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**Towards demand-driven financial services in  
Northern Vietnam: A participatory analysis  
of customer preferences**

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## **Abstract**

Analyzing secondary and primary data, this paper suggests a shift in national development policies from solely promoting rural credit to supporting savings activities. The household data are econometrically analyzed applying the Conjoint Analysis (CA). The CA gave valuable insights into how to improve outreach of formal financial institutes (FFIs) by adapting the credit products to client preferences and revealed an unattended demand for savings instruments. Due the enormous credit outreach of the FFIs in Vietnam, it would be more efficient to launch a credit consolidation policy and to implement a reliable and sustainable deposit collection system at the village level. However, in national policymaking a paradigm change must take place and the capability of rural households to save needs to be recognized by policy-makers.

**Keywords:** rural credit, conjoint analysis, Vietnam

# **Towards demand-driven financial services in Northern Vietnam: A participatory analysis of customer preferences**

Thomas Dufhues, Gertrud Buchenrieder, Franz Heidhues, and Pham Thi My Dung

## **1 Introduction<sup>1</sup>**

Vietnam has been engaged in a process of enhancing the role of market forces in the economy since 1986-87. This transition process, known in Vietnamese as 'Doi Moi' ('renewal'), is aimed at restructuring Vietnam's legal, regulatory, administrative, investment and foreign trade apparatus and policies to transform its centrally planned economic system into a market economy with 'socialist characteristics' (BRYANT 1998). In some sectors the reforms have achieved impressive results, bringing economic growth rates up to an annual average of 7.5% for the years 1995-99. Nevertheless, Vietnam is still an extremely poor country (WORLD BANK 1999). Three-quarters of Vietnam's population (77 million people) are engaged in subsistence farming and the majority lives in rural communities (BA 1997).

In the transition process, the reform of the national financial system plays a key role (HEIDHUES and SCHRIEDER 2000). The tasks ahead include: strengthening popular faith in the financial system and moving the banking sector to financial self-sustainability and expanding its outreach to include the newly emerging private sector not only in urban but also in rural areas. A financial system that enjoys the confidence of the population will be able to boost the domestic financial savings rate (percentage of GDP), now hovering at around 20%, up to rates of 30-40%, as attained in other East Asian countries (WORLD BANK 1998 and 1995). Vietnam is still largely a cash economy, with cash accounting for about 50% of the M3 money supply (WOLF 1999). There is consensus that in transition countries such as Vietnam, for the financial system to develop a comprehensive service portfolio to all market segments, the regulatory and supervisory framework for banking needs strengthening. In this context, the paper refers to the development of demand-driven financial services in a participatory way.

Broad access to appropriate and sustainable financial services has been pointed out repeatedly as being important for poverty reduction. It contributes to higher incomes and better food security (ADB 2000; BUCHENRIEDER and THEESFELD 2000; HEIDHUES 1995; SCHRIEDER 1996; ZELLER *et al.* 1997). In Vietnam many poor households are confronted with transitory food insecurity, even though their incomes seem to provide an adequate livelihood base over several years. Thus, there is a potential demand for savings, credit, and insurance services to more effectively stabilize consumption and to increase the ability to escape chronic poverty (KANBUR and SQUIRE 2001; SHARMA 2001; ZELLER 1999). Hunger eradication and poverty alleviation, particular in the Northern Uplands, is of enormous concern to the Vietnamese government (VBP 1999). The Ministry of Agriculture and Rural Development (MARD) proposes financial services as a powerful tool for poverty reduction (SIDA and MARD 1998). From the early 1990s onwards, the Vietnamese government has begun to establish and promote formal financial intermediaries (FFIs) such as the Vietnam Bank for Agriculture and

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<sup>1</sup> The research for this paper was carried out within the framework of the German-Thai-Vietnamese Collaborative Research Program (SFB 564) "Sustainable Land Use and Rural Development in Mountainous Regions of Southeast Asia". The funding from the Deutsche Forschungsgemeinschaft (DFG) and the co-funding from the Ministry of Science, Technology and Environment of Vietnam is gratefully acknowledged.

Rural Development (VBARD), the Vietnam Bank for the Poor (VBP) and the People's Credit Funds (PCFs) to provide the rural poor with cheap loans. This policy is based on the assumption that (1) the rural population is too poor to repay credits at market interest rates and that (2) capital is the factor constraining production and thus limiting food security.

The Vietnamese FFIs have been very successful in increasing their level of outreach. The state-owned VBARD and VBP have reached almost 4.5 million and 2.5 million rural households with credit, respectively (BAC 2001; HANH 2001). These are more than 58% of all rural households in Vietnam. Despite this success in terms of outreach, many rural households demanding credit still lack access. Even those credits that are targeted towards the poor seem to be bypassing the poorest groups, which often are identical to ethnic minorities (NEEFJES 2001; WORLD BANK and DFID1999). The supply of formal savings schemes is insufficient in Vietnam. Formal savings schemes have not been the focus of development efforts. Rural households are widely assumed to be too poor to save, and therefore the VBP, for example, does not offer any saving schemes. However, theoretical and empirical evidence suggests that even poor people want to, need to, and indeed do save for various purposes (KANBUR and SQUIRE 2000; RUTHERFORD 2000; SHARMA 2000; WRIGHT and MUTESASIRA 2001; ZELLER 2001).

The development of adapted financial products has been the orphan of research on financial markets in developing countries and is only now coming into its own (RUTHERFORD 2000). Thus, there is a pressing need to examine ways of designing and introducing new financial service products into micro-financial institutes (MFIs) to improve their outreach, depth, and access to them (WRIGHT 1999).

This research work aims at developing innovative client-oriented financial services in a participatory way to improve access to financial services. The objectives can be formulated as:

- 1) analysis of the supply of formal financial services, and
- 2) design of client-oriented financial services by means of participatory research.

Section 2 describes the different surveys used for the data collection and the methodology for the data analysis. In section 3 the supply side of rural finance in Northern Vietnam is discussed. Section 4 analyzes the potential demand for credit and saving services. Finally, conclusions and policy recommendations are summarized in Section 5.

## **2 Material and methods**

The complexity of the rural financial market system requires a whole set of different research methods and tools. Data from three different levels, the household level (demand side), the level of financial intermediaries (supply side), and the community level need to be collected and analyzed.<sup>2</sup> However, this research sets a special focus on the demand side, i.e. the household level. Data collection took place in the period from March 2001 to March 2002.

Secondary data were collected at all administrative levels. Semi-structured and unstructured interviews with key persons such as officials of mass organizations or political cadres at the commune and district level provided general information on the research region and gave

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<sup>2</sup> Community level is defined as all institutions, policies, and infrastructure above village level.

hints on access constraints to financial services.<sup>3</sup> Furthermore, primary data were collected at the commune level. Secondary data from the FFIs and non-formal financial institutes, like NGOs and special credit programs carried out by the state, were collected. Semi-structured interviews were conducted with bank staff from all hierarchical levels (credit officer to bank manager and district branch to headquarters). These data were analyzed from the point of view of performance indicators and information economics.

The main part of this analysis is based on the household/village database, comprising households of different ethnicity. Cross-sectional household-level data from the Yen Chau and Ba Be districts in Northern Vietnam were collected, whereby the sample contains agricultural households with and without access to services from the formal financial sector (see Section 2.2).

The perception of the target group, namely the rural population, is the most important part of this research work, particularly while designing the conjoint survey. Their view of reality permeates the whole research study to supplement and to validate all other data. Therefore, different PRA-tools were applied and had their influence on all parts of the research and its analysis. Depending on the purpose, different stakeholders were contacted with the PRA-tools: women – men, poor – rich, old – young, individuals – groups. PRA-tools applied included: cash-flow diagrams, mobility maps, wealth rankings, unstructured interviews (partly supported by photographs), different rankings, visualization workshops and role-plays with an external moderator, social mappings, and Venn diagrams.

## 2.1 Conjoint survey<sup>4</sup>

Conjoint Analysis (CA) is commonly used in commercial marketing studies and analysis of consumers' preferences and has its origin in psychological research (WITTINK and CATTIN 1989).<sup>5</sup> Assuming that a product can be defined as a vector in a multidimensional attribute space, and that the evaluation of the product is based on its attribute levels, it becomes theoretically possible to relate preference to attributes (JANSSEN *et al.* 1991).<sup>6</sup> A graphic illustration can be viewed in the Annex (Figure 2).

Each product possesses an almost infinite number of attributes. Many of these attributes do not have a measurable influence on the purchasing decision of a potential consumer or are considered as important only by a very small market segment. Therefore, it is neither possible nor useful to grasp all existing attributes and their levels in market research. It is necessary to reduce the attributes and their levels to a manageable size and to those which are most relevant to consumers in forming their preferences. Such a reduction requires interaction with

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<sup>3</sup> Due to Vietnam's socialist history, the so-called 'mass organizations' are found everywhere in Vietnam. They are hierarchically structured according to the administrative levels, e.g. Farmers' Union, Women's Union, Youth Union, and Veterans' Union. Some of these organizations offer small loans or organize training courses or saving groups at village level. The Fatherland Front is the holding organization of all other mass organizations and also has political influence on the local people's committees (GEPPERT, BUCHENRIEDER, and DANG 2002).

<sup>4</sup> A comprehensive description of the methodology of CA can be found in GREEN and SRINIVASAN (1978 and 1990).

<sup>5</sup> Preference is a one-dimensional psychological variable. It reflects the perceived advantage between two or more alternatives. The given preference to an alternative does not mean that this alternative is assessed as positive or good. A preference shows merely a relative assessment of alternatives (HAMMAN and ERICHSON 1994).

<sup>6</sup> A possible attribute of a credit product is the interest rate, with the possible level of 20% interest rate per year.



the potential consumers to determine the most relevant attributes and their levels. From the perspective of the target population, the attributes and their levels have to be determined in a ‘participatory’ process because this is pre-eminent for obtaining true-to-life results in the statistical analysis. Engineers and/or economists assigned with developing new products or services may have other priorities than the potential customer.

The rural population, and particularly farmers, were encouraged during open discussions to describe their financial background and economic conditions with the help of several participatory research tools. The qualitative data gathered allowed us to specify possible attributes of financial services, that is micro-credit and microsavings services. Then, relevant microfinance attributes and corresponding levels were pre-selected. These pre-selected attributes were again presented to the rural target group during group discussions and rankings. Here the importance of each attribute was verified or the attribute was dropped (Table 1 and Table 2).

**Table 1 Credit attributes and their levels**

Attributes	Levels
1. Interest rate (percent/month)	1) <i>High (1.2%/month)</i> 2) <i>Low (0.5%/month)</i>
2. Insurance of investment in livestock	1) <i>Insurance of livestock investment</i> (livestock that die due to accident or disease (buffaloes and pigs) will be replaced by their value at time of death; premium 5,000/month per animal) 2) <i>No livestock insurance</i>
3. Disbursal time of the loan	Disbursal time of loan in days from the first day of action to receiving the loan (e.g. in the case of VBARD getting the application form; in the case of VBP creating the group) 1) <i>Quick (7 days)</i> 2) <i>Slow (60 days)</i>
4. Lending scheme	1) <i>Group lending scheme</i> During a group lending scheme, all negotiations with the bank and commune authorities will be conducted by the credit group leader. The application form will be filled in by the group leader, the interest will be collected by him, etc. 2) <i>Individual lending scheme</i>
5. Collateral	1) <i>Land use rights (Green and Red Books)</i> 2) <i>Durable consumer goods</i> 3) <i>No collateral required</i>
6. Place of credit negotiations and information	All necessary negotiations, credit disbursal, collecting of interest, collecting of principal will take place at one of these levels. 1) <i>District</i> 2) <i>Commune</i> 3) <i>Village</i>

**Table 2**      **Deposit attributes and their levels**

Attributes	Levels
1. Savings term	<p>1) <i>Interest-bearing (0.5% per month), three-month time deposit</i> If money is not withdrawn after this time, automatic extension for another three months.</p> <p>2) <i>Interest-bearing (0.3% per month), one-month time deposit</i> If money is not withdrawn after this time, automatic extension for another month.</p> <p>3) <i>No interest-bearing checking account</i> Withdrawal and deposit at any time.</p>
2. Incentive	<p>1) <i>With a lottery scheme</i> Clients receive a free ticket for the monthly lottery for each 10,000 VND deposit. After withdrawals, clients have to skip three months of lottery unless they deposit at least 10,000 VND more than they have withdrawn. For every 50,000 VND on the account they receive one ticket.</p> <p>2) <i>No lottery scheme</i></p>
3. Place of transaction	<p>The savings transaction will be done at one of the following locations.</p> <p>1) <i>District</i></p> <p>2) <i>Commune</i></p> <p>3) <i>Village</i></p>
4. Minimum deposit amount at opening	<p>1) <i>20,000 VND</i></p> <p>2) <i>No minimum deposit necessary</i></p>

**Orthogonal design:** Even if the number of attributes and levels is reduced to the most relevant and important ones, the number of possible concepts which have to be assessed is usually too large to be managed effectively.<sup>7</sup> For instance, in this research, in the case of the credit product, four attributes with two levels and two attributes with three levels have been identified as most relevant. This would result in 144 possible concepts. According to BACKHAUS *et al.* (1996), the CA design should not exceed 20 concepts. Therefore, a reduced design was applied. The basic idea behind a reduced design is to create a manageable number of concepts that represents the full design as closely as possible. The number of concepts is selected in such a way as to permit the statistical decomposition and quantification of each attribute level's contribution to consumers' choice (RANDOLPH and NDUNG'U 2000). The Orthogonal Main Effect Design for asymmetrical factorial experiments has been applied to reduce the number of concepts (ADDELMAN 1962). An Orthogonal Main Effect Design was created with SPSS 9.0. Hence, the full design for the credit CA was reduced from 144 concepts to 16 and, in the case of the savings CA, from 36 to nine without losing important information.

**Stimuli:** Typically, a CA is carried out using hypothetical descriptions of the service, or so-called stimuli. In this context, a stimulus is defined as the presentation of the attributes' levels to the respondent. Data for CA experiments may be collected by three types of stimulus presentation: (1) verbal, (2) paragraph (descriptive cards), and (3) pictorial or in-kind presentation (GREEN and SRINIVASAN 1978). These stimuli describe distinct concepts and will be assessed by the respondents (BACKHAUS *et al.* 1996). This research study follows the recommendation of SCHRIEDER and HEIDHUES (1991) for presentation of financial services, which constitutes a mixture between verbal, paragraph, and pictorial design for the creation of stimuli in developing countries.

<sup>7</sup> Different compositions of attributes' levels create hypothetical product concepts.

Ideas for the visualization of the levels were gained through the whole research process and later on discussed during village workshops, which were moderated by a PRA specialist. The visualization ideas were finally discussed with a painter of the Tay ethnic minority. He converted the ideas, images, and figures into pictograms (BARISCH and DUFHUES 2001). The pictograms were arranged on DIN-A4 cards according to the orthogonal design and titled with an explanatory headline in Vietnamese (as an example see Figure 4). A detailed description of the participatory creation of stimuli can be found in (DUFHUES, GEPPERT, and BUCHENRIEDER 2003).

The traditional CA involves asking consumers to rank or rate in order of preference different product alternatives. However, this research uses the so-called 'Choice Based Conjoint Analysis' (CBC) approach. CBC does not involve any ranking or rating, but simply asks customers which option they would choose or purchase. This approach is more realistic. Another advantage of the CBC method is the 'none' option. As in the real world, respondents can decline to purchase in a CBC interview by choosing the 'none' option (ORME 1996).

One representative of each household was invited to participate in the CA survey. The respondent was asked to choose the three best alternatives represented by the stimuli-cards, or none. Furthermore, a short interview was conducted to collect data for market segmentation (e.g. sex, age, etc.) and complementary questions on the ideal savings/credit product (e.g. amount of savings).

## **2.2 Regional focus and sampling procedures**

Within the preparatory phase of the Uplands Program, two main research sites were selected, namely Bac Kan (Ba Be district) and Son La province (Yen Chau and Mai Son district). Both provinces are located in the mountainous regions of Northern Vietnam and belong to the poorest provinces of the country (WORLD BANK 1999).<sup>8</sup> Ba Be district is a very remote area and has only recently (in 1999/2000) gained access to regional and interregional markets. Farmers produce mainly at subsistence level and a large proportion are to be considered poor. Therefore, the area is suitable for developing client-adapted financial products that can be used as a mechanism to prevent, mitigate and cope with poverty. Due to the creation of the Ba Be National Park, huge resettlements took place and these have aggravated the problems in the region. While research was carried out in both provinces, the main focus of this research was set on the Ba Be district.

The communes and villages were selected in accordance with pre-defined selection criteria. These criteria are:

- along the slope, (different stages of market access, ecological zones and ethnic minorities),
- different phases of the land allocation process, and
- one village with a high proportion of non-farm activities.

Research in rural regions involving foreigners is sometimes perceived by the local authorities as being troublesome for the village society. To keep the intrusion to a minimum, the research was arranged together with the local authorities and local research partners. For example,

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<sup>8</sup> The average GDP per capita for Son La province is 206 US\$ and for Bac Kan province 149 US\$. These figures lie clearly under the national average of 370 US\$ per capita (1998) (STATISTICAL PUBLISHING HOUSE 1999).

three communes were selected together with the Thai Nguyen University of Agriculture and Forestry (TUAF) and the local authorities in Ba Be town according to the criteria presented above. Then the leaders of the communes identified three villages in each commune in line with the selection criteria. From these nine villages, four were chosen for the sample. An overview of the research sample in both regions is given in Table 3. The households in Ba Be and Yen Chau district were selected using a stratified sample according to the wealth status of the population.<sup>9</sup> Different wealth groups are of particular interest for this research in order to take into account the diverse preferences of people.

**Table 3 Research areas and sample composition**

Province and district	Commune	Village	Ethnic minority	Number of households per village	Selected households	
					Number	%
Province	Dia Linh	Pac Nghe 1	Tay	76	36	47
Ba Kan, district	Nghien Loan	Khau Nen	Nung/Hmong	36	19	53
		Xuan La	Thom Meo	Tay	84	43
Ba Be		Khuoi Khi	Dao	40	20	50
Province	Sap Vat	Sai	Thai	80	42	53
Son La, district		Na Pa	Thai	64	33	52
		Dong	Thai	48	25	52
Yen Chau	Chieng Hac	Bo Kieng	Hmong	20	13	65
	Chieng Pan	Than	Kho Mu	38	20	53
		Tat Heo	Thai	16	9	56
Interviewed households in total:					260	

### 2.3 Econometric analysis

Consumers make their consumption decisions based on a joint assessment of different attributes. The CA assumes that a consumer assigns a utility value to each level of each attribute and makes his or her final decision based on the total utility values across attributes for a given product (RANDOLPH and NDUNG'U 2000). Applied consumer research focuses on determining the contributed portion (part-worth utility) of each attribute level to the dependent variable (MOORE 1980). The part-worth utility is defined as the contributed portion of various attribute levels to the overall acceptance perceived (GREEN and SRINIVASAN 1978). The respondent of a CA interview shows his preferences for different concepts. By using an estimation procedure, the value of each attribute level can be calculated from the overall preference (ALBRECHT 1997). An advantage of the technique is that it can be used to assess hypothetical as well as existing products, and so it is often used to evaluate new commercial products before they are put on the market, or even before they are developed (RANDOLPH and NDUNG'U 2000). Thus, one of the main objectives of the CA is to develop a new product/service according to the true multi-attribute preferences for the product/service of a

<sup>9</sup> The Poverty Reduction Board of the commune administrative level is responsible for the wealth ranking of the households. The members are usually the head of the commune, the heads of the relevant mass organization at commune level, and the village heads. This ranking is done once per year. It is carried out according to nationally defined poverty criteria. For each household in the commune, the members of the PRB roughly estimate income according to the given standards (for more details see DUFHUES *et al.* 2002). The ranking is carried out by applying participatory instruments (ANH 1997).

certain target group (market segment). In addition, it quantifies the impact on consumer acceptance if the demanded attribute concepts are not met (KÖCHER 1990).

The CBC 2.6 software was used for data analysis. The CBC 2.6 software applies a multinomial logit analysis. Logit analysis is an iterative procedure to find the maximum solution for fitting a multinomial logit model to the data. Within logit, a multinomial framework is advocated over a binary one. In a binary model of choice, the dependent variable has just two states, to choose one product or not. A multinomial model estimates the probabilities of choosing a product from a number of competing alternatives (HUBER 2000).

The analysis of main effects regarding financial service attributes can lead to valuable insights for designing financial products (SCHRIEDER 1996). The main effects are investigated by using part-worth and total utilities, and the relative importance of single attributes. A utility is a measure of relative desirability or worth. When computing utilities using logit, every attribute level is assigned a utility (also referred to as part-worth). The higher the utility, the more desirable the attribute level. Attribute levels with high utilities have a large positive impact on influencing respondents to choose products. Just because a level receives a negative utility value does not mean that this level is unattractive. But relatively speaking, other levels are better. Utilities are zero-centered within the attribute and therefore sum to zero in each attribute. The relative attractiveness of a concept can be assessed by adding up the utilities for its component attribute levels (total utility). Utilities cannot directly be compared between different attributes or between different market segments. Therefore, the relative importance of each attribute is calculated to enable comparisons between attributes.<sup>10</sup>

The logit analysis is evaluated by the chi-square statistics. Both the credit and savings models have seven degrees of freedom. With seven degrees of freedom, a chi-square of about 25 would be significant at the 0.001% level. The chi-Squares obtained from the logit analysis, which are recorded in Table 7, Table 8, and Table 9, are safely larger than this. Therefore, it is safe to say that respondent choices are significantly affected by the attribute composition of the concepts.

### **3 Institutional assessment<sup>11</sup>**

Vietnam's financial system is still in a formative stage with some legislative issues still in process. Nevertheless, after a decade of financial sector reforms, Vietnam expects the emergence of an effective and efficient banking system (NGUYEN-KHAC and VON GURETZKY-CORNITZ 1996; TEUFEL 1997). By 1997, the former mono-bank system had been changed into a two-tier banking system consisting of the State Bank of Vietnam (SBVN) as central bank and supervisory institution (tier 1), and an operating system (tier 2) consisting of four state-owned commercial banks (one of them is the VBARD), one non-profit, state-owned bank (the VBP)<sup>12</sup>, about 150 commercial banks in the form of private banks, joint-stock banks, joint venture banks and foreign banks (foreign bank branch or representative office) and 947 PCFs (commune level savings and credit cooperatives, which are supervised by the State Bank) (QUE 1997).

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<sup>10</sup> The relative importance describes the weight of each attribute within the purchasing decision relating to a service by referring to the difference between the highest and lowest part-worth utility of each attribute level.

<sup>11</sup> The institutional assessment is based on the data collected in Ba Be district.

<sup>12</sup> On March 11, 2003 the VBP was replaced by the Vietnam Bank for Social Policies (VBSP) (Vietnam Economy 2003). The reasons for the establishment of the bank are the separating of policy and commercial credits. This aims at enhancing financial transparency in the country's banking system (SGT Daily 2003).

The formal financial institutes of the rural financial system are the VBARD, VBP, and PCFs.<sup>13</sup> The semi-formal sector consists of special credit programs administered by the State Treasury and by mass organizations. The informal sector (NGOs, moneylenders, and family or friends) covers the demand not served by the formal and semi-formal sector. Nevertheless, the share of the informal sector has been heavily reduced during the last ten years in favor of the formal sector from 78% (1992/93) of all outstanding loans to 54% (1997/98) (GSO 1995/2000).<sup>14</sup> It is quite safe to say that this development will continue as the interest rate of the formal sector is constantly lowered (see below Table 5). The main players in the rural financial system are the VBARD and VBP. Therefore, in the following sections the structure and performance of these two will be discussed.

### 3.1 Structure of VBARD/VBP

Before the financial reform (1988-1990), the VBARD was a department of the SBVN. Its former objective was to provide credit to state farms and cooperatives. The share of credits to state-owned enterprises has drastically decreased in recent years and the new objective of the VBARD is to offer financial services, and in particular credit, to all rural households and small and medium enterprises (SMEs) (BAC 2001). However, the VBARD concentrates on the better-off market segment. The branch system is split into four levels: 1. Headquarters (Hanoi) and two representative offices (Da Nang and Ho Chi Minh City), 2. provincial, 3. district, and 4. sub-district banks.<sup>15</sup>

The VBP was established in 1995 as the poor people's lending outlet of the VBARD. The VBP is a so-called policy bank, specialized in lending to poor households. The VBP uses what is called ex-ante targeting. Only a certain part of the population is eligible for a loan, namely the rural 'poor'. As mentioned before, every household in Vietnam is classified according to its wealth status once a year into one of five classes: hungry, poor, medium, better-off, or rich (for details see DUFHUES *et al.* 2002; GEPPERT and DUFHUES 2003). The target group of the VBP is the rural poor. Households from other wealth classes are officially excluded. The purpose of the VBP is not to maximize profit but to reduce poverty (HANH 1999; VBP 1999).

The VBP basically consists of a head office and it possesses no own structures below this level. For example, the vice-head of the VBARD branch is at the same time the head of the VBP branch. The VBP uses the operational facilities and staff of the VBARD and of mass organizations at commune and village level in extending its services to the target group. From the monthly interest rate charged to the clients, 0.1% is paid to the local mass organizations and 0.25% to the VBARD for its services.<sup>16</sup> Currently, the average operational costs of the VBP, expressed as interest rate spread, is 0.45% per month (HANH 2001). In 2000, the

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<sup>13</sup> PCFs are not the object of this research report, as they are of minor importance due to their insignificant outreach (only 5% of the rural population and the fact, that they are not active in either of the two research provinces (Bac Kan and Son La) (WOLZ 1999).

<sup>14</sup> DUONG and IZUMIDA (2002) found that, in their survey, only 17% of the loans were borrowed from informal sources. MCCARTY (2001) mentioned as one important factor for the decline of the informal sector the 'crowding out' by the VBARD and VBP, by which both extended their outreach in the last years.

<sup>15</sup> The sub-district level includes the so called 'mobile car branches'. At the moment, 240 mobile branches are active (BAC 2001).

<sup>16</sup> The head of the district branch stated that the payment from the VBP for the VBARD services does not cover the costs (CHAN 2001).

monthly interest rate charged by the VBP was 0.6%. This means that 75% of the interest revenues are used to cover operational costs. The poverty focus of the VBP and its high operational costs do not mean that the bank consequently operates at a loss. Due to the highly subsidized interest rates, however, many international agencies consider VBP not to be financially sustainable.<sup>17</sup>

**Outreach:** The VBARD is the biggest supplier of rural credit. In 2001, 4.5 million households were given credit. This represents 38% of all rural households. However, the share of VBARD's outstanding credit to mountainous provinces is significantly lower than to other rural areas (CECARDE 1999).<sup>18</sup> As the VBARD targets the better-off clientele in the rural population, the bank has been able to meet only a small proportion of the funds demanded by very poor households in rural areas, particular in Northern Vietnam (DUONG and IZUMIDA 2002; VIETNAM-CANADA RURAL FINANCE OUTREACH PROJECT 1999). In South Vietnam, the share of poor people with loans from the VBARD is higher, as the VBP is less active there (IZUMIDA and DOUNG 2001). In Northern Vietnam the VBP is covering this market segment. In total, the VBP reaches 21% of all rural households (HANH 2001). Both VBP and VBARD have enormous outreach.

**Staff:** The efficiency of the VBARD increased over the last decade. In 1990, 30,000 people worked for the VBARD. From then, the number of staff was steadily reduced to 24,000 people in 2000 (VBARD 2000). At the same time, the branch system was extended from fewer than 1,300 branches at the end of 1993 to 1,568 branches in 2000 (BAC 2001; SCHENK 1998; VBARD 2000). Along with the increase in efficiency, however, an overload of work due to numerous transactions was observed in most of the district branches (VIETNAM-CANADA RURAL FINANCE OUTREACH PROJECT 1999). This was confirmed by the research undertaken in Ba Be. For instance, it was found that some credit officers had to administer more than 1,000 households (CAT 2001). It has been realized that one credit officer, if he exercises all his duties including receiving clients, checking project proposals, disbursing money, checking loan usage, collecting principal and interest, can take care of 500 families as a maximum (CECARDE 1999). Certainly, if the credit officer serves more than this, he cannot fulfill all his duties. Nevertheless, it is vital that the credit officers visit all clients in their home to check their creditworthiness and to prevent heavy debts. This is not possible in case of VBARD/VBP. The VBARD/VBP has therefore delegated many responsibilities to local authorities (heads of the communes). In fact, the credit officer relies totally on the commune and village officials to assess the creditworthiness of the potential borrower. After the disbursement of the credit to the group members, the credit officer may verify with the credit group leader whether the group members use the credit as stated in the loan application. Normally he trusts the report of the credit group leader (giving him room for opportunistic behavior) and does not monitor the credit directly. Basically, not bank staff, but persons outside the bank are involved in the monitoring: the head of the commune and credit group leader. During discussions with the commune heads and the credit group leader, however, they admitted that this is not a regular activity. Officially, the loan ought to be repaid immediately if it is not used as stated in the credit contract. Nevertheless, farmers pointed out

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<sup>17</sup> The VBP now is recognized as loss-making (VBARD and DANIDA 1999). The law on credit institutions approved by the National Assembly in 1997 stipulates that the state should establish banks that operate on a non-profit basis (Article 10). This implies that the state will continue to provide cheap credit to rural areas and the poor (MINOT and GOLETTI 2000).

<sup>18</sup> For instance, in 1998 the mountainous provinces received on average 150 billion VND compared to Hanoi, which received 1,200 billion VND.

that as long as they pay the interest and the principal in time, the credit officer and the other local authorities do not bother about the actual use of the credit (DUFHUES *et al.* 2002).

Local information sources in the form of key informants can be an important low-cost mechanism to reduce screening and enforcement costs. Too much dependence by a bank on local networks as sources of information and recommendation, however, can have negative effects in terms of social exclusion of those households not included in the social and political network of the territory (VAESSEN 2001). In general, important information tends to be segmented and to circulate within specific groups or networks to the exclusion of others (ROBINSON 2001). Particularly the very poor households often find themselves in this position, as they are socially excluded and lack access to fruitful relationships with powerful allies (HICKSON 2001).

**Mobilization of funds:** The financial sources of the VBARD consist mainly of hot money.<sup>19</sup> For instance, in the year 2000 over 95% of the sources were mobilized through savings. The insufficiency of deposit mobilization by formal institutions at the grass-roots level stands in contrast to the successful development of deposit mobilization at national level. The majority of funds are mobilized in urban areas. In Vietnam, money is flowing from urban to rural areas (IZUMIDA and DUONG 2001; HUNG and GIAP 1999). The VBARD offers the only formal savings scheme available to households in rural areas in Northern Vietnam. However, even VBARD deposits are overwhelmingly urban, with only a small portion coming from rural households (MCCARTY 2001). Therefore, most branches in rural and mountainous areas have to borrow from the head office. Regulations from the head office do not motivate district branches to mobilize funds (for details see HUNG and GIAP 1999; VIETNAM-CANADA RURAL FINANCE OUTREACH PROJECT 1999). Moreover, these regulations make branches become used to depending on head office funds rather than competing for funds and improving efficiency in fund mobilization. However, the VBARD branch in Ba Be district seems to rely totally on hot money (BAO 2001). But only one-quarter of this money is based on savings from the population. The rest of the money originates from savings from other institutes, mainly the State Treasury (60%).

The sources of the VBP consist purely of cold money. One of the major reasons for establishing the VBP was to attract international donor funds (VBP 1999). However, the VBP failed to attain this objective, and international donors provide only small amounts. The government is the main supplier of funds to the VBP. If the government does not have sufficient funds to finance the soft loans of the VBP, the SBVN must refinance the VBP without interest on a long-term basis and without a pre-fixed repayment date (NGHIA 2001). The procedure for distributing the funds from the national to the lower levels is rather cumbersome. For its credit allocation process, the VBP relies on information from several public organizations and subordinate branches at the district and provincial levels, and then distributes the funds on that basis (for a detailed description see DUFHUES *et al.* 2002; THEESFELD 2000).

### 3.2 Credit

**Lending scheme:** Most of the VBARD loans follow an individual lending scheme. However, the VBARD works also on a very limited scale with group lending schemes. In contrast, the

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<sup>19</sup> Hot money is defined as savings. Cold money is defined as grants and subsidies.



VBP uses only group lending schemes (so-called ‘joint liability groups’) (VBP 2001).<sup>20</sup> However, in day-to-day practice, the group members are not held liable for each other. If one group member defaults, the only consequence for the other members is that this particular group does not receive credit any more. But individual members who repaid on time can join a new group. This means that it is enough to expel only the defaulter from the group in order to obtain a new credit, as this is officially a new group. Therefore, joint liability does not exist and the concept of peer pressure does not work. Each group has a group leader. He has an obligation to support his group members in all matters related to the loan (a detailed description about the obligations of a credit group leader can be found in DUFHUES *et al.* 2002). The VBARD/VBP regulations points out that the credit group leader is also liable (VBP 2001). He has to repay the loan in the event of default by a single borrower. However, this regulation is also not practiced in day-to-day business.

**Loan Terms:** Most loans from the VBARD were short-term production loans until around 1996. Recently, however, the situation has changed quite significantly, with a larger proportion of long-term loans (IZUMIDA and DUONG 2001). Table 4 shows the development of the loan structure in the Ba Be district. The demand for short-term loans is decreasing, while demand for long-term loans is increasing year by year. This might be explained by the fact that the VBARD has eased the criteria for long-term credits and that very popular investments are husbandry of large ruminants or tree cultivation. For an investment such as these, one year is too short to gain any profit. The government of Vietnam recognized this development and recently gave permission to the VBARD to use 30% of its short-term deposits as medium and long-term loans for farmers to provide more funds for long-term investments.

**Table 4**      **Loan structure of VBARD/VBP in Ba Be district**

	1998		1999		2000		2001	
	Amount	%	Amount	%	Amount	%	Amount	%
<b>VBARD</b> Short-term	826	19	722	16	779	10	698	6
Long-term	3,562	81	3,801	84	7,240	90	10,316	94
<b>VBP</b> Short-term	121	8	50	2	0	0	0	0
Long-term	1,313	92	2,291	98	3,471	100	3,326	100

Source: Annual report of VBARD/VBP, Ba Be (1998-2001)

Note: Figures are in VND millions. Classification of VBARD, short-term: ≤ one year; long-term: > one year (BAC 2001).

The VBP uses pre-defined loan products for all households. In March 1999, the maximum loan size for a loan from the VBP had been set at three million VND and a maximum term of three years. In 2001, the loan size was raised to five million VND and the term to five years. In comparison to the VBP, the VBARD determines the loan amount by the value of the collateral. Short-term loans are usually not requested (see Table 4).

<sup>20</sup> The group lending scheme of VBARD/VBP was supposed to be a copy of the Grameen Bank group lending scheme.

**Interest rates:** The Vietnamese Government sets an interest rate ceiling to provide the population with soft loans.<sup>21</sup> After financial reforms at the beginning of the nineties, the real interest rate became positive in 1992 (SENANAYAKE and HO 2001). Since then, however, the nominal interest rates, particularly those of VBARD and VBP, have been gradually reduced (see Table 5). Interestingly, apart from the nominal price, the credit conditions have remained more or less the same over the years. Over this period, the effective demand increased continuously. The demand was satisfied through the Vietnamese government by supplying additional funds to VBARD and VBP for lending on. Apart from two years, 2000 and 2001, when Vietnam experienced deflation, the real credit interest rate also declined (see Figure 1). The increasing credit demand is certainly positively correlated with the declining price, but also with the improvement of the transport infrastructure, which allowed the credit officers to reach more remote villages that were formerly not serviced.

The SBVN set interest rate ceilings. Nevertheless, commercial banks such as VBARD are allowed to adjust their credit interest rates within a range of 0.25% for short-term and 0.3% for medium- and long-term loans (NGUYEN 2001). However, the VBARD has to give a discount of 15% on the interest rate for farmers who are living in a poor commune and 30% for those living in a very poor commune. The interest rate payments are collected on a monthly basis, or every three or six months (depending on negotiations with the credit officer) and the principal is usually paid at the end of the term.

**Table 5**      **Nominal interest rates per month of VBARD/VBP in Ba Be district**

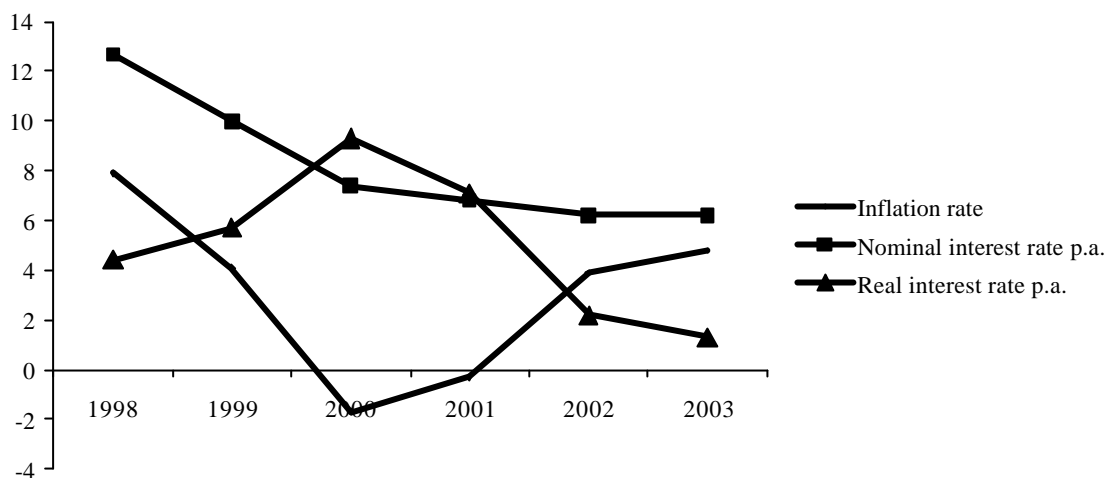
		-June 1997	1998	1999	2000	2001
<i>VBARD</i>	Short-term	1.25%	1.2%	1.2%	1.1%	1.0%
	Long-term	1.05%	1.0%	1.0%	0.9%	0.8%
<i>VBP</i>		1.20%	1.0%	0.8%	0.6%	0.6/0.5%

Source: Annual reports of VBARD/VBP, Ba Be: (1997-2001)

Note: Classification of VBARD, short-term:  $\leq$  one year; long-term:  $>$  one year (BAC 2001).

<sup>21</sup> Just recently, after a decade of pre-fixed interest rate ceilings, the SBVN has removed the lending rate ceiling (World Bank 2002). Nevertheless, the VBSP continues the policy of granting preferential loans to underprivileged groups (Vietnam Economy 2003).

**Figure 1 Real credit interest rate of VBP in Ba Be district, 1998-2003**



Source: ADB (2001), CIA (2002), and EIU (2002)

Note: The monthly interest rate was lowered in 2001 from 0.6% to 0.5%. Therefore the average interest rate of 0.55% was used for the calculation of the real interest rate. It was assumed that the monthly interest rate of 2001 (0.5%) will stay the same in 2002 and 2003. The estimated inflation rate for the years 2002 and 2003 is based on EIU (2002).

**Loan use:** Households desire to use funds for various purposes while formal financial institutions only finance a number of specific purposes. In former times the VBARD provided only financing for agricultural production, but little or none to other production activities or services (VIETNAM-CANADA RURAL FINANCE OUTREACH PROJECT 1999). The fungibility of money has been noticed by the VBARD's headquarters and the formerly strict rule has been attenuated recently, so that nowadays trading and small-scale processing will also be financed (VBARD 2001). Rural households are now allowed to spend their loan for any purpose, even for consumption (IZUMIDA and DUONG 2001). Due to the close connections between VBARD and VBP, it is very likely that the headquarters of the VBP will soon adapt its policies, too. However, this new development has not yet reached the Ba Be district.

The VBP still finances only a limited range of 'obvious' or 'fashionable' purposes related to agricultural production (e.g. rice cultivation, pig raising). There is not much room for innovative or idiosyncratic proposals (UN 1998).<sup>22</sup>

**Collateral:** The VBARD requires collateral for its loan. Usually land use certificates, 'Green Books' or 'Red Books' are taken as collateral.<sup>23</sup> The collateral often does not reflect the real value as no differentiation is made in the assessment of the land. Different qualities of land are given the same value (e.g. paddy rice or forest). During the loan term, the land use certificates are kept in the bank, until the principle has been repaid (BAC 2001; CAT 2001).

<sup>22</sup> The successor of the VBP, the VBSP, has broadened its targeting criteria. Now, not only 'the poor' are eligible for a loan, but also other disadvantaged groups, e.g. pupils, students, unemployed persons seeking jobs (even abroad), individuals and organizations in remote areas (Vietnam Economy 2003).

<sup>23</sup> Land is owned by the state in Vietnam. Nevertheless, in 1993 the renewal of the law was completed and since then, the government allocates land use certificates to farm households, the so-called 'Red Books' for agricultural land (valid for 20 years) and, since 1999, 'Green Books' (valid for 30-50 years) for forest land. Farmers are allowed to sell, rent, or pass land on to children (LUIBRAND 2002).

The land use certificate can bear only one loan, even if the loan amount is less than the value of the certificate.

Other accepted forms of collateral are government wages and houses.<sup>24</sup> The collateral, except land use rights, must be notarized at the certification office in Ba Be town if the value exceeds ten million. Below ten million an approval from the commune is sufficient (CAT 2001). If the loan exceeds 50 million, the collateral must be notarized in the province capital (BAO 2001). Only part of the value of the collateral will be granted as a loan. For instance, in the Dia Linh commune 70% of the value of the collateral will be granted, while in the other communes it is only 60% (DOAN 2001).

Although, the government states that farm households can take out loans of less than ten million without any collateral, the VBARD still requires certificates of land use rights and guarantees from local authorities as loan security. Therefore, these households without certificates have difficulties in accessing formal loans from the VBARD (MCCARTY 2001). However, the ongoing dissemination of 'Red Books' in recent years brought an increasing number of households into possession of assets that are useable as collateral, which broadened the possible outreach dramatically.

Nevertheless, the land market is still underdeveloped. Only few households in fact sell or buy land and usually it is traded within the village. Therefore it is difficult for the banks to liquidate land. Often, the only possibility would be the expulsion of the farmers from the land before liquidation (BAC 2001). At the moment the VBARD uses only psychological pressure to the farmers relating to the possibility of losing their land. None of the villagers or key persons interviewed knows of any case of land liquidation in this area. Therefore, there might be the danger of a moral hazard. If farmers find out that the VBARD is not going to liquidate their land in the event of default, the bank might end up in a landslide of bad debts.

The VBP does not require any physical collateral for its loans. However, the approval of the head of the commune can be considered as social collateral according to DUFHUES *et al.* (2002). Besides, anecdotal evidence from the village survey showed that in some cases of 'hungry' households, which are officially excluded as they are assessed as too poor, the credit officers insist on collateral in the form of a 'Red Book' for a VBP loan too. However, this is in contrast to the national policy of the VBP, namely to provide collateral-free loans.

**Repayment rate:** The official repayment rate is quite impressive. In the year 2000, only 1.1% of the loans were not performing (VBARD 2001). Nevertheless, in this case the repayment rate is an inadequate indicator of good performance, as the VBARD has so-called 'frozen debts', which are not counted as 'not performing' or 'overdue' as the principal is guaranteed by the SBVN. These debts will not bear any further interest.<sup>25</sup> The loan recovery is generally overestimated. Besides, the arrears of the VBARD do not contain rescheduled loans. The details of rescheduling loans are not clear in annual reports or in interviews with VBARD staff. A loan can be rescheduled several times, but not beyond one production cycle for short-term loans or 36 months for medium and long-term loans (IZUMIDA and DUONG 2001). As the liquidation of collateral is not possible, rescheduling of the loan is often the only possibility for the credit officer to avoid designating a loan as overdue or not performing.

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<sup>24</sup> The VBARD recently announced that it will also accept assets other than land use certificates, houses, and wages to improve their outreach to SMEs.

<sup>25</sup> In the event of a natural calamity or something unavoidable, the SBVN admit some loans from VBARD as frozen debts.

The VBP too has a very good repayment performance of 98% (HANH 2001). But again this is only a poor measurement of good performance, as rescheduling of loans in VBP too is extremely high; it is reported to be as high as 70% in some provinces (VBARD and DANIDA 1999). As the staff of VBARD and VBP is identical, it is not surprising that the instrument of rescheduling is also heavily used within the VBP.

**Procedure:** The procedure for obtaining an individual loan from the VBARD is described in the Annex Figure 3. The credit officer supplies the farmer with the application form. But it is not uncommon that the credit officer does not have the form with him. This means that the farmer has to go to the district or wait until the next visit of the credit officer to get the form.

In general, transaction costs such as credit fees, cost for forms, opportunity cost of time, etc., were not seen as an access barrier by the farmers themselves. Nevertheless, the striking disadvantage of this credit product is the high transportation costs due to the frequent journeys required (at least three) to the district capital. For the more remote households, this is a very strong market entry barrier. Particularly, the first two visits were mentioned by farmers as representing access barriers, as the farmers do not know at that time whether the loan will be granted or not. This problem could be solved by implementing so-called profit centers and through a real decentralization of the decision-making structures.

The directors authorized all small loans as recommended by the credit officers. In essence, credit officers, though not authorized to impose any limit, are authorizing small loans. This was confirmed by research work done within the VIETNAM-CANADA RURAL FINANCE OUTREACH PROJECT (1999). However, this practice is still far from being a decentralized profit center as implemented for example by the Bank Rakyat Indonesia (BRI) (SEIBEL and SCHMIDT 2000).<sup>26</sup> This form of decentralization is called 'deconcentration', and is predominant in Vietnam (GEPPERT, BUCHENRIEDER, and DANG 2002; HIEN 1999). Within the deconcentration process, the authority remains with the central agency.

The procedure of the VBP is very similar to the procedure for VBARD loans, but most of the steps are carried out by the credit group leader. Therefore, the transaction costs for the single borrower are much lower. Nevertheless, as it is a group lending scheme, the whole procedure is much more time-consuming (for details see DUFHUES *et al.* 2002).

Recent credit policy developments, however, show that the credit products of the VBARD and VBP are becoming more and more similar, and so their market segments are converging. For instance, the VBARD now tries to offer a credit product that does not require collateral for loans of less than ten million VND (VBARD 2001). At the same time, the VBP has broadened its credit term to five years and raised the maximum amount to five million VND (VBP 2001). It is not clear to potential customers whether this credit is a VBP product or whether it is a VBARD product, offered by the VBP (VBARD 2001). Some farmers even switched from the VBARD to the VBP because of its lower interest rate, despite having collateral and not belonging to the eligible target group of the VBP.

### 3.3 Savings

The VBARD's head office offers different savings schemes: A demand deposit scheme, which is mainly used by companies and term deposit accounts with three, nine, twelve and

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<sup>26</sup> Profit center is defined as a semiautonomous, independently accounting corporate unit responsible for its own operations, profits and losses (TOFFLER 1990).

more than twelve-month terms. Bonds are available for two, three or five years. However, long-term deposits are not popular and are rarely demanded (BAC 2001).

Savings accounts at VBARD's branches are traditional, simple and not attractive enough to customers. Branches offer only a very limited choice of savings products, for instance the branch in Ba Be district offers only demand deposits (0.15% per month) and three month (0.25% per month), six month (0.4% per month), and twelve/thirteen month (0.45% per month) deposits, while customers' need a more diverse supply. There is no linkage between credit and savings in branches' and credit officers' operations. For example, loans are disbursed directly in the communes (as in the case of VBP) and credit officers also visit the villages, but to save money, customers have to go personally to the branch offices. For remote households this is an invincible market entry barrier, as transport costs to the branch office are often much higher than the amount saved (VIETNAM-CANADA RURAL FINANCE OUTREACH PROJECT 1999). Another barrier, particularly for poorer households, is the minimum deposit of 50,000 VND. Many poor households are not able to save this amount at one time. Despite the fact that the interest rate on deposits has been falling year on year, the numbers of savers and the amount saved have increased in the last four years (Table 6). Nevertheless, as discussed above, almost 100% of the savings are of urban origin.

Savings mobilization plays no role in the range of services of the VBP. It is the national consensus, adopted by the local staff of the VBARD/VBP, that poor households are not capable of saving (CAT 2001; CHAN 2001; HANH 2001; HUNG and GIAP 1999). Many NGOs and research projects in Vietnam found evidence to the contrary. The negative attitude towards savings is one of the main obstacles to improving savings products in order to achieve wider outreach to the rural population.

**Table 6 Savings products at VBARD in Ba Be district**

	1998		1999		2000		2001	
	Amount	No	Amount	No	Amount	No	Amount	No
Demand deposit	/	/	336	171	206	146	278	152
3-month deposit	148	23	94	19	189	21	57	16
6-month deposits	1,374	116	2,732	215	2,962	247	4,599	379
13-month deposit	1,978	133	/	/	/	/	/	/

Source: VBARD, Ba Be (1998-2001)

Note: Amount in VND millions. This table includes only saving of the population and SMEs, excluding public agencies. No = Number of saving accounts.

#### 4 Potential demand

This section empirically applies CA to identify the specific demand for financial services and to formulate market and client-oriented financial policies. In the first part of this section, the potential demand for credits will be analyzed, while in the second we will look at savings.

#### 4.1 Potential demand for credit

Without any market segmentation, the credit attributes are assessed with similar relative importance. However, within the wealth segmentation the relative importance of attributes differs greatly. The indigent and medium households valued the attribute ‘disbursement time’ as most important (Table 7). Both groups have a high preference for quick disbursement of loans. This finding is supported by KANBUR and SQUIRE (2000) and ZELLER and SHARMA (2000), who state that poor households often use quickly accessible credits as a tool for income and consumption-smoothing and to cope with external shocks. This explains why poorer households have a stronger preference for quick loans than rich households.

All groups value the livestock insurance positively. However, it plays a minor role in the decision process relating to taking a credit, except for indigent households. The existence of livestock insurance is the second important parameter in their decision process relating to taking a credit. However, the differences between the attributes in this class are rather small. Nevertheless, poor households are well known for their risk-averse behavior.<sup>27</sup>

Surprisingly, medium households prefer the district to the commune (the district is more remote from the rural household’s perspective), and indigent households value commune and district almost equally as the place for the credit transactions. This might be explained by the fact that the regional market also takes place in the district, which gives the district an additional attraction, especially for the poor who seldom leave the village. However, for indigent and particularly for medium households it seems quite important (second highest relative importance) to conduct all credit transactions in the village. In comparison, rich households prefer the commune as the transaction place. This result is not significant, but it is supported by qualitative research. Members of rich households are often working at the commune or have family members or close friends who do so, and therefore have close contacts with commune officials and especially to the head of the commune. The head of the commune has a prominent position in the rural credit market of Northern Vietnam (DUFHUES *et al.* 2002). Therefore, it may be that those households expect to take advantage of this relationship.

Rich households assess the attribute ‘collateral’ as most important and, within this attribute, the level ‘no collateral required’. This is surprising, as rich households are considered to be in possession of sufficient collateral. Although this is not significant, one explanation for this result might be that rich households are more afraid of losing their collateral in the event of default than other households. This seems to be particularly true for ‘durable consumer goods’. These goods might be assessed by local authorities and bank staff as luxury goods and are probably easier to seize than land use rights.<sup>28</sup> Therefore, the rich value ‘durable consumer goods’ very negatively. In comparison, poorer households do not seem to care much about collateral. The relative importance of the attribute is only 17%. It is striking here that they place land use rights on the same level as ‘no collateral’. About 76% of all indigent households in the survey villages (only Ba Be) have a Green or a Red Books.<sup>29</sup> Farmers are

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<sup>27</sup> Over 80% of all households would take out livestock insurance even without a credit. Particularly the poorer households demanded this service. Therefore, the implementing of such a livestock insurance scheme would probably directly benefit the poor.

<sup>28</sup> Land markets are still in a rudimentary stage in Vietnam.

<sup>29</sup> 88% of the surveyed households in Ba Be district have Green Books or Red books. The average in the three research communes is slightly lower, at 70%, but still high. However, not every household possesses a land use right. The share of households with certificates varies greatly between the villages. In some villages, not a single

not afraid to give their land use certificates as collateral. Farmers may be convinced that their investment will not fail or, more likely, they believe that the bank will not seize the land. In the event loan default, they expect to be helped by the bank or the government. Usually this means that the credit officer will extend the loan or, in the event of a natural disaster, the government will step in and freeze any debt obligations. The finding is confirmed by DUONG and IZUMIDA (2000), who state that in rural Vietnam only few cases are known where land has been sold because of a farmer's default.

Men and women did not show great differences in their preference for credit products. Therefore, we refrained from showing the detailed table here with all utilities and t-values. Only a slight difference was found within the attribute 'lending scheme'. Both sexes favored the individual lending scheme. However, male respondents preferred the individual lending scheme to a greater extent than females (15% to 11% relative importance). This might be explained by the fact that women are usually less educated and more reluctant to deal directly with local officials or bank staff.

The share of households who choose the 'none' option (indicating no credit demand) was highest in the case of the rich and second in the case of the indigent. Rich households do possess a certain self-financing capacity and indigent households often lack investment ideas due to a low educational level. Yet, when the indigent group is separated into poor and hungry households, it shows that only 5% of the hungry households choose the 'none option'. The poorer the households, the greater the share of households who want to use credit. It is likely that some of these households are so pressed for funds that they would take any credit, no matter what the credit terms or features are. The number of male respondents who choose the 'none option' was almost double compared to the number of females. Therefore, it seems that women do have a much greater demand for credit than men. MCCARTY (2001) points out that the vast majority of rural loans are given to men. Therefore women seem to have an unsatisfied demand for credit products. Nevertheless, in general the demand for credit is still enormous due to the low interest rates set by the government.

The assumption that certain attributes of a credit product could compensate for a higher interest rate is not confirmed in this research. Almost 100% of the respondents choose the cheaper credit. This strong focus on interest rates might be explained by the fact that rural Vietnam has gone through a decade of continuous reduction of interest rates and a history of public pronouncements on how important low interests are for rural development and the improvement of rural living. Besides, farmers often have the impression that the VBP particularly is not a bank but an institution to help the poor. Nevertheless, farmers are willing to pay extra fees for special services, as the insurance attribute has proven.

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household has a certificate and in others all of them do. Villages with better access to the infrastructure have a greater probability of possessing land use rights.



**Table 7 Logit estimation of average utility values for credit attributes, by wealth classes**

	Indigent (N = 134)		Medium (N = 82) <sup>1</sup>		Better-off and rich (N = 42) <sup>1</sup>		Total (N = 258) <sup>1</sup>	
	Utilities	t-values	Utilities	t-values	Utilities	t-values	Utilities	t-values
<b><i>Livestock insurance</i></b>								
Yes (5,000 VND per month and animal)	1.541	6.800***	1.239	4.794***	8.949	0.170	1.562	9.353***
No	-1.541	-6.800***	-1.239	-4.794***	-8.949	-0.170	-1.562	-9.353***
Relative importance in %	21%		15%		21%		20%	
<b><i>Disbursal time</i></b>								
Seven days	2.078	4.801***	2.654	3.510***	6.019	0.130	1.947	7.032***
60 days	-2.078	-4.801***	-2.654	-3.510***	-6.019	-0.130	-1.947	-7.032***
Relative importance in %	28%		32%		14%		24%	
<b><i>Lending scheme</i></b>								
Group lending	-1.109	-3.643***	-1.275	-2.942***	-3.903	-0.074	-1.184	-5.414***
Individual lending	1.109	3.643***	1.275	2.942***	3.903	0.074	1.184	5.414***
Relative importance in %	15%		15%		9%		15%	
<b><i>Collateral requirement</i></b>								
Land use rights	0.857	2.616**	0.880	1.916*	5.106	0.098	1.261	5.744***
Durable consumer goods	-1.645	-2.822***	-0.873	-1.011	-14.739	-0.196	-2.298	-5.989***
No collateral	0.788	1.940**	-0.007	-0.013	9.632	0.128	1.037	3.658***
Relative importance in %	17%		11%		29%		22%	
<b><i>Location of credit negotiation, disbursal, etc.</i></b>								
District	-0.947	-2.648***	-0.756	-1.563	-11.481	-0.148	-1.388	-5.763***
Commune	-0.931	-1.622*	-1.894	-2.214**	10.405	0.146	-0.281	-0.823
Village	1.878	4.857***	2.650	4.264***	1.075	0.023	1.669	6.519***
Relative importance in %	19%		27%		26%		19%	
<b><i>None option</i></b>								
Percentage of households choosing none option	10%		7%		14%		10%	
<b><i>Chi-square</i></b>	385.170		277.465		113.648		734.149	

Note: \* Significant at 10% level, \*\* significant at 5% level, \*\*\* significant at 1% level.

<sup>1</sup> Due to the small sample size or little variance, the default settings did not yield interpretable results for all attributes or the regression model did not converge. Therefore, the settings were changed to 30 iterations instead of 20, with a smaller step size between the iterations 0.5 instead of one, and the change of log-likelihood from one iteration to the next was changed from 1e-005 to 1e-004. The attribute 'interest rate' has been excluded from the analysis, as the level '0.5% interest rate/month' was chosen in 100% of the cases.

## 4.2 Potential demand for savings

With regard to developing savings products for the rural poor, emphasis ought to be placed on liquidity and low transaction costs (ZELLER 1999; ZELLER and SHARMA 2000). Nevertheless, a monetary incentive to save is also important. The model results show that households in all wealth groups give special emphasis to a high interest rate for savings (Table 9). Corresponding to economic theory (time preference rate), this tendency is more distinct in poor and hungry households. Men clearly put a high interest rate above everything else. Women too are in favor of a high interest rate, but they rate a sight deposit account without any interest more highly than a one-month time deposit with a 0.3% interest rate. A possible interpretation for this result is that women are more often confronted directly with family emergencies and therefore prefer an always-accessible sight deposit account providing access to the deposit immediately in case of sudden need.

As saving is a much more regular activity than obtaining a credit, it is not surprising that the level 'saving in the village' is valued highly by the indigent households. Poor households seldom leave the village and the small amounts they intend to save are easily eaten up by travel costs. OWENS and WISNIWSKI (1999) pointed out that close physical contact is essential to reach the poor with saving products. Rich and medium households favor the commune as the place to save, but this result is not significant. Nevertheless, some farmers mentioned that they prefer saving in the commune or in the district because they would not trust people collecting savings in the village, even if this were a bank employee. Farmers mentioned a case where the credit officer collected the interest rate payments in the village and gambled it away on the way back to the bank. It was not clear whether farmers had to bear the loss or the bank. Although cases like this are very rare, they create an environment of distrust. Trust in the bank is essential for attracting savings. LEDGERWOOD (1999) states that MFIs providing credit services must select borrowers whom they trust to repay the loan. When collecting savings, however, it is the customer who must trust the MFI.

Women strongly prefer to save in the village as compared to men (Table 8). RANDOLPH and NDUNG'U (2000) state that transaction costs may vary by gender, e.g., a woman farmer with reproductive responsibilities may face higher opportunity costs of time when leaving the village to seek any kind of services than a male farmer. Women are responsible for many tasks in the household and on the farm. It is much more difficult for them to reallocate time towards other activities than men. Therefore, WORLD BANK and DFID (1999) concluded in a study about poverty among ethnic minorities in Northern Vietnam, that any kind of policy intervention must consider women's high opportunity costs of time and their tight time schedules.

Lottery linked to deposit accounts has proven to attract savings in many countries (GULLEN and TSCHOEGL 2002). The lottery scheme was also analyzed for different wealth groups. In comparison to indigent households, medium and rich households accept the lottery as an incentive to save. However, these results are not significant. Indigent households are very indifferent about the lottery incentive. The lottery itself is assessed as positive but the attribute plays almost no role in the decision process whether to save or not. All farmers understood the lottery, but some had difficulties to comprehend that this is a kind of incentive. This idea was very unfamiliar to them. However, the risk-averse behavior of poor households might deliver another explanation, namely that winning a prize in a lottery is not secure, but interest rates are. Some poor farmers even mentioned that they think they would never win the prize. It is surprising that women favor the existence of a lottery more than men. Usually women are more risk-averse than men. However, when considering only indigent women, the utility of the lottery became negative. But this result is not significant.

From rich to indigent households, an increase in choosing the ‘none’ option (indicating no interest in savings schemes) was observed. Rich households have more money to save in the bank. Besides, members of rich households are used to dealing with local officials and therefore can better assess their trustworthiness.

**Table 8** Logit estimation of average utility values for saving attributes, by sex

	Male (189 respondents)		Female (68 respondents)	
	Utilities	t-values	Utilities	t-values
<b><i>Interest rate and term</i></b>				
No interest rate / demand deposit	-2.247	-3.130***	-0.217	-0.360
0.3% Per month for a one-month deposit	0.110	0.225	-1.167	-1.745*
0.5% Per month for a three-month deposit	2.137	5.791***	1.384	4.502***
Relative importance in %	50%		24%	
<b><i>Incentive scheme</i></b>				
No lottery	-0.446	-1.110	-0.944	-2.119**
Lottery	0.446	1.110	0.944	2.119**
Relative importance in %	10%		18%	
<b><i>Location of depositing and withdrawing</i></b>				
Village	1.447	6.026***	1.947	3.966***
Commune	-0.517	-1.270	0.430	0.817
District	-0.929	-3.265***	-2.377	-2.963***
Relative importance in %	27%		41%	
<b><i>Minimum requirement for account opening</i></b>				
No minimum requirement	0.518	2.114**	0.933	2.248**
20,000 VND	-0.518	-2.114**	-0.933	-2.248**
Relative importance in %	12%		18%	
<b><i>None option</i></b>				
Percentage of households choosing none option	13%		11%	
<b><i>Chi-square</i></b>	350.894		117.704	

Note: \*Significant at 10% level. \*\* Significant at 5% level. \*\*\* Significant at 1% level.

**Table 9** Logit estimation of average utility values for saving attributes, by wealth classes

	Indigent (N = 134)		Medium (N = 82) <sup>1</sup>		Better-off and rich (N = 42) <sup>1</sup>		Total (N = 258)	
	Utilities	t-values	Utilities	t-values	Utilities	t-values	Utilities	t-values
<b><i>Interest rate and term</i></b>								
No interest rate / demand deposit	-1.750	-2.355**	-2.120	-0.271	-2.026	-0.243	-1.401	-3.702***
0.3% Per month for a one-month deposit	-0.063	-0.105	-1.063	-0.136	-1.789	-0.214	-0.347	-1.075
0.5% Per month for a three-month deposit	1.813	5.614***	3.184	0.204	3.815	0.229	1.747	8.243***
Relative importance in %	45%		26%		30%		38%	
<b><i>Incentive scheme</i></b>								
No lottery	-0.069	-0.154	-3.802	-0.163	-3.297	-0.132	-0.612	-2.070**
Lottery	0.069	0.154	3.802	0.163	3.297	0.132	0.612	2.070**
Relative importance in %	2%		37%		33%		15%	
<b><i>Location of depositing and withdrawing</i></b>								
Village	1.935	5.820***	0.645	0.083	-0.124	-0.015	1.448	8.077***
Commune	-0.571	-1.083	1.537	0.099	1.827	0.110	-0.251	-0.839
District	-1.364	-3.018***	-2.182	-0.279	-1.704	-0.205	-1.196	-4.755***
Relative importance in %	42%		18%		18%		32%	
<b><i>Minimum requirement for account opening</i></b>								
No minimum requirement	0.458	1.483	1.828	0.156	1.884	0.151	0.589	3.045***
20,000 VND	-0.458	-1.483	-1.828	-0.156	-1.884	-0.151	-0.589	-3.045***
Relative importance in %	12%		18%		19%		14%	
<b><i>None option</i></b>								
Percentage of households choosing none option	2.283	6.012***	4.251	0.218	2.726	0.131	1.864	6.483***
	17%		11%		5%		13%	
<b><i>Chi-square</i></b>	249.034		168.742		73.906		459.531	

Note: \*Significant at 10% level. \*\*Significant at 5% level. \*\*\*Significant at 1% level.

<sup>1</sup>Due to the small sample size or little variance, the default settings did not yield in interpretable results for all attributes or the regression model did not converge. Therefore, the settings were changed to 30 iterations instead of 20, with a smaller step size between the iterations 0.5 instead of one, and the change of log-likelihood from one iteration to the next was changed from 1e-005 to 1e-004.

## **5 Summary and conclusion**

The Conjoint Analysis provided some valuable insights into how to improve outreach to the population by adapting the existing services. The results show that the VBP particularly can improve its outreach by offering individual loans, as this kind of lending scheme was strongly preferred by the sample population. This approach would also reduce the administration time of the credit procedure, i.e. transaction costs. It could also go hand in hand with the increasing introduction of collateral instead of group liability, as farmers showed that they are able and willing to use their land use rights (Red Books) as collateral. However, without an effective land market for trading Red Books, it will probably be risky for the credit institutes to rely more on land use rights as collateral. Nevertheless, VBP and VBARD together already have enormous outreach. At this stage, implementing a consolidation policy and establishing financially sustainable structures would deserve priority over boosting credit outreach further by implementing new structures. An important element for inducing innovation in the microfinance industry is to nurture conditions for greater competition between different suppliers. As long as no effective competition exists in the rural financial market in Northern Vietnam, there is little incentive for the institutes to improve their products. The only competition exists between the VBP and the VBARD.

This research has shown that poor households are able and willing to save. The supply of savings offers firstly the possibility to create financially sustainable structures within the existing institutes, and secondly to boost the outreach of the formal financial sector. When offering savings to the rural population, especially to the poor, close physical proximity to customers and easy and quick withdrawal access are seen as key factors. The main challenge will be to implement a safe, attractive and cost-covering deposit collection system at the village level. Simple savings products can coexist with more complex market-segment-oriented saving products. Therefore, a range of products should be implemented and promoted. Comparing the outreach of credit activities with savings shows that savings instruments need to be promoted much more than credit. However, before this can happen a paradigm change is called for. The official policies in Vietnam need to recognize the ability and the demand of the rural population to save, including the poorest.

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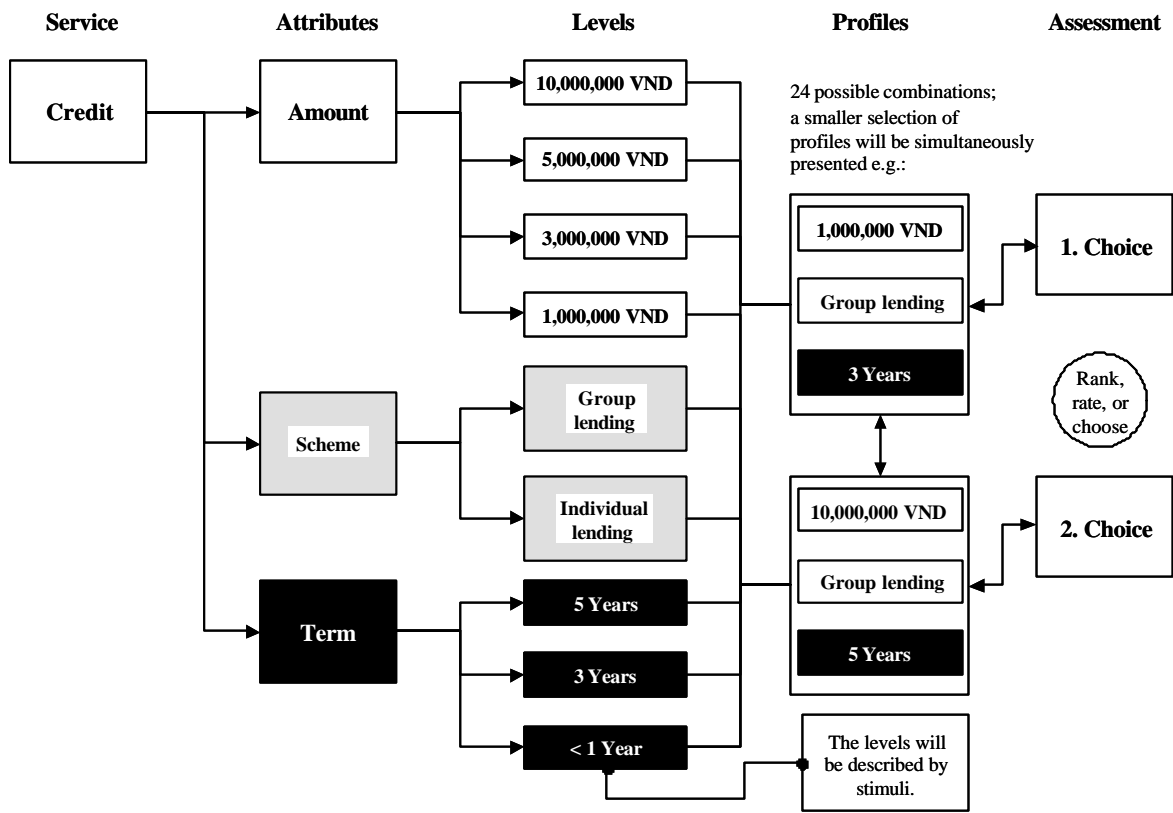
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Annex

Figure 2 Illustration of the concept of the Conjoint Analysis by means of credit



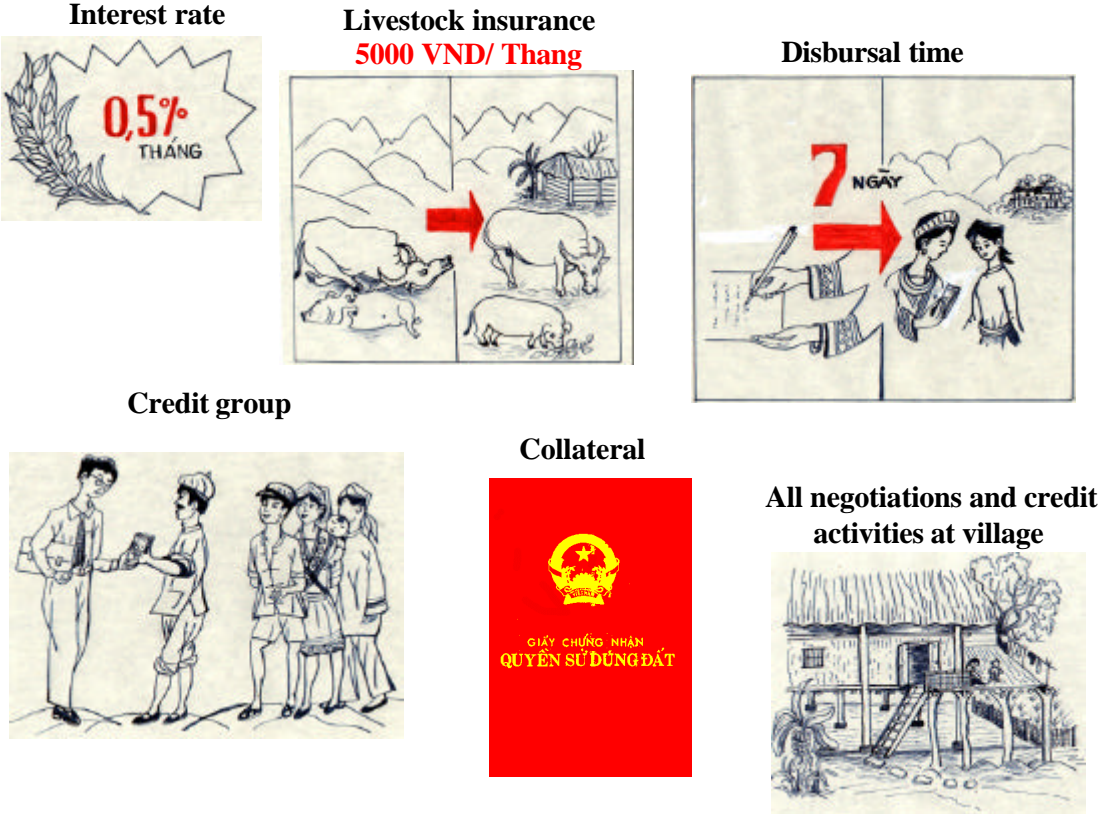
Source: Adapted from Dufhues (2002)

**Figure 3      The six-step procedure to obtain an individual loan from the VBARD in Ba Be district**

1. The farmer contacts the credit officer in the district or in the commune to discuss with the credit officer the purpose of the loan, the amount, the profitability of the investment, and further steps (if farmers can not calculate the profitability of the investment, the credit officer helps to do so); then the farmer receives the application form.
2. The farmer fills in the form at home, because the wife and any children over 18 in the household have to sign as well.
3. The farmer has to take the form to the commune to get a signature and a stamp from the head of the commune.<sup>1</sup>
4. The farmer brings the form and the land use certificate to the bank.  
(The credit officer visits the household to check if everything is correct and arrange an appointment at the bank (usually Tuesdays and Wednesdays) ; he mainly checks the collateral. Many farmers stated that the credit officer never visited their households, as they have to give him the land use certificate to keep it in the bank, he has no need to visit the household.)  
*Internal steps of application:*
  - a)      *The credit officer signs the application.*
  - b)      *The head of credit office signs the application*
  - c)      *The director signs the application*
5. The farmer has to come to the bank to ask whether his application was approved or not; if yes, he agrees a date with the credit officer for the disbursal of the money.
6. The farmer comes on the arranged date and receives the money disbursed.

Note: <sup>1</sup> The signature also confirms that the applicant lives in the area. The head of the commune may refuse the signature if he knows of a disagreement between the married couple as it relates to the credit application, in cases of drug abuse of the applicant, or so-called social evil in the households.

**Figure 4 Conjoint survey credit cards**



Note: The headlines of the concepts were in Vietnamese language on the original conjoint survey cards.

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