Photo Credit: Root Capital

2015 Year in Review:
Increasing Impact & Managing Risk

CSAF COUNCIL ON SMALLHOLDER AGRICULTURAL FINANCE

CSAF Members & Affiliates

Data & Knowledge Partners

Supporting Partners

** CSAF affiliate since 2015*

Photo Credit: Oikocredit/Opmeer Reports

2015 At A Glance

$597M DISBURSED *to* **672 BUSINESSES** *sourcing from* **2.1M FARMERS** *across* **66 COUNTRIES**

Mission

- Facilitate market entry and increase lending to agricultural businesses in the missing middle
- Grow the agriculture finance sector to support the livelihoods of the world's 450 million small-scale farmers
- Promote responsible lending principles, including social, environmental, and governance standards, among all financial institutions serving this market

Vision

CSAF envisions a thriving, sustainable, and transparent financial market that generates long-term economic, social, and environmental benefits by meeting the financing needs of agricultural businesses that aggregate smallholder farmers in developing countries worldwide.

A Note on Methodology

The results presented in this report are based on agricultural lending activity by the nine CSAF members and affiliates from January 1, 2015 to December 31, 2015. CSAF members and affiliates (hereafter called members) provided this information to MIX, an organization that promotes financial inclusion through data and insight, under a nondisclosure agreement. Subsequent analysis was conducted by MIX using an aggregate dataset and therefore does not identify either the borrower or the lender.

To account for inconsistent data types and to improve trend analysis, MIX applied a unified adjustment methodology across both new and historical data. Therefore, readers will notice slight variations from the data published in CSAF's 2014 annual report. Additionally, only active loans are included in this analysis. Active loans are those that meet at least one of the following criteria: (1) had a maturity date in the survey year or later; (2) included a disbursement date in the survey year; or (3) had an outstanding balance (not subject to write-off) at any point during the survey year.

To complement and contextualize the financial data presented in this report, CSAF members participated in a first-of-its-kind qualitative survey covering trends affecting portfolio growth and credit quality in 2015, as well as each organization's outlook for the future. The survey results are included in this report.

Executive Summary

Increasing Impact

CSAF members continue to extend our reach and increase our impact. By providing loans to small- and medium-sized enterprises (SMEs) across 66 countries, CSAF members played a role in connecting more than 2.1 million smallholder producers—over one-third of whom are women—to domestic and international markets.

In 2015, members supported 672 businesses by extending a combined $597 million in short- and long-term credit, up 5% from the $566 million disbursed to 651 businesses in 2014. The vast majority of this credit was disbursed to businesses in Latin America and sub-Saharan Africa. This regional distribution remains largely unchanged from 2014 despite notable year-on-year variations by country and significant growth in South and East Asia, an emerging region for many CSAF lenders.

This financing helped to fuel an estimated $3.7 billion in combined annual revenue among borrowers. From coffee cooperatives in Peru exporting to global markets to grain processors in Kenya selling nutrient-fortified flours to local consumers, CSAF members continue to support the growth and development of a diverse market for smallholder agriculture finance. By targeting businesses that meet our respective social and environmental criteria, we aim to improve farmer livelihoods and promote agricultural practices that sustain the environment.

Managing Risk

At the same time, 2015 was a year of slower growth and increased risk for many lenders, agricultural businesses, and the farmers they reach. For borrowers, a range of production, price, and market challenges have compressed operating margins and strained cash flows. As a result, lenders have observed a slowdown in the number of new businesses requesting and qualifying for loans. This is particularly true for coffee businesses in Latin America—the region-commodity combination accounting for the largest portion of CSAF lending—where low prices and the residual effects of coffee leaf rust disease are inhibiting the sector's potential.

Figure 1: CSAF Lending

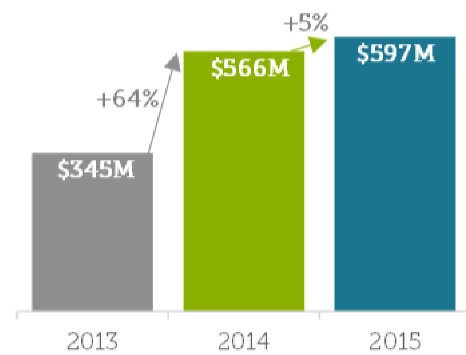
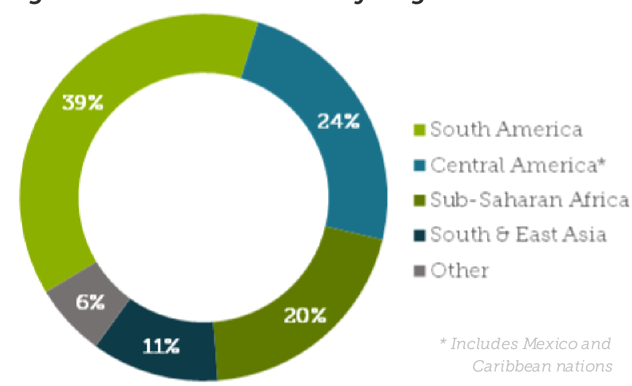


Figure 2: Disbursements By Region



A decline in credit quality among existing borrowers—especially those in West Africa's cashew sector and Central America's coffee sector—has also contributed to slower market growth, with some members adjusting their lending policies in response to slower repayment and a rise in loan restructurings.

This year's report highlights both collective progress as well as specific challenges and risk factors that contributed to the slower market growth and decline in credit quality. These factors include a persistent decline in the prices of several agricultural commodities and a depreciation of emerging-market currencies; crop losses due to increasingly erratic and unpredictable weather events tied to climate change; and uncertain or unfavorable regulatory environments that deter lending. These external shocks and stresses have an amplified impact upon businesses that are often under-capitalized and have limited managerial and agronomic capacity, underscoring the importance of technical assistance alongside access to finance.

Rather than pursuing a fragmented and uncoordinated approach to addressing these challenges, CSAF members believe it is essential to draw on our collective experience and build a supportive infrastructure from which the entire sector will benefit. As we independently pursue our respective missions to expand access to finance for high-impact agricultural businesses, we recognize that our ability to do so is inextricably linked to the success of the entire sector.

Filling the Data Gap

Among the various types of infrastructure that are required to build this industry, perhaps none is as important—and as frustratingly absent—as having timely and accurate data to make informed investment decisions.

In the agricultural markets of most developing countries, a sizable information gap translates into uncertainty for would-be investors and ultimately limits the efficient flow of capital. Today, agricultural data is messy and often contradictory, if it exists at all. For example, reliable data regarding cost of production – and hence the market price required to support profitable investment by a business and acceptable risk to a lender – is not available for many commodities across different regions, and data on crop yields and prices is notoriously inconsistent.

Efficient markets rely on information, and as CSAF members, we are committed to transparently sharing aggregate information while also respecting the confidentiality of our individual borrowers' business and financial data. Since 2014, we have collaborated with an external analytics firm to aggregate lending data and present a snapshot of smallholder agricultural finance. In doing so, we seek to fill the information gap that has impeded the growth and development of agricultural finance.

Growing the Industry

As CSAF members, we each maintain diversified portfolios of loans to agricultural SMEs that aggregate hundreds, often thousands, of smallholder farmers. This means that we serve just one segment of a broad and continuously evolving market, one that is dynamic and beginning to formalize. It is a market that includes diverse actors working in different ways to meet the needs of smallholder farmers: non-governmental organizations and extension agencies that are providing a range of technical assistance; investors, donors, and financial service providers that are channeling capital to smallholder farmers; traders, exporters, and agribusinesses that are connecting smallholders to markets; and national governments and industry groups that are creating the overall conditions that are required for sustainable agricultural development.

For instance, a new coalition named Propagate, which is similar to CSAF and includes six organizations focused on direct-to-farmer finance, seeks to increase the overall quality and availability of viable smallholder financial services. Meanwhile, a growing ecosystem of knowledge partners is turning learning into action and helping to identify opportunities for increased impact and innovation. For example, as part of its work in financial innovation, the Consultative Group to Assist the Poor (CGAP) is using financial diaries, along with national surveys, to understand the financial needs and behaviors of smallholder families.

Similarly, the Initiative for Smallholder Finance and the Rural and Agricultural Finance Learning Lab—both of which serve as knowledge partners to CSAF—recently released a landmark study, *Inflection Point: Unlocking Growth in the Era of Farmer Finance*, to guide practitioners and funders. Building on research from the *2012 Catalyzing Smallholder Agricultural Finance* report, Inflection Point provides a more complete picture of the various actors and approaches within the field of smallholder agricultural finance. It suggests that, because projected market growth based on current efforts is insufficient, the industry must make fundamental changes to close the financing gap for smallholder farmers.

We agree and fully embrace the report's recommendations around increased customer engagement, expansion of "smart subsidies" to unlock greater market activity, and the need for so-called "progressive partnerships" by a range of public and private actors. Following the slowdown in lending growth and an increase in risk across our members' loan portfolios, these findings come at a pivotal moment. We hope the insights shared in this publication complement the Inflection Point report by identifying specific areas where smart subsidy and progressive partnerships can be targeted: (1) to grow the supply of capital; (2) to build the capacity of agricultural SMEs; and (3) to improve the overall enabling environment.

To that end, this annual report shares our progress, highlights opportunities for growth, and notes the challenges and risks associated with smallholder agricultural finance. Ultimately, it is our hope that CSAF's activities will encourage other financial institutions to increase lending to high-impact agricultural SMEs, and to do so in a way that is responsible, sustainable, and transparent.

Photo Credit: Oikocredit/Opmeer Reports

Sector Trends

Agricultural lending by CSAF members continues to grow, but at a much slower pace than in prior years. During 2015, CSAF lenders disbursed a record $597 million to 672 businesses across 66 countries. Of this total, $230 million (39%) was disbursed in South America; $143 million (24%) in Central America*; $120 million (20%) in sub-Saharan Africa; $67 million (11%) in South and East Asia; and the remainder in other countries. This regional distribution remains largely unchanged from 2014, despite notable year-on-year variations by country and significant growth in Asia.

The enterprises that received loans from CSAF members in 2015 generated $3.7 billion in combined annual revenue. These businesses connected 2.1 million smallholder producers—over one-third of whom are women—to domestic and international markets, paying them an estimated $2.3 billion for their crops. In addition, these businesses provided permanent employment to approximately 37,000 workers and employed thousands more during peak agricultural periods tied to harvesting and processing.

CSAF borrowers earned an estimated **$3.7 billion** in combined revenue and connected **2.1 million** smallholder producers to markets, paying them **$2.3 billion** for their crops.

Roughly two-thirds of CSAF borrowers are structured as producer organizations (i.e., farmer-owned cooperatives or associations), while just under one-third are privately owned enterprises sourcing from smallholder** farmers. As in prior years, the majority of credit disbursed was in the form of working capital loans and trade credit, which is used to purchase crops from farmers and fund ongoing operational expenses. These working capital loans are often backed by purchase contracts, which allow businesses that have limited fixed assets to pledge as collateral—one of the binding constraints that precludes them from qualifying for loans from local banks—to access credit.

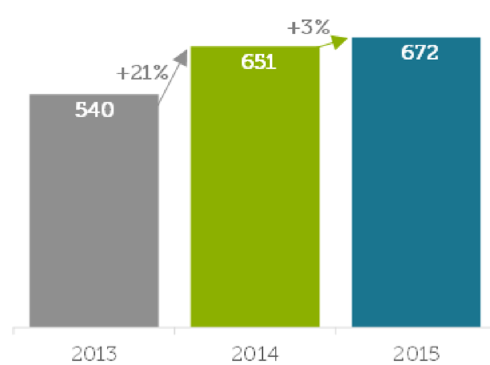
Figure 3: Total Disbursements By Region

	2014		2015		Change
South America	$209M	(37%)	$229M	(39%)	+9%
Central America*	$167M	(29%)	$143M	(24%)	-17%
Sub-Saharan Africa	$109M	(19%)	$120M	(20%)	+9%
South & East Asia	$36M	(6%)	$67M	(11%)	+46%
Other	$46M	(8%)	$38M	(6%)	-20%
Total	**$567M**	(100%)	**$597M**	(100%)	**+5%**

On a global, aggregate basis, the topline lending figure of $597 million represents a 5% increase in credit disbursed compared to 2014 and signals a continued commitment among lenders to support agricultural SMEs, despite the market failures that make this lending so challenging. Yet as this report highlights, lending in 2015 slowed considerably relative to the 64% growth observed in 2014. Indeed, most lenders reported that the volume of disbursements declined or remained steady compared to 2014.

While the net increase in businesses reached from 2014 to 2015 was 3%, the gross increase in businesses reached—driven by the addition of 148 new borrowers—was 23%; However, because 132 of the 651 businesses reached in 2014 paid down their loans, declined to renew, or had difficulty repaying, the net percentage increase remained low.

Figure 4: Total Number of Borrowers

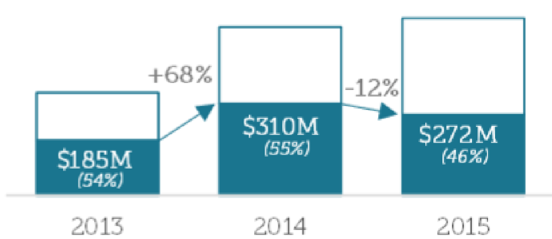


* Note that in this and all subsequent references, the Central America region includes Mexico and the Caribbean.
* * The definition of smallholder farming varies by country and context. Throughout the report, we define smallholder farmers as those who cultivate five hectares or less.

Whereas trends during 2014 signaled the growth opportunities in agricultural lending, particularly during a period of high commodity prices, our collective experience in 2015 revealed the impact of short-term shocks and the boom-and-bust cycles of global commodity and currency markets. These and other factors contributing to the lending slowdown and increase in risk are explored later in the report, following a brief discussion of lending within key value chains.

Weighed down by low prices and the residual effects of leaf rust in Latin America, coffee lending accounts for much of CSAF's decelerated growth. After surging by nearly 70% to $310 million in 2014, global disbursements to coffee-sector enterprises contracted by 12% to $272 million in 2015. The total number of borrowers (280) decreased slightly from the 288 businesses reached in 2014. As in previous years, CSAF lenders are heavily concentrated in the coffee sector, which accounted for 46% of global disbursements in 2015, down from 55% in 2014.

Figure 5: Coffee Sector Disbursements and Share of Total



This concentration varies by region—from 85% of lending in Central America to less than 35% in sub-Saharan Africa. And while all CSAF members actively finance agricultural value chains beyond coffee, it is the largest sector for all due a host of factors: strong market linkages, formal contracting, and widespread adoption of third-party sustainability standards and certifications by borrowers and their buyers that facilitates transparency. For the foreseeable future, no other sector offers conditions nearly as conducive to lending at scale as coffee.

Nevertheless, concentration in a single crop entails risk for financiers and farmers alike. In 2015, many of these risks materialized and had an adverse impact on the growth and, as discussed later, the quality, of credit portfolios.

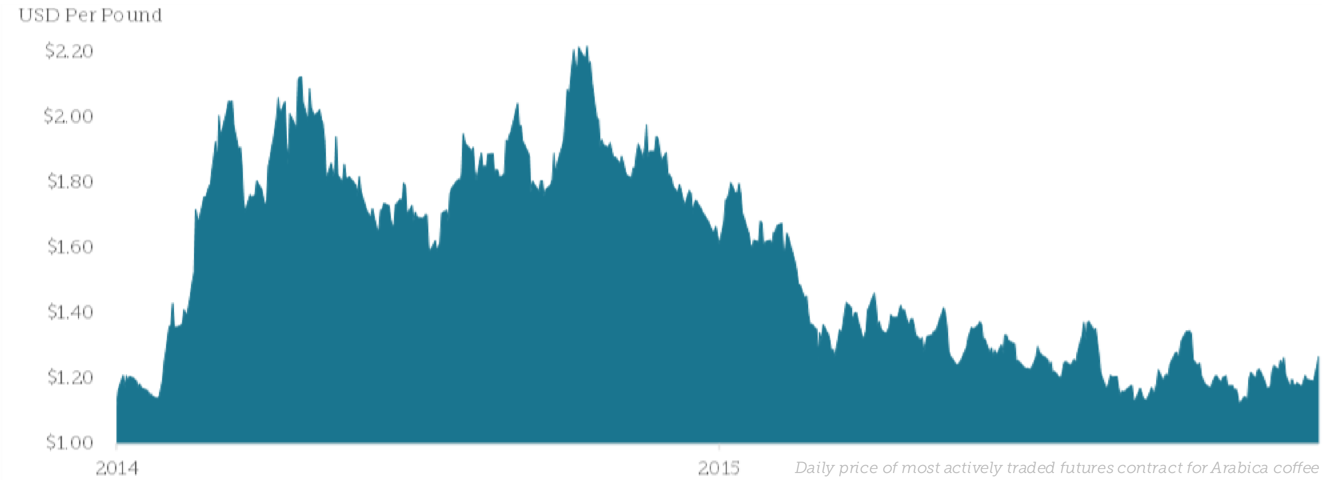
The drivers of the decline in coffee lending vary. At a macro level, most lenders cite the prolonged period of low coffee prices as a central factor. In 2015, the average price for the most actively traded Arabica coffee futures contract was $1.32 per pound, 35% below the average of $1.78 per pound in 2014.[1] While many borrowers sell their coffee at a negotiated premium above this international price, it remains a widely used reference point for pricing specialty coffee contracts, and is indicative of the degree to which price movements impact the bottom line of coffee farmers and enterprises. At the same time, rising input and labor costs have squeezed margins and constrained cash flows, making some prospective borrowers more conservative in their credit appetite and adversely affecting the repayment capacity of existing borrowers.

The residual effects of the 2013/2014 outbreak of coffee leaf rust disease throughout Latin America are also having a negative impact. Leaf rust is a naturally occurring fungal disease that reduces yields and can kill coffee plants entirely. It thrives in humid, low-lying areas, and as the region's climate warms, the disease is spreading to new areas and to unusually high altitudes.

In some countries, rust-related losses were not as drastic as had been feared, yet in other countries—including El Salvador, Mexico, and Peru—the disease took an unexpectedly devastating toll (see page 18). Some businesses that CSAF members finance reported 80% drops in production due to coffee leaf rust disease; the effects have been so dire that in some regions farmers are abandoning their land and essentially giving up on agriculture.

With aging trees and declining yields, Latin America's coffee-growing regions required large-scale investments well before the outbreak of leaf rust; now this has become even more urgent. CSAF lenders and partner organizations observe similar trends in East Africa's coffee sector, as well as in West Africa's cocoa sector. In Ghana, for instance, an estimated 23% of cocoa tree stock is more than 30 years old, according to the country's cocoa board.[2]

Figure 6: Daily Price of Arabica Coffee Futures



Daily price of most actively traded futures contract for Arabica coffee
Source: Intercontinental Exchange (ICE)

Although several CSAF members have designed specialized loan products for crop renovation, overall financing efforts have been limited, due in part to insufficient channels through which to deploy capital, especially for farmers not connected to well-organized producer organizations. Recent analysis by Dalberg Global Development Advisors suggests that more than $14 billion in investment is needed today to rehabilitate or renovate aging cocoa and coffee crops worldwide.

Decreases in coffee lending were particularly acute in Honduras, Mexico, and Peru.

- Honduras. Much of the decline in coffee disbursements took place in Honduras, which is the third-largest exporter of coffee in Latin America, behind Brazil and Colombia. With virtually all CSAF lending in Honduras concentrated in coffee, disbursements there declined by 40%, from $64 million in 2014 to $39 million in 2015, due in part to heightened country risk, including security concerns.

- Mexico. Lenders also reported a significant decline in lending to Mexico's coffee sector. Despite the net addition of two borrowers, the volume of disbursements declined by 40%, from $15 million in 2014 to $9 million in 2015, on lower demand due in large part to the impact of coffee leaf rust disease. For instance, government reports estimate that 70% of the total coffee-growing area in Veracruz and Chiapas were affected by leaf rust and that production nationwide has decreased by 50% over the past five years.[3]

- Peru. Similarly, in Peru, which accounts for roughly one-quarter of global coffee lending, producers continue to struggle with the ongoing outbreak of leaf rust, which has affected up to 60% of the total area planted and has hit farmers in the central highlands hard. At the same time, shifting buying patterns on the part of coffee companies have threatened the financial sustainability of several producer organizations, especially those that are undercapitalized and most susceptible to external shocks (see page 16). Disbursements to Peru's coffee sector declined by 22%, from $81 million in 2014 to $63 million in 2015.

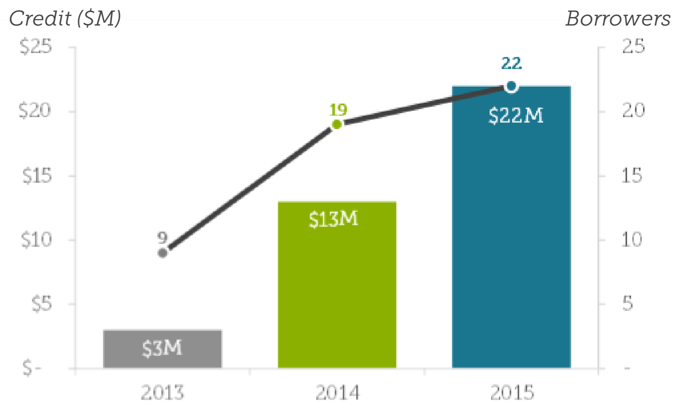
Figure 7: Coffee Lending By Country

	2015 Disbursements	% Change from Previous Year
Peru	$63M	⬇ -22%
Nicaragua	$43M	⬆ +13%
Honduras	$39M	⬇ -40%
Colombia	$22M	⬆ +70%
Costa Rica	$20M	⬇ -5%
Uganda	$15M	⬆ +50%
Rwanda	$14M	⬇ -7%
Guatemala	$10M	⬆ +11%
Mexico	$9M	⬇ -40%
Indonesia	$7M	⬆ +40%
Other	$31M	N/A
Total	**$272M**	⬇ -12%

With a rebound in production and sector reforms, lending to Colombia's coffee sector grows by 70%. Colombia has long had a reputation for producing some of the best coffees in the world. Following several years of below-average production, the country's output has rebounded. Production in 2015 surpassed 13.3 million 60-kilogram bags, a 10% increase from the previous year and nearly double the output from 2007.

The country's national coffee federation attributes this increase in output to its large-scale crop renovation initiatives, which have reportedly lifted per-hectare yields from 600 kilograms to 900 kilograms over the past few years.[4] Colombia exports approximately 90% of the coffee it produces, although that figure is slowly declining as local coffee consumption increases. The country has also introduced market-oriented reforms in its coffee sector, allowing greater opportunities for producer organizations to export directly.

Figure 8: Lending to Colombia's Coffee Sector



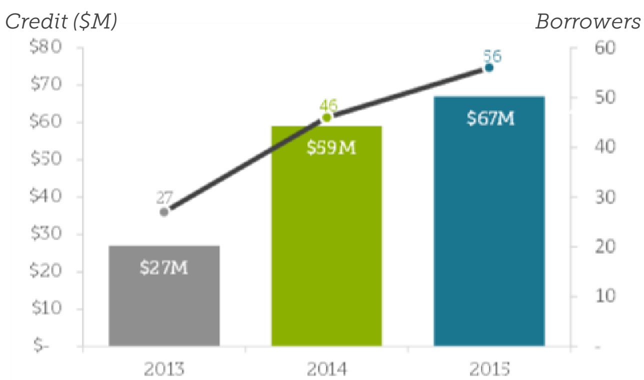
Spurred in part by these national-level factors, CSAF members have significantly increased lending to Colombia's coffee sector, from $3 million in 2013 to $13 million in 2014 and $22 million in 2015. The number of coffee-sector businesses in Colombia receiving CSAF financing has grown as well, from nine in 2013 to 22 in 2015.

Photo Credit: Root Capital

As cocoa prices climbed throughout 2015, lending to the sector increased by 14%, with particularly rapid growth in Uganda. Cocoa is the second-most financed commodity among CSAF lenders in total. In recent years, it has accounted for approximately 10% of global CSAF lending, a share that increased slightly in 2015 as overall lending to the sector grew by 13% to $67 million, up from $59 million the prior year. This growth in lending occurred alongside a sustained rally in the international price of cocoa throughout 2015—the fourth successive year of gains for cocoa futures.

The number of cocoa businesses receiving CSAF financing also grew, with nine new borrowers across Uganda (four), Ecuador (three), and Ivory Coast (two). Globally, CSAF lenders currently support 56 cocoa businesses in eight producing countries.

Figure 9: Cocoa Lending Growth



Nearly 40% of global cocoa-sector disbursements went to borrowers in Ivory Coast, the world's largest producer and exporter of cocoa beans. There, seven CSAF members currently lend to 15 cocoa businesses, up from 13 businesses that received loans the prior year. Cocoa disbursements in Ivory Coast during 2015 grew by over 30% to surpass $25 million as the country increased its farm-gate price by nearly 20% due to the higher world price. (Since 2011, Ivory Coast has set a minimum farm-gate price, calculated as a percentage of the export price based on the forward sales of its cocoa crop.)

By contrast, CSAF lending to cocoa businesses in Ghana, the world's second-largest producer, remains limited, given that all cocoa is exported through a government marketing board. More broadly, the geographic breakdown of CSAF lending in the cocoa sector is similar to that in the coffee sector in that it is concentrated in countries where the macroeconomic environment is favorable and domestic value chains are relatively well-organized.

While Ivory Coast and Ghana dominate global cocoa production—accounting for roughly two-thirds of total output—other countries are playing a pivotal role in helping to fill what industry analysts predict may be frequent supply deficits in the years to come. For example, Peru is responding to rising global demand and over the past five years has reported steady increases in area under cultivation, yield, and quality. CSAF members disbursed $22 million to 18 businesses in Peru's cocoa sector in 2015.

In Uganda, CSAF lending to the cocoa sector increased fivefold, from $2 million in 2014 to more than $10 million in 2015. As a result, cocoa now accounts for 30% of all CSAF lending in Uganda, a country that has not traditionally been a major producer or exporter of cocoa. This growth stems directly from recent efforts to strengthen the sector through the government's Cocoa Development Project and other industry-building efforts.

Central American countries are also increasing cocoa cultivation in response to warming climate conditions. In El Salvador, the U.S. Agency for International Development (USAID) and the Howard Buffett Foundation have each contributed $10 million to revitalize the country's cocoa sector.[5] With implementing support from Catholic Relief Services, Lutheran World Relief, and TechnoServe, this is an example of the role that progressive partnerships and smart subsidy play in nurturing an emerging sector and unlocking capital to accelerate its growth.

Figure 10: Cocoa Lending By Country

	2015 Disbursements	% Change from Previous Year
Ivory Coast	$26M	+31%
Peru	$22M	-8%
Uganda	$11M	+483%
Ecuador	$4M	+242%
Dominican Republic	$3M	N/A
Philippines	$1M	-9%
Cameroon	$0.6M	-54%
Ghana	$0.1M	N/A
Total	**$67M**	+13%

Financing Climate-Smart Agriculture

Another data point about 2015: it was the warmest year since modern recordkeeping began in 1880.[6]

Climate change has the potential to both positively and negatively affect the location, timing, and productivity of crop, livestock, and fishery systems at local, national, and global scales. By mid-century and beyond, these impacts will be increasingly negative, especially within the countries where CSAF members lend throughout Asia, Latin America, and sub-Saharan Africa.[7]

As lenders, we have a role to play in helping agricultural SMEs and smallholder farmers adapt. The challenge is how to put capital to work for climate adaptation while also managing risk. A number of existing financing mechanisms have been instrumental in mobilizing resources for climate change adaptation at regional and national levels, but few models have successfully "down-scaled" to reach agricultural SMEs and even fewer have extended to individual farmers.

However, we continue to see encouraging signs of progress. Working in partnership with borrowers, several CSAF lenders have designed specialized loans and technical assistance funds to support climate-smart practices. These include long-term loan to renovate aging coffee and cocoa trees and financing for installation of solar-powered food processing equipment, distribution of drought-resistant seed varieties, and the adoption of micro-irrigation systems, for example. Looking ahead, there is a critical need for innovative financial products that support smallholder farmers in adopting these and other practices as the impact of climate change becomes more visible.

Photo Credit: Root Capital

Lenders continue to expand into new value chains, with grains, nuts, quinoa, and rice among the fastest-growing commodities. While few, if any, value chains offer the market linkages and relative transparency of coffee, CSAF lenders continue to expand our portfolios to include businesses sourcing a wide range of food and cash crops for both domestic and export markets.

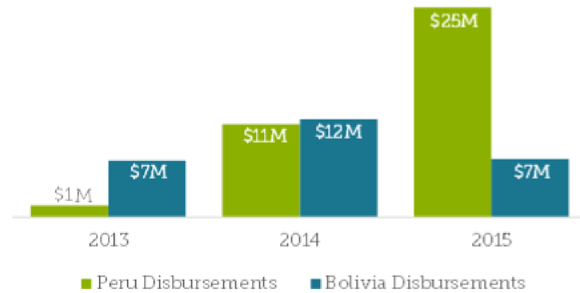
In 2015, a majority of CSAF lenders reported financing businesses in entirely new value chains, including alpaca, bananas, sacha inchi*, and seafood. Additionally, CSAF data indicates a notable increase in lending to Peru's quinoa sector, Bolivia's nut sector, and the grain and rice value chains of South America and Southeast Asia, respectively.

- **Quinoa lending quadruples since 2013 and Peru emerges as the world's top producer.** Quinoa has been cultivated by indigenous Andean populations for thousands of years. More recently, it has become one of the fastest-growing commodities in world trade, with a spike in international demand beginning in 2007.[8] CSAF lending to businesses in the major quinoa-exporting countries of Bolivia and Peru has tracked this growth by quadrupling from $8 in 2013 to $32 million in 2015. The most pronounced growth in demand for credit came from borrowers in Peru, which in 2015 surpassed Bolivia to become the top quinoa producer in the world.

  While quinoa prices have retreated from their historic highs, the sustained, multiyear price increase driven by rising global demand encouraged producers living in Peru's lower-altitude coastal region to start cultivating quinoa. In just the past two years, the value of quinoa exports from Peru grew from $83 million in 2013 to $180 million in 2015.[9]

  CSAF disbursements to Peru's quinoa sector more than doubled, from $11 million in 2014 to $25 million in 2015. Quinoa has now replaced cocoa as the second-most financed crop in the country among CSAF lenders, after coffee. The number of quinoa-sector borrowers in Peru also increased to seven in 2015, up from three in 2013. Meanwhile, quinoa lending in Bolivia actually declined from $12 million in 2014 to $7 million in 2015.

Figure 11: Quinoa Lending Growth in Peru



- **The rise of Brazil nuts...in Bolivia.** Despite their name, the largest exporter of Brazil nuts is not Brazil but Bolivia. Today, roughly half the world's Brazil nuts come from Bolivia, with another 40% from Brazil and 10% from other countries.

  Brazil nuts grow naturally in the Amazon rainforest and provide critical income to thousands of small-scale producers who wild-harvest the nuts (as opposed to cultivating them in an agricultural production system). Because this source of income is only viable when the forest is intact, Brazil nuts are an example of how conservation can improve livelihoods.

CSAF lending to the Brazil nut sector increased **5x** on increased demand.

  In 2013 and 2014, lenders supported Bolivia's Brazil nut sector by providing $3 million in financing each year. However, in 2015, with the addition of just one business and substantial growth tied to market demand, disbursements jumped to $16 million, replacing quinoa as the most-financed crop in the country and driving overall lending growth in the region.

* Sacha inchi is the seed of a plant that grows in the highlands of Peru and has been cultivated by indigenous people for centuries.

Our Borrowers

CSAF lenders support smallholder farmers by financing points of aggregation: businesses that purchase crops from hundreds or thousands of individual producers and then aggregate, process, and sell those crops to domestic or global buyers. In addition to generating income for farming households, these businesses create substantial seasonal and year-round employment and often function as multi-service providers, offering farmers access to finance, farm inputs, agronomic training, and often non-agricultural services as well, such as health insurance.

As agricultural value chains become more integrated and formal, the structure and scale of businesses across CSAF member portfolios are increasingly diverse, from early-stage private ventures with less than $500,000 in annual revenue to large-scale producer organizations with several million dollars in sales.

Of the 672 businesses that received financing from CSAF lenders in 2015, two-thirds (441) are structured as producer organizations (i.e., membership-based cooperatives and farmer associations). These types of businesses also account for the majority (75%) of credit disbursed on a global basis. Privately owned agricultural enterprises, such as traders and food processors that source from smallholder producers, account for one-third of borrowers globally and represent nearly half of the total businesses reached in sub-Saharan Africa.

Meanwhile, outside of these aggregation points, new channels through which to deploy capital to farmers are quickly emerging, including local microfinance institutions, savings and loan cooperatives, and commercial banks with rural networks and agricultural expertise.

672
BUSINESSES
generating

$3.7B
REVENUE

sourcing from

2.1M
FARMERS

Photo Credit: Root Capital

Risk Factors

Agriculture is an inherently risky industry, and 2015 was a year of increased risk for farmers, agricultural businesses, and, in turn, CSAF members and others that finance them.

For borrowers, a range of production, price, and market challenges have compressed operating margins and strained cash flows. As a result, we have observed a slowdown in the number of new businesses requesting and qualifying for loans, as well as a weakening of credit quality among existing borrowers, with slower repayment and increased loan restructurings.

For lenders, this has resulted in a clear uptick in the number of nonperforming loans and higher provisioning costs. At the end of 2015, portfolio-at-risk greater than 30 days (PAR>30) across all CSAF member portfolios was 14%, more than double the percentage at year-end 2014. CSAF lenders also reported having to restructure 6% of loans (and of outstanding balance) in 2015, with the highest percentage of loan restructurings among borrowers in sub-Saharan Africa.

Several factors have led to this decline in credit quality. The majority of CSAF members cited commodity price volatility and crop failure due to disease and extreme weather events among the top factors adversely affecting the quality of their portfolios. These and other risk factors are discussed in more detail in the following section.

Figure 12: Top-Ranked Risks

	Risk Factors
1.	Commodity price volatility
2.	Crop failure due to diseases and extreme weather events
3.	Currency volatility
4.	Low market demand for specific agricultural products
5.	Lack of available supply due to farmer side-selling
6.	Theft or fraud among borrowers
7.	Political instability
8.	Conflict and insecurity

Based on survey results among CSAF members

It is important to note that, while agricultural SMEs represent one of the most effective channels through which smallholder farmers can integrate into formal markets, many of these businesses are undercapitalized and often have limited financial and managerial capacity. This, in turn, inhibits their growth and makes them particularly vulnerable to external shocks and stresses.

- **Limited financial and managerial capacity.** Irrespective of their structure and scale, many businesses lack the capacity, systems, and processes to absorb and properly manage credit. Technical competencies such as accounting, financial planning and analysis, governance, product pricing, and strategic planning can be acutely deficient among some borrowers.

  Compounding this challenge is the fact that many businesses struggle to attract and retain staff, especially as younger generations migrate to urban areas. This is a systemic risk and one that requires deep and sustained investment in higher education, workforce training, and other publicly funded programs to attract talented managers and skilled workers to the agricultural sector.

- **Under capitalization.** Many producer organizations, such as cooperatives, are long on social capital but short on financial capital. Their equity base consists of the nominal fee members pay when they join and even smaller annual contributions that members often make to capitalize the cooperative.

  When the cooperative has a good year and generates surplus revenue, the farmers vote on how much should be retained and how much should be distributed to the membership. Given the precarious financial situation of many smallholder farmers, it is not surprising that cooperatives tend to distribute the majority of their earnings to members as opposed to retaining surpluses to capitalize the business.

  In this context, working capital loans can have a large impact because they allow cooperatives to rapidly scale up their purchases from farmers and access better-paying markets. Yet, ironically, successful cooperatives struggle to build a proportional capital base; as they grow, they take on increasing leverage (i.e., ratio of debt to equity) and are susceptible to external shocks (e.g., market volatility, extreme weather). In recent years, several larger, iconic farmer cooperatives have become destabilized or been disbanded, in part because of their inadequate capital base and weaknesses in management, governance, or both.

CSAF members continue to collaborate on efforts to prevent overindebtedness among borrowers by communicating when multiple lenders are financing a larger enterprise and creating guidelines for loan restructurings. Yet there is an immediate need for better indicators and financial benchmarks, as well as training for borrowers so that business managers themselves can properly document existing debt obligations and recognize when they are becoming overleveraged.

- **Low agricultural commodity prices.** During 2015, virtually all agricultural commodities were caught in an extended down cycle. For example, after surging by 50% to $2.20 per pound in 2014, the benchmark price of Arabica coffee steadily retreated throughout the year and closed at $1.27, a 25% decline from its yearly high in January 2015 (see Figure 6). Shortly thereafter, the price dropped to $1.11 per pound—a two-year low and only slightly above the estimated average cost of production in many countries. Similarly, following a threefold increase in quinoa prices over the past several years, the price of the ancient grain fell dramatically in 2015 as a result of increased production.

Low commodity prices put agricultural SMEs at a distinct disadvantage, as many of these businesses operate with relatively high fixed costs and have undiversified sources of revenue. When the value of their sales decreases, already thin margins are compressed further. This low profitability, combined with the structural challenge of under-capitalization, constrain growth and jeopardize the commercial viability of their businesses, particularly for enterprises unable to access external financing when needed. Many SMEs simply have not built the balance sheets that are required to withstand multiple years of financial losses. For these businesses, 2015 was an especially difficult year.

Additionally, while the impact of global agricultural commodity prices on producers is variable and dependent upon the local contexts and the specific value chain, smallholder farmers and agricultural SMEs generally lack negotiating power and are subject to asymmetrical market information; they are almost always price-takers.

- **Extreme weather events.** During the last six months of 2015, reports of an exceptionally strong El Niño weather event fueled market uncertainty. Since then, unfavorable weather conditions have negatively impacted agricultural production in several countries.

For instance, heavy rains in Kenya and Uganda reportedly led to 30% post-harvest losses within the grain sector, and significant drought throughout Southeast Asia devastated rice crops in the top-exporting countries of India and Thailand. In Ivory Coast, the impact of El Niño, combined with dry, dusty conditions have reduced cocoa output for the 2015/2016 season. And in Indonesia, El Niño–induced dry weather is expected to result in a decline in coffee production through early 2017. (While these events have exerted upward pressure on the price of several agricultural commodities, many continue to trade below five-year averages.)

It is possible that CSAF lenders will observe the effects of El Niño into 2017 as the financial implications of crop loss strain the cash flows of borrowers and jeopardize their ability to repay existing loans. And of course for economically vulnerable producers and farmworkers living at the margins on less than $2 per day, shocks and stresses such as these can quickly push them deeper into poverty and trigger desperate measures, including migration.


Photo Credit: Root Capital

- **Pests and crop disease outbreaks.** Across the 66 countries where CSAF lenders support agricultural SMEs, crop production is almost universally affected by a range of pest and crop diseases that reduce both quantity and quality of output and threaten food security for millions.

  For example, over the past three years, borrowers in Latin America's coffee-growing regions have struggled to combat coffee leaf rust, which reached epidemic proportions and has devastated coffee farms and rural economies from southern Mexico to Peru.

  According to World Coffee Research, the disease has caused $3.2 billion in damage and lost economic activity and resulted in the loss of an estimated 1.7 million coffee-sector jobs. The epidemic, which peaked in 2013/2014, has become the most severe leaf rust outbreak since the disease first appeared in the region three decades ago, and it has revealed the impacts of long-term underinvestment in agriculture.

$3.2 billion in lost economic activity and 1.7 million jobs lost due to coffee leaf rust disease

This situation is not unique to Latin America's coffee sector. Elsewhere, diseases like pod rot and witches' broom have destroyed cocoa trees, with industry estimates putting losses as high as 30% to 40% of global production each year. In Eastern and Southern Africa, maize lethal necrosis continues to affect the main food crop, and cassava mosaic virus has had an even greater impact on the food and nutritional security of farming families.

The incidence and negative impact of these and other outbreaks are almost certain to become more pronounced in the coming years, as climate change creates the hotter and more humid conditions in which these pests and pathogens thrive.

- **Currency volatility.** The sharp decline in commodity prices over the past few years has coincided with slowing economic growth in emerging markets. Over the course of 2015, the currencies of several countries where CSAF lenders operate depreciated significantly against the U.S. dollar.

For example, Zambia's kwacha experienced a rapid depreciation of roughly 40% and was considered among the worst-performing currencies of the year. Ghana's cedi depreciated by 30%, and the currencies of Kenya, Tanzania, and Uganda weakened almost as much. Latin American currencies, including the Mexican and Colombian pesos, also depreciated.

The reason why this matters for agricultural finance is that CSAF lenders—capitalized in U.S. dollars, euros, or British pounds—are often unable to meet the increasing demand for financing among businesses that request credit in local currencies; since these businesses sell to local markets, they earn revenue in local currencies. Like lenders, these businesses want to match assets and liabilities to avoid losses from currency fluctuations.

The majority of loans that CSAF members originate are denominated in U.S. dollars or euros and are disbursed to businesses that specialize in export crops with contracts denominated in the same currency. However, the majority of the world's smallholder farmers do not participate in export-oriented value chains. Rather, they cultivate staple food crops for local consumption, helping to feed rapidly growing populations in developing countries that are quickly urbanizing.

Providing local currency financing to the businesses that purchase, process, and market staple crops (e.g., maize, millet, rice, cassava, wheat) represents an opportunity to reach a much greater share of the world's smallholder farmers. Not only can domestic value chain financing transform livelihoods for producers and boost food security, but it also contributes to macroeconomic growth. For example, with more options for local currency lending, CSAF members can support countries like Ghana, which is developing a national rice industry to reduce the approximately $600 million it spends each year to import rice.

Local currency risk has been one of the primary barriers slowing the deployment of capital in many geographies in which CSAF lenders operate. There are few foreign currency hedging products—such as forward contracts, options, and swaps—for these transactions, and those that do exist are often cost-prohibitive and do not adequately account for the variability and unpredictability and of agricultural cash flows.

Given the inevitable uncertainty created by these and other external risk factors—and the notorious boom-and-bust price cycles they ignite—CSAF members observe a growing aversion among some SMEs to take on the cost and risk of financing. This is especially true for businesses that are considering investing in asset-heavy infrastructure and ancillary business activities with long-term payoffs (e.g., nurseries, crop renovation).

Yet even in the short term, what initially appears to be a smart, rational decision for a business to secure external financing to fund core operations may prove otherwise due to unexpected price fluctuations, changing procurement preferences among buyers, sudden extreme weather events, or the outbreak of a crop disease.

For this reason, CSAF members continue to emphasize the immediate need for effective decision-support tools and risk-management solutions that are both accessible and applicable to smallholder farmers and their enterprises. These interventions include technical assistance and advisory services to help SMEs objectively analyze the commercial viability of a potential investment, determine the costs and benefits of financing, and understand the variables that could impact their ability to meet debt obligations.

Looking Ahead

As more investors and financial service providers channel capital into the agricultural sectors of emerging markets, several opportunities exist to support the continued growth, development, and, importantly, stability of the sector. Looking ahead, we believe that donors, investors, and policymakers have an important role to play in (1) growing the supply of capital available; (2) building capacity among SMEs that aggregate smallholder producers; and (3) strengthening the overall enabling environment.

Grow the Supply of Capital

- **Leverage a blend of capital and targeted subsidy to reduce risk and attract investment.** Considering the diversity of constraints, risks, and market failures that many SMEs face, a blend of capital is needed from public and private investors who have a range of risk/return expectations. Public investors, such as national governments and development finance institutions, can strategically use their funds to reduce risk and attract more private-sector capital, thus exponentially increasing the impact of their resources. Examples of this include partial loan guarantees, political risk insurance, emergency disaster funds, and dedicated funding pools to offset foreign currency losses.

Build Capacity among Agricultural SMEs

- **Invest in technical assistance.** While the lack of risk-tolerant capital is indeed an inhibiting factor, CSAF members are unanimous in their assessment that the leading constraint to significant market growth is the dearth of investable businesses. Technical assistance providers therefore play an essential role by offering training and advisory services. These include helping SMEs develop business plans, build financial models to forecast revenues and cash flows, assess appropriate capital requirements, and provide transaction support in applying for external financing. There are equally important needs around building agronomic and operational capacity, and establishing linkages to formal markets.

- **Expand risk-management solutions.** Donors and investors should devote significantly more attention to efforts that design, deploy, and scale risk-management solutions that are both accessible and applicable to agricultural SMEs. Examples of this include several types of agriculture-related insurance and mechanisms for price risk management.

Improve the Overall Enabling Environment

- **Strengthen legal and regulatory frameworks.** A country's legal and regulatory environment plays a crucial role in the development and efficient operation of its financial sector. However, responsibility for agricultural finance policies often falls between several different public sector entities, such as the ministries of finance, agriculture, and trade or commerce, not to mention a country's central bank and various export-promotion agencies.[10] More coordination is needed to promote, rather than inhibit, greater access to finance and support the efficient flow of capital to agricultural businesses. Examples include credit information bureaus, collateral registries, contract enforcement mechanisms, clear financial reporting regulations, and warehouse receipt systems.

- **Improve the availability and quality of information.** Efficient markets rely on timely, transparent, and accurate information. In the United States, for example, the Survey of Agricultural Credit Conditions presents a full picture of commercial bank activities on a quarterly basis. Similarly, the European Farm Accountancy Data Network collects accountancy data from farms with the aim of monitoring agricultural incomes and business

Figure 13: How Enabling Environments Can Affect Lending

activities on an annual basis. This data exists because there are well-resourced, publicly funded entities dedicated to collecting and analyzing it. Yet in most developing countries, agricultural data is messy and often contradictory, if it exists at all. Simply put, the lack of reliable and timely information limits the efficient flow of agricultural finance to countries and communities where it is needed most.

The field of smallholder agricultural finance continues to evolve and expand. As CSAF members, we are addressing a small, but critically important, segment of this market: we are financing high-impact agricultural SMEs that in 2015 brought together over two million individual producers and connected them to markets. In the future, we believe that different sub-segments of the agricultural finance market—equity investors, equipment leasing companies, crop insurance providers—will have their own alliances, much like Propagate and CSAF, to share learning and develop standards and best practices.

While external shocks and stresses like those discussed in this report will continue to threaten these businesses and the smallholder farmers they support, we are optimistic about the years ahead. As part of our annual reporting in 2015, CSAF members participated in a survey—the first for our industry—on the likely demand for credit in 2016. We forecast moderate growth, with most lenders estimating a 6% to 10% increase in annual disbursements from the $597 million disbursed in 2015. Survey results also indicated expectations that countries with relatively well-developed agricultural sectors—including Colombia, Ivory Coast, Kenya, Peru, Rwanda, and Uganda—will continue to drive much of this growth while lenders diversify into new domestic and global value chains.

Over the past three years, CSAF lending has surged 75 percent from a base of $354 million in 2013, and an additional 360 agricultural SMEs have been able to access the financing needed to sustain and grow their operations. Longer term, we believe that—with the right mix of capital, capacity building, and market conditions—we can continue to build a thriving, sustainable, and transparent financial market to support the world's smallholder farmers.

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