

ALES – Agricultural Loan Evaluation System



AgriFin Webinar

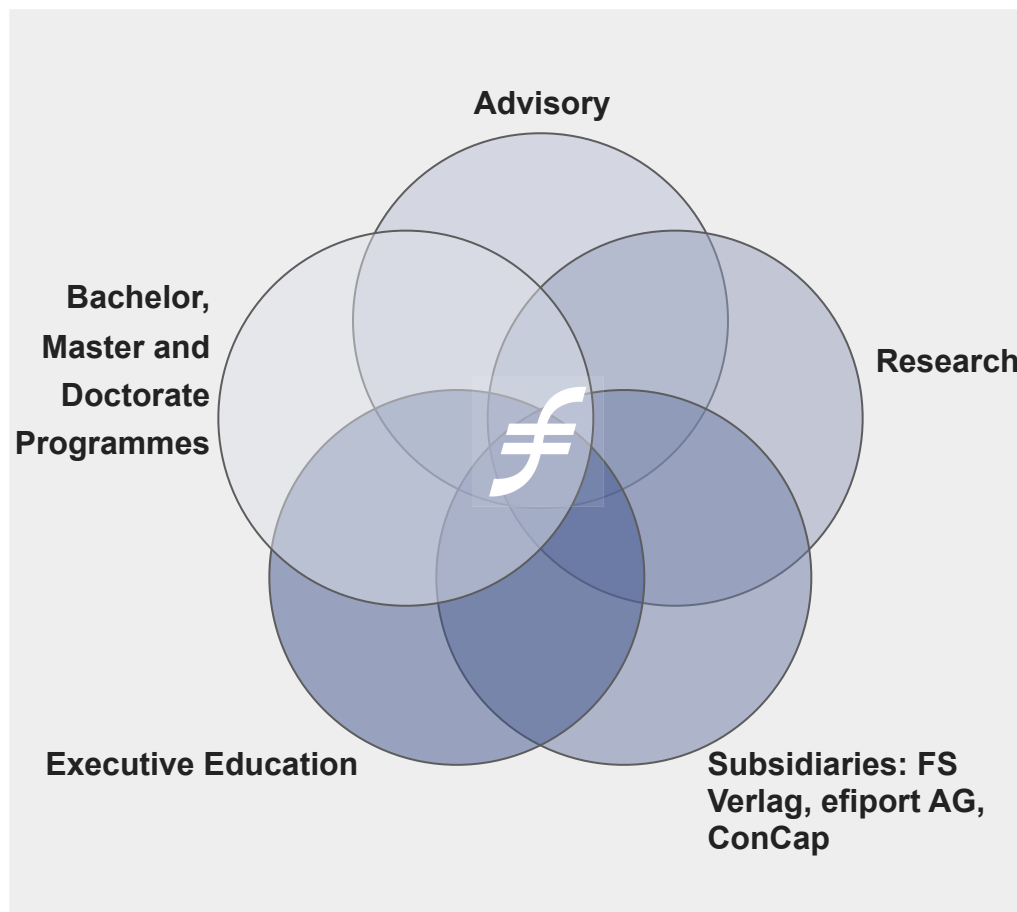
*Credit Scoring for
Agriculture Lending*

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Monday, February 18, 13

Frankfurt School of Finance & Management - A new type of business school



Frankfurt School - International Advisory Services (IAS):

- IAS structures and implements consulting and training projects in emerging markets and developing countries.
- Clients include international donor organisations, non-governmental organisations, international financial institutions, microfinance institutions, banks and other financial institutions.
- IAS has successfully implemented over 500 projects in more than 50 countries!
- The team consists of more than 90 multicultural professionals globally

Tajikistan - Overview



- Population: 7.7 Mio (July 2012);
- More than 73% of the population lives in rural areas; nearly 2/3 of population lives in poverty;
- High dependence on remittances; nearly half of the labor force works abroad;
- Only 26% of territory are considered agricultural land, 20% of permanent pastures and 5% of arable land;
- Agriculture is a key sector of Tajikistan, contributing 23% of GDP; agriculture accounts for 67% of employment;
- Most farmers farm on less than 2 ha: family farms own about 26% of total arable land while their gross agricultural output has reached 61.7%;

<http://www.taff.tj>

Main constraints for financing of agriculture in Tajikistan (as of 2007)

- Command agriculture versus freedom to farm
 - = **risk** from unprofitable activities (cotton)
 - = **low productivity** of farms
 - = **risk** from uncertainty of land users rights (no privately owned land)
- An exhausted capital base
 - = **risk** from lack of good farm collateral
 - = **risk** from increasing agronomic fragility
- A fragmented agrarian sector
 - = high transaction **cost** for farm credits
- Little or no experience with financing farms
 - = **risk** from heavy and often unknown past liabilities of farms (cotton debt burden)
 - = **no experience** with small privately owned farms
 - = no knowledge of agriculture
 - = **no cash flow based lending**
 - = bad experience with large scale cotton farmers

Agricultural Loan Evaluation System – ALES

**Financial
Institutions
(Banks, MFIs, etc.)**



Why ALES?

- To help opening up the agricultural finance market to financial institutions;
- To increase farmers' access to finance;
- To assess loan applications of farmers efficiently and to quickly determine the credit risk of farmers based on gross margins and reject loan applications from non-profitable farms (cost reduction for financial institutions);
- To provide an efficient and standardized scoring tool for loan officers with little or no knowledge on agriculture;
- ALES is a tailor-made solution specific for the region and the financial institution concerned and thus needs to be fed with local information and up-dated regularly

ALES Development: Establishment of Scoring System

- The first step in developing ALES is the establishment of a scoring system in line with the targeted financial institution's risk appetite, risk policy and lending strategy:
 - **Lending decision based on gross profit or net profit**
 - **Lending up to XX% of working capital need;**
 - **Amount of living expenses (min. – max. amounts; XX% of net income);**
 - **Importance of qualitative analysis related with production & productivity and minimum score to proceed.**
- Furthermore, **data collection on past yields** and comparison with regional averages will be necessary;

ALES Development: Development of Tech-cards & Regional Data Collection

- Tech cards are the core element of ALES.
- The main purpose of developing tech-cards and regional data collection is to come up with an overall average expense and income figure for each specific crop in each sub-region.
- Together with Frankfurt School, the financial institution defines the priority crops and agricultural activity and develops the “tech-cards” to feed the tool.
- The country concerned is grouped in sub-regions according to geographical location, regional development plans, climate, crop diversity and flora.
- Local Frankfurt School agronomists travel extensively to these sub-regions to collect agricultural data (i.e. average yield, selling price, working capital requirement, production processes and related costs etc.) to be embedded into the tool.



ALES Development: Development of Tech-cards & Regional Data Collection

- Tech cards include the working capital need for cultivating one decare (1000 m²) of land for the crop concerned, sales price (per kg) and yield (per decare).
- They calculate gross margins of different agricultural productions and are essential to conduct the quantitative analysis.
- While collecting data from the field, Frankfurt School pays special attention to estimate future selling prices and future income and expenses. The data is regularly updated in line with the changes and expectations in the local and international markets.



OLIVES for OIL (İZMİR)



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Yearly Expenses	Manpower (hour/decare)	Machinepower (hour/decare)	Substance used (kg/da/unit)	Manpower (TL)	Machinepower (TL)	Substance used (TL)	Total (TL)
1-Land Preparation							
* Plowing							0,00
* 2. Plowing							0,00
* 3. Plowing							0,00
* Furrowing ,Chisel, Harrowing		2,40			40,00		96,00
* Cultivating							0,00
Other							0,00
Total							96,00
2- Handling							
* Irrigation	6,53			3,75			24,49
* Fertilizer	1,46			3,75			5,48
* Herbicides, Fungicides, Insecticides	2,86			3,75			10,73
* Hoe weeding, Thinning	11,23			3,75			42,11
* Pruning	10,00			3,75			37,50
* Seed preparation							0,00
* Seedling							0,00
* Other (embarkation, debarkation, ...)	0,30			3,75			1,13
Total							121,43
3- Harvesting / Blending							
* Harvest	36,00			3,75			135,00
* Transport to harvest point							0,00
* Blending							0,00
* Transport to market		0,10			40,00		4,00
* Packaging							0,00
Toplam							139,00
4- Inputs							
* Seed/Seedling							0,00
* Chemical Fertilizer							40,00
** Fertilizer (containing nitrate)							0,00
** Fertilizer (containing phosphore)							0,00
** Fertilizer (containing potassium)							0,00
** Compost Fertilizer			40,00			1,00	40,00
* Fertilizer from Farm							0,00
* Substance for Pest Control							71,00
** Herbicide							0,00
** Insecticide			4,00			14,00	56,00
** Fungicide			1,00			15,00	15,00
** Other							0,00
* Cost of Irrigation Water			1,00			40,00	40,00
* Cost of Packaging Material							0,00
* Other (embarkation, debarkation, ...)							0,00
Total							151,00
Total Expenses							507,43
				YEARLY INCOME	YIELD (KG/DA)	SALE PRICE (TL/KG)	AMOUNT (TL)
				Main Crop	500,00	1,50	750,00
				Side Crop			-
				TOTAL INCOME			750,00

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ALES Implementation in Turkey

- Implementation of ALES in the Turkish market for 3 partner banks within the framework of EBRD's MSME Lending Programme (www.msmeturkey.com).
- **MSME Lending Programme Objectives:** To increase access to finance by MSME borrowers specifically farmers and agribusinesses located in rural areas, to increase credit to the agricultural sector and to enable partner banks to lend at stable levels in rural areas of Turkey.
 - **Akbank:** ALES is tested in pilot regions and the bank aims to launch the tool in 28 provinces of Turkey in 2013.
 - **Isbank:** ALES is tested in pilot regions and started to be used as a decision mechanism to assign limits for the bank's "Imece Card", an agricultural credit card.
 - **Yapi Kredi Bank:** ALES is being used in 250 branches of the bank since January 2012. As of September 2012, the total volume of agri-loans extended by Yapi Kredi Bank exceeded EUR 250 million disbursed to more than 30,000 farmers and agri-businesses (average loan size below EUR 10,000).

Results in Tajikistan using ALES (as of mid-February 2013)

- The novel lending methodology has provided access to finance for more than 24,583 farms; more than USD 72 million have been disbursed since November 2007
- The tool has substantially contributed to promoting inclusive finance in Tajikistan: the average loan amount disbursed to primary agriculture is below USD 3,000
- By making use of the lending methodology governance has been strengthened: PAR30 stands at 1.8 %
- More than 650 people have been trained in using ALES
- Other international financial institutions recognize the methodology: partner financial institutions get interest rate discounts if they use ALES for their client analysis

In summary: ALES Benefits & Challenges

Benefits:

- The tool can assess the various loan requests on working capital, investment and machinery as well as equipment for various activities e.g. crop production, animal husbandry (meat or dairy production), aquaculture, chicken farming, apiculture.
- Ideal for farmers and / or agricultural enterprises involved in various agricultural activities to help structure their payment schedule and for a better evaluation of their repayment capacity
- Provides a separate loan decision for each loan product and sets a general limit for the applicant.
- Filters and eliminates non-profitable agricultural activities (reducing costs & risks)
- Provides recommendations on maturity and loan repayment schedule for each crop or activity
- In line with the banking system and risk approach of financial institutions (Banks & MFIs). The tool does not only assess the agronomic risk but also the bank indebtedness (consumer & commercial).
- Loan decision is based on various criteria: working capital, income, loan request and guarantor
- Provides the chance to react immediately to any changes or events in the respective market
- Tailor-made for each financial institution
- It can easily be incorporated into the financial institution's internal scoring system.

In summary: ALES Benefits & Challenges

Challenges:

- Requires human resources and investments for regional data collection
- Need for expansion on functions, such as to check and control the collateral provided and to include cash flow projections (FS experts are working on it)
- Need for a professional IT partner if it needs to be integrated into the bank's internal IT system.



THANK YOU!



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