 SMEs, 44 SMEs received finance from the fund while the other 44 SMEs did not. On 88 SMEs, we added 9 employees from 9 bank partners of BDF Ltd who are in charge of the Credit Guarantee Fund and 1 employee of BDF Ltd who deals with SMEs‟ guarantee fund.

Sampling techniques

The technique used in the determination of the sample size of SMEs is the non-probability quota sampling technique. The choice of quota sampling was guided by the geographical dispersions of respondents. The researcher divided the SMEs according to their geographical sector of location and 16 subgroups were formed. Then, among 16 sectors, 3 sectors were chosen purposively due to their ease of accessibility, Gisozi, Kacyiru and Nyarugenge. Reference made to Table 1 Gisozi got 53 SMEs, Kacyiru 53 SMEs and Nyarugenge 278 SMEs. Finally, as all SMEs in the selected sector do not have financial information, the researcher chose only 88 SMEs who have financial information. For commercial banks, all 9 commercial banks partnered with BDF Ltd were taken, from which 1 employee in charge of the credit guarantee fund was interviewed. And for BDF Ltd 1 employee manager of SME"s Guarantee Fund was interviewed.

Data Collection Instruments

According to De Vaus, [13] questionnaire is a general term to include all techniques of data collection in which each person is asked to respond to the same set of questions in a predetermined order. It, therefore, includes structured interviews and telephone questionnaires as well as those in which the questions are answered without an interviewer being present. For the collection of primary data, the researcher adopted the technique of semi-structured interviews. It means that we had a predetermined topic and questions regarding the topic but respondent was free to add any information they wanted. This technique helped to serve time and at the same time gave chance to respondent to give their views and opinions on the matter. Secondary data was obtained from annual reports, journals, newspapers, publications, textbooks, websites and other research works on the SMEs and credit guarantee funds.

Administration of Data Collection Instrument

As the researcher wished to know how difficult it is for SMEs in Kigali to access the credit guarantee, she adopted to conduct a semi-structured interview. This technique use questionnaires based on a predetermined and „standardized" or identical set of questions and is referred as interviewer-administered questionnaires. The researcher reads out each question and then records the response on a standardized schedule, usually with pre-coded answers [13]. The choice of structured interview is due to the geographical location of SMEs and time limitations. Contrary to the post-questionnaire technique 15 % of questions come back not responded [14]. The interview also increased the chance to get all responses at one time as the researcher administered them herself. A semi-structured interview was conducted with SME owners or managers in Kigali City and 1 employee of BDF Ltd in charge of the SMEs" guarantee fund. After releasing that the level of accessibility to credit guarantees can be influenced by the position of bankers on the matter, the interview was also conducted with persons responsible for credit guarantees in commercial banks in Kigali. Their views helped the researcher to understand what could be obstacles for SMEs to access finance through credit guarantees. These interviews enabled the researcher to collect primary data. For secondary data the researcher used the SME data set Excel version available from the Ministry of Trade and Industry. This database helped the researcher to make the sample. The researcher used also BDF Ltd annual reports, books and journals, research work, and publications all related to SMEs and credit guarantees.

Reliability and validity

Reliability refers to the extent to which data collection techniques or analysis procedures will yield consistent findings [13] while validity is the degree to which results obtained from the analysis of the data represent the phenomenon under study [15].

The data collected was reliable as the researcher conducted a pretest and retest interview. For validity of the data collected, the researcher administered the interview and she did not influence SMEs owner or managers to make them biased. The use of semi-structured interviews has also helped to increase the reliability of the data as it helped the participants not to be influenced by the time or situation, they were in. As far as the matter was concerned, data were corrected directly from the manager or owner of SMEs, this guaranteed red their validity.

Data Analysis Procedures

It is a psychological fact that data presented higgledy-piggledy is far harder to understand than data presented in a clear and orderly manner. Consequently, the next step after the figures have been collected is to lay them out in an orderly way so that they are more readily comprehended [14]. The researcher used the SPSS package in data analysis. Tables, Graphs, and Pie charts helped in the presentation of the data. One of the objectives of this study was to know if there is a relationship between the granted credit guarantee and the number of employees for SMEs who acquired the guarantee. To know this, the researcher used regression analysis and computed Kandall's tau correlation.

Ethical Consideration

At some extent all researcher faced ethical issue. There can be conflicts between the goal of obtaining desired knowledge and the goal of protecting the health and well- being of the subjects who are studied [16]. In this study the researcher has taken with high importance the ethical issue, that is why, when choosing the topic to study, the researcher chooses a project which will be a benefit for the participant. The study will help to ameliorate the financing means of SMEs which result in their wealth enhancement in particular and the country economy in general. The researcher used the semi-structured interview as a technique of data collection, so for the ethical issue, the names of SMEs participating or other staff were not mentioned. She avoided all sorts of sources of harm and she ensured all participants that the data collected would only be used for study cause.

RESULTS

Demographic Characteristics of Respondents

Table 1: Respondent position in banks and BDF Ltd

Institution name	number	Position of respondent
Business Development	1	Manager of SME Guarantee
Fund Kenya Commercial Bank Urwego	1	Fund Commercial officer
Opportunity Bank	1	Commercial officer
Bank of Kigali	1	Commercial officer
Banque Populaire du Rwanda	1	Commercial officer
Rwanda Development Bank	1	Commercial officer
I&M Bank	1	Commercial officer
Cogebank	1	Commercial officer
Guarantee Trust Bank	1	Commercial officer
Ecobank	1	Commercial officer
Total	**10**	

Source: Field data 2014

Table 1 indicates that the interview was conducted to 9 commercial officers from 9 different commercial banks in Kigali partners to BDF Ltd., plus 1 manager of SME guarantee fund Department in BDF Ltd.

Table 2: Age of the company (SMEs)

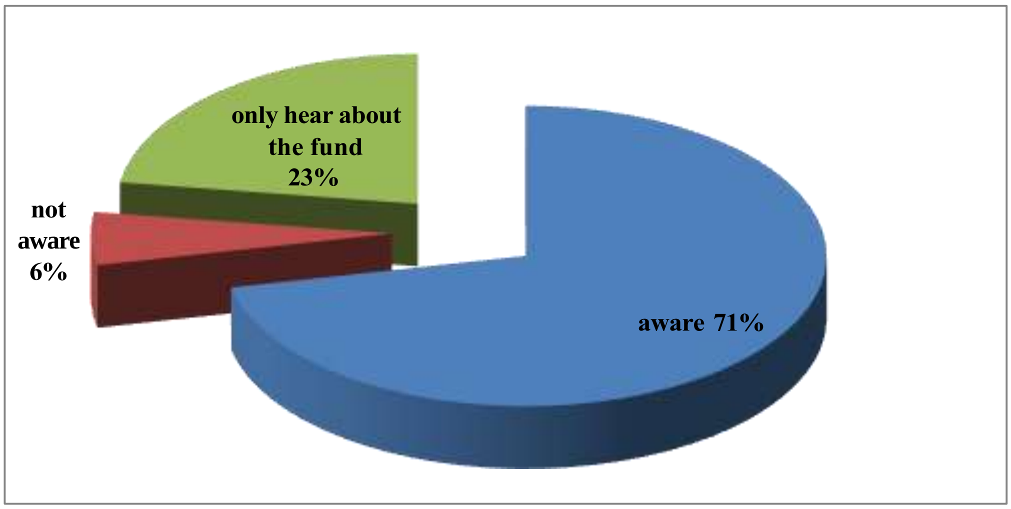
	Frequency	Percentage
less than 3 years	29	33.0
4-6 years	41	46.6
7-10 years	11	12.5
more than 10 years	7	8.0
Total	**88**	**100.0**

Source: Field data

According to Table 2, 46.6% of SMEs in our sample have been working for a period of 4 up to 6 years, 33% for a period of less than 3 years, 12.5% have been working for a period of 7 up to 10 years while 8 of our SMEs in our sample have been working for 10 years. This shows that a large number of SMEs in our sample have been in business for over 4 years.

Representation of findings

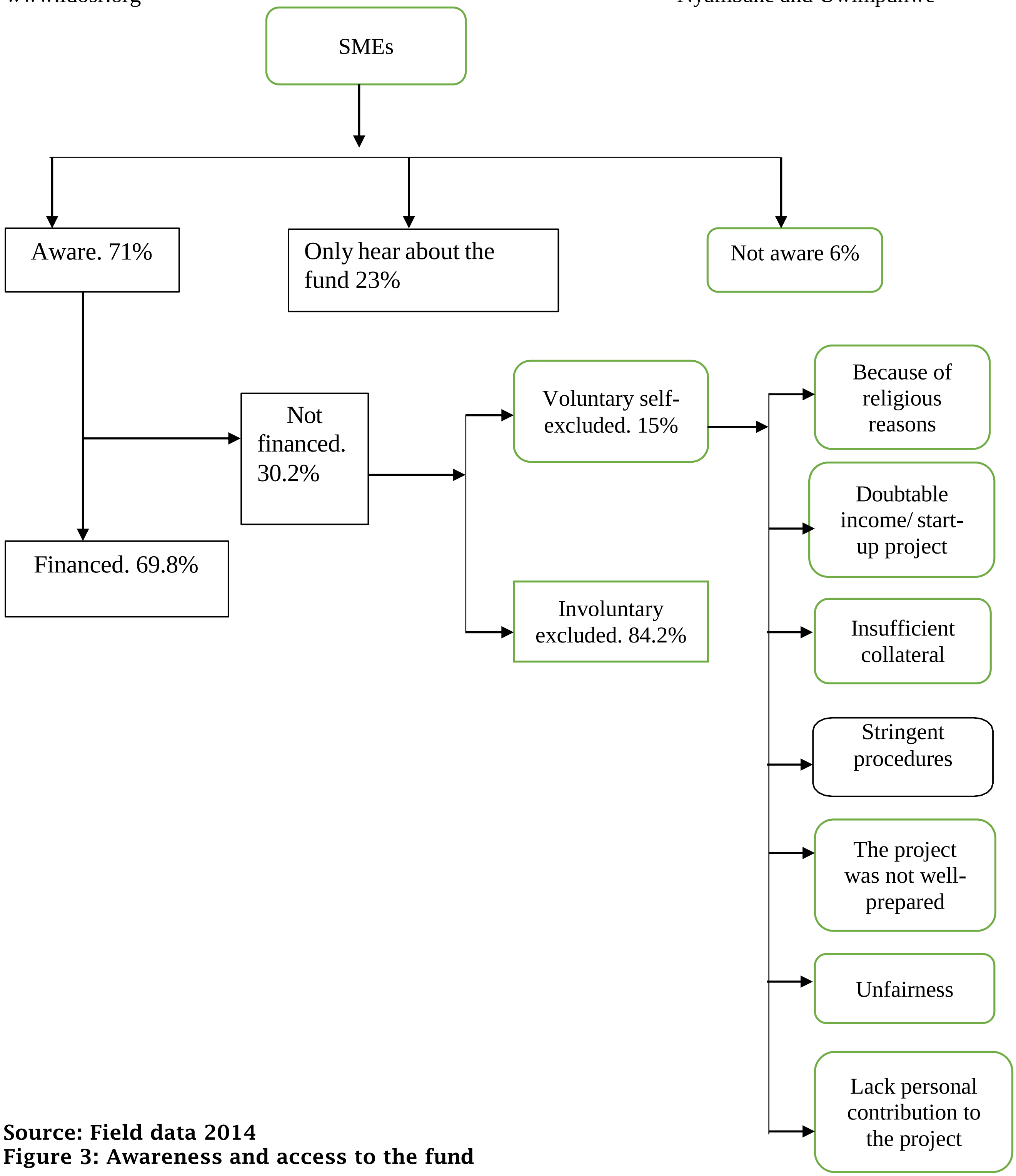
In this section, the researcher presents findings of the research obtained from data collected using an interview guide and report from BDF Ltd. Objective one: The accessibility to the BDF Ltd guarantee fund by SMEs in Rwanda especially those of Kigali city. Access to finance or funds refers to the possibility that individuals or enterprises can access that fund or other financial services. It is not possible to access the fund if you're not aware of the existence of it. The awareness of funds leads to utilization of it and the latter leads to economic growth of the users. To analyze the accessibility to the funds by SMEs in Kigali City, it was important for the researcher to understand the degree of awareness of the existence of the fund. The following question was asked:



Source: Field data 2014

Figure 2 Distribution of respondents according to their awareness of BDF Ltd.

The SMEs awareness of the fund is classified into 3 groups: the first group, 71%, is made up of people who are aware of the existence of the fund. This high rating goes in line with what the manager of the SME guarantee fund in BDF Ltd pointed out to us they have put much effort into doing the campaign and opening branches across the country. The second group, 23%, only understood the fund without real information on it, while the third group, 6%, of the study was made by people who said it was the first time they to hear about that fund. Figure 4.3 categorizes respondents in terms of degree of awareness of the fund and therefore shows the accessibility to the fund as well as reasons that may forbid people from accessing the fund.



Source: Field data 2014
Figure 3: Awareness and access to the fund

Figure 3, respondents fall into 3 categories based on the degree of awareness of the fund:

The first category comprises people who are aware of the fund (71%) and have been either financed (68.9%) or not (30.2). The field data showed that among those who are not financed, some are voluntarily excluded (15.8%) and those who are involuntarily excluded (84.2%). people who exclude themselves from getting finance do so as they don't need the fund because they have sufficient collateral to present to the bank or their religious convictions do not match with the fund features. For instance, some said their religion forbids paying interest on borrowed money. People who are involuntarily excluded from the fund are due to the following reasons. Those who are not able to find the remaining percentage of required collateral. A good example is youth who, after finishing their studies want to start businesses. In this case, BDF will cover their loan at a rate of 75% of the loan, and this means that they are required to provide at least 25% or 50% of the loan as collateral, depending on the bank risk coverage required. If they don't find that portion, they are excluded from being financed. Those with start-up businesses: the majority of banks questioned said that they finance start-up businesses at a fair rate as they are new on the market, and their repayment capacity is doubtable. They claimed that most of those businesses fail after a short time because of a lack of customers or entry into the market which can be hard for them. Thus, if they fail, it means that they will then not be able to reimburse the loan. Normally when banks analyze the repayment capacity of a person, they compare the sales on the income statement of the borrower and movements on his account. So, for start-up businesses, those movements do not exist or are weak. Moreover, the income statement is made by projected figures and not real figures, reason why banks see the repayment capacity of those businesses as doubtable. This perception increases the number of people who are involuntarily excluded from finance. Note that some respondents from banks said that they do not finance Hangumurimo products because they are all start-up businesses. Stringent procedures of access to the loan under the fund also decrease the number of people to be financed. Several respondents said that after having an experience with their colleagues who applied for loans and seeing how hard it was and how long times it took, they decided not to apply for the loan. Another factor which excludes people from being financed is the insufficient knowledge of how to prepare the project. People can have good projects in mind but fail to present them on paper or to show how profitable it is. This factor is recognized by both the bankers and BDF staff. Some respondents also mentioned unfairness in terms of corruption and pointed out that some people present a good project for funds and this project can be given to others. The last factor which can exclude people from being financed is a lack of personal contribution to the project. For a bank to finance a project the promoter must possess at least 10% up to 30% of the project depending on the bank. Thus, some of the respondents, including the bankers and manager of SME guarantee fund in BDF said that this also remains a key factor in the non-financing of SMEs. The second category is made up of people who said that they heard about the fund through television, advertisements or radio but they do not know what the fund is for, which means that they have not accessed finance from the fund. Some of them know it as a fund for only youth and women while others said that it is a fund for only agriculture projects. The third category is that of people who said that it was the first time for them to hear about that fund. Comprising 6% of the total respondents, this category has never benefited from the fund as they are not aware of it. After analyzing the degree of awareness of the fund by SMEs in Kigali, the next question was to assess if it is difficult to access the fund for those who are aware of it and to understand the related reasons.

Is it difficult for SMEs in Kigali to access the fund?

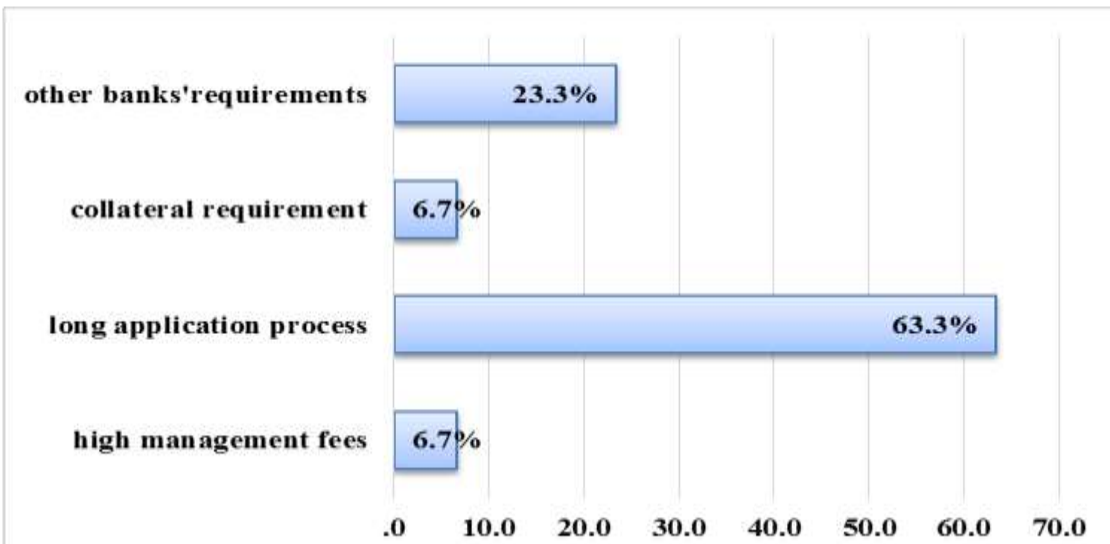
In the sample of 88 SMEs, 5 respondents were not aware of the existence of the fund and 20 respondents only heard about the fund this means that they could not know if it was difficult for SMEs to access the fund. Reason while 63 respondents were concerned with the question.

Table 3: Respondents' perception of the accessibility to the fund

Frequency		Per cent
difficult	60	95.2
not difficult	3	4.8
Total	**63**	**100.0**

Source: Field data

Reference made to Table 3, 95.5% of respondents perceive access to the fund as difficult while 4.8% find that access to the fund is not difficult. The main reasons which make access to the fund difficult as pointed out by respondents are classified into 4 clusters:



Source: Field data 2014

Figure 4 Key obstacles to accessibility to SME guarantee funds in Kigali

According to Figure 4, 63.3 % of respondents find that access to the fund is difficult because of the long application process. They revealed that the days between application and getting money can take a period between one month and a half up to one year and this period comprises the time the application spends at the bank and the time the file spends at BDF Ltd. In "other bank requirements" given also as a factor obstacle to accessing the fund respondents (23.3%) indicated that banks do not understand the fund and therefore take the service rendered as a grant, especially for Hangumurimo winners. This obliges SMEs to push to get the service. Respondents also mentioned that sometimes banks can ask for a surplus of collateral to the extent that it becomes insignificant to have collateral from BDF Ltd.

A minority of respondents, 6.7% indicated that management fees can also be an obstacle to accessing the fund. Note that the annual fee is 1% of the loan which is paid by the users of the fund. Lastly, 6.7% of respondents, mentioned the lack of collateral required by banks especially for youth as BDF Ltd does not cover 100% of the loan; people may even not be able to find the remaining ratio on the risk coverage. Accessibility to the fund by SMEs depends also on bank utilization of it. The bank utilization of the fund will increase as the challenges that banks encounter in financing SMEs decrease. This explains why the researcher did not ignore those challenges.

Table 4: Challenges banks encounter in financing SMEs in Kigali

challenges	Number of respondents		Total	percentage
	yes	no		
Lengthy claims procedure	7	2	9	77.8%
High default rate	9	0	9	100%

Source: Field data 2014

According to the Table 4, the big challenges that banks encounter in financing Small and Medium Enterprises who accessed the funds, is the high default rate. All Respondents pointed out that some borrowers, when given a loan under guarantee scheme, they take it as a grant and use that money in a different project from what was initially financed, hence increasing the default rate to the bank. Other borrowers, when given a debt, use it as planned. However, due to a lack of experience in the market, their project failed and they became involuntary defaulter. The second challenge that banks mentioned is the lengthy claim procedure. 7 banks out of 9 indicated that it takes longer to be reimbursed by BDF Ltd in case of default of borrowers. However, the manager of the SME guarantee fund pointed out that they have reduced that complicated procedure. She said that they no longer wait for the customer to reach class 5 according to BNR risk classification (Table 4.5) to execute the collateral. By now, the customer has to reach class 3 (Table 5) and BDF Ltd pays 50% of what is due to the bank and the remaining amount gets paid after the bank has executed the collateral.

Table 5: BNR classification of non-performing loan

class	Related criteria for classification
Class 1 Normal Risk (Pass);	**subjective criteria include all of the following:** where the financial condition of the borrower is sound; where there is adequate documentation to support the granting of credit, such as current financial statements, cash flows, credit checks and evaluation reports on collateral held; and If the account is supported by collateral, the collateral shall be unimpaired. **objective criteria include all the following:** a credit facility with fixed repayment which is up-to-date in payments; and an overdraft or credit facility without fixed repayment which is operating within the approved limit; with unexpired credit line; with interest charges covered by deposits; with no hardcore and showing turnovers which are equivalent to, or greater than the approved credit line plus interest charges.

Class2. Watch (Special Mention);	**subjective criteria include any of the following**: a credit facility which is currently up-to-date but evidence suggests that certain factors could, in the future, affect the borrower's ability to service the account properly; There may be evidence of impairment of the collateral; a credit facility which may deteriorate because of current market conditions affecting the sector or industry; a deteriorating trend in the financial performance of the debtor; or a renegotiated credit facility which is up-to-date in repayments and adequately secured for a minimum of three months after rescheduling during which period there would have been no inherent weaknesses affecting repayment. **objective criteria include any of the following:** for a credit facility with fixed repayment dates; when the principal or interest is due and unpaid for thirty days to less than ninety days; the interest charges for thirty days to less than ninety days have been capitalized, refinanced or rolled over; or for an overdraft or credit facility without fixed repayment dates: when the approved limit has been exceeded for thirty days to less than ninety days; the credit line has expired for thirty days to less than ninety days; the interest charge for thirty days to less than ninety days has not been covered by deposits; or the account had turnovers which did not conform to the business cycle of twelve (12) months.
Class3; Substandard	**Subjective criteria include any of the following:** credit facilities display well-defined credit weaknesses that jeopardize the liquidation of the debt such as inadequate cash flow to service the debt, undercapitalized or insufficient working capital, absence of adequate financial information or security documentation and irregular payment of principal or credit facilities that are not protected by the current sound net worth and paying capacity of the borrower; **Objective criteria include:** a) Any of the following credit facilities meeting the criteria specified in Article 3, on which principal or interest remain unpaid or where credit line is exceeded or expired, for ninety days to less than one hundred and eighty days.
Class4; Doubtful	**subjective criteria include any of the following:** where the collection of the debt in full is highly questionable or improbable; or credit facilities which, in addition to the weaknesses existing in substandard credits, have deteriorated to the extent that full repayment is unlikely or that realizable security values will be insufficient to cover the bank's **objective criteria include** Credit facilities meeting the criteria specified in Article 3 on which principal or interest remains unpaid or where credit line is exceeded or expired, for one hundred and eighty days to less than one year.
Class 5; Loss.	**subjective criteria which include any of the following:** credit facilities that are considered uncollectable or which may have some recovery value but it is not considered practicable nor desirable to defer write-off (even though partial recovery may be effected in the future); an account classified as Doubtful with little or no improvement over the

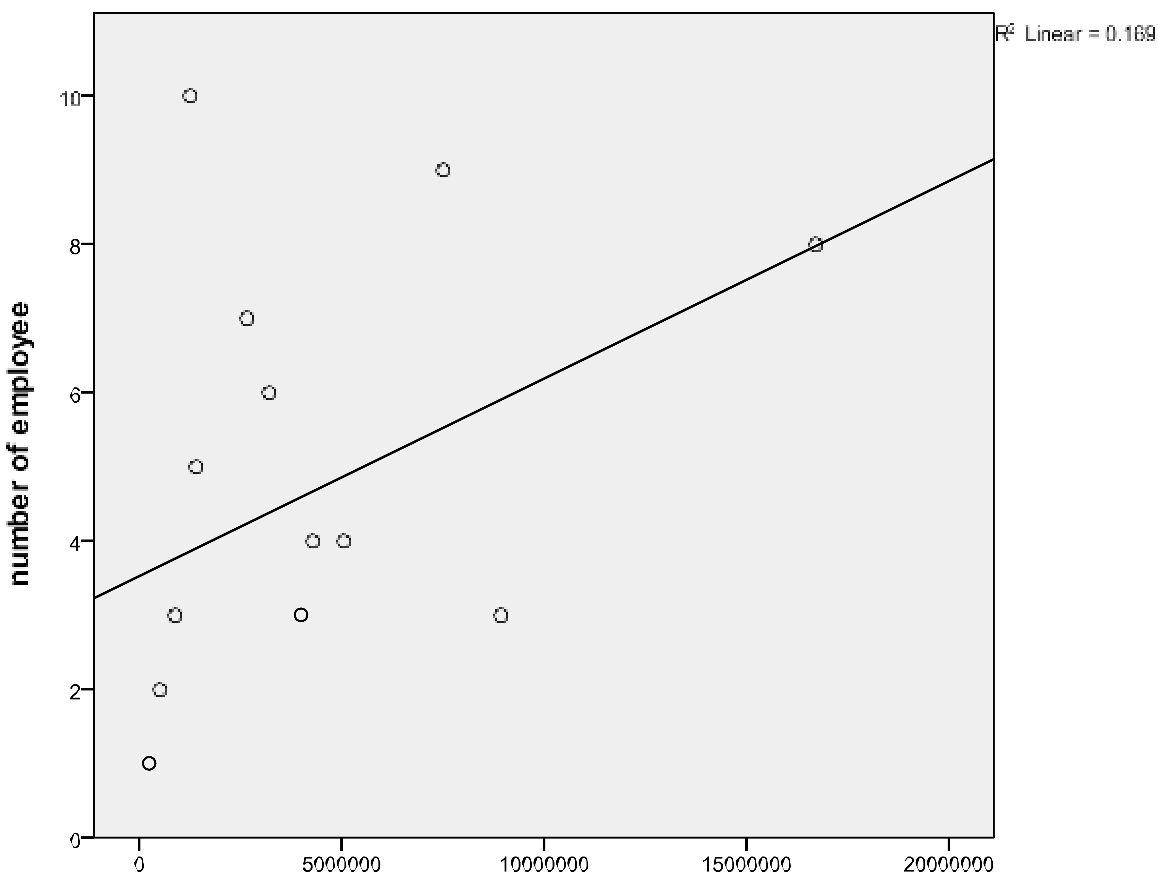
	period it has been classified as such; and **Objective criteria which include** a) Credit facilities meet the criteria specified in Article 3, on which principal or interest remains unpaid or where credit line is exceeded or expired, for twelve months or more.

Source: Official Gazette n° special of 30 March 2011

Objective two: The relationship between BDF Ltd SMEs guarantee fund and employment creation

It is understandable that, for the researcher to know if the guaranteed amount has an impact on the number of employees that an SME in Kigali employs, the question related to this objective was asked only to SMEs which received the BDF Ltd guarantee. This means that the analysis would consist of 44 SMEs; unfortunately, only 15 SMEs have provided all the required information to make the analysis. So, it is important to clarify that the following information concerns only 15 SMEs out of 44 SMEs. For analyzing the relationship between the number of employees and the guaranteed amount, the researcher used the scatter plot, Kandalla's tau correlations and regression analyses.

Scatter plot.



Source: author's compilation

Figure 5 Scatter plot showing the relationship between the number of employees and the guaranteed amount.

Figure 5 shows a positive relationship between number of employees and the guaranteed amount.

Kendall's tau correlation analyses

According to [17], it is advisable to use Kendall' 's Tau when you have a small data set with a large number of tied ranks instead of using Spearman's coefficient. Moreover, he estimates that Kendell's statistic is a better estimate of correlation in population, as such we can draw more accurate generalizations from Kendell's statistic than from Spearman's. This is the reason why the researcher has used Kendall's in calculating the correlation between our two variables.

Table 6 Kendall's Tau, Correlations analysis between number of employees and guaranteed amount

			number of employees	guaranteed amount
Kendall's tau_b	number of employees	Correlation Coefficient	1.000	.370*
		Sig. (1-tailed)	.	.031
		N	15	15
	guaranteed amount	Correlation Coefficient	.370*	1.000
		Sig. (1-tailed)	.031	.
		N	15	15
***. Correlation is significant at the 0.05 level (1-tailed).**				

Source: author's compilation

There was a weak but significant relationship between the number of employees and the guaranteed amount, $r = .37$, p (one-tailed) < .05.

Table 7: Regression Analysis

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.411[a]	.169	.105	2.671

a. **Predictors: (Constant), guaranteed amount Source: author's compilation**

There is a significant relationship between the number of employees and the guaranteed amount, $r = .411$ from this number, we can see that our relationship is weak as it is < 0.5. The value of r^2 is .169 which tells us that variation in the number of employees was encountered for 16.9% of the variation in guaranteed amount explaining that 83.1% of the variation in the number of employees of our SMEs was encountered from other factors.

Table 8: Regression Coefficients

Model		Unstandardized Coefficients			Standardized Coefficients	
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.520	.958		3.675	.003
	guaranteed amount	2.662E-7	.000	.411	1.625	.128

a. Dependent Variable: number of employees
Source: author's compilation

With the regression equation $Y = B_0 + B_1X$, Thus $Y = 3.520 + 0.0000002662X$. We have from table $B_0 = 3.520$, this means that 3.5 ~ 4 employees will be hired with 0 guaranteed amount (X=0). We can also observe that B_1 equals 0.0000002662. This means that with one Rwandan franc guarantee, 0.0000002662 extra jobs will be created. In other words, with RWF 10,000,000 of guarantee, 2.662 ~ 3 jobs will be created. Thus, creating one job requires RWF 3,333,333. Thus, we can conclude that the guaranteed amount makes a significant contribution ($p < 0.005$) to predict job creation for SMEs in Kigali.

Objective three: To examine if the credit guarantee fund can help to increase the sales turnover of SMEs.

This question also concerns those respondents who are aware of the existence of the fund.

Table 9 Credit guarantee fund and sales turnover of SMEs.

Frequency		Per cent
yes	63	100%
no	0	0%
Total	**63**	**100.0**

Source: Field data

All 63 respondents agreed that if they were given a guarantee, this could increase their sales turnover.

DISCUSSION

Summary of Findings

In Rwanda, SMEs comprise over 98 % of private sector establishments and employ the majority of the population. This means that growth in the SME sector in Rwanda could be of strategic importance in addressing the challenge of unemployment, and trade deficit, and reducing its dependence on external grants and loans. However, SMEs meet the financing gap. The general objective of this study was to analyze the effectiveness of BDF Ltd and the growth of SMEs in Rwanda especially those in Kigali. The following findings were found:

Objective one

The first objective was to examine the accessibility to the BDF Ltd credit guarantee fund by SMEs in Rwanda especially those of Kigali City. To analyze the accessibility, the researcher judged it important first of all to know the degree of awareness of the existence of the fund by SMEs. Findings showed that 71% of SMEs in the sample were aware of the existence of the fund, 6% of respondents were not aware of the existence of the fund 23% said that they understood about the fund without real information on what they do. The first category of those who are aware is made by people who have been either financed (68.9%) or not (30.2). The field data showed that among those who are not financed, some are voluntarily excluded (15.8%) and those who are involuntarily excluded (84.2%). people who exclude themselves from getting finance do so as they don't need the fund because they have sufficient collateral to present to the bank or their religious convictions do not match with the fund features. For instance, some said their religion forbids paying interest on borrowed money. People who are involuntarily excluded from the fund are due to the following reasons: Those who are not able to find the remaining percentage of required collateral. A good example is youth who, after finishing their studies want to start businesses. In this case, BDF will cover their loan at a rate of 75% of the loan, and this means that they are required to provide at least 25% or 50% of the loan as collateral, depending on the bank risk coverage required. If they don't find that portion, they are excluded from being financed. Those with start-up businesses: the majority of banks questioned said that they finance start-up businesses at a fair rate as they are new on the market, and their repayment capacity is doubtable. They claimed that most of those businesses fail after a short time because of a lack of customers or entry into the market which can be hard for them. Thus, if they fail, it means that they will then not be able to reimburse the loan. Normally when banks analyze the repayment capacity of a person, they compare the sales on the income statement of the borrower and movements on his account. So, for start-up businesses, those movements do not exist or are weak. Moreover, the income statement is made by projected figures and not real figures, the reason why banks see the repayment capacity of those businesses as doubtable. This perception increases the number of people who are involuntarily excluded from finance. Note that some respondents from banks said that they do not finance Hangumurimo products because they are all start-up businesses. Stringent procedures of access to the loan under the fund also decrease the number of people to be financed. Several respondents said that after having an experience with their colleagues who applied for loans and seeing how hard it was and how long times it took, they decided not to apply for the loan. Another factor which excludes people from being financed is the insufficient knowledge of how to prepare the project. People can have good projects in mind but fail to present them on paper or to show how profitable it is. This factor is recognized by both the bankers and BDF staff. Some respondents also mentioned unfairness in terms of corruption and pointed out that some people present a good project for asking for funds and this project can be given to others. The last factor which can exclude people from being financed is a lack of personal contribution to the project. For a bank to finance a project the promoter must possess at least 10% up to 30% of the project depending on the bank. Thus, some of the respondents, including the bankers and manager of SME guarantee fund in BDF said that this also remains a key factor in the non-financing of SMEs. The second category is made up of people who said that they heard about the fund through television, advertisement or through radio but they do not know what the fund is for, which means that they have not accessed finance from the fund. Some of them know it as a fund for only youth and women while others said that it is a fund for only agriculture projects. The third category is that of people who said that it was the first time they heard about that fund. Comprising 6% of the total respondents, this category has never benefited from the fund as they are not aware of it. After analyzing the degree of awareness of the fund by SMEs in Kigali, the next question was to assess if it is difficult to access the fund for those who are aware of it and to understand the related reasons. Although the majority of SMEs affirmed that they knew that fund, 95.2% of them claimed that it was difficult to access the fund, while 4.8% of them recognized that it was not difficult. The factors which make access to the fund difficult include: (1) 63.3% said that it was due to the long application process. This loan application is on both the bank side and the BDF side, but most of the users of the fund explained that the long process is found on the bank side. The short time used on the BDF side is justified by the interview with the manager of the guarantee fund, who said that, for an application to be processed, it takes only a week. (2) 23.3% indicated extra banks requirement, (3) 6.7% pointed out the collateral requirement (those who are not able to find the additional collateral required by banks after being funded by BDF Ltd) and (4) 6.7% said that access is exacerbated by the high management fee. The accessibility to the fund is also influenced by banks' utilization of it, it is in this regard that the researcher investigated the bankers to know what challenges they encounter in financing the SME users of the fund. It is understandable that the higher the challenges, the lower the utilization of the fund. All respondents from 9 banks agreed that the first challenge is the high default rate of those SMEs and this rate is exacerbated by the fact that most of the funded businesses are start-ups with low knowledge of the market or with moral hazard intentions. 7 out of 9 banks indicated that even the claiming process, and procedures, in case a borrower defaults, could be long. According to the manager of the SMEs guarantee fund in BDF Ltd, this process has been reduced where, previously, they used to pay back a loan in case a borrower attains “class 5” according to BNR risk classification. Currently, they pay 50% of the amount due when the borrower achieves “class 3” according to BNR risk classification. The reaming is paid after the execution of the collateral by the bank.

Objective two

The second object was to evaluate the relationship between BDF Ltd SME's guarantee fund and employment creation. Regression analyses and Kendall’s tau correlation were used to evaluate this relationship. Kendall‟s tau correlation has shown that there was a significant relationship between the number of employees and the guaranteed amount, r =.37, p (one-tailed) < .05. And using regression analyses, r = .441 and the value of r^2 was .169 which told us that variation in several employees was encountered for 16.9% of the variation in guaranteed amount. With the regression equation $Y = B_0 + B_1 X$, from our study $Y = 3.520 + 0.0000002662$. We had from table B_0 = 3.520, this means that 3.5 ~ 4 employees will be hired with 0 guaranteed amount (X=0). We can also observe that B_1 equals 0.0000002662. This meant that with one Rwandan franc guarantee, 0.0000002662 extra jobs would be created. In other words, with RWF 10,000,000 of guarantee, 2.662 ~ 3 jobs will be created. Thus, creating one job requires 3,333,333 RWF.

Objective three

The third objective was to examine if the credit guarantee fund can help to increase the sales turnover of SMEs. All respondents agreed that if they were given a guarantee this could increase their sales turnover.

Objective four

The fourth objective was to analyze if BDF Ltd SMEs guarantee fund has been able to satisfy the demands of borrowers from 2011 to 2013. Findings have shown that 97% of all applications of SMEs from Kigali city were approved and 3% were rejected. The reasons for rejection, according to the manager of the SME guarantee fund include: having sufficient collateral not needing a guarantee, the project not being well prepared, and applying to a specific product without meeting all requirements like age. Moreover, referring to the interview with the manager of the SME guarantee fund, BDF Ltd has never met the challenge of lacking funds since it started. She mentioned that fund comes from different areas. Some of the backers are the Ministry of Trade and Commerce, the Ministry of Agriculture, the Rwanda Development Bank, the Ministry of Gender and Family Promotion and the United Capital Development Fund.

CONCLUSION

It is difficult for SMEs in Kigali to access the guarantee fund because of the long application process, extra bank requirements, lack of additional collateral, high management fees, unfairness and limited level of utilization of the fund by banks which is highly influenced by high default rate of SMEs and lengthy claim procedures in case of default. There is a significant positive relationship between credit guarantee funds and employment creation for SMEs in Kigali, r = .37, *p* (one–tailed) < .05. And with regression analyses r^2 was .169 which told us that variation in several employees was encountered for 16.9% of the variation in guaranteed amount. We can also predict that 3,333,333 RWF of guaranteed amount can help to create one extra job for SMEs in Kigali. They agreed that if they were given a guarantee this could increase their sales turnover and we can conclude that BDF Ltd has been able to satisfy its demand during 2011 and 2013 As findings have shown that 97% of all applications of SMEs from Kigali city were approved and 3% were rejected and SMEs guarantee fund, BDF ltd has never met a challenge of lacking fund since it started.

Recommendations

According to the results obtained in this study and considering the impact the credit guarantee has on the growth of SMEs in Rwanda especially those in Kigali, the following recommendations were formulated by the researcher for BDF LTD, Government Banks and SMEs. BDF Ltd. should put much effort in doing a follow-up on the projects that they have financed. More staff should be hired because this follow-up is a key point for business to succeed. In other words, this will reduce the high defaulting rate hence increasing banks' utilization of the fund. The follow-up should be on-site follow-up and not only telephone follow–up. The on-site follow-up will ensure that people use the fund on what was planned. BDF Ltd. should also do a follow-up in banks to know their feedback on approved applications by the fund especially for Hangumurimo products, as sometimes banks refuse applications which were approved by BDF. So, this will help to know why banks refused those applications and see how to mitigate the raised issues. It should sit together with bankers and see how the application process should be reduced. BDF Ltd. should conduct a study to analyze the possibility of doing a parallel recovery of non-performing loans together with banks. This would reduce the weakness of the bank of not doing the recovery at the right moment hoping that BDF Ltd will reimburse in case of default and this will alleviate the people's intention of taking this fund as a grant.

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