

AFRICA SME FINANCE FORUM NAIROBI

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PROCEEDINGS

INNOVATIONS IN AGRIFINANCE

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Panelist 1: Norah Becerra, Senior Project Manager, Frankfurt School of Finance

Panelist 2: Faith Kamenchu, Head of Africa Operations, Farm Force

Panelist 3: Mina Stiernblad, International Business Manager, InspiraFarms

Panelist 4: Pamitra Wineka, Co-Founder and President, TaniGroup

Executive Summary

Agriculture remains an important activity in emerging markets. With the assistance of technological devices, agricultural companies can significantly improve their management skills and business models.

The AgriTech companies help smallholder farmers obtain access to markets and finance through various online platforms. Moreover, these high-technology platforms can also help business managers to make lending decisions by scoring on the evidence provided by the farmer to a series of questions. However, sometimes banks tend to view the agricultural sector as a highly risky sector and are reluctant to provide large amounts of finance. In future, agricultural SMEs need to expand collaboration with more banks. An increased focus on the education of farmers and buyers is also needed. More importantly, to be more cost-effective, SMEs should combine technology to reduce their production costs.

Farm Force Innovations in Kenya

- Farm Force is a Software-as-a-Service solution that simplifies the management of small-holder farmers, increases traceability and enables access to formal markets. It is used to efficiently manage outgrower schemes and contract farming programs.

The system is cloud hosted therefore there is no need to employ an IT manager or purchase servers/ IT equipment.

- The system manages geo referencing of the farmers locations, maps the area in production and determines specific conditions of their production, including the type of crops/variety they are growing and the chemicals they are using to cure diseases. The system also gathers information regarding farmer complaints, pests and diseases through a survey.
- Producers and extension managers can use the Farm Force mobile application to make conducting business easier. The Web application enables managers to see remotely producers' data, including the profile, yield forecast, total weight of each commodity purchase, and loans disbursed to which farmers /installments that are due/ payments made. In addition, the Farm Force also has a web platform on which banks can generate farmers' historical data and conduct credit scoring or evaluate which farmers are viable for a loan or vice versa. The mobile application is able to capture data offline and when the connection becomes available the data is synchronized to the cloud (web application) to enable managers to see what is happening in fields in real time.
- The Farm Force team is not involved in day-to-day activities on the ground level. Normally, aggregators, cooperatives or farmer groups would deploy Farm Force and appoint extension officers or lead farmers who would manage the data entry responsibilities, (day-to-day field operations). The Farm Force team would conduct system user training, offer technical support and helps with the platform configuration and setup as required. They would help set up pesticides, fertilizer and seeds application rates (set the maximum dosage for a specific chemical according to the Pest Control Products Board (PCPB) label). It also provides instructions about harvesting times, farmer, crop variety and a harvest summary.

Indonesian Agrifinance Company, TaniGroup's Farm Platforms

- TaniGroup aims to help Indonesian smallholder farmers in the two major issues they face: access to markets and access to finance. Through its e-commerce platform, TaniHub, farmers can sell their harvest to businesses such as restaurants, hotels, caterings, supermarkets, local markets and exporters. Their crowdlending platform, TaniFund, is designed to help farmers obtain more capital to expand their farms and increase their production.
- TaniGroup is currently the leading AgTech company in Indonesia, helping more than 18,000 farmers, and working with more than 2,000 business clients. On average, the farmers collaborating with TaniGroup earn more than 30 percent of their previous income.
- TaniGroup started off with TaniHub which experienced some difficulties when it started. First, it was very difficult to work with farmers because of their small landholdings and limited production capacity. Second, convincing the farmers to sell through the TaniHub platform could be difficult as they had already agreed to borrow money from and sell their products to middle men. As such, they were reluctant to break their original contracts with the middle men.

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- TaniGroup found that traditional banks were reluctant to work with them either was it to finance their transactions with the clients or to finance the capital for the farmers to increase their production. This was because they were seen as a new company (less than 3 years) and with no collateral. TaniGroup decided to adopt a crowdfunding platform. They succeeded in helping farmers obtain capital and increasing their incomes by more than 100 percent.
 - TaniGroup believes that the success in its model is the focus on the demand side. One of its new strategies is to create markets through the TaniPreneur program which help individuals or groups with the financial ability to open their own restaurants, juice bars and fruit stores. TaniGroup provides free training, free menu list with recipes, SOP, designs and collaborates with banks for financing purposes. TaniGroup is growing quickly because of its collaboration with multiple banks in the development of a supportive ecosystem.

The Business Model of Frankfurt School of Finance and Management—The “ALES” System

- One of the important tools that separates the Frankfurt School’s business model from others that it provides technical assistance and training to financial institutions at all levels. Traditionally, lenders spend a substantial amount of time assessing loan applications, and even more time preparing tailor-made credit proposals for review and decision. With the emergence of a new automated credit assessment, both time and money can be saved.
- “ALES” is an electronic platform developed by the Frankfurt School. It enables banks to expand their agricultural lending to farmers and agribusinesses by automating the credit assessment process. Currently, such automated systems are mostly used for consumer and small business lending. However, considering the relatively high costs of conducting assessments for agricultural clients, an increasing number of banks are identifying opportunities for automating parts of this process. The Frankfurt School platform provides an efficient and standardized scoring tool for agricultural loans. Banks utilize loan officers, who may have limited knowledge of agriculture. By contrast, “ALES” is tailored to each local set of circumstances, using local agricultural information that is updated regularly to ensure its accuracy. The system is also tailored with respect to issues of risk appetite, policy, and lending strategy of the financial institution in question.
- ALES’s work mode is built on the development of tech cards, which incorporate local agronomic data. These provide an overall average expense and income figure for each specific crop by sub-region. Tech cards are developed by the financial institution based on the key agricultural commodities in their region. They include information about the working capital needs for one hectare of land for each commodity in question, along with income assumptions. This enables gross margins for each commodity to be calculated, which is critical to ALES's quantitative analysis. ALES has so far shown impressive results, with significant expansion of lending to agricultural sectors where it's been utilized, along with high levels of portfolio performance.

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- ALES can also be used to make lending decisions. It includes productivity questions, which focus on identifying the structure and features of the farmer or agricultural enterprise. This will include the numbers of years of experience, the number of years spent growing a particular crop, ownership and investment in the land and machinery, irrigation, and water usage and access. This data helps identify good farmers. Scoring is based on the evidence provided by the farmer to these questions. Only a farmer who meets an acceptable productivity standard will be considered suitable for borrowing. Moreover, upon entry of the loan application details into ALES, it automatically calculates the working capital needed, and the most likely yield and income. It then produces a report which provides suggested loan limits for each type of product requested.
 - The biggest advantage of the ALES system is its ability to assure consistently applied credit assessment rules and decisions for the specific crop and region in question. In this way, it ensures that lending decisions are based on the quality of an individual farmer, while applying the bank's portfolio limits on agricultural sectors.

InspiraFarms

- With food security becoming more important and intensified by climate change — and with the incidence of food-borne illnesses on the rise — producers in the developing world have a vital role to play. However, without adequate support and access to reliable sustainable energy, these smallholder farmers will miss out on substantial economic and social opportunities. And the world will miss out on the 2.8 billion tons of food produced by the developing world each year.
- InspiraFarms provides small and growing agribusinesses with turn-key solutions that significantly reduce produce loss, cut energy costs, and improve market access. Whether on or off the grid, InspiraFarms' energy efficient cold storage (which meets European export standards) and food processing plants come with a food safe certification and are equipped with remote performance monitoring software and energy back-up systems.
- InspiraFarms offers modular plants that grow and move with producers. It also offers technical support, warranty, and flexible leasing terms to ensure returns on investment.

Successes and Challenges for Agrifinance Companies

- It is important to incorporate aggregators rather than individuals into the business system. By doing so, companies can better manage farmers' activities while blocking irrelevant information, such as selling and buying site locations. In addition, companies also need to focus on traceability so that they can know farmers' planning conditions.
- The education of farmers and buyers is very important. Companies should care more about the fulfillment rate, which is the acceptance rate of the goods delivered to customers, because it concerns the quality and quantity of products. As such, it is necessary to spread the knowledge of how to produce good quality crops at scale among farmers. In addition, buyers should be educated to understand that the products are harvested by farmers utilizing sustainable practices. In other words,

low prices should not be their sole focus.

- Banks tend to view the agricultural sector as a highly risky sector. However, it is possible to convince them, that when managed appropriately, an agriculture loan portfolio can be profitable. Indeed, many financial institutions introducing these kinds of tools are finding that their agriculture loan portfolio outperforms other sectors. In this context, many financial institutions are also introducing various tools to better evaluate the performance of the agriculture loan portfolio, perhaps better than in other sectors.
- Banks can sometimes question the accuracy of data. The data monitoring the agricultural products is collected by Global Positioning System (GPS), which only provides information on the location. Therefore, banks do not have access to the entire data entry and tend to provide more limited loan options.
- Enlarging the farmer base can be difficult for agricultural companies. For example, TaniHub only acquires farmer clients based on the recommendation of the existing partner farmers, which makes for very slow increases in client acquisition. Companies will therefore need to implement all the scoring methods available with any kind of technology as a means to acquiring more farmer clients.
- Sometimes buyers lack knowledge about how to properly store and transport food products. Despite the higher quality and good price, vegetables can easily spoil if the buyers fail to provide cold storage. Thus, it is equally important to educate the buyers.

Findings and Recommendations

- Indonesia can be a good example for African banks to follow. Most of the banks in Indonesia are not deleveraging. Rather, they are trying to work together with more start-ups to build a larger ecosystem. With the establishment of such an ecosystem, banks can more readily monitor and trace farmer activities and loans. In this context, the Indonesian government requires all banks to provide more than 50 percent of their loans to SMEs and the productive sectors.
- In future, the AgTech companies need to collaborate with more financial institutions, especially multilateral institutions, such as the World Bank. For example, TaniGroup has reached the limits of its lending from most of the banks in Indonesia. Also, it is unrealistic to continuously ask for collateral from technological companies.
- It will be more cost-effective if companies can combine the technology to reduce their staff costs. For example, one person who used to monitor 10 hectares might now be able to monitor 100 hectares with the support of sensors and technology, thereby improving the efficiency of production and management.