



Does better risk management lead to upscaling of finance for agriculture? the cases of maize and cashew in Burkina Faso *

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The Farm Risk Management for Africa Project (FARMAF) aims to improve food security and livelihoods of the rural poor in Africa by enhancing smallholder farmers' access to sustainable tools and instruments to manage farm risks.

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This study is part of the FARMAF project, which investigates tools for agricultural risk management in three African countries. FARMAF has developed pilot projects in Burkina Faso with warehouse receipt financing and crop insurance in the period 2012-2016, in a collaboration between a national farmers organisation – CPF - and a network of European universities – among them CIRAD France and Wageningen University and Research, Netherlands.

The FARMAF project has supported the community warehouse infrastructure in 10 rural communities, by constructing 8 new warehouses and rehabilitating 2 others. It has also donated warehouse equipment, organised trainings for warehouse committees, and developed agreements with two microfinance institutions. In crop insurance, FARMAF has introduced insurance in 31 villages, in collaboration with Planet Guarantee and 2 microfinance institutions. The insurance covers drought risk in maize, and is structured as a weather index insurance.

The objective of this study is to explore whether and how FARMAF's risk management tools have improved the farmers' access to finance, and to what extent upscaling of this financial access is possible. This study is qualitative and exploratory in nature. It's methodology is based on 25 semi-structured interviews with different actors involved: farmers (f/m), warehouse committees, representatives of farmers' organisations, marketing cooperatives, microfinance institutions, insurance-related actors, processing companies, resource persons, and the project implementers (CPF and CIRAD). The interviews and field visits were held in November and December 2015. Field visits took place in Western Burkina Faso, where FARMAF pilot areas are located.

The study focused on the maize value chain, because the insurance covers drought risk in maize and the warehousing included maize among other cereals. The cashew value chain was treated as a comparison, to explore to what extent the risk management tools could be replicable to an entirely different chain.

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Does better risk management lead to upscaling of finance for agriculture?

1. Financing in the maize value chain

The financing needs in the maize value chain vary greatly. The production costs can be used as a proxy for the financing needs, whether financed externally or with internal resources of the producer. A traditional farmer with half a hectare of maize would typically invest € 36 in inputs and labour, or € 110 if he uses animal traction on a full hectare of maize. A mechanised farmer with 2.2 hectares of maize on average would need € 325 to finance his costs of production, plus financing for his investments in equipment (Ouédraogo et al, 2011).¹

The average financing needs in processing and trade are far larger, because the businesses are larger. In maize processing, the annual costs of production per processor range from roughly EUR 3,400 (small processor) to EUR 380,000 (industrial processor). In maize trade, the costs per trader vary from EUR 11,000-12,000 (small buyers, retailers) to EUR 82,000 for wholesale traders. The actual financing needs for traders and processors may be a fraction of the annual production costs, because the stocks rotate several times throughout the year.

Direct financing to the trading segment is the most important source of financing for maize.

This direct financing is provided by banks and microfinance institutions. Another important source for maize trading is supplier credit: farmers delivering their produce to their producer organisations, who can only pay them when they have received their payment from their buyers (traders or public institutions). (source: interviews with resource persons).

For the production segment (maize farming), the most important source is indirect financing through the cotton chain. As cotton farmers diverted part of the inputs to their maize plots, the cotton companies deliberately started to supply inputs for the food crops of their farmers. (Guenot & Huchet-Bourdon 2014). To some extent direct financing of production does take

place, but only where the financing risk can be mitigated through collateral or through reduction of risks. Warehouse receipt financing and crop insurance are examples of such risk mitigation tools.

Access to finance is most problematic for the segments production (farming) and processing, and in general for longer-term investments. The trading segment – and to some extent the processing segment - is more generously financed, because financial institutions' classical products (f.i. inventory credit, trade finance) are more adapted to them, in terms of loan sizes, securities and repayment frequency, and financial institutions are more familiar and comfortable with these businesses (Yago et al, 2016).

2. Warehouse receipt financing

Warehouse receipt financing is not yet widespread in Burkina Faso, but rather an emerging financing product. As a latest national estimate, in 2012 the total number of community warehouses in Burkina Faso was estimated exceeding 100 with more than 3850 farmers involved (Ghione et al, 2013).

Stocks of produce in the 10 FARMAF-supported warehouses have been growing consistently. In the period 2012-2015, the total volume of products stocked has grown from 257 T to 407 T. The warehouses are now operating at roughly 2/3 of their capacity.

The loan volume in warehouse receipt financing has hardly grown in the three past years, although the volume of stocks increased substantially. A total loan volume of around EUR 30,000 per year was issued. This is a surprising outcome, because it is often assumed that access to loans is the prime objective of the WRF system. It was not clear from the field research whether the credit was limited at the supply side, or whether the demand for loans through the WRF system was basically satisfied. Further research into this phenomenon would be helpful, to clarify the conditions for further upscaling of WRF.

¹ The average farm sizes mentioned for each farmer segment are outcomes of the national household survey by DGPER-INERA/ AFRICA RICE, cited by Ouédraogo (2011).

Warehouse receipt financing is part of the seasonal cash flow of the farmers' household economy, rather than being part of a vertical value chain like maize or cereals. Farmers are storing not only maize, but a variety of food and cash crops (sorghum, millet, maize, beans, cowpeas, sesame, peanuts). The warehouse receipt loans are used to finance a variety of activities: 59% for the cotton harvest (harvest labour), and the rest for other income generating activities (petty trade, fattening of chicken or goats, horticulture gardening), school fees, etc. The loans are also repaid with a variety of income sources, often with the proceeds of the activities financed (income generating activities cited above), and not always with the sales of the grains stocked.

Cereals stocking adds to the farmers' risk management strategy and food security and thus has a merit of its own, whether or not it provides access to a loan. Only 2/3 of the bags stored are used as collateral for a warehouse receipt loan. The other part – increasing over the years from 10% to 1/3 - constitute savings free from any obligation. Similarly at the moment of destocking: only about 70% of the cereals are sold, whereas the other 30% is kept for family food security during the “hunger season” (food, feed, seed).

The warehouses are part of an “outlet portfolio” for the farmers, who can choose to keep the cereals in their homes, sell them, or stock them in different community warehouses. This would indicate that farmers prefer to diversify their market outlets for grains, possibly to spread risks, or to grasp opportunities provided by traders and/or non-profit entities (public entities, farmer organisations, NGOs). This could also challenge the impact assumption that all the cereals stocked in the FARMAF warehouses would otherwise be sold immediately after the harvest; part of it may have gone to the expense of stocking in other warehouses, which could dilute the impact in terms of higher sales prices. More research would be needed to disentangle this phenomenon.

The warehouses are not fully financially sustainable. The warehouse fee covers the direct stocking expenses, but does not include depreciation or larger repairs of the warehouse building and equipment. At the same time, the warehouse committees seem well organised, and capable to mobilize support and funds for larger

repairs or replacements. This does indicate a certain degree of sustainability of the warehouse system.

The warehouse receipt lending is fairly standardized. The stocks are valued against one standard price, and the loans are standardized at 70-80% of the stock value. Also the de-stocking moment is standardized. This standardization keeps the system simple and transparent, which is easy to manage for the warehouse committees and easy to monitor for the lending institutions.

The MFIs seem to be comfortable to provide the WRF service. They consider it a loan product that they can offer virtually risk-free (100% repayment in the analysed period), and without investing too much in monitoring and oversight. The key moments are the inventory control at the moment of issuing the loan, and the destocking combined with repayment of the loan. In between there is a monthly inventory control, which is sometimes skipped by the MFI when they fully trust the warehouse committee. With the loan amounts per warehouse around EUR 3,000, which is small but not micro size, this modest frequency of oversight is perfectly feasible for the MFI. The MFIs declare that they consider the warehouse committees well-trained, which makes them trust-worthy in managing the stock and avoiding losses or deterioration of the product. A few cases of stock deterioration have taken place, which have led to improvement in stocking routines. One MFI offers a substantial interest rate discount for WRF (6% instead of 10% for similar loans).

3. Crop insurance

Crop insurance is a relatively new product in Burkina Faso, launched in 2011. Planet Guarantee – with a number of partners - has developed crop insurance for cotton and cereals (maize, millet, sorghum). The number of farmers participating on an annual basis varies between 5198 (2015/2016) and 9627 farmers (2014-2015) (Planet Guarantee 2016).

In 2012, FARMAF agreed with Planet Guarantee to expand its drought risk insurance for maize to 31 villages in the FARMAF regions. The number of farmers insured in the broader FARMAF region grew from 203 (2013) to 970 (2015). This seems to suggest rapid growth, but much of this growth

was realized by further “horizontal expansion” to other villages in the same region, outside the 31 selected by FARMAF. We have no specific data on the number of insured farmers in the 31 villages, but the impact survey of FARMAF reveals that – out of a survey population of 465 farmers – the number of insured farmers grew from 24 (2013) to 33 (2015). This gives an uptake rate that increases from 5% to 7%, which is rather limited.

The limited uptake of insurance is further confirmed by a few factors. First, one of the participating MFIs – APFI - shows erratic outreach figures, rather than consistent growth. From the interviews, it seems that APFI had limitations of loan capital in those years, which has forced them to limit their credit activities. As insurance is most often bundled with credit, this could explain the decrease in insurance clients from the supply side. Second, at the demand side, there are indications that the adoption of insurance is not always stable. The interviews indicated that a number of clients were disappointed in the insurance. Some of them had expected more frequent pay-outs, as they stated that drought takes place every 2-3 years (this seems to be too high an expectation, as the insurance is designed for more extreme and this less frequent droughts). Others didn't consider it fair that their neighbours had been compensated for drought and they hadn't (the drought index is calculated along rectangular gridlines, rather than natural barriers). Other farmers were disappointed that the insurance did not cover excess rain or inundations. There seemed to be a portion of clients that tried out the insurance and dropped out after being disappointed. We didn't have data to quantify this phenomenon, and thus cannot corroborate to what extent the client base of the insurance consists of “repeated users” or “first-time users”.

The sustainability of the insurance product still seems to be fragile. For the MFIs, the insurance product is profitable. They gain through the premium commissions earned, and through the fact that their maize portfolio is better protected against drought risk. However, the product is not yet profitable for the insurance-related companies. For example Planet Guarantee, the insurance broker, would need a much higher volume of insurance operations in Burkina Faso to break even (90,000 clients).

Added to that, the costs could be underestimated: from the field interviews it appeared that the communication to clients about the insurance product could be improved and intensified, which would still add to the costs for the MFIs or for the insurance-related companies.

The loan volumes attached to the insurance – in the broader FARMAF region - grew substantially, from € 33,000 (2013) to € 122,000 (2015). There is a practically linear relationship between the insurance premiums paid and the credit volumes attached to the insurance. So, the insurance has indeed mobilised a proportional loan volume.

Most of the clients opt for the bundled credit+insurance, and only few opt for the stand-alone insurance without a loan. This is confirmed by the fact that the premium income is as high as one would expect when all the premiums were related to credits insured. **It is possible that the same clients had received similar loans in previous seasons,** without the insurance cover attached. From our research we cannot confirm with certainty that the loans could only be issued with the insurance in place. More research into client data of the MFIs would be needed to disentangle this possibility.

4. Upscaling potential

WRF: in absolute numbers, the loan portfolio related to the warehouse system is small. We did not see signs of a growth acceleration of this product. Although the MFIs are comfortable with the product, they seem to take a stand-by attitude, waiting until the product is demanded, rather than going out and actively promoting the WRF product. They seem to consider such promotion the responsibility of development agencies, who help the communities to invest in the warehouses and equipment and to train the warehouse committees. This would imply that the replication of the WRF system seems to depend more on the development actors, who create more warehouses with well-trained warehouse committees.

Insurance: the loan portfolio is somewhat larger than for the WRF system, but that is largely due to “horizontal expansion”: the uptake rate is still rather limited. The MFIs are comfortable with the product. Yet they are quite dependent on the

insurance-related actors to offer the product. For Planet Guarantee, gradual upscaling would depend on fresh project subsidies (their current model). For breaking-even, a faster upscaling would be necessary: one option to achieve that is to make the insurance compulsory, as a government policy. Efforts to that effect are being made by Planet Guarantee and other actors.

In conclusion, the upscaling of the crop insurance as a sustainable business model would require a break-through in the product uptake, either by making it a more convincing product for the farmers, or by making it compulsory if farmers wish to have a loan. In any case, more intensive communication to clients is recommended, so that

the clients have realistic expectations about the insurance product.

Loan capital available at the MFI is a limiting factor for upscaling, for both WRF and crop insurance.

Cashew: the economic viability to replicate WRF and insurance for other value chains is not evident. In the Burkina cashew sector neither WRF nor crop insurance currently exists. Cashew nuts can be stored, and in most seasons the price tends to rise after the harvest. However, in the last season the prices were already very high in the harvest season, which makes warehousing a less attractive option.

5. Conclusions and perspectives

The risk management tools of FARMAF – WRF and crop insurance – have indeed facilitated the farmers' access to credit, be it at a modest scale so far. They have alleviated the constraints of guarantees (WRF) and agricultural risk (insurance). One (large) MFI has offered substantial interest rate reductions for the WRF loans, in view of reduced credit risk and monitoring cost.

The upscaling potential of both mechanisms is promising but conditional. For WRF, the main constraint lies in the availability of warehouse infrastructure: expansion of warehouses depends highly on public subsidies and development agencies.

For crop insurance, the marketability of the insurance among farmers remains fragile, and the distribution channels for the insurance are limited. In both cases, the MFIs' limited loan capital can be an obstacle to scaling up their agricultural credit portfolio.

Replication of the risk management tools to a different value chain like cashew seems technically possible, but it would require further investigation and product adaptation to corroborate the economic viability. Lessons may be learnt from Tanzania, where WRF is being done in

the cashew chain, not so much to gain from price movements but more to finance aggregation, especially by farmers' groups, cooperatives and other traders.

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