

## LOAN ANALYSIS

AGLEND1 is a financial institution that was founded in the early nineties as a microcredit NGO. In the beginning, its target clientele were micro- and small entrepreneurs in the urban area. However, since the majority of the population in the country live in rural areas, AGLEND started to diversify its portfolio and provide individual loans to rural households in its third year of operations.

AGLEND took a gradual approach by starting to serve rural entrepreneurs outside the agricultural sector first and then, one year later, moving on to farm households and agricultural production. To do this AGLEND altered its lending technology that was originally designed to serve an urban clientele.

AGLEND started its agricultural lending operations in the valleys where good irrigation systems and physical infrastructure were present. From there, it moved on to other regions and now also operates rural branches in the tropical lowlands, the coast and the highlands.

The farm households that get loans from AGLEND primarily produce cereals (maize, wheat, rice etc.), coffee and vegetables. There are also a considerable number of cattle producers (dairy and meat production). However, the majority of borrowers obtain additional income from off-farm economic activities.

AGLEND started with one basic loan product, an “equal monthly installment” loan. However, they are now introducing more flexible loan terms, allowing repayments with varying amounts and less frequent repayments.

At present, AGLEND’s average loan size is USD500 for crop production and USD1,000 for cattle breeding.

The family Crespo farm at Eagle’s Peak, which is a small place located in an Andean valley, around 15 km away from the district capital. Pedro and his wife, Maria, have 3 children, aged between 15 -20 years, who live with them on the farm. The only daughter will marry soon and leave the farm. The two sons work occasionally as construction workers in the district capital as does their father Pedro.

The family owns 4 hectares of very fertile land. Two hectares are used for wheat production, one for sunflower and one for maize. In addition, Maria has a small garden close to the house where she cultivates vegetable and flowers that she sells at the market in the district capital.

The family owns two oxen that are used primarily for ploughing. There is also one milk cow and a heifer. In addition, Maria takes care of five hens. The milk and eggs are used just for family consumption and are not sold. As his brother Carlos, Pedro has thought about starting cattle fattening as an additional economic activity as this seems to be highly profitable. However, he has very little grassland so that he can hardly produce any own fodder. But Maria convinced him that expanding the land to grow more vegetable would be a good alternative investment. Prices for vegetable are very high and the Crespo farm has enough water, very good soil and the best micro-climate in the valley.

Crespo has applied to Aglend for a loan of \$1000 to buy new farm equipment. The following is how the analysis of this loan is done by the Aglend staff. A loan officer from Aglend visits the Crespo on his farm at Eagle Park. Following is the conversation between a loan officer from Aglend and Mr. Crespo-

---

1 This is drawn from the FAO-GTZ Aglend Toolkits 1 – 5 for the training purpose.

*Good morning, Mrs. and Mr. Crespo. I am coming from AGLEND in order to review your loan application. How are you doing today? I see that you are already starting with seedbed preparation.*

Welcome to Eagle's Peak. We are so happy to see you here. It is so far away from the district town and nobody ever comes to visit us. The extension workers are not coming and the veterinary officer who used to vaccinate our ox and cow has stopped visiting as well.

But you are right - we are currently preparing the seedbed for wheat production. These 2 hectares are very good land. My father took care of it and now I am running the farm, I take care of it.

*Yes, the soil is very good here in this region. What yield per hectare do you get?*

Well about 1,400 kg, when there is enough rain and I have enough money to buy fertiliser.

*And what about bad years? How much do you produce in bad years?*

Then the yield can go down to 900 kg per ha. I remember that happened in the year when the Church was burnt down in our village by the rebel group.

*That is a long time back. I remember - I was still a child at that time. And since then, has it often happened?*

No, no, maybe one or two times since. I am taking care of my land and I know how to do it.

*And how much wheat do you keep for your family and how much do you sell?*

Well, we normally keep about 400 kg and the rest we sell.

*That is a lot to keep. Do you have a big family? What do you use so much wheat for? You only need 200 kg as seeds for the next year!*

You know how difficult it is in this region. Today, the soldiers protect us. Tomorrow, they are gone and the rebels come to our homes.

*Hmm... are there any other problems? I know that in this region there are a lot of difficulties with stem rust attacks.*<sup>1</sup>

No, no, I use resistant varieties. And for the other pests, I always keep a stock of sprays. Here, have a look. There are my reserves.

*Where do you sell your wheat after harvest?*

There is a wholesale-trader who collects the crop directly from the farm.

*And at what price did you sell in the past and what do you expect this year?*

Last year, I sold at \$18.10 per 100 kg. But this year, there are less farmers producing wheat, so I expect the trader to pay me at least 50 cents more than last year.

*The price you got is one dollar more than the price was on average last year. How do you explain this?*

Well, I get my wheat graded at the local grain mill. So there is no need for the trader to do that for me. I prefer this ... there is less possibility for him to cheat me.

*When does he come to collect the wheat?*

He normally comes in late May.

*And when does he pay you?*

In the past, he gave me cash when he came to collect the crop. However, because travelling in the region is not secure anymore, I opened an account in the Commerce Bank and he directly transfers the money to that. Although this is more secure, I do not like it. The money is always delayed by one month.

*What inputs do you purchase to grow these 2 hectares of wheat?.....*

**FOLLOWING IS THE USE OF 5 Cs IN LOAN ANALYSIS BY THE AGLEND LOAN OFFICER**

**CASH FLOW ANALYSIS**

Here is a summary of figures from Crespo family's cash flow projection.

| <b>Months</b> | <b>Monthly Net Cash Flow (A)</b> | <b>AGLEND Loan Repayment Instalments (B)</b> | <b>Net Cash Flow after Repayment A-B=C</b> | <b>Free Net Cash Flow C / B</b> |
|---------------|----------------------------------|--|--|---------------------------------|
| 1             | 165                              | 103.33                                       | 61.67                                      | 0.59                            |
| 2             | 220                              | 103.33                                       | 116.67                                     | 1.12                            |
| 3             | 215                              | 103.33                                       | 111.67                                     | 1.08                            |
| 4             | 200                              | 103.33                                       | 96.67                                      | 0.93                            |
| 5             | 250                              | 103.33                                       | 146.67                                     | 1.41                            |
| 6             | 600                              | 103.33                                       | 496.67                                     | 4.80                            |
| 7             | 200                              | 103.33                                       | 96.67                                      | 0.93                            |
| 8             | 185                              | 103.33                                       | 81.67                                      | 0.79                            |
| 9             | 215                              | 103.33                                       | 111.67                                     | 1.08                            |
| 10            | 160                              | 103.33                                       | 56.67                                      | 0.54                            |
| 11            | 190                              | 103.33                                       | 86.67                                      | 0.83                            |
| 12            | 200                              | 103.33                                       | 96.67                                      | 0.93                            |

**CHARACTER ASSESSMENT**

|   | <b>Excellent</b> | <b>Fairly Good</b> | <b>Sub-Optimal</b> | <b>Bad</b> |
|---|------------------|--------------------|--------------------|------------|
| a) Open disclosure of required information                        |                  |                    |                    |            |
| b) Reputation within the community                                |                  |                    |                    |            |
| c) Good credit history with AGLEND and other lending institutions |                  |                    |                    |            |

## CAPITAL

| Assets  | Value | Liabilities/Equity                       | Value |
|---|-------|--|-------|
| Cash in Hand <sup>1</sup>                         |       | Accounts payable/short term <sup>7</sup> |       |
| Cash in Bank or Co-operative Account <sup>2</sup> |       | Accounts payable/long term <sup>7</sup>  |       |
| Inventory/Agricultural <sup>3</sup>               |       | Loans                                    |       |
| Inventory/Trade                                   |       | Leasing contract                         |       |
| Inventory/Other economic activities               |       | Household liabilities                    |       |
| Accounts receivable/Short term <sup>4</sup>       |       | Other liabilities                        |       |
| Accounts receivable/Long term <sup>4</sup>        |       | AGLEND Loan                              |       |
| Machinery and equipment <sup>5</sup>              |       | Total liabilities <sup>8</sup> (B)       |       |
| Household assets                                  |       | Equity <sup>9</sup> (C) (=A-B)           |       |
| Plant and/or building <sup>5</sup>                |       |  |       |
| Other assets                                      |       |  |       |
| Total assets <sup>6</sup> (A)                     |       | Total liabilities plus equity            |       |

**Level of indebtedness** – expressing liabilities as a percentage of total assets indicates what proportion of the farm's assets has been financed through borrowing.

$$\frac{\text{Total Liabilities (B)}}{\text{Total Assets (A)}} \times 100$$

**It is recommended that agricultural lenders check the level of indebtedness before and after the proposed loan as part of the loan appraisal. It may be wise to set a maximum level, e.g. 50%.**

**Equity percentage** is the mirror image of the level of indebtedness. It is the equity or owner's capital expressed as a percentage of total assets.

$$\frac{\text{Equity (C)}}{\text{Total Assets (A)}} \times 100$$

Let's have a look at the balance sheet that the AGLEND loan officer constructed for the Crespo family.

| ASSETS (\$)             |              | LIABILITIES & EQUITY (\$) |              |
|-------------------------|--------------|---------------------------|--------------|
| Cash on hand            | 5            | Accounts payable          | 100          |
| Deposit in co-operative | 5            | AGLEND loan               | 1,000        |
| Agricultural stocks     |              |                           | 765          |
| Accounts receivable     | 1,425        | Equity                    | 1,500        |
| Fixed assets (machines) |              |                           | 250          |
| Household goods         |              |                           | 150          |
| <b>TOTAL</b>            | <b>2,600</b> | <b>TOTAL</b>              | <b>2,600</b> |

What is the indebtedness ratio?

$$\frac{\$1,100}{\$2,600} \times 100 \quad \text{which equals } 42.3\%$$

## COLLATERAL

Aglend defined the following conditions for any asset that they would accept as collateral:

1. **Importance to the borrower.** The asset must be of high personal value to the borrower. He/she must be psychologically hurt if the asset were to be taken away by AGLEND.
2. **Value.** The asset must be known to have a value that is sufficient to cover the loan amount, interest for the entire loan term and a possible penalty charge. The minimum value of the asset(s) must be 1.35 of the loan amount.
3. **Marketability.** The asset must be easy to sell. Transfer of property rights should take place at little cost and with little formalities. In addition, the assets must be free from liability of third parties.

According to these three factors, the economic value of the collateral is only one side of the story. It is even more important that the borrower feels attached to the asset and that losing it would cause him/her considerable – even though psychological - damage.

### QUESTIONS:

1. *What kind of income sources are available for the family Crespo to repay the loan they want from AGLEND? Do you consider that family Crespo has a steady monthly income or is it rather seasonal and volatile?*
2. *Reread the conversation between Pedro Crespo and the AGLEND loan officer and identify the risks that Pedro Crespo face in agricultural production.*
3. *What kind of information did the AGLEND loan officer cross-check during the interview with Pedro Crespo? Do you consider that Pedro Crespo answered correctly?*
4. *What gross income does the family Crespo get from wheat production?*
5. *Do you consider that the AGLEND loan officer has enough information to project a realistic income from wheat production for the Crespo family? What additional questions would you ask to better project the incoming cash-flow from wheat production?*
6. *Have another look at the interview with Pedro Crespo in the first part of this lesson and identify any points that you think make him appear either a reliable or a non-reliable client.*
7. *Let's assume that the trader who purchases Pedro Crespo's wheat is sometimes late with his payments. If he does not pay Pedro the predicted \$450 for his wheat in month 6 (June) but in month 7 (July) instead, what impact will this shift of cash income have on the cash flow? Revised free net cash flow ratio for June:*
  - a. *Revised free net cash flow ratio for July:*
  - b. *Would you still recommend the loan is approved?*
8. *Pedro Crespo's daughter is getting married in May. He has already set aside \$25 for the festivities. However, he is not sure whether this is enough. He heard that the future husband of his daughter remarked about the low amount. Pedro is unsure whether he should plan to*

- spend another \$95. As he has never done a detailed study of his cash-flow as the AGLEND loan officer has done, he decides to ask his advice. What would you advise him to do? Do you think he can take another \$95 from his May net income?*
- 9. The balance sheet of Pedro Crespo shows a high figure for accounts receivable because he sells the bulk of his produce to buyers on credit. Do you consider this too risky and what would you advise him to do about it?*
  - 10. If one buyer who owes Pedro money for a fifth of his sales fails to pay at all, what impact would this have on the balance sheet and the indebtedness ratio?*