

Letters of Microcredit:  
expanding Microcredits to guarantee supplier credit lines<sup>1</sup>

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*Money borrowed through Microcredits is used to buy both capital goods and inputs, but the current design of these loans is optimal only for capital goods. The particular dynamics of the purchase of inputs open a door to guarantee supplier credit rather than lending cash, and this guarantee can be provided through the system of Letters of Microcredit proposed and analyzed in this document. The system proposed here has the very relevant characteristics of producing a multiplier effect that allows to exponentially escalate the economic impact of Microcredits without significant additional funds or costs, of facilitating the screening of customers to sellers and thus eventually increase supplier credit lines at sellers' own risk, of significantly decreasing interest rates in this type of loans and of addressing some of the most usual problems associated with lending cash.*

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## **Introduction**

Microcredit programs around the world are typically and perhaps unconsciously designed for supporting the purchase of capital goods<sup>3</sup>, which are generally purchased only once when the business starts or slowly while the business grows. But the money from Microcredits is also used to buy a different type of goods for which these loans are not optimally designed: inputs, consumables and articles for resale. The nature of this second type of goods creates different market dynamics that can be taken advantage of: while the purchase of capital goods doesn't create a microentrepreneur-supplier relationship because of its random and non-repeated nature, the purchase of inputs, consumables and articles for resale favors a constant interaction and sometimes deep relationship between the supplier of the goods and the customer (in this case, the beneficiary of the Microcredit) because of its repetitive nature. In other words, while a micro-entrepreneur who wants to start a bakery will buy an oven only once (capital goods), she will buy flour, sugar, eggs and other ingredients once or twice a week at the local supermarket (inputs and consumables).

If this micro-entrepreneur were instead a large baking company, she would very likely get her daily inputs using credit lines *from her suppliers, not from the bank*, using the standard type of commercial supplier-credit that most companies enjoy. However, given the small size of our entrepreneur, neither the supermarket nor other suppliers would open a credit line for her because of the difficulty and cost to collect such a small amount, thus excluding her from the regular dynamics of business. The few suppliers willing to give her credit will do it at interest rates so high that these credits can't be considered part of the dynamics of business observed by larger companies.

But what if we eliminated credit risks by guaranteeing payment to suppliers and if we aggregated these small risk-free entrepreneurs into an easily identifiable type with a large accumulated purchasing power? Could we induce suppliers to give them the credit lines that they need, at market interest rates, and thus multiply the available credit for Microentrepreneurs? In 2005, CORFO in Chile will double the budget of Microcredit loans to 8 million USD<sup>4</sup>, the Federal Government of Mexico will dedicate 65 million USD to the same purpose<sup>5</sup>, the Grameen bank will subscribe 500 million USD<sup>6</sup> in micro loans and the world governments and international organizations will dedicate 1.2 billion dollars to Micro loans<sup>7</sup>, plus hundreds of millions more from private funds; Considering the exponentially growing aggregated numbers, we can now make it interesting for suppliers like this supermarket to catch a chunk of this new demand and to provide credit lines to micro-entrepreneurs under a guarantee system.

## **Proposal**

One of the most important achievements of Microcredit institutions is to get low default rates in loans to the very poor, using a variety of recently developed lending methods. We

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<sup>3</sup> See Annex 1 for examples of capital goods vs. inputs and consumables.

<sup>4</sup> <http://www.aqua.cl/noticias/index.php?doc=6116>

<sup>5</sup> <http://presidencia.gob.mx/buenasnoticias/index.php?contenido=17898&pagina=39>

<sup>6</sup> <http://www.gdrc.org/icm/grameen-supportgrp.html>

<sup>7</sup> [http://www.creditcollectionsworld.com/news/080801\\_2.htm](http://www.creditcollectionsworld.com/news/080801_2.htm)

can extend this ability to obtain low defaults and guarantee supplier credit by using a system of Letters of Microcredit, which would basically use the same mechanics of a regular standby letter of credit, where a bank guarantees payment to a supplier<sup>8</sup>. The idea is that when a Microcredit is approved, the beneficiary receives a portion of it in cash and a portion of it in the form of Letters of Microcredit. The cash portion is for capital goods, and the letters of Microcredit are for inputs and consumables. Once the beneficiary determines who her suppliers of inputs will be, she will hand a letter of Microcredit to each one of them for an amount equal to the credit line that she wishes to open. Suppliers will accept these letters as a guarantee of payment, and will open a credit line for this person; if the person doesn't pay back, the supplier goes to the bank and cashes the letter. For example if a micro-entrepreneur wants to start a small wooden-frame factory and receives a Microcredit composed of 100 USD in cash plus 300 USD in Letters of Microcredit, he can spend the cash in buying a hand saw and a hammer and then hand in a \$200 letter of Microcredit to the wood supplier and a \$100 letter of Microcredit to the hardware store. This procedure will establish a guaranteed credit line for him with these two companies and will enable him to obtain his supplies in regular commercial credit terms (30, 60 or 90 day payment terms for example). The letters of Microcredit are not meant to be drawn on, they are meant to remain unused as long as this person comes back and pays his balance. If the person fails to pay on time (defaults), then the supplier can simply go to the bank and cash the letter of Microcredit. In that case, the bank charges the Microcredit institution that issued the letter, and the debtor who defaulted is punished in the regular ways of the Microcredit loans, particularly in the terms of his own Microcredit institution. The face value of the letters of Microcredit signals the maximum amount of credit that the supplier may cash in case of default, i.e. the size of the credit line; the regular purchases of the customer may be under that maximum limit, they don't need to be equal to the maximum all the time. Mechanisms can easily be put in place so that in case of default the supplier cashes only the defaulted amount at the bank rather than the full amount of the letter.

The Letters of Microcredit program is not about a supermarket giving a 50 dollar credit to one individual, it is about thousands of companies giving regular commercial supplier credit to millions of individuals, under the guarantee of the banks, backed by the cash of the Microcredit institutions and working under regular widely accepted and tested Microcredit rules. This is, in the end, about improving the credit market for the poorest and integrating them more directly into the dynamics of business and trade<sup>9</sup>.

### ADVANTAGES

- *The credit line can grow at the risk of the supplier, without any additional cost:* the repeated interaction between suppliers and Microcredit beneficiaries works as screening of good borrowers, which suppliers can use to *increase* the amount of the credit line beyond the limits of the letter. This would effectively increase the overall effect of the Microcredits without any further risk or cost to the lending institutions, and without the need of greater funding. In case of default, the lending institutions would only respond for the amount of the letters.

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<sup>8</sup> Further details on standby letters of credit are explained in the next section.

<sup>9</sup> See Annex 2 for a flowchart with a graphic description of the program.

- People get supplies directly, rather than cash. This avoids several problems that have aroused in different places:
  - o People who use their Microcredit loans to repay other loans instead of investing them in their original purpose.
  - o Avoid “temptations” of using the cash for something different than the original intentions.
  - o Avoid pressures on women, the most usual beneficiaries of these loans, from men or other members in their families who ask them to divert funds.

It is true that this type of pressures for deviating cash may appear after the person sells her products and gets the money anyway, but one could argue that it is different to have the cash in hand after having gone through the entire process of getting the inputs, perform some work, sell a product and earning some profits than it is to have cash at hand without having even started a profitable activity yet. This simple variation in the way the money gets into a person’s hands could represent the difference between someone deciding to spend the money in something else and someone actually undertaking a project.

- Substantial decrease in interest rates: since the Microcredit institution is not lending cash, it cannot charge interest rates. The real lenders in this case, the suppliers of goods, usually charge no interest rate in commercial guaranteed credit lines of 30, 60 or even 90 days. Although supplier credit tends to be considered as more expensive than other types of financial credit because of an implied cost (discount in case of upfront payment), we must consider that this cost is composed of an element of interest rate plus an element of risk, and the risk component can be very high in some countries where collections can be a nightmare to suppliers because of inadequate laws. If we completely take away the risk element using letters of Microcredit, the implied interest rate should tend to be between zero and market rate because of competition among suppliers, especially when suppliers have to choose between losing the sale to a competitor and keeping the merchandise in stock (in which case the supplier incurs in a financial cost anyway) or selling now and have a secured collection in a relatively near future. In other words, the advantages between a sale with secured collection over an uncertain sale play a role not only in convincing suppliers to accept letters of Microcredit, but also in equalizing the implied interest rates in supplier credit to market rate or even less.
- Patience: When a customer-supplier relationship develops, the seller is usually more patient with the payment than the banks, meaning that sellers won’t necessarily draw upon a Letter of Microcredit immediately after the payment terms are due, and they are likely to give at least a call and an opportunity to renegotiate payment terms to the debtor before cashing the letter, because suppliers tend to appreciate the repeated business more than a final cash out, especially if cashing out is not totally necessary.
- Multiplier effect: The Letter of Microcredit doesn’t really have a cost, it is just a guarantee of payment to the supplier who actually gives the credit. Thus, giving a

letter of Microcredit for \$100 USD doesn't really imply the disbursement of \$100 USD; it actually implies no disbursement at all. Only defaults imply disbursements, and there is no reason to believe that defaults will be larger than they are already under the current system because the exact same joint liability and other enforcing systems will be used. The multiplier effect for the total funds of a Microcredit institution,  $\Pi$ , equals:

$$\Pi \equiv (1 - \theta)R_{cash} + \frac{\theta}{loss_{letters}}, \text{ where}$$

$$loss_{letters} = \frac{C + D - F}{TF_{letters}} \geq 0$$

$\theta$  = % of total funds used to guarantee Letters of Microcredit (the complement is lent in cash)

$R_{cash}$  = Recovery Rate for cash loans considering all the related defaults, costs and returns,  $\leq 1$ .

$C$  = monetary value of all costs related to letters of Microcredit.

$D$  = monetary value of all defaults in letters of Microcredit.

$F$  = monetary value of all fees and income generated by the letters to the Microcredit institution.

$TF_{letters}$  = monetary value of Total Funds dedicated to letters of Microcredit.

The first term in the equation corresponds to the multiplier for cash loans and the second term to the multiplier for letters of Microcredit. Note that a multiplier very close to one applies to cash loans (depending on the incurred percentage of losses or gains, represented by the  $R_{cash}$  term in the equation), while a much larger multiplier (in theory tending to infinity if all costs are recovered, i.e. if there are no losses or  $loss_{letters}=0$ ) applies to letters of Microcredit, essentially because with letters it is suppliers who provide the loans, and the Microcredit institution only guarantees the payment and collects its defaults and costs in advance. Because loans in cash are for capital goods and letters are for inputs and consumables, then funding entrepreneurial ventures that don't need capital goods offers a far greater reach to Microcredit institutions than funding capital goods-intensive ventures, due to the multiplier effect. This reasoning derives from the assumption that entrepreneurs need longer periods of time to pay for their capital goods than they need to pay for their inputs. Therefore, the 30, 60 or 90 day regular payment terms offered by suppliers would be too short to repay capital goods, and for this reason entrepreneurs need a loan in cash financed to longer terms by the Microcredit institutions. However, if the 30, 60 or 90 day credit period were enough to pay back the capital goods (as in cheap capital goods or high-margin businesses) or if the suppliers of capital goods agreed to provide long enough payment terms backed up by the letter of Microcredit, then capital goods could be purchased using letters of Microcredit and thus could benefit from the multiplier effect. Essentially, lending cash consumes far more resources than guaranteeing a supplier credit, and thus its opportunity cost is much higher for Microcredit institutions.

Under a system of letters one can re-implement a Microcredit program that exists today with only a fraction  $\frac{1}{\Pi}$  of the funds, and if the fees charged for the letters of credit were set equal to the sum of total costs and defaults and collected in advance ( $F \geq C+D$ ), then the system becomes not only self sustainable but highly expandable; if only a fraction of the costs and defaults is collected in the form of fees, the program can still grow larger than it is today with just a fraction of the funds.

Example: Without considering operation costs for simplicity (operation costs are very similar for cash and letters), if a Microcredit institution today has a 5% default rate and 1 million dollars in total available funds, it must lend exactly 1 million dollars in cash to its borrowers; under the letters of Microcredit system, if it issued one million dollars in letters it would only need 5% (\$50,000 USD) to pay for the defaulted letters. Therefore, this Microcredit institution can guarantee in advance letters of Microcredit for up to 20 million dollars, because only 5% of those 20 million (1 million, the available funds) will default; if this institution charged 5% to the customers who got the 20 million in letters of Microcredit ( $F=D$ ), it will have again one million at hand at the end of the period to replace the defaulted million, and the process starts again. Furthermore, it will very likely have collected the million in fees *before* the first million is even defaulted (remember different suppliers give different payment terms, so defaults may spread in time), meaning that with the new million collected from the fees of the first series of Letters of Microcredit, the Microcredit institution can issue another series of Letters of Microcredit for *another* 20 million dollars, even before the first ones start to default. This process can be repeated as long as defaults don't exceed the collected fees (in this example equal to the expected default rate of 5%). In a real world implementation all costs must be considered in addition to the default rate, but a very large multiplier can still be reached depending on the efficiency and size of the Microcredit institution.

Using or not a multiplier is optional for the Microcredit institutions. The maximum affordable multiplier for Letters of Microcredit tends to infinity if all costs and defaults are recovered by charging fees in advance to the individuals who receive a Letter. An important multiplier case would be where a Microcredit institution uses 100% of its funds available for loans (after discounting all costs) to exactly pay its expected defaults in advance. In that case, the multiplier is

$$\Pi_{FULL} = \frac{1}{\text{default\_rate}}, \text{ as shown in Fig 1. We call this particular case a Full}$$

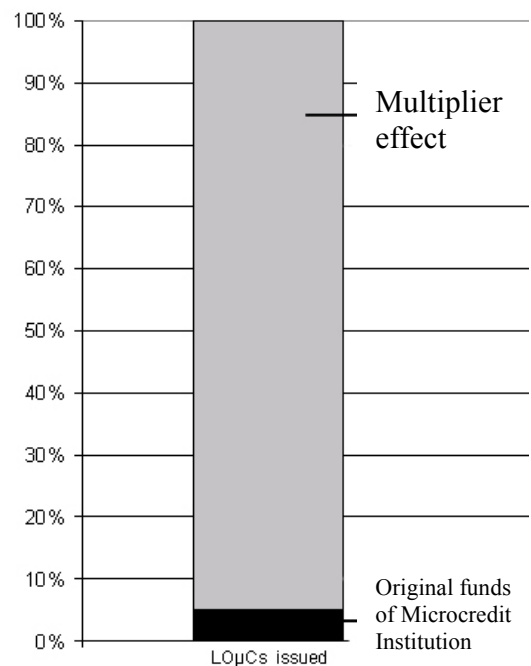
**Multiplier.** The *Full Multiplier* is the maximum possible multiplier where the total expected defaults can be funded or paid in advance by the Microcredit institution. For any multiplier larger than the Full Multiplier, the Microcredit institution won't have enough funds to cover the expected defaults in advance and must get "funding as you go", meaning that the money to cover the expected defaults will need to be raised from the fees collected from those who get the Letters of Microcredit, at the time when they get the letters. Any multiplier smaller than the Full Multiplier would essentially be wasting the potential of the multiplier effect.

Microcredit institutions are free to choose under which combination of cash and letters of Microcredit they wish to divide their funds, according to their own preferences, goals and position towards promoting ventures that are intensive or not in capital goods. In any case, the momentum generated in the economy by a program that includes letters of Microcredit could arguably be larger than that of current loans because of the possibility of the multiplier effect and the potential increase in the size of credit lines by suppliers at their own risk. In the next sections I will give a more detailed explanation of the implementation of this proposal.

Fig. 1

This is the case of a Microcredit institution with a default rate of 5%, using a full multiplier. By depositing its funds available for loans in advance to the confirming bank in order to cover defaults, the Microcredit institution is able to produce Letters of Microcredit for up to 20 times the size of its own funds, exponentially increasing its impact at no significant additional cost.

$$\Pi_{FULL} = \frac{1}{\text{default\_rate}} = \frac{1}{0.05} = 20$$



### Description of a Letter of Credit (LOC):

There are several types of Letters of Credit: back-to-back, credit enhancement, irrevocable, revocable, standby, confirmed, documentary, among others. We will focus on the Standby Letter of Credit, as it is the inspiration for the Letter of Microcredit, as well as on irrevocability and confirmation, two characteristics that that will later be introduced as an essential part of the Letter of Microcredit.

Using the exact definition and words from the Credit Research Foundation<sup>10</sup>, “The standby letter of credit serves as a secondary payment mechanism. A bank will issue a standby letter of credit on behalf of a customer to provide assurances of his ability to perform under the terms of a contract with the beneficiary. The parties involved with the transaction do not expect that the letter of credit will ever be drawn upon. The standby letter of credit assures the beneficiary (supplier) of the performance of the customer's obligation. The beneficiary is able to draw under the credit by presenting a draft, copies of invoices, with evidence that the customer has not performed its obligation. The bank is obligated to make payment if the documents presented comply with the terms of the letter of credit. Standby letters of credit are issued by banks to stand behind monetary obligations, to insure the refund of advance payment, to support performance and bid obligations, and to insure the completion of a sales contract. The credit has an expiration date. The standby letter of credit is often used to guarantee performance or **to strengthen the credit worthiness of a customer**. In the above example, the letter of credit is issued by the bank and held by the supplier. The customer is provided open account terms. If payments are made in accordance with the suppliers' terms, the letter of credit would not be drawn on. The seller pursues the customer for payment directly. If the customer is unable to pay, the seller presents a draft and copies of invoices to the bank for payment. The domestic standby letter of credit is governed by

<sup>10</sup> <http://www.crfonline.org/>

the Uniform Commercial Code (in the US). Under these provisions, the bank is given until the close of the third banking day after receipt of the documents to honor the draft.”<sup>11</sup>

About the confirmation procedure, still using the words and paraphrasing some ideas of the Credit Research Foundation, “Confirming Bank: A bank may confirm the letter of credit for the beneficiary. At the request of the issuing institution (in this case, the Microcredit institution), the confirming bank obligates itself to insure payment under the letter of credit. The confirming bank would not confirm the credit until it evaluated the institution where the letter of credit originates (the Microcredit institution)”<sup>12</sup>

On the revocability, “The irrevocable letter of credit may not be revoked or amended without the agreement of the issuing bank, the confirming bank, and the beneficiary. An irrevocable letter of credit from the issuing bank insures the beneficiary that if the required documents are presented and the terms and conditions are complied with, payment will be made. If a letter of credit is irrevocable it is referenced on its face”<sup>13</sup>

### **Description of a Letter of Microcredit (LO $\mu$ C):**

Essentially, Letters of Microcredit are equivalent to Confirmed Irrevocable Standby Letters of Credit, with the particularity of being issued for relatively small amounts of money and standardized for massive distribution. Microcredit institutions will issue these letters instead of lending cash, a bank will confirm the letters and, if they were drawn upon, the same bank will cash them or directly deposit them into an account. The details and reasons of this process are detailed in the next section.

***Adaptation to increase expeditiousness:*** Given the relatively small value of each Letter of Microcredit (LO $\mu$ C) and the flexibility and speed of operation that will be required to adequately support the beneficiaries of the Microcredits, it's not worth to individualize each LO $\mu$ C because the costs would skyrocket. Instead, banks and Microcredit institutions should standardize the LO $\mu$ Cs<sup>14</sup> by issuing only a few types, for example \$50 USD and \$100 USD LO $\mu$ Cs. By doing this, each Microcredit institution could issue all its confirmed Letters of Microcredit in advance and store them for handing out to customers right away when a credit is authorized. If a Microcredit beneficiary gets approval for a \$350 USD credit in letters for example, he will receive three LO $\mu$ Cs of \$100 USD each plus one of \$50 USD. LO $\mu$ Cs will be payable at the confirming bank immediately upon presentation. If the microentrepreneur wants to open a \$200 USD credit line with her supplier, she simply hands in two \$100 USD letters as guarantee.

***Activation:*** Given the fact that LO $\mu$ Cs are payable immediately at the bank, they are equivalent to cash and thus subject to theft. In order to minimize this risk, LO $\mu$ Cs shall be “inactive” during their process of printing, transportation, delivery and storage, meaning that during this process they shouldn't be tradable at the bank. Once a supplier receives and accepts a LO $\mu$ C, he must “activate” it either by logging in a website or by calling a

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<sup>11</sup> <http://www.crfonline.org/orc/cro/cro-9-1.html>; words in parenthesis were added by the author of this paper.

<sup>12</sup> Paraphrase and adaptation from <sup>12</sup> <http://www.crfonline.org/orc/cro/cro-9-1.html>, Credit Research Foundation.

<sup>13</sup> Exact definition pasted from Credit Research Foundation, <http://www.crfonline.org/orc/cro/cro-9-1.html>

<sup>14</sup> LO $\mu$ Cs = Letters of Microcredit.

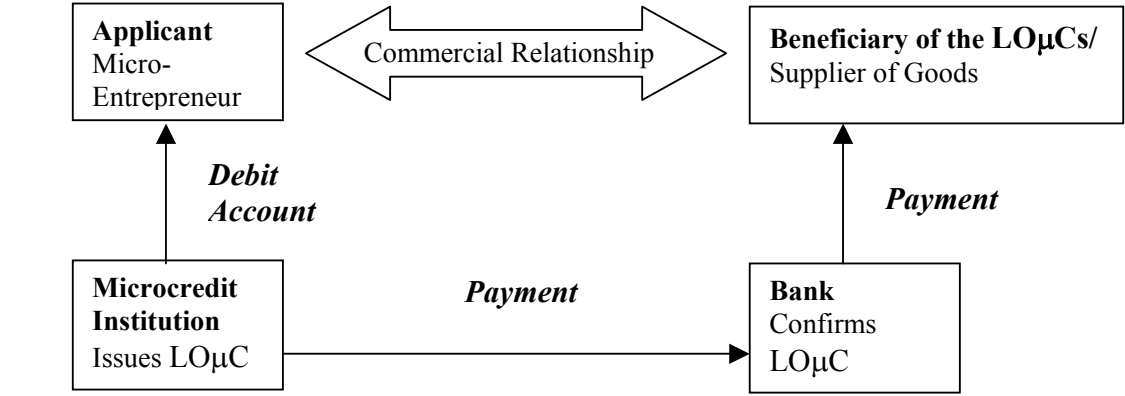
number where he shall provide the necessary data on the beneficiary (in this case the supplier company itself) and confirm the borrower number or ID of the individual who handed in the LOμC in order to authenticate a match with the borrower, in a similar fashion to the activation of credit cards. Once the LOμCs are activated, it doesn't matter if they are lost or stolen, for they will be payable only to the beneficiary who activated it, either in cash or directly deposited in his bank account. If the commercial relationship ends between the customer and the supplier of the goods, the customer shall get back her LOμCs upon payment of all outstanding debt to the supplier, and shall obtain a signed and stamped pre-designed release form from the supplier. Then she can take the LOμCs back to the issuing Microcredit institution for deactivation in the system (after a checkup with the beneficiary to confirm the veracity of the release). After this deactivation/obligation-release process, the LOμCs are ready to be re-activated with any other supplier as beneficiary. A more friendly way to do it would be to have the supplier log in the website and release the LOμC directly in the system, but since this would mean an additional hassle to him and the cancellation of a business relationship, some sellers may refuse to do it or may delay the process.

**Issuing, Confirming and Funding of the LOμCs and their multiplier effects**

a. Issuing and confirming the LOμCs

Confirmed standby letters of credit are drawn only at the confirming bank, and only banks issue standby letters of credit. This is an important difference with Letters of Microcredit, which will be issued not only by banks but also by NGOs, private institutions, public agencies, public programs, cooperatives and others. This represents a difficulty because the most important factor for letters of credit to operate is trust: suppliers swap the credit worthiness of the customer by the credit worthiness of the issuing institution, meaning that if the issuing institution is not creditworthy then its letters of credit are useless. Since the organizations that currently provide Microcredits are not necessarily creditworthy or known in the market, a process of confirmation is necessary: each institution will issue its own LOμCs, but each LOμC must be **confirmed** by a bank. This will maintain the expeditiousness of the process and the individuality of each Microcredit institution, at the time that it enables the letters of Microcredit to operate because banks would be obligated to cash them, and thus the creditworthiness of banks will replace that of individuals.

**Fig. 2: Operation of a Letter of Microcredit<sup>15</sup>**



<sup>15</sup> Adapted and modified from: ScotiaBank, “Documentary Letters of Credit, a practical guide”, International Trade Finance Services.

**Expiration of the LO $\mu$ Cs:** Letters of Microcredit shall have an expiration date set by each Microcredit institution. Ideally, the period of time for which letters of Microcredit are valid should be a market standard and as long as possible (1 year, 2 years), because that would make it easier for suppliers to administer the letters and thus easier to get them into the market. However, it is likely that different Microcredit institutions will issue letters with validity periods that differ in length. Supplier and borrower should settle all accounts and claim all defaults before a Letter of Microcredit expires, and this will allow the Microcredit institution and confirming bank to give a closure to the period. Issuing new letters or renewing them will imply charging the corresponding fees again. Some Microcredit institutions might choose to issue non-expiring letters of Microcredit, in which case they will be forever liable for their letters; this characteristic could both positively and negatively affect the structure of their letters system in terms of fees, charges, liabilities, administration, public acceptance and other areas.

**Fees to the LO $\mu$ C:** The fees payable by those who receive LO $\mu$ Cs will depend on each Microcredit institution, but they will usually be linked to its default rate, desired premium and costs of credit administration. Most usually, fees shall be paid in advance before receiving the letters. If these fees equal the default rate, then the Microcredit institution is able to recover the defaulted amounts of its LO $\mu$ Cs. More benign methods like fee collection at a later date (as opposed to in-advance), or even no-fee letters of Microcredit can be implemented, always at the expense of the multiplier and the sustainability of the program; larger fees to recover costs or make profits can also be charged. Of particular interest would be a combined method in which defaults and premium are charged in advance as a one-time fee, but credit-administration charges are spread over time and collected in weekly or monthly payments in a similar fashion to the payment of cash Microloans. **Bank Fees:** Confirming Banks will charge for their services, and these costs shall be added to the fees. Banks currently charge a fee for incurring the risk and issuing letters of credit, usually between 0.25% and 2% of the letter value, with lower fees for larger letters of credit. However, regular letters of credit imply a costly and unique “handcrafted” design, and their implementation, administration and creation is sometimes difficult, especially when they involve international trade, shipping of goods, intricate contracts, etc. Standardized LO $\mu$ Cs, on the other hand, represent a much easier administration and should enable banks to lower their fees substantially, especially because banks are only confirming the letters and not actually issuing them or incurring in any risk.

#### b. Funding Letters of Microcredit

Since every LO $\mu$ C is confirmed by a bank, then banks will pay to suppliers who draw the letters by charging the Microcredit institution, which incurs all credit risk. The only realistic way for a bank to not incur in any credit risk is to have all the funds that may be required to cover defaults already deposited in advance in its own accounts, but... how much is *all the funds that may be required*?

Certainly a good amount to use would be the total value of the LO $\mu$ Cs circulating. That way, if all Microcredit beneficiaries defaulted at 100% of their credit line, there would be exactly sufficient funds to cover all claims. But what are the odds of that happening? Is it really necessary to have 100% coverage? It was shown in the section describing the

multiplier effect that it would be necessary to cover only the defaulted portion of the LOμCs in circulation, not their total amount, and this is exactly what produces a multiplier effect. However a conflict arises when the confirming bank, which pays for every letter that is drawn upon, is unable to observe the real or expected default rate before it actually happens, and it is additionally unable to control the quality of the loans granted by the Microcredit institution. Due to these unobservables, confirming banks are likely to require a full funding of all the LOμCs before confirming them, putting the multiplier effect at risk.

How to get around a fully funded requirement:

These are only a few ways to get around this requirement:

- a) *Third party backup*: many Microcredit institutions are widely respected internationally, and the rate of default of their loans has been studied and is known. Among the supporters of these respected Microcredit institutions are foreign governments, billionaires, foundations and other parties that are capable and willing of backing up their multiplier effects. The “funding” needed to guarantee the multiplier effects can come in the form of cash or of a standby letter of credit from a billionaire supporter or from an economically solid financial institution willing to support this Microcredit institution. I use the word funding in quotes because cash is not really needed, only a guarantee of payment to be used in case the defaults are higher than the total funds deposited in advance at the confirming bank. If the Microcredit institution holds up to its reputation, this cash or letter of credit will not be drawn upon and the billionaire supporter will never be bothered. If the defaulted rate is higher than expected and the Microcredit institution is unable or unwilling to cover the difference, then the difference between the actual defaulted amount and the funds deposited in advance by the Microcredit institution is collected from the guarantee deposited by the billionaire.
- b) *Microcredits in Wall Street*: the market can fortunately substitute our hard-to-find altruistic billionaire from above. Let’s use the example from figure 2, where a Microcredit institution with default rate of 5% wants to use its full multiplier of 20, and suppose it has 1 million dollars available for letters of Microcredit. Under our reasoning of full multiplier, this Microcredit institution should be able to issue letters of Microcredit for an amount of 20 million dollars, and given the default rate of 5% only 1 million dollars will be drawn on, which is the exact amount that can be deposited in advance to the confirming bank. However, if the bank is requesting a guarantee for the full 20 million dollars, the Microcredit institution is 19 million dollars short. This institution can go to the market and request 19 million dollars to guarantee its multiplier effects, the obtained funds would go directly to a special account in the confirming bank, which will then confirm the letters of Microcredit. Instead of charging a fee of 5% to the users of the letters of Microcredit, the Microcredit institution must charge its default + premium rate of, let’s say, 8%. This means that with the collected fees the Microcredit institution will be able to recover its own losses due to default and to distribute 3% proportionally among those who invested in guaranteeing the fund. Since these 19 million are not supposed to be used in the first place (they are only a guarantee of a supposedly well designed program), it is a relatively safe investment, depending on the quality of the

Microcredit institution. But if the default rate exceeds 13%, then investors will lose money. Why 13% and not the collected 8%? Because the Microcredit institution had deposited 5% in advance in the first place, to fully cover all expected defaults. Then it collected an additional 8% in fees, thus making 13% in cash available in this particular example to cover defaults. Only when defaults exceed 13% (2.6 times the expected default rate in this example) will investors start to lose money. Needless to say, by the time this extreme is reached the Microcredit institution will have lost all of its funding. I used a numeric example in the sake of clarity, but the premium rates and fees are variable and depend on the market rating of this particular institution, as well as on the defaults expected by the market.

This kind of guaranteeing has the advantage of getting the market to pick the best Microcredit institutions and to allow different multipliers to different institutions according to their default rates and to the quality of their liability models; for example if in the above mentioned example the Microcredit institution raised only 9 million from the market instead of 19 million, a multiplier of 10 can still be used instead of the full multiplier of 20, thus giving this institution a sense of what the market estimates its multiplier should be. The disadvantage of this option is that it may require special legislation in each country to allow public fundraising of this type.

- c) *Confirming bank backup*: if you are willing to share a premium with the market, why not share it with your partner the confirming bank? Exactly the same scheme detailed in b) can be used if the confirming bank is willing to back the Microcredit institution or, in other words, to charge a premium in exchange for waiving or lowering the funding requirement to a proportion lower than 100%.
- d) *Government backup*: today, a Microcredit program is part of almost any government's plan to fight poverty, and the government funding dedicated to this type of loans is increasing practically everywhere. A good way for governments to increase their support for these programs without actually administrating them or dedicating direct funds would be to serve as guarantor to confirming banks for the funds that allow the multiplier effects. Again, this solution might require legislation at different levels in different countries.

As I mentioned, these are just a few forms to get around the full funding requirement, and combinations of the four options are possible. The intention is to make the point that it is possible to get around it, and the dynamic financial markets will surely be able to provide many more solutions to this problem. Particularly interesting will be the solutions that allow for the Letters of Microcredit mechanism to operate without any new legislation and with minimum multiplier funding requirements, ideally using the current laws in most countries in order to avoid any potential delay or distortion.

### **Getting the Letters of Microcredit into the market**

Microcredits in cash as they exist today will still exist under a system of letters of Microcredit, because the letters will only replace the part of the credit that is dedicated to purchase inputs and consumables. Each different loan will require a different percentage in

cash for the purchase of capital goods according to each particular project, and it is up to the Microcredit institution to decide what percentage of each loan to give in cash and what percentage in letters. The multiplier effect that applies to letters will make credit in letters more abundant than credit in cash, possibly causing that while supporting the same number of loans for capital goods that they support today, Microcredit institutions will be able to support a much larger number of loans for inputs and consumables using LO $\mu$ Cs. This could mean, in the end, that credit will be more readily available for entrepreneurial ventures that don't require much or any investment in capital goods, like buying and selling finished goods or food, than for ventures with capital requirements like manufacturing chairs. It is very positive however that credit for capital goods will be just as available as it was before the system of letters was implemented, while credit for inputs will increase substantially (Pareto improvement). Therefore, the options of Microcredit institutions will grow to offer loans only in letters, or in any combination of letters and cash, or only in cash. Furthermore, these institutions could implement an experimental system of letters as a side ramification to their main system of microcredits, so that starting to work with LO $\mu$ Cs will not affect in any way the traditional operations of the institution.

Microcredit institutions will not lose the frequent contact and deep relationship that they develop with their customers because customers will still meet the institution with the same frequency as today, in order to repay the portion of their loan that corresponds to capital goods or to show invoices and other documentation corresponding to inputs and consumables (presenting invoices and documents will substitute cash payments in the case of LO $\mu$ Cs). These frequent meetings will be just as useful as they are today to deepen the bonds between the borrower and the Microcredit institution, and no change in the default rate should be seen because of this reason.

Trying to come up with a general implementation manual that applies to every country and region would be too ambitious and useless, because every country has a particular and different situation and any attempt of starting a program based on these ideas would require particularized adaptations and adjustments. However, there are certain common denominators and guidelines that may be useful to discuss when trying to implement the Letters of Microcredit system for the first time in a country:

- It is desirable to present a detailed proposal to the local Microcredit institutions, including those that are government funded, and obtain data from them on the desirability of the system, on how much money they are willing to invest in this scheme and with this data estimate the size of the LO $\mu$ C program for that particular region or country (including potential multiplier effects). At the same time and with an estimate of the program size, the proposal could be presented to local banks, government, chambers of commerce and financial experts, in order to identify the possible legal provisions that can allow for such a system to work, even if it requires some local adaptations, and to determine the possible legal barriers in that particular region or country. Of special importance would be to establish the rigorous legal obligations of the confirming banks, because the entire system works based on the fact that these letters will be easy to cash in case of customer default, and if this characteristic is in any way jeopardized the whole system would collapse simply because sellers won't accept them as guarantees. Perhaps the current laws on letters of credit already allow for such system to work in most countries.

- When a local implementation of this system is possible, it may be desirable to include the media in the loop for the dissemination of details. A temporarily strong media campaign could be potentially useful to convince suppliers of accepting LO $\mu$ Cs as guarantees.
- It may be preferable to start with a uniform system of LO $\mu$ Cs so that the market gets the idea fast, but new developments and adaptations can later be individualized for different Microcredit institutions.
- To the extent that international Microcredit institutions adopt letters of Microcredit, it will be easier and faster to propagate the idea to different countries and regions.
- Even if the LO $\mu$ Cs are not widely known or accepted in the beginning, the new entrepreneurs who want to use them will conform a very powerful marketing campaign and will eventually get them into the market, especially if they can count on some support like a bank telephone line or website where sellers can confirm the veracity and form of operation of the letters.
- Adaptations may have to be in areas other than legal. Some Microcredits are provided on a basis of weekly follow-up or even weekly payment, among many other variations that the LO $\mu$ Cs program could “complicate”. Intensive monitoring and other current characteristics can still take place under the LO $\mu$ Cs program, but as was mentioned above they might have to be based on the revision of invoices and statements of account from suppliers rather than on cash payments from the micro-entrepreneurs.
- If new laws or modifications to the laws are required to implement a system based on these ideas, it would be useful to both try to get those laws enacted and to look for substitute instruments that can get the system to start working, for example:
  - o *Cashier's Checks or Certified Checks*: The great advantage of these substitutes is that they are equally useful as a guarantee and they already exist and are widely accepted in the market. The downside is that they can't be paid partially and have to be made one by one (non standardized), so they require some extra work from the bank and Microcredit institutions, in the sense that they will have to coordinate the creation of each check individually. An additional problem is that cashier's checks in some countries might be counterfeited more easily than the standardized confirmed LO $\mu$ Cs with activation procedure. In some countries, these checks might be subject to laws establishing full funding and non-cancellation policies that could potentially complicate the process of guaranteeing suppliers' credit.
  - o *Money Orders*: The advantage of money orders is that they are widely accepted, designed for small amounts and can be cashed in many places. This type of substitute would even allow Microcredit institutions to partner with international entities and not only with local banks. The main drawback is that money orders, like checks, are meant to be cashed right away while LO $\mu$ Cs are not meant to be cashed at all with the exception of

customer default. This means that the mechanisms that allow for a change in suppliers (beneficiaries of the instrument), cancellations, theft, loss, among others are not as efficient as we would like for these purposes, plus they can't be easily tracked and confirmation whether they were cashed or not is not readily available. Currently, this type of follow-up services in money orders are provided through relatively expensive fees and take relatively long periods of time, mainly because they are designed for people to buy them anonymously in corner stores and to secure mail transportation, rather than to guarantee a payment.

There are many other instruments that could be adapted if the local legislation temporarily or permanently blocks Letters of Microcredit, and among those instruments are of course traditional letters of credit themselves. Eventually, the wider knowledge of this product and its potential, added to the support of the public and the market will turn the LOμCs into a common, widely accepted instrument.

### **Overcrowding of the market: giving good advise to the new entrepreneurs.**

It is important to note that overcrowding the markets with Microcredits overnight using the multiplier effect might have certain negative effects that must be anticipated. If a certain high percentage of the population suddenly accesses Microcredits, the diversity of the use that they will give to the funds starts to matter because of potential general equilibrium effects. For example, if thousands of people suddenly receive Microcredits at approximately the same time in a city and a certain percentage of them use their loans to sell stamped t-shirts for the final soccer game of the season, they will be unable to observe the direction of the market (hundreds of people doing the same thing) and thus will be unable to see the problems ahead, where the aggregated number of entrepreneurs does have an effect in the entire market and creates an excessive supply that will eventually cause a decrease in prices and an increase in the default rate of loans, thus affecting investors, decreasing the size of full multipliers and causing a generalized failure of the Microcredit programs; this scenario aggravates if there are multiple and competitive sources of Microcredit in a single city, rather than just one or two, because the Microcredit institutions won't be able to foresee the problem either. Cases like this have happened in the past, for example when in 1974 the Chilean government decided to downsize its payroll, it provisioned \$100 million dollars in funds to be given as loans to the people who voluntarily resigned to their government jobs by the end of that year. The loans were intended to create entrepreneurs by supporting the purchase of capital goods, and the program was adequately called "The New Entrepreneur Plan"<sup>16</sup>. Problems started when a very large percentage of these new entrepreneurs used their loan to make down payments for cars and turned them into taxis, to the extent that they overcrowded the taxi market and eventually were unable to pay their loans, consequently causing a failure of the program<sup>17</sup>.

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<sup>16</sup> Plan del Nuevo Empresario, Decreto Ley 534, Artículo 23, 1974. Gobierno de Chile.

<sup>17</sup> Personal interview to Don Pablo Kangiser, researcher of the legislative program, Instituto Libertad y Desarrollo, Chile.

## **Conclusions**

Letters of Microcredit are a potentially powerful instrument that can be useful to Microcredit institutions, governments and other organizations involved in fighting poverty. The particular characteristics of the LO $\mu$ Cs make it easier to implement them in countries with a relatively well functioning banking system and with a legal environment that is more or less friendly towards innovation in financial instruments, but still their low level of complexity and their similarity to widely used instruments makes it relatively easy to substitute them with existing instruments that have similar characteristics or even to adopt legislation that allows them to operate, if it were necessary. Future debates on Letters of Microcredit might be better enlightened by data from real implementation experiments that allow for a further and deeper analysis on their projected and their unforeseen consequences, as well as their costs of implementation.

Beyond creating a new financial instrument, the objective of this document is to show the huge potential of supplier credit lines as a tool to fight poverty around the world, especially when this potential is combined with a Microcredit institution's ability to obtain low default rates in loans to the poor.

The processes and functioning of systems that generate "liability of the poor" shouldn't be seen anymore as just a way to lend money. Successful personal liability systems for the poor must be extended to different dimensions, so that they allow the most disadvantaged individuals to access the numerous advantages of business and markets besides simple loans. This access is possible to the extent that these systems make people liable, and therefore to the extent that they are responsibly administrated and implemented.

## ANNEX 1

### **Examples of the differentiation between expenditures in capital goods and expenditures in inputs, consumables and articles for resale.**

#### A. Investment in capital to process inputs and produce something:

- Shoe stand
- Chairs and Tables for a small restaurant
- Grain milling machine
- Chain saw, hammer, screwdrivers
- Stove, Oven
- Printer, computer
- Sewing Machine

#### B. Investment in inputs, consumables and articles for resale:

- Wood, glue and nails to make chairs or frames
- Flour to make bread
- Finished products for resale
- Ingredients to prepare food for resale (small restaurant)
- Shoe care products for the entrepreneur who installed a shoe stand
- Fruits to prepare cocktails or juice
- Vegetables, fruits and similar products for resale.
- Paint, glass, iron, thread, etc. for handcrafts.
- Candy for resale

In type B, inputs are very likely to be continuously purchased from the same supplier over and over again: the person uses the money from her micro credit to purchase flour, then prepares some bread at home, sells it and goes back to purchase more flour. This type of “business development” creates an actual business relationship between the customer (in this case, the beneficiary of a micro loan) and the supplier of the goods. Furthermore, while the beneficiary of the micro loan is likely to be a very poor individual, the supplier of the inputs need not be; actually the supplier is most likely an established store or company, capable of opening a credit line to its own customers and requiring only an appropriate guarantee to do so.

**ANNEX 2. Letters of Microcredit Flow Chart**

