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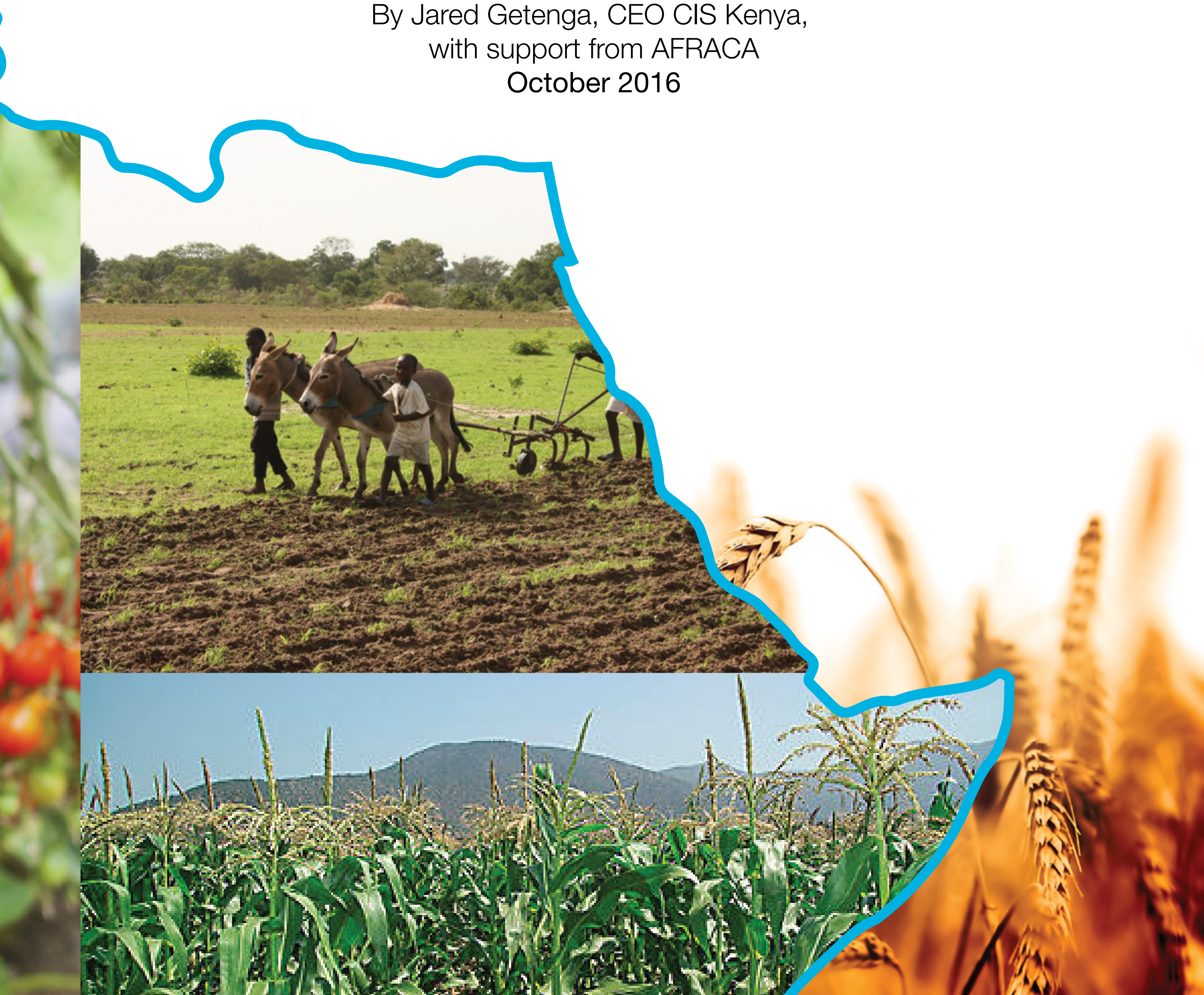
Developing Credit Information Sharing Platforms for De-risking Lending to Agriculture in Sub-saharan Africa

Paper prepared as part of collaborative relationships between African Rural & Agricultural Credit Association (AFRACA) and Credit Information Sharing Association of Kenya (CIS KENYA)

By Jared Getenga, CEO CIS Kenya,
with support from AFRACA
October 2016



DEVELOPING CREDIT INFORMATION SHARING PLATFORMS FOR DE-RISKING LENDING TO AGRICULTURE IN SUB-SAHARAN AFRICA

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1.0. Purpose of the Paper

'...Other areas that need attention are financial infrastructure with adequate reach to rural areas, which could include credit reference bureaus, collateral registers and a network of diverse financial institutions working collaboratively'... **Ms Esther Kasalu-Coffin, Country Director, IFAD[1]** .

This paper makes the case for agricultural lenders in Sub-Saharan Africa (SSA) to u**pgrade the sources of information collateral** by placing more reliance on credit bureaus than less sophisticated structures such as group-based savings and lending techniques. Properly licensed and regulated credit bureaus, having access to a wide range of formal and informal, positive and negative data, are a more efficient and effective means for character-based lending to mitigate risk, reduce operating costs and enforce repayment.

Drawing from other studies, this paper demonstrates that credit bureau data, combined with other key features of credit risk mitigation, constitutes a valuable input towards informed decisions for successful agricultural lending. The progress made towards establishing credit information sharing (CIS) in SSA offers opportunities for improving access to finance for agricultural borrowers by de-risking such loans. However, today only a handful of countries have well-functioning and inclusive credit reporting systems that include the range of bank and nonbank lenders that serve the poor.

In order to ensure that opportunities are created for farmers to benefit from their information capital, this paper makes three broad recommendations. The first is the need to broaden the scope of credit bureau data sources to tap into bottom-of-the-pyramid agricultural lenders. This can be achieved either by reforming credit bureau systems to accommodate less sophisticated data sources or by facilitating the upgrade of micro-lenders' systems to enable flow of data to credit bureaus.

The second recommendation is to establish linkages between credit bureaus and other innovative scoring initiatives (such as Farm Drive in Kenya) that specialize in data sets that are more relevant to agricultural lending than the generic credit bureau templates. Furthermore, a unique opportunity exists to digitize ROSCA and ASCA activities around savings, borrowing and repayment behavior, which credit bureaus can use to build credit profiles.

The third recommendation is for technological linkages between credit bureaus and collateral registries to promote visibility for small-scale agricultural farmers who may not feature in credit bureaus even though their assets get registered in collateral registries.

[1] Address by the Country Director of the International Fund for Agriculture Development (IFAD), Ms Esther Kasalu-Coffin at the Fourth African Rural and Agricultural Credit Association (AFRACA) Central Banks Forum 2016 on 13th October, 2016; in Accra, Ghana

2.0. Statement of the Problem

Information Asymmetry and resulting demand for tangible collateral – a binding constraint in Agricultural Lending

As the dominant economic sector, agriculture accounts for 34% of SSA's gross domestic product (GDP) and employs 64% of its labor force. Despite the importance of agriculture to economic growth and human welfare, however, the sector has been neglected for decades, as demonstrated by underinvestment in rural development and agricultural research, underutilization of productivity-enhancing technologies and land resources, and anti-agricultural biases in economic policies throughout the region. As a result, the agricultural sector in Africa remains significantly underdeveloped relative to its potential.

Access to credit is a major constraint to modernization of agriculture throughout SSA. Although the African banking industry has shown remarkable development in the past decade, credit for agriculture remains low. As highlighted in Table 1 below, commercial bank lending to agriculture represents a small portion of total credit, averaging only 5.8 percent across a sample of ten SSA countries. This amount is especially low considering that the agriculture sector accounts for over a third of the region's GDP. Agriculture plays a hugely significant role in the development of Africa's economies.

Among the factors that contribute to low levels of financing to agriculture is information asymmetry between lenders and borrowers. To reduce asymmetric information problems associated with extending credit and increasing the chances of loan repayment, banks typically require collateral from their borrowers[2]. According to World Bank Enterprise Surveys performed in over 100 countries, collateral was required in over 75% of all loans.[3] Many theoretical models postulate that the availability of collateral is a binding constraint in financing, and that this constraint binds harder in more underdeveloped financial markets[4] . Empirically, insufficient collateral is one of the main reasons firms are rejected when they apply for credit. Like all other categories, agricultural borrowers are not exempt from this reality.

It has been proven that credit bureaus provide an effective solution to information asymmetry but are yet to support lending to agriculture because this infrastructure has not been widely developed in SSA and where established, it has not captured data at the lower end of the pyramid. As a result, the real potential impact of CIS on the agriculture sector in Africa is to a large extent unknown.

[2] See Steivejvers and Voordeckers (2009) for a recent survey of empirical studies on the use of collateral to mitigate credit rationing

[3] Enterprise surveys are available at http:/www.enterprisesurveys.org/

[4] See Liberti and Mian (2010), Collateral Spread and Financial Development, The Journal of Finance, Vol 65, Issue 1 pages 147-177

Table 1: Commercial Bank lending by sector and country, 2008 (percentage share of total)[5]

	Botswana	Ghana	Kenya	Malawi	Mozamb -ique	Nigeria	Sierra Leone	Uganda	Tanzania	DRC	Average
Agriculture	0.7	4.3	3.6	14.6	8.1	1.4	3	5.9	12.4	3.8	5.8
Manufacturing	2.3	11.9	11	11.7	13.2	12	7.6	12.2	14	5.5	10.1
Trade	8.6	32.7	11.9	13.9	25.6	0	27.7	12.3	16.8	0.3	16.7
Transport, Electricity & water (oil & gas)	2.7	6.9	6.9	16.5	11.2	25.5	10.4	7.6	12	9.4	10.9
Construction	1.8	6.8	3.6	2.7	4.2	0	19	9.5	3.3	1.7	5.8
Mining	4.6	2.9	1.3	0.1	0	10.9	1.3	0.3	0.9	4.2	2.9
Other services & personal loans	79.3	34.5	61.8	40.6	37.7	50.4	31.1	52.2	40.6	75.1	50.3

[5] International Monetary Fund, January 2010. Democratic Republic of Congo Statistical Appendix. Page 26. http://www.imf.org/external/pubs/ft/scr/2010/cr1011.pdf and Mhlanga, Nomathemba, "Private Sector Agribusiness Investment in sub-Saharan Africa," Rural Infrastructure and Agro-Industries Division, Food and Agricultural Organization of the United Nations (Rome, 2005), 50.

3.0. How Credit Information Systems work

"For all types of finance, the availability of credit history reduces the lender's risk. Thus credit information bureaux are valuable, and can be made, with the right regulations and incentive structures for financiers, to cover the smallest loans in rural areas"[6] .

3.1. Past payment experience a strong predictor for future payment behavior

Credit information systems involve the use of credit bureaus which are set up to perform a number of functions including collecting, analysing, and distributing information about how consumers and businesses, large and small, handle their credit obligations. This type of information can be used for a variety of purposes such as assessing the risk faced by creditors, as past payment experience is a strong predictor of future performance. It also makes it possible to empirically assess, in the form of credit scoring tools, which factors are most predictive, permitting finely tuned credit decisions. As a result, creditors can more intelligently assess consumer and business lending decisions, thus promoting the extension of credit and economic development[7] .

CIS offers a meaningful solution of enhancing information symmetry needed to strengthen risk management in lending institutions and enhance financial inclusion. In more mature credit markets, credit bureaus have been part of the equation over a long period of time to introduce efficiency in the credit markets, leading to faster turnaround time in lending decisions, lower cost of borrowing for low-risk borrowers and increased visibility for the financially excluded.

The role of credit information systems in credit market development is well established . There is empirical evidence supporting the view that CIS has a positive effect on lending to the private sector [9]. Other studies have shown that credit is more abundant when borrowers and lenders benefit from credit-sharing institutions [10] . In countries where credit bureaus have been established, there has been an increased utilization of these services to address a fundamental problem of all credit markets- information asymmetry between borrowers and lenders that can lead to problems of adverse selection and moral hazard. However, there exist a gap between information being made available to and effective use of such information by credit providers.

3.2. Global Standards to guide development of CIS

The General Principles of Credit Reporting[11] describe the nature of credit reporting elements which are crucial for ensuring that credit reporting systems are safe, efficient and reliable. They are intended to provide an international agreed framework in the form of international standards for credit reporting systems' policy and oversight. They suggest the

[6]The Missing Middle in Agricultural Finance, Oxfam GB Research Report, December 2009

[7] OECD, Facilitating Access to Finance- Discussion paper on credit information sharing

[8] Akerlof, G. (1970) "The market for 'lemons'. Quarterly Journal of Economics 84; 488-500; Stiglitz, J. E. and Weiss, A. (1981) "Credit rationing in markets with imperfect information". American Economic Review 7 (1st June): 393-410; Hoff, K. and Stiglitz, J.E. (1998) "Moneylenders and Bankers: Price-increasing subsidies in a monopolistically competitive market". Journal of Development Economics 55:485-518.

[9]Jappelli, T. and Pagano, M. (2002) Information sharing in credit markets. Journal of Finance, 1695-1718.

[10]Galindo, A. and Miller, M. (2001) "Can credit registries reduce credit constraints? Empirical evidence on the role of credit registries in firm investment decisions". Paper prepared for the Annual Meetings of the Inter-American Development Bank, Santiago, Chile; Powell, A., Nataliya, M., Miller, M., and Giovanni, M. (2004). Improving credit information, bank regulation and supervision: On the role and design of public credit registries. World Bank Research Working Paper Series.

[11] The report has been prepared by a Task Force coordinated by the World Bank, with support from the Bank for International Settlements (BIS).

key characteristics that should be satisfied by different systems and the infrastructure used to support them to achieve a stated common purpose, namely Expanded Access and Coverage, Fair Conditions, and Safe and Efficient Service for borrowers and lenders.

As summarized in Box 1 below, the key considerations can be broadly grouped around i) data; ii) data processing; iii) governance arrangements and risk management; iv) legal and regulatory environment; and, v) cross-border data flows.

Box 1: The General Principles (GPs)

Public policy objectives: *Credit reporting systems should effectively support the sound and fair extension of credit in an economy as the foundation for robust and competitive credit markets. To this end, credit reporting systems should be safe and efficient, and fully supportive of data subject and consumer rights.*
Data (GP1): Credit reporting systems should have relevant, accurate, timely and sufficient data—including positive—collected on a systematic basis from all reliable, appropriate and available sources, and should retain this information for a sufficient amount of time.
Data Processing: Security and Efficiency (GP2): Credit reporting systems should have rigorous standards of security and reliability, and be efficient.
Governance and Risk Management (GP3): The governance arrangements of credit reporting service providers and data providers should ensure accountability, transparency and effectiveness in managing the risks associated with the business and fair access to the information by users.
Legal and Regulatory Environment (GP4): The overall legal and regulatory framework for credit reporting should be clear, predictable, non-discriminatory, proportionate and supportive of data subject and consumer rights. It should include effective judicial or extrajudicial dispute resolution mechanisms.
Cross-Border Data Flows (GP5): Cross-border credit data transfers should be facilitated, where appropriate, provided that adequate requirements are in place.

3.3. CIS Contribution to Doing Business Indicators- The World Bank Assessments

The World Bank Doing Business Indicators [12] assess the reforms in various countries with regard to comparative business regulation environments across economies and over time. Among the indicators assessed is the *Ease of Getting Credit,* which includes, inter alia, three indicators that measure information capital:

1. **Depth of credit information index** (Scope and accessibility of credit information distributed by credit bureaus and credit registries)
2. **Credit bureau coverage** (Number of individuals and firms listed in largest credit bureau as percentage of adult population)
3. **Credit registry coverage** (Number of individuals and firms listed in credit registry as percentage of adult population)

.

Based on these criteria, the results of the Doing Business Review 2016 established that the SSA countries were lagging behind other regions (see Table 2).

[12] The Doing Business project provides objective measures of business regulations and their enforcement across 189 economies and selected cities at the subnational and regional level.

Table 2: Comparative Regional Presence of Credit Reporting, 2010

Region	Getting Credit DTF	Depth of credit information index (0-8)	Credit registry coverage (% of adults)
East Asia & Pacific	53.6	4.2	14.7
Europe & Central Asia	64	6.4	23
Latin America & Caribbean	50.31	4.8	13
Middle East & North Africa	28.75	4.4	13.5
OECD high income	62.19	6.5	12.1
South Asia	42.5	3.9	4.2
Sub-Saharan Africa	37.5	2.5	6.9

The World Bank Reports also highlight the specific reforms undertaken by various countries. ***Appendix 1 provides a summary of reforms undertaken in various SSA countries.***

4.0. Critical players in the development of CIS in Sub-Saharan Africa

4.1. Role of Central Banks

Because of the importance associated with development of CIS, many central banks in SSA have made efforts to introduce credit bureau infrastructure in their respective credit markets. The different models include: Private Credit Bureaus (as is the case in Kenya), Public Credit Registries ordinarily established in the Central Bank (as is the case in Mauritius) or a combination of the two models that complement each other (e.g. Nigeria). Most CIS frameworks in SSA are in their early stages of development and it is therefore premature to expect material contribution to financial inclusion by credit bureaus in these countries at this stage of their evolution. If developed appropriately however, these systems will have a significant impact on lending to agriculture.

A few case studies are summarized in Box 2 below.

Box 2: Developments in CIS in selected countries in SSA[13]

Bank of Ghana
All DMBs and NBFIs had signed up for credit reference services by end of 2014. Credit checks made by financial institutions increased by 79.4% to 948,360 in 2014. Work commenced towards the establishment of an operational relationship between the Collateral Registry and the credit bureaux to harmonise and enhance the credit information system in Ghana.

Central Bank Kenya
In 2015, the Central Bank of Kenya (CBK) licensed Creditinfo as the third credit bureau after TransUnion and Metropol, thus increasing diversity and competition in service and product delivery. All banks are mandated to submit full-file data to all three. As at December 2015, CBK had approved 325 non-bank data sources (including 204 Savings and Credit Cooperative Societies). As at December 2015 11.2 million credit reports had been requested by the subscribing banks.

Bank of Mauritius
Mauritius Credit Information Bureau (MCIB), owned by and located within the Bank of Mauritius, is the only credit bureau operating in Mauritius. It is a repository of both positive and negative credit information, The MCIB started operating on 1 December 2005 with 11 banks and has gradually extended its coverage to 44 participants comprising banks, leasing companies, insurance companies, non-bank financial companies and utility companies.

Central Bank of Nigeria
The CIS infrastructure consists of CBN Credit Risk Management System (CRMS) and three private credit bureaux. At end-December 2014, the CRMS database consisted of 125,371 borrowers while those in private bureau database stood at 97.7 million. The cumulative credit reports obtained from the three credit bureaux stood at 2.8 million at end-December 2014. CBN, in collaboration with the NIBSS and the National Association of Microfinance Banks (NAMBs), extended BVN to OFI customers, principally the MFBs.

Bank of Uganda
BOU has two licensed credit bureaus, Metropol and Compuscan. 142,738 financial cards delivered to Participating Institutions during 2015, raising the cumulative number of cards to 1,235,845 as at December, 2015. A total of 613,829 credit enquiry records were recorded in 2015 (cumulative number: 2,948,915). The Financial Institutions Act was amended in January 2016 to permit the expansion of the CRB system to other lenders outside the ambit of Bank of Uganda.

Bank of Zambia
The total number of credit files submitted at the Credit Reference Bureau in 2015 increased by 9.0% to 7,675,751. However, the number of credit reports searched declined by 21.3% to 456,125 due to operational challenges relating to system connectivity.

[13] Bank Supervision Annual Reports of Bank of Ghana (2014), Central Bank of Kenya (2015), Bank of Uganda (2015), Bank of Rwanda (2015), Bank of Mauritius website

4.2 Role of Industry Bodies

4.2.1 South Africa Credit and Risk Reporting Association (SACRRA)

1. SACRRA is a members association of all credit providers in South Africa which coordinates and facilitates the submission of payment profiles to the Credit Bureaus. The founder members of SACRRA are retailers and credit bureaus who established the Association in 1989 with the following objectives;

i. Ensuring that the value of consumer credit, both to the economy and the individual, was fully appreciated.
ii. Facilitating the sharing of timeous, accurate, up-to-date and relevant consumer credit information to enable lenders and credit grantors to grant their customers appropriate credit facilities.
iii. Carrying out activities related to consumer credit information and consumer credit granting, which would further the interests of members, consumers and the economy.

4.2.2 CIS Kenya

CIS Kenya is a members association set up to coordinate the development of CIS in Kenya . It seeks to champion the expansion of the mechanism, lobby for legal reform, undertake public awareness on the benefits of the mechanism, build capacity of credit providers to utilize credit scores for risk-based pricing, promote the use of Alternative Dispute Resolution as a preferred option for addressing CIS-related consumer complaints, and strengthen self-regulatory aspects of the mechanism.

The establishment of CIS Kenya was the outcome of collaborative efforts of the Central Bank of Kenya, the Kenya Bankers Association and Financial Sector Deepening Trust (FSD Kenya). It is the only other members association in SSA after SACRRA. Its contribution, aimed at ensuring that the development of CIS in Kenya meets international standards as espoused in the General Principles of Credit Reporting, has contributed significantly to the remarkable progress so far witnessed in Kenya's CIS agenda.

5.0. Providing Solutions – use of farmers' information capital for agri-lending

5.1. Combining character-based lending with technical criteria

Analysis undertaken by CGAP and IFAD has found that successful agricultural microfinance lenders rely on various combinations of features to mitigate the risks associated with lending to farming households, although in no experience were all ten features present . The paper identifies ten features (see Box 3), a substantial number of which seem to contribute to a well-performing portfolio, in diverse combinations, in a variety of circumstances. In general, the first few features are found in most successful experiences, while those that come later on the list have proven important in addressing particular risks or situations found in lending in specific types of agricultural activities. Most of the features address issues specific to financing agriculture; some respond to the general challenges of operating in rural areas, and some reflect good practice in delivering small unsecured loans.

Box 3: Ten Features of a successful agricultural Microfinance

Box 3: Ten Features of successful agricultural microfinance

• Feature 1: Repayments are not linked to loan use.

• Feature 2: Character-based lending techniques are combined with technical criteria in selecting borrowers, setting loan terms and enforcing repayment.

. Feature 3: Savings mechanisms are provided.

• Feature 4: Portfolio risk is highly diversified.

• Feature 5: Loan terms and conditions are adjusted to accommodate cyclical cash flows and bulky investments.

• Feature 6: Contractual arrangements reduce price risk, enhance production quality and help guarantee repayment.

• Feature 7: Financial service delivery piggybacks on existing institutional infrastructure or is extended using technology.

• Feature 8: Membership-based organizations can facilitate rural access to financial services and be viable in remote areas.

• Feature 9: Area-based index insurance can protect against the risks of agricultural lending.

• Feature 10: To succeed, agricultural microfinance must be insulated from political interference.

The second most important feature, according to this study, was witnessed in lenders who combine character-based lending with technical criteria in lending decisions, as explained below.

Feature 2: Character-based lending techniques are combined with technical criteria in selecting borrowers, setting loan terms and enforcing repayment.

This study established that, if a lender has reliable knowledge of a potential client's character, as is the case with a well-functioning credit bureau, the lender can make a loan based on that person's history of repaying financial obligations and on its assessment of that person's financial situation and plans. But developing countries almost never have a credit reference system with good coverage of poor families. Microcredit techniques were developed as a substitute for microlenders' lack of knowledge about the characters of potential clients and their willingness to repay debt. To serve small farmers and farmers in remote or marginal rural areas, group-based savings and lending techniques may be essential to mitigate risk, reduce operating costs and enforce repayment.

"Managing risks and designing products for agricultural microfinance - Features of an emerging model"; Occasional Paper 11, issued on August 2005 by the Consultative Group to Assist the Poor (CGAP) authored by Robert Peck Christen and Douglas Pearce, UK Department for International Development.

5.2. Linking CIS with other information-based platforms for enhancing Agricultural Finance

CGAP in its initiative on small holder finance focuses on identifying the demand for financial services by households in agricultural areas with a sharp focus on the use of information and communication technologies (ICT) to reach households in a cost effective way. This has culminated in the design of digital financial services for smallholder families in Zimbabwe, Senegal, Rwanda and Cambodia, and has also led to an understanding of the demand for financial products and services through the Smallholder Dairies project in Mozambique, Tanzania and Pakistan. IFC works with private sector banks and agribusinesses through lines of credit, equity participation, risk sharing facilities, and targeted advisory services to promote the flow of credit to smallholder farmers and agribusinesses. Key areas of IFC's work include trade finance for commodities, warehouse finance for stored commodities, and financing improved technologies to increase productivity and improve resilience to shocks.

Farm Drive

In Kenya, Farmdrive has pioneered an innovative way to use data generated in smallholder farmers' value chains for financial inclusion. Through harnessing the power of data analytics and mobile technology, Farmdrive has helped in aggregating and analyzing pertinent information about smallholder farmers from dynamic traditional and alternate data points - including produce offtakers, agro-dealers and the farmers themselves. This has also helped in building innovative comprehensive credit profiles used for real-time credit assessment to then serve smallholder farmers through digital financial services. Farmdrive applies methods that minimize the lending risk to farmers, and operational costs while increasing the efficiency and operational capacity of financial service providers to meet the hugely unmet demand for credit by farmers. FarmDrive's solution enables farmers to access a range of affordable financial services from our partner financial institutions. Farmers are now able to easily access affordable credit they deserve through their mobile phones when they need it hence eliminating the more complicated loan processes which often resulted in rejection.

Data available in Savings Groups

Low-income people around the world make numerous financial transactions a day. They buy store items on credit, borrow from friends and family, and save with community groups. But the majority of these transactions are conducted in cash and part of the informal economy. Given this informality, even low-income people who always pay their debts back on time lack ways to build their credit. They remain invisible to formal providers.

The internal data of savings groups holds important information. Respondents in the 298 household Kenya Financial Diaries study cited the ROSCA as the number one most important informal device. Table 3 below shows that informal groups are commonly used – and even though the balances can be relatively small, they can represent a large share of transactions, providing an untapped source of big data.

Table 3: Usage of informal savings group among the Kenya Financial Diaries sample (N=298)[17]

	% of HH using	# of transactions per savings group for each household over the period of study (per savings group)	Balance as share of liabilities/assets
Savings in a ROSCA	**78%**	**11**	**2%**
Savings in an ASCA	**52%**	**8**	**12%**
Borrowing from an informal group	**35%**	**4**	**6%**

[17]Kenya Financial Sector Deepening Trust. 2014. "Kenya Financial Diaries: Shilingi Kwa Shilingi—The Financial Lives of the Poor." http://www.fsdkenya.org/new/our-work/ financial-diaries.html

There is a high likelihood that, by digitally capturing and analysing individual savings, borrowing and repayment data from savings groups, credit providers could provide loans directly to individuals at a lower cost. In addition, more appropriate decisions on loan size, duration and price decisions could be made, based on this data. This approach could introduce farmers to a breadth of loan products that could complement their existing informal portfolios and allow them greater ability to seize opportunities, manage risks and ease temporary cash flow shortfalls by building a direct relationship with a broad range of potential credit suppliers.

Linkages with collateral registries

Secured lending refers to credit transactions where a creditor holds an interest in a debtor's movable property such as inventory, account receivables, livestock, equipment, and machinery, as collateral to secure a loan or a debt obligation. The interest in movable property is accordingly referred to as security interest, pledge or charge. Collateral registries are publicly available databases of interests in or ownership of assets, allowing borrowers to prove their creditworthiness and potential lenders to assess their ranking priority in potential claims against particular collateral.

While credit bureaus on the one hand and collateral registries on the other are completely different in terms of purpose and function, the two share the same beneficiaries and clientele. Credit bureaus contain private information while collateral registries contain public information. What typically happens between the credit bureaus and the collateral registry system is that a formal data sharing agreement is put in place whereby, on a regular basis (weekly, monthly, etc) the credit bureau gets a data dump from the collateral registry often at a cost. The credit bureau then uses this information to create a value added product or additional information on the credit report. Many credit bureaus have formal business relationships with the registry systems around the world. In some instances, e.g. Sri Lanka, Bhutan, the credit bureau is the service provider of the collateral registry. When the credit bureau is acting as a service provider a proper governance structure needs to be implemented to support that type of business model.

Efforts to link credit bureaus and collateral registries in SSA have the potential impact of enriching the farmers' information capital for improved credit risk management, access to capital and default management.

5.3. Strengthening CIS at the Base of the Pyramid

"An essential element in the prevention of multiple-lending and over-borrowing is the availability of information to the MFI of the existing outstanding loan of a potential borrower. This is not possible unless a Credit Information Bureau is established expeditiously."—Malegam Committee Report, Reserve Bank of India, January 2011

In their market intelligence on credit reporting systems, IFC and CGAP observed that: 'Over the last 10 years, credit reporting has rapidly expanded in emerging markets, but many of these initiatives have emerged in the mainstream banking and consumer lending sectors, often leaving microlenders and the low-income consumers they serve outside of this information infrastructure. Today, only a handful of countries have well-functioning and inclusive credit reporting systems that include the range of bank and nonbank lenders that serve the poor'[18].

The findings of this study are articulated in the report: Credit Reporting at the Base of the Pyramid: Key Issues and Success Factors, whose key messages (abridged) are presented in Box 4 below. The findings contained in this report confirm the need for a more inclusive credit bureau system that obtains data from the bottom-of-the-pyramid lenders.

[18] CGAP and IFC, 2011. Credit Reporting at the Base of the Pyramid: Key Issues and Success Factors. Access to Finance FORUM No. 1, September 2011.

Box 4: Key Messages on Credit reporting at the Base of the pyramid

Box 4: Key Messages on Credit Reporting at the Base of the Pyramid

- MFIs still dominate the base-of-the-pyramid lending landscape in many markets. However, commercial banks, consumer lenders, and retailers and other nonfinancial firms—are also now targeting these market segments. For CIS to be effective in averting over-indebtedness at the base of the pyramid, all relevant lenders in a given market need to participate.
- Country-level factors determine which approaches to CIS at the base of the pyramid will have the best prospects —credit bureaus, credit registries, MFI-specific client databases, or some hybrid of these. The various CIS approaches are not mutually exclusive.
- Credit reporting systems are dynamic, and they can be expected to evolve over time in response to market, lender and regulatory changes.
- No one approach carries a guarantee of success in any market, and each has its limitations, especially those influencing which types of lenders can participate.
- There are challenges to effective base-of-the pyramid CIS, including (i) establishment of credit reporting systems that cover all types of base of-the-pyramid lenders; (ii)regulatory or cost barriers that limit participation; (iii) comparatively high costs of obtaining and processing high-quality data on base-of the-pyramid borrowers; (iv) establishing the identity of base-of-the-pyramid borrowers; and (v) protection of data privacy and accuracy at a reasonable cost given high transaction volume and low loan sizes. But growing global experience also shows likely success factors in addressing the challenges.
- Policy makers, donors, and lenders serving those at the base of the pyramid all have roles to play in developing credit reporting systems that gather reasonably thorough and accurate data on base-of-the-pyramid borrowers and cover the full range of formal lenders from which these clients are borrowing. Policy makers can remove regulatory barriers to participation and fashion incentives—or even mandates. Donors have the means to support policy makers, credit reporting service providers, and base-of-the pyramid lenders to understand the benefits of comprehensive credit reporting systems and to overcome obstacles—and they have the means to inform base-of-the-pyramid borrowers why this is in their best interest. Base-of-the-pyramid lenders have the most important role to play: by supplying data and purchasing credit reports they provide the building blocks of credit reporting systems with the potential to foster responsible lending at the base of the pyramid and avert irresponsible lending that leads to over-indebtedness.

6.0. Testable Hypotheses

Although a number of countries in Africa have begun embracing CIS, the real potential impact of CIS on the agriculture sector in Africa is to a large extent unknown. Secondly, it is not clear if sufficient effort has been made to expand the data sources for credit bureaus to include sources that are rich in agri-lending data. Thirdly, because of the generic nature of data specifications used in collating and submitting data to credit bureaus, the suitability of these templates for agri-data collection is not clear. For example, there is need to confirm if these data templates allow for categorization of SMEs in the agricultural value chain as agricultural borrowers. Finally, no evidence has been gathered to confirm that the credit profiles generated by credit bureaus are suited for agri-lenders.

This sets out a policy gap that needs to be investigated. Further research into innovative approaches to ensure that the development of CIS in Africa contributes to increased access to agricultural credit is needed on the following hypotheses:

- Character-based lending has improved agricultural credit market performance through reduced default rate, increased availability of credit and reduced cost of credit (interest rates)
- By virtue of higher level of sophistication, credit bureau infrastructure provides a more cost-effective source of information collateral than group based lending structures
- Expanding the range of data sources for credit bureaus would increase their relevance to agricultural lenders
- Lending to the agricultural sector will increase if farmer input-financing is disbursed through financial institutions (formal) rather than through marketing agencies (informal) as a way of ensuring easier uptake of data by credit bureaus.
- Agricultural finance outside the value chain framework particularly to smallholder farmers is risky to lenders.
- CIS for farmers in an agricultural value chain will increase credit allocation to the sector.
- Internal savings group data is a valuable source of information to determine credit-worthiness.
- Strong linkages between collateral registries and credit bureaus will assist introduce information symmetry that will increase access to credit for farmers.

Appendix I:

Observations from Doing Business report year DB2016 to DB2017 on how reforms in SSA economies have made getting credit easier

Doing Business Report 2017	Nigeria strengthened access to credit by creating a centralized collateral registry. This reform applies to both Kano and Lagos
	Zimbabwe improved access to credit information by allowing the establishment of a credit registry
	Togo improved access to credit information by introducing regulations that govern the licensing and functioning of credit bureaus in UEMOA member states
	Senegal improved access to credit information by establishing a new credit bureau
	Burkina Faso improved access to credit information by introducing regulations that govern the licensing and functioning of credit bureaus in West African Economic and Monetary Union (UEMOA) member states
	The Gambia strengthened access to credit by adopting the Security Interests in Moveable Property Act which implements a functional secured transactions system and establishes a centralized notice based collateral registry
	Côte d'Ivoire improved access to credit information by establishing a new credit bureau
	Mozambique improved access to credit information by enacting a law that allows the establishment of a new credit bureau
	The credit bureau in Tanzania expanded credit bureau borrower coverage and began to distribute credit data from retailers
	Mauritania improved access to credit information by providing banks and financial institutions with online access to the credit registry data
	Lesotho improved access to credit information by expanding the coverage of its credit bureau
	Malawi strengthened access to credit by adopting a new law on secured transactions that implements a functional secured transactions system and establishes a centralized, notice-based, online collateral registry

Doing Business Report 2016	Liberia improved access to credit by adopting new laws on secured transactions that establish a modern, unified and notice-based collateral registry
	Madagascar improved access to credit by broadening the range of assets that can be used as collateral by allowing a general description of assets granted as collateral and by allowing a general description of debts and obligations
	In Rwanda the credit bureau started to provide credit scores to banks and other financial institutions while the credit registry expanded borrower coverage, strengthening the credit reporting system
	The Seychelles improved access to credit information by establishing a credit registry
	In Uganda the credit bureau expanded borrower coverage, improving access to credit information
	In Zambia the credit bureau began to provide credit scores
	Kenya improved access to credit information by passing legislation that allows the sharing of positive information and by expanding borrower coverage
	The Comoros improved access to credit information by establishing a new credit registry
	Namibia improved access to credit information by guaranteeing by law borrowers' right to inspect their own data
	Niger improved its credit information system by introducing regulations that govern the licensing and functioning of credit bureaus in the member states of the West African Economic and Monetary Union (UEMOA)
	In Zimbabwe the credit bureau began to provide credit scores
	In Rwanda the credit bureau started to provide credit scores to banks and other financial institutions while the credit registry expanded borrower coverage, strengthening the credit reporting system
	The Seychelles improved access to credit information by establishing a credit registry
	In Uganda the credit bureau expanded borrower coverage, improving access to credit information
	In Zambia the credit bureau began to provide credit scores
	Mali improved its credit information system by introducing regulations that govern the licensing and functioning of credit bureaus in the member states of the West African Economic and Monetary Union (UEMOA)
	Mauritania improved access to credit information by lowering the threshold for the minimum size of loans to be included in the credit registry's database and by expanding borrower coverage