



# Credit NGOs' sustainability in rural financial market: a SWOT analysis on DAYBANG

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## Abstract

**Purpose** – The purpose of this paper is to analyze the sustainability of Credit Non-Governmental Organizations (CNGOs) such as DAYBANG.

**Design/methodology/approach** – This paper investigates and describes the operating details, through the web, of DAYBANG using SWOT analysis.

**Findings** – By the means of SWOT analysis it is found that clarified information, credit scoring system and the law of large numbers set up by DAYBANG will decrease the asymmetric information influence, which will result in adverse selection and lowering of the transaction cost; while operational risk and moral hazard are the weaknesses to be overcome. SO, ST, WO, WT strategies deserve consideration.

**Originality/value** – Researches on informal finance have focused on loans between relatives, friends and usurers. Few literatures, however, have studied the Credit NGOs (CNGOs). DAYBANG is a newly-emerging CNGO which has resulted in immense public interest because of its Web operating platform. This paper discloses its operational characteristics, using SWOT analysis, which expands the research on informal finance.

**Keywords** China, Credit, Loans, Internet, Rural regions, Financial markets, Credit Non-Governmental Organizations, Sustainability, Rural financial market, SWOT analysis, DAYBANG

**Paper type** Research paper

## 1. Introduction

It is generally accepted that the informal financial institutions are the key loan providers to farmers in rural China, originating in the incompleting rural financial market, primarily stem from risk-avoided formal financial institutions escaping from rural region in a long time. There are two main forms in the rural financial market that need to be critically assessed. The first is that loans were taken out by individuals such as relatives, neighbors, friends and usurers, who control the risk from poor credit scores farmers by high rate of interest and space-oriented credit. Usury lenders could charge higher interest rates hence make more profits. Relatives and neighbors also have incentives since they can get the respect and advantages from the borrowers. Actually borrowers would not default subjectively even the objective condition worse because of they know each other between lenders and borrowers. There is no easy means to place a market value on the transaction beyond the accumulation of goodwill,

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social capital, and reciprocity (Turvey *et al.*, 2010). The second popular informal institutions are Credit Non-Governmental Organizations (CNGOs), which allow farmers who were excluded from formal lenders and former lenders. Generally speaking, CNGOs are set up by charity organizations and individual or programs provided by world bank or other international financial institutions.

CNGOs started its fund injected role from Bangladesh are recognized as a means to help poor farmers get access to the loan. As the Grameen rural banking system, this kind of organization provides loans to poor farmers who are unable to provide collateral and indoctrinated in Grameen social values (Hussain *et al.*, 2001). While a large number of micro-credit NGOs do not survive for long and those who survive do not grow beyond the subsistence level. The low survival rate as well as stagnated growth own to the flawed developmental role of the CNGOs (Hoque, 2004). The financial scheme of NGOs had the problem of mixing social and financial objectives (Shete and Garcia, 2011; ACDI/CEE, 1995).

DAYBANG is a newly emerging CNGO operated as a P2P microfinance in the context of e-commerce context, which is purpose of to help poor farmers access the credit while provides a platform for those kind donors to make loans to farmers. DAYBANG announces farmers' (borrowers) information collected by their staff on the web site to seek to maximize outreach to the farmers and the investors while remaining financially sustainable. Multi-level interest rate is designed that shows how optimal interest rates depend on information regarding moral hazard and adverse selection problems (Katchova *et al.*, 2006). Actually DAYBANG itself is not a lender which is obvious different with other micro-finance institutions (MFIs) and informal usurers, which focuses on the corporate social responsibility (CSR). By using a strongly organization-centered view, many business and communication scholars regard CSR as a special corporate program that is carried out in order to deal with different stakeholders (Schultz and Wehmeier, 2010; Signitzer and Prexl, 2008). The large and far reaching informal financial usurers have naturally given rise to a wide variety of responses and reflections. The causes, effections and implications have all been extensively debated and many authors have made recommendations as to future policy. However, given the magnitude of the space-oriented informal financial forms a range of literatures can only be welcomed. CNGOs have advocated actions across a spectrum from making loans to farmers to the SMEs, which give us a new view of reassessing our entire research approach to informal financial institutions.

CNGOs make rural financial market completely. As formal rural financial institutions such as ABC, RCCs and PSBC in China would always avoid to provide loan to poor farmers, which are characterized by high costs and lower interest rates (Shete and Garcia, 2011; Hoff and Stiglitz, 1990), and are often inadequate in supply (Shete and Garcia, 2011; Chaudhuri and Gupta, 1996). Thus, a number of MFIs have been emerging to fill in the gap. However, there is adverse selection because only borrowers know whether their project is of high or low quality but the MFIs do not. The MFIs are competitive, risk neutral, and they offer loan contracts specifying the amount to be repaid only if a borrower's project makes a profit (Batabyal and Beladi, 2010). Microfinance has innovated approaches beyond the traditional financial intermediary role, in which building human capacity through social intermediation and designing group-based lending programmes are proven to be among the effective risks in relation

to providing credit to the rural poor, the special purpose vehicle (SPV) is identified to hold the MFIs (Dusuki, 2008).

The rate of GB's loan repayment is 98 percent, which makes GB-type micro-credit systems functioning not only in Bangladesh but also in 50 countries across Asia, Europe, Africa, Oceania, and in the USA (Hussain *et al.*, 2001). Can CNGOs function in the period of web?

The general CNGOs literatures do not address adequately, if at all, the role of CNGOs to help farmers to access to finance. In addition, while a number of specific studies do explore the characteristics of informal finance especially in the fund flow between farmers and their relatives, friends and usurers, we would highlight the function of CNGOs operated on the basis of web.

This paper seeks to draw out the main strengths of CNGOs such as DAIBANG which operated on the web platform compared to other informal financial institutions and then place them in the context of rural financial market and consider what conclusions can be drawn both for future policy on the rural financial market development and conduct of future academic research related to these issues.

## 2. SWOT analysis

The strategic management tool of strengths, weaknesses, opportunities, threats (SWOT) analysis is used to group a number of current and emerging issues (Helms *et al.*, 2011). In order to gauge the SWOT of the newly CNGOs operated as DAYBANG, evidence of the fund resource, loan managerial approach and the sustainable capability has been collected and, in addition, the possibility to access the credit for farmers and repayment have been noted.

### *2.1 Operating characteristics description of DAYBANG*

DAYBANG collects fund by means of web from people who are interested in investment and donate. These people are actively managing their investment to seek the optimal profit as well as charity to society. Furthermore, individuals spere the risk by means of the lowest benchmark requirement of RMB 30 to invest. In other words, the start-up capital of investment in DAYBANG is only RMB 30, which is attractive to lots of people, rather it is manageable and in many cases is within individuals' power and ability to overcome the moral hazard if farmers fail to repay. The easy-investment threshold implies that people from different parts of the world have the possibility to make profits and charity in the same time to foster farmers to get access the credit. Of the limited fund sources into MFIs, there is a focus on sources of finance from the masses and social networks. In such a circumstance, DAYBANG attempts to explore the role of public, which fills the funding gaps between demand from farmers and supply from the lenders. By far, the business of DAYBANG is restricted in some provinces such as Jiangxi, Hubei, Anhui, Hunan, Guangxi and Guizhou. The life of common loan is designed as no more than one year and the installment is the main method both for access to loan and repayment. The life of petty loan (the principal is no more than RMB 5000) is no more than one month, which is repaid by sum payment/the interest rate level of former is from 0.9 to 1.3 percent per month by different projects, respectively, while the petty loan is 1 percent per month (the life of the petty loan is one month). Managerial expenses collected from lenders (investors) is around 3.6 percent

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one year and 1 percent higher than that if the loan is guaranteed by DAYBANG, while no expenses collected from lenders on petty loan.

Like other formal and informal finances, goodwill and credit investigation of farmers by DAYBANG are requisite. The staff in village branches of DAYBANG are responsible for collecting the true information of farmers by visiting their home.

## 2.2 SWOT analysis

After a brief presentation of the operating characteristics of DAYMANG, it is now important to highlight the main SWOT for DAYBANG.

### 2.2.1 Strengths

Clarified information. There are two channels for investors to make clear the information of farmers (borrowers), which is possible to lower down the risk of adverse selection – the main reason why formal financial institutions will avoid to provide the credit to farmers. The first channel is from the DAYBANG's public information of each borrower collected from investigating in farmers' household by the staff of DAYBANG, while the second channels is the other investors' investment action.

Owing to modern technology as internet widely used, web platform is the main channel of funds from investors to borrowers such as farmers. Investors who have the charity will to help poor people get access to credit can control their lending decision-making by transparent information of borrowers provided by DAYBANG, which suggests that the investors' lending decisions are systematically fair in favour of farmers who have goodwill and will put the money in the process of producing. No significant change in information asymmetry between pre- and post-lending when DAYBANG released a clarity information is found. As in general, there is adverse selection because only borrowers know whether their project is of high or low quality but the MFIs do not. The MFIs are competitive, risk neutral, and they offer loan contracts specifying the amount to be repaid only if a borrower's project makes a profit, otherwise, this borrower defaults on his contract (Batabyal and Beladi, 2010).

Also, borrowers' loan characteristics can be passed on among all investors who take part in the same lending project, which objectively demonstrates the borrower's project information. Obviously, internet is the main role to make information transparent, which partly substitutes traditional information publicly channel and will be lower costly.

In this circumstance, farmers who hope to apply the loan successfully from DAYBANG will try to provide the operating demand to satisfy the mass investment trend to get the fund as soon as possible. In other words, the more investors join in, the shorter the borrower can get access to the loan successfully.

Statistically, participation in farm-activities and off-farm activities other than non-operating activities will increase the probability of farmers to participate in credit market (Shete and Garcia, 2011) provided by DAYBANG. The statistic description analysis will explain this kind of trend. Tables I and II show farm-activities fund demand is easiest to get access the credit, then the operating activities, while house construction and life usage for fund demand are the most difficult to get access to the credit. This seems identify internet will make the information clarified in favour of helping farmers who conduct operating activities easier to access the credit.

Law of large numbers. Like the theory of insurance, a large number of investors can diversify the risk resulted from the default of farmers. When the investor, for example, is going to lend the money to a farmer (the borrower), the investor will always watch

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Loan classification	One-day process since applying for farmers by average (%)	Three-day process since applying for farmers by average (%)	Seven-day process since applying for farmers by average (%)
Planting and cultivation	82	96	100
Operating activities	68	84	100
Small farm machinery and appliances	43	62	88
Education	40	76	96
Medical treatment	28	68	86
House construction	18	54	97
Life	18	43	77

**Table I.**  
Observed value of variables

**Source:** Averaged by five months during February to June in 2011 from the web site of DAYBANG: www.daybang.com

**Table II.**  
Statistic description of variables

Variables	Minimum	Maximum	Mean value	SD
Planting and cultivation	82	100	92.6667	9.45163
Operating activities	68	100	84	16
Small farm machinery and appliances	43	88	64.3333	22.59056
Education	40	96	70.6667	28.3784
Medical treatment	28	86	60.6667	29.68726
House construction	18	97	56.3333	39.55165
Life	18	77	46	29.61419

the other investors' action. The investor will follow to join in the loan if other investors have taken part in. The more investors, the more likely the investor will make the loan (Table III). In such a case, there will be a Nash equilibrium for the farmers to get access to the credit. The matrix will be shown in Table III.

There is an assumption underlined in the matrix that L and L\* will suggest the possible revenue for all investors from the loan project to farmers. In order to address the information clarified from investors' action, farmers default has been simplified. Here, assumed farmers successfully applied loan from DAYBANG could pay-in-full, no default will be occurred.

The investor	Other investors	
	Lending	No lending
Lending	L,L*	L,0
No lending	0,L*	0,0

**Table III.**  
The investor and other investors' action

**Notes:** L means that the fund from the investor put in the loan pool for the farmer who has applied to be the borrower by DAYBANG; L\* indicates that the fund from other investors put in the loan pool for the farmer who has applied to be the borrower by DAYBANG; absolutely, both L and L\* will larger than zero (L > 0; L\* > 0)

Credit scoring system. Why do lenders shrink back from risk pricing in certain credit markets, even when a sophisticated system of credit scoring is already in place (Pryce, 2003)? DAYBANG has set up its credit scoring system by local staff spersed over the countryside, who inquires the farmers households' information by face to face talking to visit their home and registering their assets, ID credentials and household registering book which are kept in records as the file. Loan characteristics, etc. are regarded as the standard variable in credit scoring assessment statement, while classified into four grades such as A, B, C, D (A is the highest credit grade, D the lowest) (Table I). The standard of credit grade will defined as the region, respectively, higher standard with higher average household income in the region, however, there are the same assessment indexes, which shown in Table IV.

As generally, loan characteristics and borrower financial characteristics are significant variables in determining type of loan outcome (default or paid-in-full) and time to outcome. Changes in the economic environment and farm economy during the life of the loan are significant (Dixon *et al.*, 2011). The staff of DAYBANG will make the evaluation by these two kind of indexes, and highlight the project revenue assessment and other income and expenses during the loan lifetime which can suggest the changes in the economic environment and farm economy during the life of the loan.

*2.2.2 Weaknesses.* Asymmetric information in the form of moral hazard is still unsolved. As general, asymmetric information in the form of moral hazard and adverse selection can result in sizable program costs (Esuola *et al.*, 2007) for loan conducted. DAYBANG could not seek a better way to control the risk from moral hazard because of the farmers financing characteristics, which is the same as other formal finance and informal finance.

In addition, only the limited regions and farmer households could be benefit from DAYBANG programme. As shown in the web site of DAYBANG, there are only six provinces in the business coverage of DAYBANG and moreover, five to seven farmer households are selected to be as the borrowers each day.

*2.2.3 Opportunities.* Based on the new technology, DAYBANG has built an financial innovational platform in China, which effectively accomplishes interaction and cooperation between different investors and farmers. It also encourages flow

Level one index	Level two index
Borrowers financial characteristics	Experience Skills Real-estate Inventory Income resources Expenses
Loan characteristics	Loan classification Usage of loan Funds application plan Project revenue assessment Other income and expenses during the loan lifetime Subjective evaluation by staff

**Source:** Selected from the web site of DAYBANG: [www.daybang.com](http://www.daybang.com)

**Table IV.**  
Indexes in the credit scoring statement

of fund resources. Innovation has been a key factor in promoting the competitiveness of enterprises and contributes to increase in added value and in market shares through new products, processes, and services (Li *et al.*, 2011). Because of the financial innovation from the platform DAYBANG sets up, the adverse selection will be avoided for the clarified information of borrowers' by means of traditional investigating and announcement on the web and, in addition, investors can make the lending decision which decreases the agency cost. Financial intermediary will rely on internet technology to bring down the transaction cost and evade the pre-risk which will result in adverse selection. As an example, DAYBANG will give rise to an opportunity both to informal finance such as CNGOs and to formal finance. In a word, effective use of internet technology in CNGOs has great impact on its competitiveness and sustainability.

*2.2.4 Threats.* The diffusion of a financial innovation will increase the influence to the operational risk in any business line with different rate (Philippas and Siriopoulos, 2009). DAYBANG, however, will result in a higher operational risk. The strict borrowers selection requires the staff of DAYBANG will make an on-the-spot investigation, which needs more expenses on management. Whether the three percentage of managerial fee will cover the expenses is pending.

Fund-raising and resource management is another threat for the sustainability of DAYBANG. Whether investors continue to invest their money in this programme will rely on the first-round investment revenue. DAYBANG is in the period of its start-up time, which possibly incur the operational loss and farmers' default. Once the loss and default occur, there will weaken the goodwill of DAYBANG.

### 3. Conclusions and suggestions

The rural economic development of a developing country like China depends much upon the success of rural finance. In China, though the rural finance is gradually reform and increasing the service, many farmers households due to some constraints cannot get access to the finance service in the rural financial market. Lack of efficient and reliable management, collateral-free loan, formal finance is gradually escaping from rural financial market, though the governmental policy strengthen the support for farmers financial service. Informal finance such as CNGOs as the main part of MFIs are found to be the one of the most important rural financial institutions. However, CNGOs' sustainability is in doubt. Internal control mechanisms are critical for the success of MFIs (Hartarska, 2009) which is the same as CNGOs. Based on the SWOT, a set of strategies should be come up (Table V).

#### *SO strategy*

Asymmetric information constraints farmers to access the loan. To overcome the unfavorable situation, the clarified information by internet and on-the-spot

	Outside	Strengths	Inside	Weaknesses
Table V. SWOT and strategies	Opportunity	SO strategy		WO strategy
	Threat	ST strategy		WT strategy

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investigation deserves to continue to be consideration. Each investor should be made aware of the project's economic opportunities around the lending programme and possible risks resulted from the default of farmers.

#### *ST strategy*

To overcome the operational risk, business will be widened and expanded as traditional corporate management. DAYBANG is required to provide a sizable financial service to the farmers so that the entrepreneurs of DAYBANG could be more knowledgeable and capable of running the business smoothly, efficiently and effectively (Islam, 2009).

#### *WO strategy*

The success of loan is measured using default rate of farmers households. The loan after-monitoring is not only relied on the staff in DAYBANG, but also the public of all investors. The public information of loan projects should be dynamic to display the operating process of farmers to avoid the moral hazard.

#### *WT strategy*

Both operational risk and moral hazard constraint the development of DAYBANG. The major institutional constraint reflects formal and informal institutions (Atherton and Smallbone, 2010). Business expanding and financial innovation offer an alternative perspective and enhancement of managers' personal perceptions (Aranda and Arellano, 2009) of business priorities is also important to overcome the weaknesses and threats.

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