

PATHWAYS to PROSPERITY

Rural and Agricultural Finance

State of the Sector Report

November 2019



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Primary report sponsors



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EXECUTIVE SUMMARY

Since the publication of *Inflection Point* in 2016, the landscape of rural agricultural finance has once again changed. Our understanding of challenges faced by rural clients has expanded, including the ways in which agricultural finance overlaps with critical global agendas, such as climate change and food security. More diverse financial services are available, from crop insurance to mobile-enabled savings. And the capital market for rural finance has also grown, from a relatively small set of donors to a larger ecosystem of capital providers. With these changes comes an urgent need to develop improved frameworks for understanding the state of the sector.

To that end, in this report, we update key sizing numbers from the latest global data—for the first time including agricultural small- and medium-sized enterprises (SMEs). We also introduce new models for understanding how rural clients, financial service providers, and the capital markets can effectively work together. Finally, we present targeted impact and investment theses and new ways of thinking about inclusive rural economic growth. In doing so, we hope to contribute to unlocking the benefits of financial inclusion for the 2.5 billion people who depend on smallholder farming for their livelihoods worldwide.

A more nuanced rural finance gap

Despite significant progress in the rural agricultural finance sector, financial service providers are still unable to meet the full USD 240 billion demand of rural households for agricultural and non-agricultural finance. The latest data suggests that providers are currently supplying approximately USD 70 billion. This leaves around USD 170 billion—or 70%—of the global demand for smallholder finance unmet. This gap cuts across all geographic regions and financing types, but is particularly concentrated in long-term agricultural finance, for which 98% of global demand remains unmet. As with the direct-to-smallholder finance market, there is a large gap when it comes to lending to agricultural SMEs. There is no comprehensive global sizing of the demand and supply for lending to agricultural SMEs, but recent analyses have painted a stronger picture of how the market functions and illustrate why—despite agricultural SMEs playing a vital role in economic development—financial service providers limit their lending to these clients.

In recent years, new financing products have begun to penetrate rural markets. These include the rise of lending “innovators”—fintechs and mobile network operators that deliver credit directly to rural households through digital channels, holding the associated credit risk on their own balance sheet. While these innovators have great potential to address customer pain points and reach unserved customer segments, they currently represent a small portion of the lending market. At the same time, there’s been an emergence of new models of agricultural insurance, digital payments, and savings accounts. With greater breadth, depth and innovation in rural financial services than ever before there are new opportunities emerging to close the persistent rural finance gap.

New models for understanding the rural agricultural finance market

As the sector continues to evolve, we propose two frameworks that we believe are key to driving the rural finance agenda forward:

› *Rural Pathways Model*

The rural pathways model moves us from a static understanding of rural households based on their characteristics at a particular moment, toward a dynamic view of how households and their needs might evolve over time. This model lays out the different transition pathways rural households may take as they pursue increased resilience and agency through various livelihoods strategies. These pathways coalesce around four centers of gravity: 1) farming as a business; 2) rural services; 3) rural labor; and 4)

urban migration. Over the course of a lifetime, a single household may move forward or backward along a pathway, change pathways entirely, or simultaneously pursue multiple pathways. By mapping out the likely transition points for rural households, financial service providers will be able to create a strategy for engagement that delivers the right services at the right time.

› *Service Delivery Model Typology*

We also present a new service delivery model typology that reflects the dramatic changes in service provision and enables us to analyze differences, challenges, and opportunities for specific financial service providers. This new typology creates segments based on two variables: 1) primary objectives for service delivery and 2) scope of services offered to rural households and SMEs. The first variable explains a financial service provider's *primary* motivation for offering services: namely, in pursuit of supply security, service profitability, or client outcomes (i.e., a more resilient household or business). The second variable breaks services out by scope: finance only; finance *and* productivity-enhancing services; or finance, productivity, *and* market access services. By mapping these two variables against each other, we create a new typology that acknowledges why providers are serving rural clients and with what services. This typology model establishes nine segments of financial service providers, through which we can map how the market currently looks and how it evolves over time as providers innovate and scale.

Bringing it all together: the micro and macro levels of agricultural transformation

When combined, the models presented in this report offer a number of transformative applications. At the **micro level**, the rural pathways model and service provider segmentation can help determine what type of providers are best suited to serve different client segments with much more specificity than ever before. These models can also shed light on the elusive impact-return trade-off by creating more comparability between different service providers and the capital they need. By bringing together the rural pathways model and the service provider segmentation into a series of integrated impact-investment theses, this research hopes to drive more efficient capital allocation and smarter subsidy that can achieve particular impact and financial returns,

At the **macro level**, the rural pathways model can also be a powerful tool for considering the current shape of a given rural economy and informing tough decisions about where and how to invest in rural transformation. While this report is only able to illustratively lay out the trade-offs and potential scenarios for Nigeria, the unprecedented ability to understand how changes in the broader economy will impact specific rural communities means governments and other stakeholders are better equipped than ever to start a new conversation about rural transformation.

Given the trends and models outlined in this report, we believe there are four agenda-defining needs that the sector must address moving forward:

1. *The need to think dynamically and long-term through a rural pathways lens*, which should result in more tailored products, bundled offerings, and better communication with clients.
2. *The need to get serious about "smart" subsidy*, by utilizing the models introduced in this report to get clearer about service delivery, profitability profiles, and outcomes.
3. *The need to realize the digital promise*, by translating early experimentation into proven, scalable solutions.
4. *The need to continue to innovate around how capital comes to market*, by building more effective connections between capital need and right-fit capital supply.

I. WAS THE YEAR 2016 AN INFLECTION POINT?

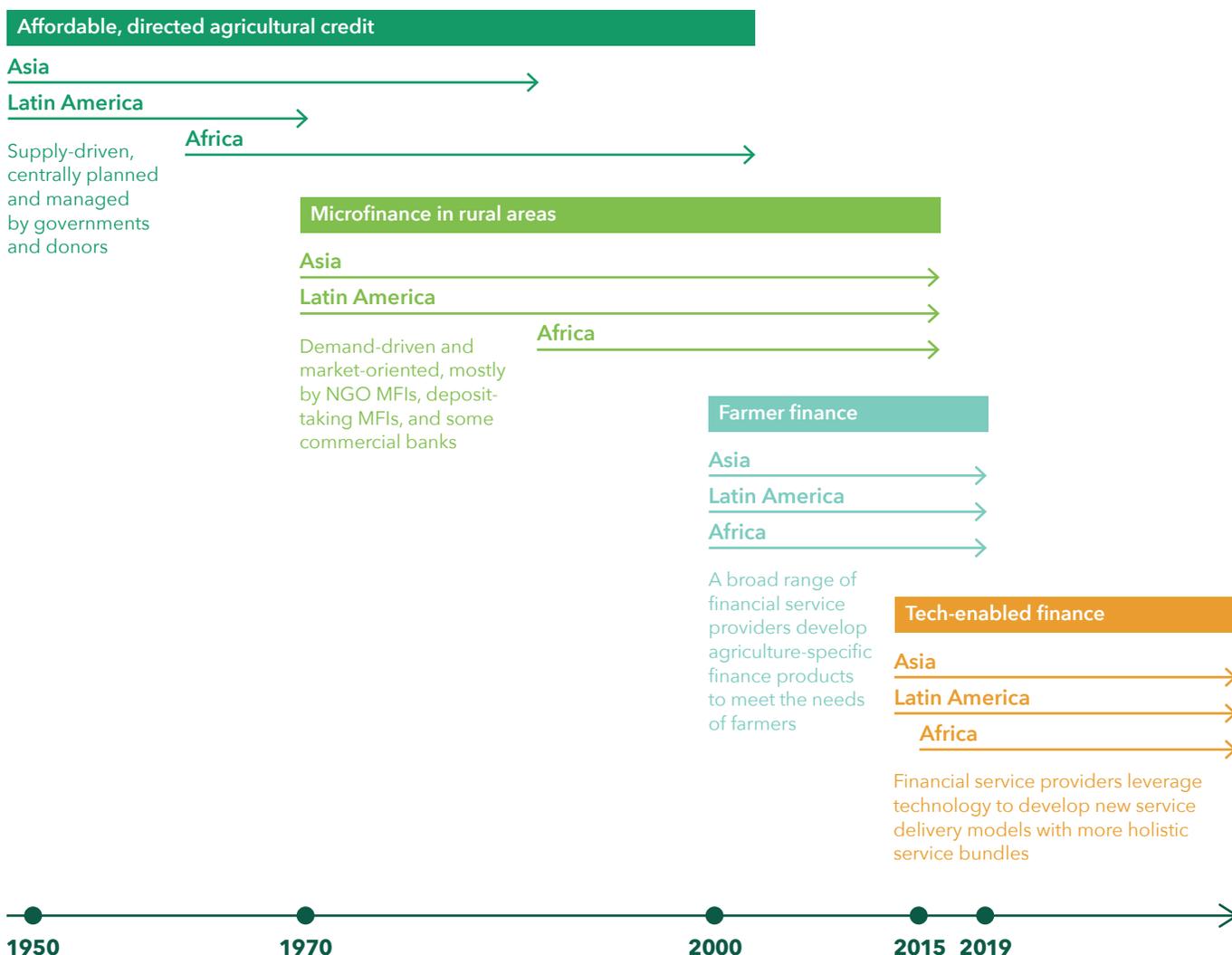
THE RURAL FINANCE AGENDA IN CONTEXT

In 2016, the ISF Advisors and the Mastercard Foundation Rural and Agricultural Finance Learning Lab (RAFL) released a landmark report titled *Inflection Point: Unlocking growth in the era of farmer finance*. Building on an earlier Dalberg report¹ that estimated the market size and articulated growth opportunities in the smallholder agricultural finance sector, *Inflection Point* presented the most comprehensive baseline to date of both the demand and supply for smallholder financing.

Crucially, the report also identified market frictions that inhibit smallholder farmers' access to financial services. To address these, *Inflection Point* recommended three key areas of focus for actors in the sector: **customer centricity**, **progressive partnerships**, and **smart subsidy**. By making a concerted effort in these three areas, the report contended, sector stakeholders could change the trajectory of rural agricultural financing and begin to bridge the persistent rural finance gap in the developing world.

FIGURE 1

Historical evolution of rural finance



¹ Carroll, Tom et al. *Catalyzing Smallholder Agricultural Finance*, Dalberg, September 2012: https://oneacrefund.org/documents/101/Dalberg_Skoll_Citi_Catalyzing_Smallholder_Agricultural_Finance_Farm_Finance.pdf

Smallholder financial services have continued to evolve since the 1950s, when the first government-led agricultural development banks were formed to lend to farmers at below-market interest rates. High levels of default and misaligned incentives caused many of these early programs to fail. In the 1970s, the next phase of smallholder financial services shifted focus to microfinance, with the reincorporation of many of the struggling state and community banks. While this approach addressed earlier challenges—for instance, by leveraging community-based mechanisms and reducing the need for collateral—providers still lacked a strong understanding of the agriculture-specific and seasonal financing needs of smallholder farmers. In *Inflection Point*, we documented the modern evolution of farmer finance, where a growing community of practitioners collaborated across sectors to develop new financial products designed to meet the needs of smallholder farmers. Now, three years later, we are at another point of transition. The last three years have seen an unmistakable acceleration in technology-driven innovation, which has powered changes in existing rural finance models, enabled providers to develop new service delivery models, and facilitated the bundling of services in new ways.

But technology isn't the only thing that's changed. In 2019, there is a more expansive landscape of agendas, programs, and investments related to rural agricultural finance than ever before. This includes more diverse finance offerings: Where before, providers focused on short-term credit, many now offer crop insurance, payments, leasing, and savings programs. Providers are also recognizing, more and more, the ways that rural agricultural finance intersects with critical global agendas, such as climate change, food security and nutrition, gender equality, and opportunities for youth. The result is not only a more robust understanding of challenges faced by rural clients, but also a growing number of innovations in non-financial support, such as advisory services and capacity building. The capital market for rural agricultural finance has also expanded, from a relatively small set of host country governments, agribusinesses, and donors to a larger ecosystem of capital providers with differing objectives and investment philosophies.

With more funding flowing to and from ever more diverse actors with distinct and overlapping agendas, it's critical that we take stock of the rural finance sector today. In this report, we update key sizing numbers from the latest global data—for the first time including agricultural SMEs, which play a vital role in rural economies,

wherever possible. We also introduce new frameworks for understanding how rural clients, financial service providers, and the capital markets can effectively work together, and present targeted impact and investment theses and new ways of thinking about inclusive rural economic growth. In doing so, we hope to contribute to unlocking the benefits of financial inclusion for the 2.5 billion people who depend on smallholder farming for their livelihoods worldwide.²

AN EXPANDED VIEW OF RURAL CLIENTS

Just as the agricultural finance agenda has evolved over the years, so too has our understanding of the rural clients that are at the heart of this work. This report reflects that changed perspective in a number of ways:

- In the past, financial service providers thought of smallholder farmers as beneficiaries of their services. Nowadays, they are more often thought of as clients, which reflects the growing recognition that—even within remote communities—smallholder farmers are active consumers of sophisticated financial services and key players in vibrant markets.
- Where previously smallholder farmers were thought of on the individual level, we now reference rural households to capture the fact that farming is just one of a range of economic activities, livelihood strategies, social dynamics, and aspirations that come together at the household level.
- The sector also increasingly recognizes the importance of the rural service economy that supports agricultural production and the associated business models for delivering those services through agricultural small- and medium-sized enterprises (SMEs)—such as cooperatives, farmer associations, and private businesses. These SMEs act as a critical point of connection, inputs, and services for rural households.

² Please see Appendix 1 for a full explanation of sizing methodology and assumptions. Assumes five family members per household.

THREE YEARS ON—BY THE NUMBERS

A persistent smallholder finance lending gap³

An estimated 500 million households—or 2.5 billion individuals—consider smallholder farming an integral part of their livelihoods. Who are these smallholder farmers? The vast majority are geographically concentrated in Asia, followed by sub-Saharan Africa. They produce crops or raise livestock on up to five hectares of land, relying primarily on household members for labor. They generally pursue multiple economic activities in addition to farming, often in the informal economy. Poverty is widespread among smallholder households. In at least one study, the smallholder poverty rate was shown to be higher in most countries than the poverty rate for their overall populations.⁴

Smallholder farming households in South and Southeast Asia, sub-Saharan Africa, and Latin America collectively require around USD 240 billion⁵ in agricultural and non-agricultural finance. This capital would not only help them optimize their farm operations by investing in high-quality agricultural inputs or increasing mechanization—it could also finance non-agricultural expenditures, such as school fees, home improvements, or life events.

Unfortunately, despite progress made in the rural agricultural finance sector, financial service providers are still unable to meet this USD 240 billion demand. The latest data suggests that providers are currently supplying approximately USD 70 billion⁶ to smallholder households, which includes:

- **USD 30 billion by value chain actors**, typically agribusinesses that are working with farmers to secure their supply chain. This financing is almost exclusively for agricultural needs and tends to be focused on farmers growing cash crops, such as coffee or cocoa.
- **USD 21 billion by formal financial institutions**, including state banks, microfinance institutions, commercial banks, social lenders, high-touch NGOs, and fintechs/innovators. This financing is primarily for agriculture-related needs.

- **USD 17 billion by informal and community-based financial institutions**, including loan associations and local money lenders. While this is typically the easiest and most flexible financing option that smallholder households can access (including for non-agricultural needs), it's often the lowest quality with the highest interest rates.

That still leaves around USD 170 billion—or 70%—of the global demand for smallholder finance unmet. This gap cuts across all geographic regions and financing types, but is particularly concentrated on long-term agricultural finance, where USD 86 billion—or 98% of the global demand for this type of financing—remains unmet. The financing gap for short-term agricultural needs is relatively smaller at USD 66 billion, or 67% of the global need for this type of financing. Regionally, agricultural finance in sub-Saharan Africa and South and Southeast Asia continues to lag behind Latin America, where the prevalence of cash crops and government financing schemes lead to a larger influx of financing to rural households. Lastly, the financing gap for non-agricultural needs is estimated at USD 17 billion. This gap is smallest in South and Southeast Asia, where a high concentration of primary cooperatives provides farmers with financing for both agricultural and non-agricultural needs.

A NOTE ON SIZING

In the 2016 *Inflection Point* report, we presented the first global estimates of smallholder finance supply and demand. This report refreshes those numbers with the latest global data, as we have continued to refine the sizing methodology. As a result, some of the headline numbers have changed since 2016. We see this evolution as a reflection of 1) increasingly comprehensive data and 2) a greater level of sophistication in understanding the market. Thus, we caution against direct comparisons with the previous dataset. For more information about our updated methodology, see Appendix 1.

3 Please see Appendix 1 for a full explanation of sizing methodology and assumptions relevant to this section.

4 Rapsomanikis, George, *The economic lives of smallholder farmers: An analysis based on household data from nine countries*, Food and Agriculture Organization of the United Nations, 2015: <http://www.fao.org/3/a-i5251e.pdf>

5 Excludes China, Central Asia, and the Middle East and North Africa. For more information, consult Appendix 1.

6 Excludes China, Central Asia, and the Middle East and North Africa. For more information, consult Appendix 1.

THE MARKET FOR LONG-TERM SMALLHOLDER FINANCE

Smallholder farming, as it is currently practiced, is generally an intensive endeavor with low returns on investment. Access to inputs and advisory services is essential for smallholder farmers to increase productivity and yields. But in order to unlock significant agricultural transformation, smallholder households require capital investment in farm assets, such as machinery and equipment, storage and warehousing, tree crop renovation, and technologies like drip irrigation. This is particularly the case in sub-Saharan Africa, where farming is almost entirely rain-fed and reliant on individual hand labor. The FAO estimates that only 6% of cultivated land in sub-Saharan Africa is equipped for irrigation, and that there are fewer than two tractors per 1,000 hectares of cropland in the region.⁷

Without significant savings or alternative sources of income, most smallholder farmers cannot afford to finance the time between an initial capital investment and the following harvest. Access to long-term financing could help farmers bridge that time gap. Yet financial service providers are reluctant to offer credit for capital investments. The higher cost and risk of serving smallholder farmers is magnified when it comes to long-term financing, where the multi-year time horizon makes delivering risk-adjusted returns particularly challenging. As a result, providers are meeting less than 2% of the global need for long-term smallholder finance.⁸

Fortunately, this is beginning to change. The last five years have witnessed an emerging wave of providers experimenting with new models to give smallholder farmers direct access to capital investments. Here are a few examples:

- **Mechanization:** In India, ETC Agro Tractors & Implements Ltd has partnered with Mahindra & Mahindra, a multinational auto manufacturing company, to launch a tractor and farm equipment rental business called Trringo. When a farmer needs a tractor or farm equipment, they place their order via Trringo's mobile app. On demand, they receive a well-maintained tractor along with a professional driver—and pay only for the time used. To date, Trringo has reached more than 150,000 farmers and enabled 250,000 hours of farm mechanization.⁹ Based on this success, ETC Agro Tractors is replicating a similar model in Tanzania.
- **Tree crop renovation and rejuvenation:** Through a multi-sector partnership called the Coffee Farmer Resilience Initiative (CFRI), Root Capital provided renovation and rehabilitation loans to Latin American coffee enterprises hit by coffee leaf rust disease. The long-term financing—up to seven years, with a two-year grace period on principal repayments—helped nearly 900 farmers renovate more than 1,800 hectares of diseased, aging, and unproductive trees.¹⁰ Another example is Komaza¹¹, a wood supplier in Kenya, which provides smallholders with inputs and tools to grow trees. In exchange, the company gets exclusive tree harvesting rights. Komaza provides farmers with training and support for several years before it's time to harvest the trees. After harvest, the company shares the sales revenue with farmers.

While still small in number and limited in reach, these innovative models provide a testing ground for long-term finance. As models prove successful, financial service providers can apply those lessons to addressing the financing gap for long-term capital investment at scale.

7 Kormawa et al. (eds.), *Sustainable Agricultural Mechanization: A Framework for Africa*, Food and Agriculture Organization of the United Nations and the African Union Commission, Addis Ababa, 2018: <http://www.fao.org/3/CA1136EN/ca1136en.pdf>

8 Please see Appendix 1 for a full explanation of sizing methodology and assumptions.

9 <https://www.trringo.com>

10 Foote, Willy, "How to Build a Public-Private Partnership That's More Than A Marriage of Convenience," *Forbes*, November 29, 2017: <https://www.forbes.com/sites/willyfoote/2017/11/29/how-to-build-public-private-partnership/#5ca267e94bfa>

11 <http://www.komaza.com/>

FIGURE 2

The global market for smallholder finance

Number of smallholder households

There are ~270 million smallholder farmers and pastoralists across Latin America, sub-Saharan Africa, and South and Southeast Asia



Smallholder household:

Households producing crops and/or livestock on 5 or fewer hectares of land, or nomadically

Financing need

The financing need of these ~270 million smallholder farmers and pastoralists is estimated at approximately USD 240 billion annually

Breakdown by type of financing needed



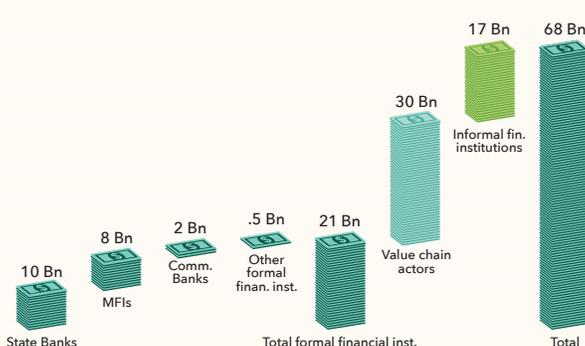
Breakdown by region



Current supply

In total, financial service providers, agribusinesses, and informal or community-based financial institutions supply an estimated USD 70 billion in annual disbursements

Breakdown by type of financial service provider



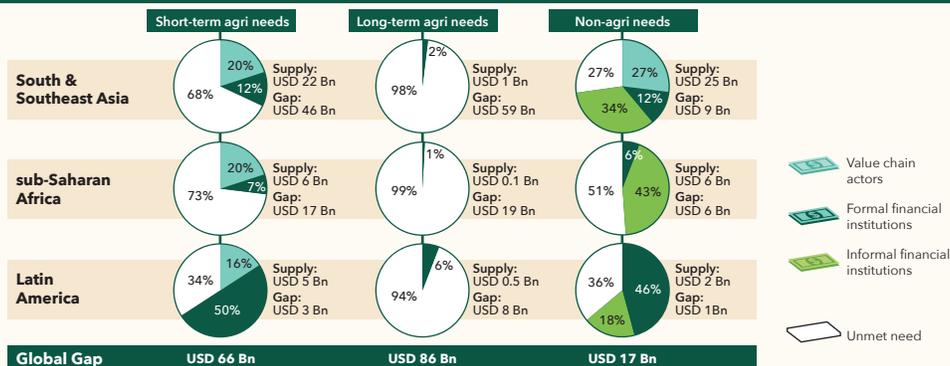
Observations

- ~70% of rural lending by formal financial institutions is agricultural financing
- State banks are active primarily in Asia and to a lesser extent in LATAM
- Other formal financial institutions include social lenders (\$0.3 Bn), "innovators" (\$0.3 Bn) and high touch NGOs (\$50 Mn)

Smallholder finance gap

Over 70% of demand for smallholder finance goes unmet – the equivalent of USD 170 billion per year

Finance gap by region and type of financing need



Source: ISF Advisors and RAF Learning Lab *Inflection Point: Unlocking growth in the era of farmer finance*, 2016; Lowder, et al. *The Number, Size, and Distribution of Farms, Smallholder Farms, and Family Worldwide*. United Nations, 2016; Lowder, et al. *Transformation in the size and distribution of farmland operated by household and other farms in select countries of sub-Saharan Africa*. African Association of Agricultural Economists, 2016; FAO *Pastoralist Knowledge Hub Gathering South Asia Workshop Report*, 2015; The MIX *Global Outreach and Financial Performance Benchmark Report*, 2016; CSAF *State of the Sector 2018*; GSMA *State of the Industry Report on Mobile Money*, 2018; World Bank *Findex Database*; FinScope Survey; Providers' websites; Expert Interviews; Dalberg analysis.

SPOTLIGHT: THE RISE OF LENDING “INNOVATORS”

In the last five years, there has been a proliferation of innovative actors leveraging technology and data analytics to serve smallholder farmers with new financing products. For the purpose of this report, we define “innovators” as fintechs and mobile network operators (MNOs) that deliver credit to rural households directly through digital channels—typically mobile phones—and that hold the associated credit risk on their own balance sheet. We are not including fintechs and MNOs that own the overall customer experience while offloading their balance sheet with a commercial banking partner. Nor are we including commercial banks, microfinance institutions, social lenders, high-touch NGOs, agribusinesses, or informal/community-based financial institutions that are increasingly utilizing technology to digitize their service delivery.

Innovators use technology to not only streamline operations, but also to increase customer centricity—a key recommendation from the 2016 *Inflection Point* report. Through digital technology, innovators can address existing customer pain points; for example, reducing time and transaction costs. In countries where mobile network penetration is relatively high in remote rural areas, innovators can even use technology to reach entire customer segments not currently being reached by traditional finance institutions.

Despite the hype around these innovators, they are a fairly small portion of the overall lending market, disbursing an estimated USD 280 million annually, of which only 25% is directed toward agricultural financing.¹² Over two-thirds of the total innovator lending is concentrated in sub-Saharan Africa—and particularly in Kenya, where mobile banking is widespread.¹³ This geographic concentration is explained by three underlying dynamics:

- There is a **larger segment of customers** whose needs are currently unmet by traditional finance institutions in sub-Saharan Africa than, for instance, in South and Southeast Asia, where large numbers of state banks and microfinance institutions have historically served this client segment.
- Innovators in South and Southeast Asia have developed strong partnerships with financial institutions, allowing them to focus on user experience while offloading the credit risk from their balance sheet. In sub-Saharan Africa, the lack of strong **target customer overlap** between traditional financial institutions and innovators means that partnerships are few and far between—thus, fintechs and MNOs are often lending off their balance sheet out of necessity.
- As more mature markets, South and Southeast Asia have stricter regulations for lending institutions, making it harder for start-ups in the region to become credit institutions. In sub-Saharan Africa, **looser regulations** mean that innovators have fewer barriers to lending off their own balance sheet.

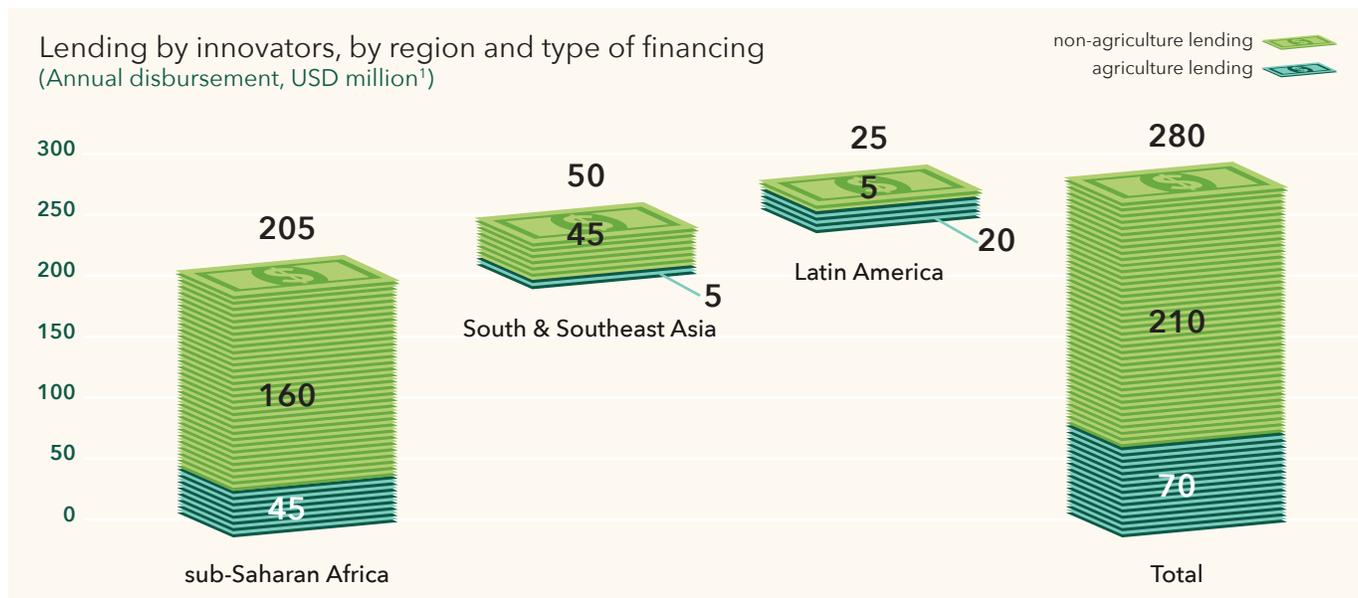
It’s difficult to predict how this subset of lending innovators may evolve in the future. Most are small start-ups—which means they face the attendant challenge of raising enough capital to scale operations. Many will not make it past the pilot stage. Those that do reach scale may see their profitability increase exponentially. But many may find that the capital needed to scale is only available through partnerships with traditional financial institutions. Thus, we are likely to see more hybrid models in which a bank or other traditional financial service provider owns the credit portfolio while the lending innovator focuses on optimizing the technology platform to provide a superior customer experience.

¹² Please see Appendix 1 for a full explanation of sizing methodology and assumptions.

¹³ For example, 93% of the population has an account with mobile banking service M-PESA. Rfi Group, “9 in 10 Kenyans are financially included largely thanks to M-Pesa,” 2017: <https://www.rfigroup.com/global-retail-banker/news/kenya-9-10-kenyans-are-financially-included-largely-thanks-m-pesa>

FIGURE 3

Direct-to-farmer lending by innovators



1. Excludes China, Central Asia, Middle East and North Africa, and Eastern Europe.

Source: Innovators websites; CTA *The Digitalisation of African Agriculture Report*, 2018; GSMA *State of the Industry Report on Mobile Money*, 2018; Geopoll *The Digital Farmer: A Study of Kenya's Agriculture Sector*; RAF Learning Lab Service Delivery Model analyses, expert interviews, Authors' analysis.

The agri-SME lending picture

As with the direct-to-smallholder finance market, there is a large gap when it comes to lending to agricultural SMEs. Agricultural SMEs—including producer organizations, input providers, storage and transportation facilities, traders and offtakers, processors, and distribution service providers—play a key role in driving economic prosperity for rural areas. SMEs aggregate otherwise dispersed smallholder farmers; provide inputs, training, credit, and access to markets; and create formal employment opportunities. In Africa alone, agri-SMEs generate 25% of rural employment and are responsible for processing and selling 80% of food produced for local consumption.¹⁴ These enterprises thus have the potential to improve the livelihoods, productivity, food security, and resilience of millions of rural households.

While agriculture accounts for 20-30% of GDP and employs 35-70% of the workforce globally, only 1-20% of SMEs are focused on agriculture (see Figure 4 below for selected countries). Despite a growing number of financial service providers focused specifically on agricultural SMEs over the last decades, most enterprises still lack access to the capital needed to grow and reach their full potential. Financial institutions perceive high risk in lending to these enterprises—both because of external factors such as climate change and price volatility, as well as internal factors such as poor management capacity and record keeping.

¹⁴ Sumba, Daudi (ed), *The Hidden Middle: A Quiet Revolution in the Private Sector Driving Agricultural Transformation*, Alliance for a Green Revolution in Africa (AGRA), 2019: [https://msu.edu/user/reardon/AASR2019-The%20Hidden%20Middle\(web\).pdf](https://msu.edu/user/reardon/AASR2019-The%20Hidden%20Middle(web).pdf)

FIGURE 4

Number of agri-MSMEs and agricultural context in selected countries

Country	Estimated number of agri-MSMEs (in thousands)			Context information on agriculture importance		
	Agricultural Micro-enterprises (MEs)	Agricultural Small- & Medium-sized enterprises (SMEs)	Total Agricultural MSMEs	Share of Agricultural MSMEs within all MSMEs	Employment in agriculture (% of total employment) ¹⁴	Agriculture, forestry, and fishing, value added (% of GDP) ¹⁴
Nigeria ¹	3,300K ⁴	1.5K ⁵	3,302K ¹⁵	9%	37%	21%
Tanzania ²	11K ⁶	2K ⁷	13K	0.4%	66%	29%
Bangladesh ³	n.a.		1,720K ^{8,9}	22%	40%	13%
Mozambique ²	2K ¹⁰	1 ¹¹ - 2K ¹²	3 - 4K	2% -3%	72%	21%
Côte d'Ivoire	n.a.		11 -12K ¹³	6%	48%	20%

- (1) Microenterprises are defined as enterprises having less than 10 employees, small enterprises between 10-49 employees, and medium enterprises between 50-199;
- (2) Microenterprises are defined as enterprises having less than 4 employees, small enterprises between 5-49 employees, and medium enterprises between 50-100;
- (3) MSMEs include all enterprises with 100 employees or less;
- (4) SMEDAN and National Bureau Of Statistics Collaborative Survey: Selected Findings. 2013. Pg. 22.
- (5) Ibid. Pg. 42;
- (6) National Baseline Survey Report for Micro, Small, and Medium Enterprises in Tanzania. December 2012. (Estimated mix between micro and SMEs based on table 6.2, p32;
- (7) National Baseline Survey Report for Micro, Small, and Medium Enterprises in Tanzania. December 2012. (Pg. 32);
- (8) Global Journal of Management and Business Research: Finance. Small and Medium Enterprise in Bangladesh-Prospects and Challenges. (% of ag of total MSMEs);
- (9) Microenterprises in Bangladesh: Emerging Drivers of Inclusive Growth. Insights InM Newsletter. Volume 1. April 2016. (Number of total MSMEs);
- (10) PME. Pequenas e médias empresas em Mocambique: Situação e desafios. 2016. Pg 41 (Table2), Pg 40. (Figure 1), Pg 43. (Figure 4). (Calculated: (28475/20.4%)*78.3%)*2%);
- (11) Ibid. (Calculated: 3%*28475);
- (12) Ibid. (1%*10%*(28475/20.4%)+(7%*19.4%*(28475/20.4%));
- (13) There is no clear trend between the Agri-MSMEs / Total MSMEs ratios for the 4 countries where data was available (all five except Côte d'Ivoire). Two analogues were selected based on % of GDP from Ag. This elimination process leave identifies Mozambique and Nigeria (i.e., ratio of ~5.6-6%, which is the average of ~2-3% and 9%). As a result, the Agri-MSMEs for Ivory coast would be 6% x the total MSMEs = ~5.6-6% x 204,000 = 11,356 -12,230;
- (14) WB indicators
- (15) Nigeria's 2010 survey recorded less than half the number of total MSMEs in the country. Therefore, some experts believe 3.3 million MSMEs might be a slight overestimate based on extrapolation from a small sample.

Currently, there is no comprehensive global sizing of the demand and supply for lending to agricultural SMEs. A joint report by Dalberg and KfW estimated that there is an annual USD 100 billion agricultural SME lending gap in sub-Saharan Africa alone.¹⁵ This gap cuts across all sizes of agricultural enterprises, but is especially prevalent for micro-SMEs, as well as mezzanine and equity investments to SMEs. Recent analyses have provided a stronger picture of how the agricultural SME finance market functions. The Council on Smallholder Agricultural Finance (CSAF) partnered with Dalberg and USAID to analyze the loan-level economics of lending to agricultural SMEs.¹⁶ Among other insights, they found that:

- **Agricultural SME loans in Africa were twice as likely to end up in recovery** and have operating costs 22% higher than loans in other regions.

- **Larger loans performed better than smaller ones.** The operating costs are similar across different loan sizes, but interest and fee income are proportional to loan size.
- **Loans to existing borrowers were significantly more profitable than loans to new borrowers.** New borrowers' risk of default was twice as high as that of existing borrowers, and new borrowers' loan origination costs were 50% higher as well.
- **Loans in more formal coffee and cocoa value chains performed better than loans in other crop markets.** Loans to crops other than coffee and cocoa were 2.5 times more likely to default.
- **Short-term loans (less than 12 months) performed better than long-term loans (12 months or more).** Loans with tenors of more than 12 months were over

¹⁵ Dalberg and KfW, *Africa Agricultural Finance Market Landscape*, 2018.

¹⁶ USAID, "CSAF Financial benchmarking: Final learning report," July 2018: https://www.agrilinks.org/sites/default/files/usaaid_-_csaf_financial_benchmarking_final_learning_report.pdf.

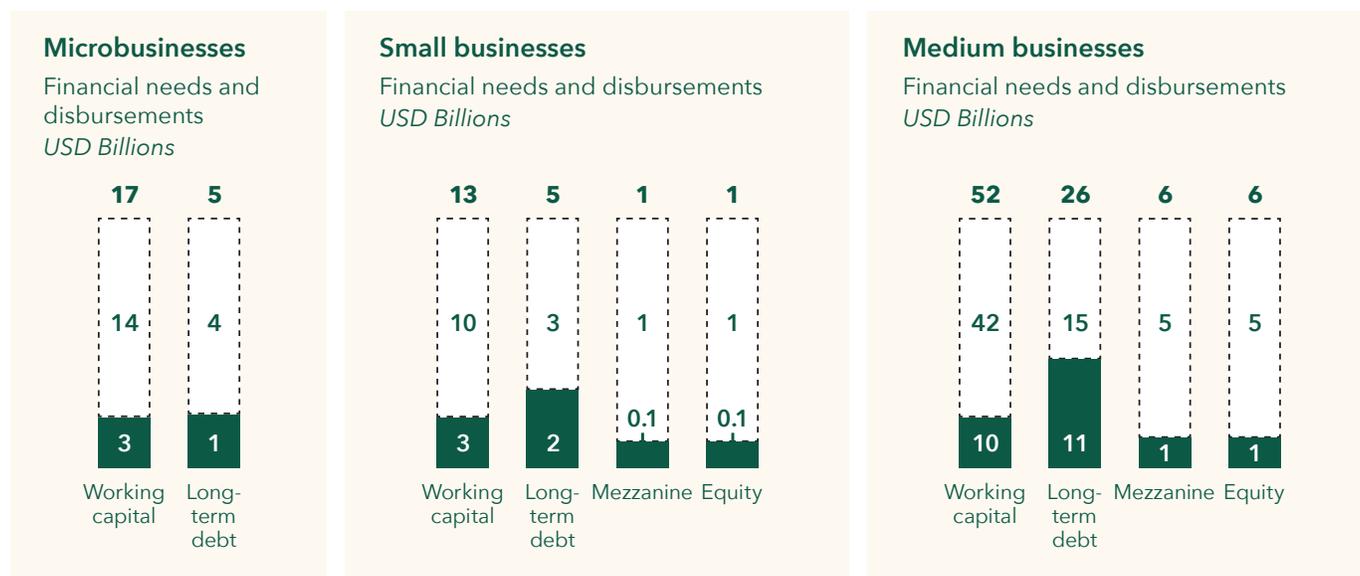
four times more likely to fall into arrears compared to loans with tenors under 12 months.

These findings illustrate why—despite agricultural SMEs playing a vital role in economic development—financial institutions limit the volume and types of lending they're willing to disburse to SMEs. A follow-up CSAF, Global

Development Incubator (GDI), and Dalberg analysis of loan-level economics specifically in East Africa found that larger (>USD 1.5 million) loans to agricultural SMEs were typically more profitable.¹⁷ Faced with lower costs and higher risk-adjusted returns elsewhere, most lenders continue to overlook the impact potential of agricultural SMEs, particularly of smaller or earlier-stage businesses.

FIGURE 5

Supply of agri-MSME finance in sub-Saharan Africa



Source: Adapted from Dalberg Advisors and KfW, *Africa Agricultural Finance Market Landscape*, 2018.

--- Financing gap
 ■ Financing supply

Going beyond credit for rural households

In addition to finance, smallholder households require access to payments, insurance, and savings in order to transact more effectively, manage risk, and smooth cashflows. These products have begun to penetrate rural markets in recent years and represent an opportunity for financial service providers.

Insurance

Despite the emergence of new models of agricultural insurance, particularly index-based products, the majority of smallholder farmers have limited access to risk management options. This is particularly true in sub-Saharan Africa, where the lack of government subsidy means that insurance continues to be cost-prohibitive for both farmers and financial service providers. In South

and Southeast Asia, insurance coverage has increased slightly for about 20% of smallholder farmers, primarily driven by large government-subsidized programs in India, Indonesia, and Vietnam.¹⁸ Access to insurance is even more prevalent in Latin America (at 33% of farmers).¹⁹ More mature agricultural markets—especially in Mexico, Peru, and Brazil—with a strong history of social welfare programs have enabled broader penetration of agricultural insurance options in the region.

Scaled expansion of agricultural insurance could support increased access to rural agricultural finance writ large. In the absence of collateral and formal land rights, well-designed agricultural insurance acts as a risk mitigation mechanism that can unlock credit options. In a series of case studies, RAFL and IDH The Sustainable Trade Initiative found that—while access to a comprehensive package of financial and non-financial

17 Dalberg, "The Economics of Agri-SME Lending in East Africa," December 2018: https://www.agrilinks.org/sites/default/files/resources/the_economics_of_agri_sme_lending_in_east_africa_final_report.pdf
 18 ISF Advisors, *Protecting Growing Prosperity: Agricultural Insurance in the Developing World*, September 2018: https://www.rafllearning.org/sites/default/files/sep_2018_isf_syngenta_insurance_report_final.pdf
 19 Ibid.

services can increase farmer incomes by up to 150%—in the absence of agricultural insurance, access to capital actually significantly *increases* farmer vulnerability to price and yield shocks.²⁰ This increase in risk leads many farmers to be unwilling to make the investments needed to optimize productivity and increase incomes. Insurance products must also be designed with the needs of specific groups in mind—for example, studies show that women have less incentive to purchase agricultural insurance products that don't include coverage for other sources of risk, such as family health.²¹

Digital payments

Over the last 10 years, penetration of digital payments has increased exponentially, thanks to the widespread accessibility and use of mobile technology, even in rural areas. In sub-Saharan Africa, more than 30% of rural adults made or received a digital payment in 2017, up from 24% three years earlier. Mobile money accounts have almost doubled, from 11% to 20% of the adult population. Within the region, there are large variations: While in Kenya the proportion of rural adults who have made or received a digital payment in 2017 is a whopping 79%, in Nigeria it's as low as 22%. Other regions have experienced similar overall increases. In East Asia, the percentage of rural adults making or receiving digital payments has gone from 32% to more than 55% in 2017; in South Asia from 15% to more than 25%; and in Latin America from 32% to more than 42%. Though this latest data is from 2017,²² given the pace of technological innovations, we expect a similar growth rate during the last two years, and in the years ahead.

The growth in digital payments is important because this technology is a key step in increasing financial inclusion of rural households. Digitization of payments increases convenience and security of monetary transactions. In addition, it can enable access to other financial products, such as savings and credit, by providing vital customer data to financial service providers. Of course, digitization will only strengthen financial inclusion if it is done in a gender-sensitive manner. Women in low- and middle-income countries are 10% less likely to own a mobile phone²³—a proportion that varies by region

but has consistent implications for inclusive growth of digital payment systems.

Financial institutions aiming to increase their operational efficiency and reach more customers by adopting technological solutions tend to start by digitizing payments. According to research by RAFL, this can lead to cost savings of up to 80%.²⁴ That being said, there's only so much that financial institutions can do to digitize their payment processes if rural economies continue to be almost fully cash-based. Agricultural SMEs may be able to help rural economies reduce cash transactions by digitizing their own payments to their suppliers, thus making digital transactions a more attractive and holistic option for farmers.

In countries where mobile money penetration is low, social media may present another avenue of opportunity. For example, Cassava Fintech International recently announced the launch of Africa's first integrated social payments platform, Sasai, in partnership with mobile network operators. The app will combine instant messaging, social media, and mobile payments into one integrated platform.

Savings

The use of savings accounts has also increased in rural areas, encouraged by a wave of digital wallets. At least 68% of rural adults in South and Southeast Asia have an account at a financial institution, up from 50% in 2011. In Latin America, more than half of the adult population living in rural areas has an account, a 16 percentage point increase since 2011. Sub-Saharan Africa continues to lag behind—but even there, use of savings accounts has increased from 19% in 2011 to 30% in 2017.²⁵

For many rural households, these accounts mean more than saving money; they are an investment in greater resilience against climate and market shocks. Savings accounts smooth consumption and allow households to store money for farm inputs, as well as regular household and non-agriculture expenses (such as school fees). As the first step in the financial inclusion journey, savings accounts allow financial institutions to better

20 Colina, Clara and van der Velden, Iris, *The business case of smallholder finance: Introducing the SDM Case Study Series*, Rural and Agricultural Finance Learning Lab, November 26, 2018: <https://www.rafllearning.org/post/the-business-case-smallholder-finance-introducing-the-sdm-case-study-series>

21 Delavallade et al., *Managing Risk with Insurance and Savings: Experimental Evidence for Male and Female Farm Managers in the Sahel*, World Bank Policy Research Working Paper No. 7176, 2015: <https://www.poverty-action.org/publication/managing-risk-with-insurance-and-savings-experimental-evidence-male-and-female-farm>

22 The World Bank, *Global Financial Inclusion and Consumer Protection Survey*, DataBank, 2017: <https://databank.worldbank.org/source/global-financial-inclusion-and-consumer-protection-survey>

23 Rowntree, Oliver, *Connected Women: The Mobile Gender Gap Report 2019*, GSMA: <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2019/02/GSMA-The-Mobile-Gender-Gap-Report-2019.pdf>

24 Rural and Agricultural Finance Learning Lab, *The Business Case for Digitally-Enabled Smallholder Finance*, Learning Brief 1, December 2016: https://www.rafllearning.org/sites/default/files/business_case_for_digitally_enabled_smallholder_finance.pdf

25 World Bank, *Global Financial Inclusion and Consumer Protection Survey*, 2017.

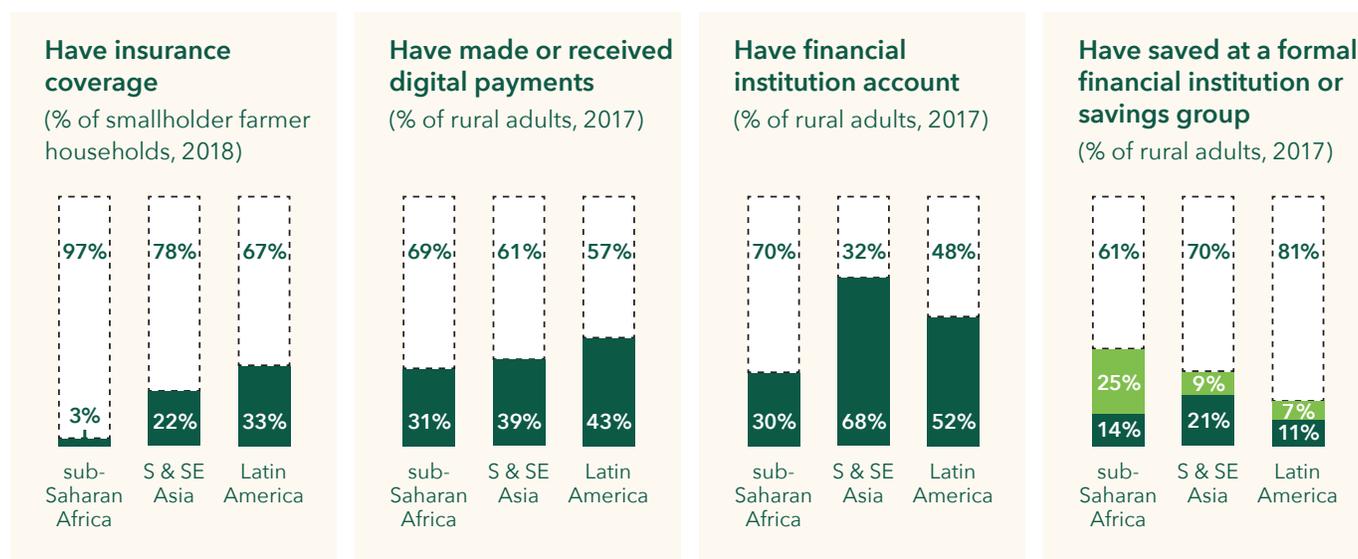
know their customers and potentially extend loans to them in the future. Savings accounts are particularly important for women, as being able to put aside money can enable them to have greater decision-making power at the household and community levels.

However, despite the benefits of savings and the increase in savings accounts in rural areas, actual saving behavior—particularly at formal financial institutions—remains low. Even in South and Southeast Asia, where

more than two-thirds of rural adults hold an account, less than a third of adults appear to actually save through either formal financial institutions or community savings groups. This data suggests that many accounts are dormant or are being used primarily for transactions. For many rural households, saving extra money is simply not feasible; additionally, these households may distrust financial institutions.

FIGURE 6

Penetration of agricultural insurance, digital payments, and savings accounts



Source: ISF Advisors, *Protecting Growing Prosperity: Agricultural Insurance in the Developing World*, 2019; World Bank Global Findex Database 2017

--- Gap
 Informal savings group
 Formal financial institution

KEY TRENDS IMPACTING THE SECTOR

There’s no doubt that the rural agricultural finance market has evolved at a rapid rate just within the last three years. While it’s impossible to capture the full range of dynamics influencing these changes, we’ve identified eight key trends:

FIGURE 7

Rural agricultural finance market

SERVICE DELIVERY TRENDS		
<p>Trend: A change in providers’ perceptions.</p> <p>Financial service providers are shifting their perception of smallholder farmers and the investment opportunity they present. While initial costs to serve this market are high, more efficient operating models and a recognition of the lifetime customer value of smallholder farmers have begun to shift risk-adjusted return expectations.</p>	<p>Why it Matters:</p> <p>The change in perceptions is driving a new influx of private sector, for-profit providers—both innovators and incumbents—who are expanding the market frontiers.</p>	<p>Future Evolution:</p> <p>Provide the proof points necessary to move from interest to action. For example, IDH The Sustainable Trade Initiative and RAFLI are partnering to evaluate the financial sustainability of smallholder business models in order to help financial service providers understand how investments into this market can translate into financial returns.</p>
<p>Trend: The explosion of new digitally-enabled services and approaches to rural finance.</p> <p>New technology to deliver financial services is not only changing <i>what</i> products are being offered, but also <i>how</i> financial service providers conduct their business. This includes digitally-enabled innovations in credit scoring, distribution infrastructure, and farmer training programs.</p>	<p>Why it Matters:</p> <p>The spread of digitization is impacting both traditional service providers and newcomers, though in slightly different ways.¹ Traditional providers tend to leverage digitization to improve their business model economics and drive operational efficiencies. Innovators, on the other hand, are leveraging technology to solve pain points or reach new customer segments.</p>	<p>Future Evolution:</p> <p>Increasing clarity about impact. These innovations are still in an experimental phase; more evidence is needed on the extent to which digital innovations can drive operational efficiencies for providers, how it is benefitting smallholder farmers—particularly women for whom digital technologies may have the adverse effect of increasing the gender gap—and what types of innovations achieve the best financial and impact returns.</p>
<p>Trend: The increasing recognition of the need for more holistic service bundles and menus.</p> <p>An increasing number of financial service providers are offering bundled products and services. This reflects a growing recognition that effectively and sustainably meeting farmer needs requires a more holistic approach—one where finance is not an end itself, but an enabler of greater impact and overall profitability.</p>	<p>Why it Matters:</p> <p>For service providers, this is a fundamental shift from considering service-level profitability to prioritizing customer-level profitability. In some cases, it will require cross-subsidization of multiple service lines and product types. It also acknowledges the reality that finance must facilitate access to inputs, markets, and other value-added services in order to generate the most impact for farmers.</p>	<p>Future Evolution:</p> <p>More work needs to be done to understand the best combination of bundled offerings. Providers have not yet determined what combination of financial and non-financial services can deliver the highest financial and impact returns for different client segments, including women and youth smallholders, nor how that combination of services should be delivered.</p>
CAPITAL MARKET TRENDS		
<p>Trend: New thought leadership and research into impact-return tradeoffs.</p> <p>Recent thought leadership by sector leaders has furthered the way we think about impact-return trade-offs. For example, Root Capital’s “Efficient Impact Frontier”² concept, case studies by RAFLI and IDH The Sustainable Trade Initiative on Service Delivery Models (SDM),³ and Omidyar Network’s studies⁴ on early-stage investing in emerging markets.</p>	<p>Why it Matters:</p> <p>These approaches enable capital providers to interrogate the ways in which impact-return trade-offs are navigated within clearly understood service delivery models. New frameworks, tools, and benchmarks contribute to a more robust conversation.</p>	<p>Future Evolution:</p> <p>Establishing a standardized approach. This can then be used to segment the provider market into different profitability and impact profiles, creating benchmarks that can be used by funders and providers to navigate the highly complex impact-return trade-off.</p>

Trend:**Blended finance.**

The importance of blended sources of capital was noted in the 2016 *Inflection Point* report and has only become more popular as a way to mobilize financing. Increasingly sophisticated tools, approaches, and structures⁵ are now being developed to offset risks and create ways for more commercial capital to participate in agricultural finance.

Why it Matters:

It's estimated that an additional USD 2-3 trillion of investment is needed annually to achieve the UN Sustainable Development Goals. With limited public and donor funding and large gaps in service provision, there is a significant need for new ways of leveraging private finance.

Future Evolution:

The application of blended finance to catalyze more investment into smallholder finance will require innovation. In the same way that providers must navigate the impact-return trade-off, blended finance will require an increasingly sophisticated set of skills from investors and donors to create instruments that are fit for purpose and scalable.

Trend:**Structured funding.**

There is an increasing number of structured funds and facilities engaging on smallholder finance. In 2017, ISF Advisors identified USD 19 billion dollars of funding in 80 impact-driven agricultural funds⁶ that are now actively seeking pipeline. Though these funds have a variety of orientations and objectives, they signal the emergence of a stronger set of asset classes.

Why it Matters:

The development of new funds and facilities is an important step in bringing both more, and more sophisticated, capital to market. Many of these funds integrate novel approaches to risk management and anticipated below-market returns.

Future Evolution:

Facilitating a pipeline of investment. Structured funds are beginning to move more of the right capital into the right parts of market. However, many of these newer funds and facilities are struggling to find the investment pipeline they need to satisfy their mandates. Complementary investments must be made in identifying and priming the demand for capital.

ENABLING ENVIRONMENT TRENDS**Trend:****The proliferation of ag-tech.**

Beyond the explosion of digitally-enabled financial services, the last three years have seen a rise in the use of digital technologies—such as weather stations, soil sensors, and digital disease surveillance—for a variety of agricultural use cases that are driving smallholder farm transformation, including digitally-enabled advisory services and market linkages, supply chain management, and macro data decision making.

Why it Matters:

For farmers, ag-tech solutions are enabling increased productivity, access to new products and services, and connection to markets at better prices. Technology also has the potential to drive inclusivity through the engagement of women and youth. For financial service providers, ag-tech solutions help optimize business models—increasing understanding of target customers, improving portfolio monitoring, and facilitating more cost-effective service delivery.

Future Evolution:

Understanding the most impactful models. Similar to fintech services, providers need clarity about the direct and indirect impact of ag-tech solutions on smallholder livelihoods and the larger market. What infrastructure is needed? Which models are financially sustainable? How can we ensure inclusive adoption of ag-tech solutions?

Trend:**The rise of ecosystem connectors and intermediaries.**

The sector has experienced an increase in pre-competitive networks and connectors, such as CSAF, Smallholder and Agri-SME Investment Network (SAFIN), or Propagate Coalition. There are also a growing number of intermediaries—such as ISF Advisors, Lions Head, or Open Capital Advisors—which are supporting financial service providers with capital allocation and strategic planning.

Why it Matters:

Closing the smallholder financing gap will require a multi-stakeholder approach. Ecosystem connectors bring public, private, and philanthropic actors together to coordinate agendas, share lessons learned, and mobilize sector-wide action. At the same time, as complexity in the market increases, specialist intermediaries can provide the support and connections that providers need to optimize their business models.

Future Evolution:

Leveraging connectors and intermediaries effectively. With more ecosystem actors than ever before, it will be crucial to match the right set of skills to the right problems. Ecosystem actors must also build on the existing expertise and shared learnings of others. This will require ecosystem actors to be intentional about learning and putting systems and processes in place that support learning and dissemination.

¹ Murthy, Gayatri; Vidal, Maria Fernandez; Faz, Xavier; Baretto, Ruben, *Fintechs and Financial Inclusion: Looking past the hype and exploring their potential*, CGAP, May 2019.

² McCreless Michael, *Toward the Efficient Impact Frontier*, Stanford Social Innovation Review, Winter 2017.

³ Colina, Clara; van der Velden, Iris, *The business case of smallholder finance: Introducing the SDM Case Study Series*, November 26, 2018.

⁴ Bannick, Matt; Goldman, Paula; Kubzansky, Michael, *Frontier Capital: Early Stage Investing for Financial Returns and Social Impact in Emerging Markets*.

⁵ Convergence, *The State of Blended Finance 2018*, September 26, 2018.

⁶ ISF Advisors and Rural & Agricultural Finance Learning Lab, *Fund management and inclusive agribusiness: A global perspective*, May 10, 2017.

II. NEW WAYS TO UNDERSTAND AN INCREASINGLY SOPHISTICATED MARKET

As the rural agricultural finance market continues to evolve, we need new models to understand this increasingly complex market and to align rural agriculture finance needs with service provision. To that end, we propose two frameworks that we believe are key to driving the rural finance agenda forward:

1. A **Rural Pathways Model** to move us from a static understanding of smallholder households based on their characteristics at a particular moment in time, toward a dynamic view of how households might evolve over time and how their needs change as they move along different development trajectories.
2. A **new Service Delivery Model Typology** that reflects the dramatic changes in service provision, and enables us to analyze differences, challenges, and opportunities for specific financial service providers.

Together with an updated understanding of relevant capital supply (discussed in Section III), these frameworks will assist the sector in bridging the gap between financing needs and financial service provision.

A NEW RURAL PATHWAYS MODEL

In the 2016 *Inflection Point* report, we recommended that financial service providers offer products and solutions based on a deep understanding of their customers' needs, preferences, and behaviors. We labeled this "customer centricity"—an approach that would not only help providers tailor their engagements, but would also mitigate risk and improve sustainability.

In an effort to strengthen customer centricity, the sector has since made significant progress in building rich knowledge about how and why smallholder households engage with markets. Five years ago, we segmented smallholder farmers primarily based on data about crops and farm size. These days, however, the sector has produced more robust, multifaceted data, refining our comprehension of smallholder households and allowing a better understanding of how they interact with markets. Based on extensive data collection, CGAP has introduced three segments of smallholder households: Subsisting, Commercializing, and Diversifying.²⁶

This research, detailed in the callout box below, reveals that smallholder households have rich financial profiles, and that household members have a range of income sources that inform the choices they make.

THREE SEGMENTS OF SMALLHOLDER HOUSEHOLDS (CGAP)

- *Subsisting*: Farmers in this segment are generally rural dwellers whose livelihoods focus on agriculture, primarily in order to feed their own families. They complement their agricultural activity with income from day labor, often on other farms. There is little indication that they will transform their agricultural activities into a sustainable, commercial business. This segment has the lowest use of formal and informal financial services.
- *Commercializing*: In contrast to the subsisting segment, commercializing smallholders consider farming to be a business, from which they obtain the bulk of their income. This segment is better connected to other actors within their value chains, including wholesalers and resellers. While still poor overall, they earn relatively higher incomes than subsisting farmers and use a combination of formal and informal financial services.
- *Diversifying*: Households in this segment have a multidimensional livelihoods strategy. On average, they farm smaller plots of land and consume most of their agricultural output. While some may earn income from agriculture, their primary income source is formal or informal employment. Household income can be as high as or higher than the commercializing segment, and they may use formal financial tools such as bank accounts and mobile money.

²⁶ Anderson, J., Karuppusamy, R., Neumann, P., Miller, H., Tamara, R., "Smallholder Households: Distinct Segments, Different Needs," CGAP Focus Note No. 111, April 2019. http://cgap.org/sites/default/files/publications/2019_04_Focus_Note_Smallholder_Households_Distinct_Segments_Different_Needs.pdf.

But even with these advances in our understanding of smallholder households, segmentation has remained static. We still characterize smallholders based on a snapshot of their characteristics at a particular *moment in time*. In reality, however, smallholder households—like any households—are dynamic. As smallholders pursue goals and face challenges over the course of their lives (and across generations), their needs evolve. In order to map these dynamic needs, we’ve developed a new model to describe a series of predictable development trajectories for rural households. This “rural pathways” model offers macro- and micro-level insights into how household needs evolve over time—and how that shapes rural economies.

A new dynamic view of rural households

The rural pathways model lays out the different transition pathways smallholder households may take as they pursue increased resilience and agency through various livelihoods strategies (see Figure 8). These transition pathways coalesce around four centers of gravity—broad categories of livelihoods that rural households may choose to engage with:

1. **Farming as a business:** Smallholder households remain in primary production. As a smallholder household invests in growing its farming business, it may move from subsistence to more intensified or commercialized farming. Households in this category may eventually transition into a medium or large farm enterprise.
2. **Rural services entrepreneurship:** Some smallholder households may shift away from primary agricultural

production, pursuing entrepreneurship-based livelihoods strategies. They may focus on agricultural services (e.g., inputs, veterinary services, processing, or aggregation) or non-agricultural services (e.g., transportation, running a local shop). Micro and small entrepreneurial ventures may eventually grow into medium and large enterprises.

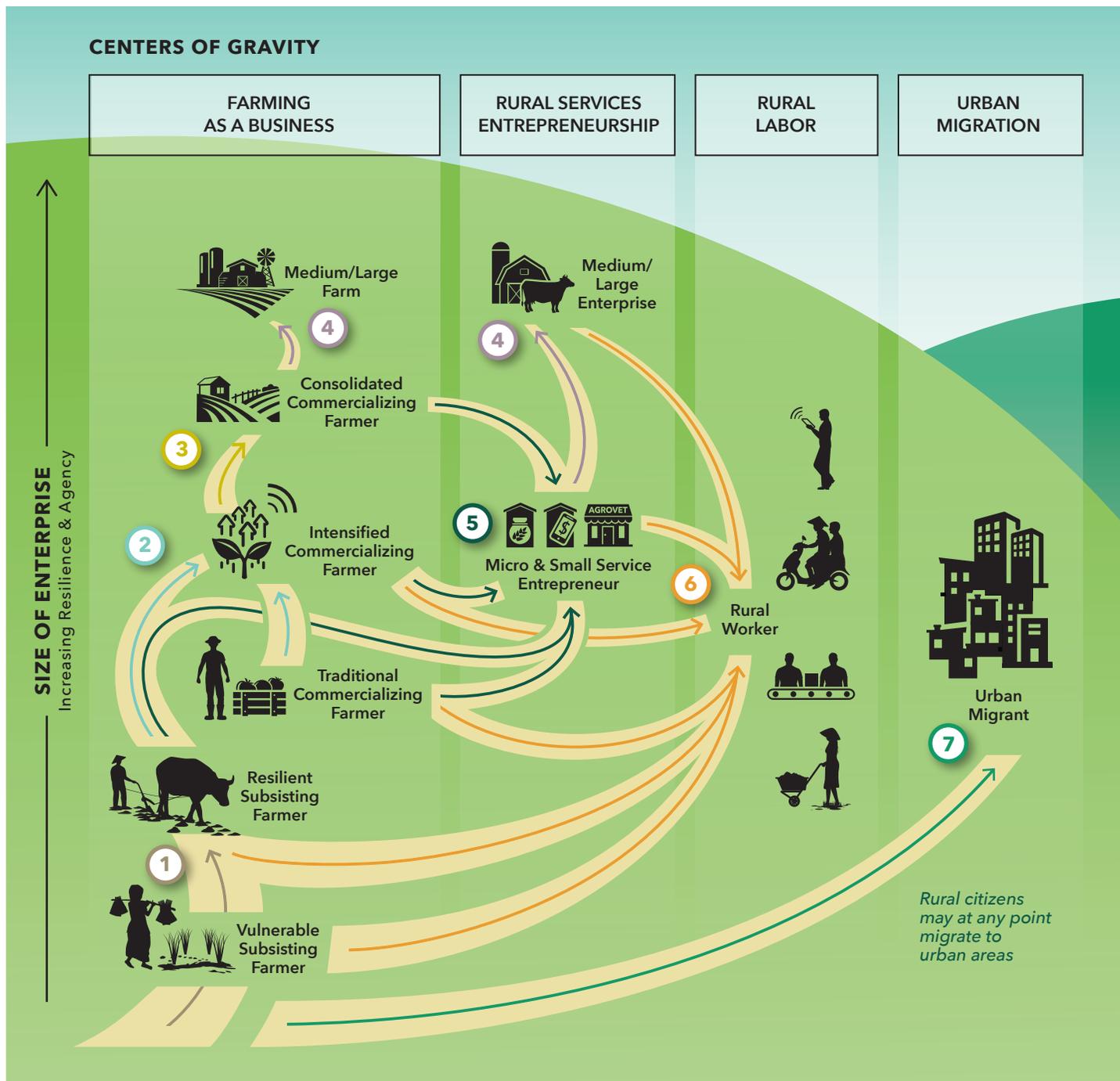
3. **Rural labor:** Households may remain in a rural area but focus their livelihood strategy on employment that supports the activities of large commercial farms or SMEs. This labor may be agricultural or non-agricultural, formal or informal.
4. **Urban migration:** Facing certain push and pull factors, a rural household may migrate to an urban area and transition fully to non-agricultural livelihood activities.

It is important to note that, over the course of a lifetime, there will be both forward and backward movement along these pathways. A single household may also change pathways or simultaneously pursue multiple pathways as they adapt to changing priorities. In many of these pathways, rural SMEs may play a vital role. These enterprises can be started by local entrepreneurs moving along pathways #4 or 5, or by urban entrepreneurs who move to rural areas to set up enterprises that provide employment opportunities for those on pathway #6. Thus, the rural pathways model doesn’t just illustrate choices and behaviors on the smallholder household level, but offers insights relevant to rural economies as a whole.

FIGURE 8

Rural Pathways Model: A new way of thinking about rural clients

The Rural Pathways Model aims to capture predictable development trajectories smallholder households may take as they pursue greater resilience and agency. When applied to a specific context, these pathways can offer micro- and macro-level insights into how smallholders' needs may evolve over time and how that will shape the rural economy.



PATHWAYS

1 Developing a Resilience Buffer

Smallholder farmer continues to farm primarily for subsistence—has little or no surplus—but is able to improve farming practices and build assets to strengthen its resilience to external shocks.

2 Farm Intensification

Smallholder farmer takes a business-oriented approach to farming, and is able to generate a surplus and increase production value through improved inputs, better farming practices, and regular sales to buyers and traders.

3 Land Consolidation

Farmer takes a business-oriented approach to farming and is able to consolidate multiple plots of land for more efficient, cost-effective, and competitive commercial production.

4 Transition to Formal Enterprise

Farmer or service entrepreneur consolidates its activities into a formal enterprise that is fully integrated into the value chain and relies primarily on hired labor and mechanization.

5 Transition to Service Provision

Smallholder farmer shifts away from agricultural production and instead pursues an entrepreneurship livelihood strategy in rural services, either related to agriculture (e.g., agro-vet) or not (e.g., mobile money agent).

6 Conversion to Rural Employment

Smallholder farmer remains in rural areas but shifts away from self-production or entrepreneurship to become labor for on-farm or off-farm activities.

7 Migration to Urban Areas

Smallholder farmer migrates to urban centers, transitioning to non-agricultural activities.

Why this new perspective matters

The goal of a successful financial inclusion strategy is not a single interaction, but rather a long-term engagement that allows smallholder households and agricultural SMEs to improve their economic standing over their lifetime. For financial service providers, this is closely tied to the concept of “customer lifetime value,” where profitability is increased by a relationship that endures and matures over an extended period of time. The static segmentation currently common in the agricultural finance space allows donors and service providers to craft interventions that meet a smallholder household’s *current* needs. But creating and implementing a strategy for long-term engagement requires us to consider the potential pathways that customers may travel in the short- to long-term future. By examining the transition points along these pathways, we can begin to understand how a smallholder’s use of financial services and products may change over time. This dynamic understanding will help financial service providers and donors tailor products, bundle offerings, and better communicate with their clients.

Perhaps the most striking aspect of the dynamic model is the simple recognition that many rural households will not remain smallholder farmers at all. As external factors like climate change and industrialization push more farmers out of agriculture as a primary livelihood strategy, rural households’ needs will change. Therefore, delivering inclusive economic development over time will require a wider range of non-agricultural products and services. This is a much broader and more fluid view of the rural agricultural finance market, a shift that we believe represents a new opportunity to push the boundaries of innovation and inclusion in our sector.

A NEW SERVICE DELIVERY MODEL TYPOLOGY

Like smallholder segmentation, the standard typology of financial service delivery models has traditionally been fairly static. In the past, service delivery has largely been considered through three lenses: type of organization, types of services provided, and location of service provision. But with new digital technologies and heightened external pressures (such as climate change), a new generation of financial service providers has emerged. These providers are serving needs that did not previously exist—and in the process, they have accelerated the development of new service delivery models.

These new models require an updated framework for describing why and how different financial service

providers are helping rural households and agricultural SMEs move along the different rural transition pathways. This new typology will allow the sector to better understand each type of model, how well-positioned they are to address the needs of different rural client segments, and what capital they require to reach sustainability and scale.

A new typology of financial service providers

We propose a new typology of financial service providers that goes beyond type of organization to create segments based on two variables: 1) Primary objectives for service delivery and 2) Scope of services offered to rural households and SMEs.

In mapping out the rural agricultural finance sector, we found three distinct types of primary objectives for service delivery, which explain a financial service provider’s motivation for offering financial and non-financial services to rural households and SMEs:

- **Supply security:** Providers offer services to farmers or SMEs, often in exchange for a purchase agreement, in order to ensure sufficient supply of products for their own business operations. Services offered are a means to an end: the end being the availability of produce at the right time, in the right quantity and quality.
- **Service profitability:** Providers offer services that, in themselves, are the core business objective. Services are focused on creating monetizable value for the rural household and/or SME and at least one service is profitable on its own (e.g., earning interest on a loan). In some cases, additional services may be offered that are not necessarily profit-motivated, but that can be cross-subsidized to increase overall positive customer value (e.g., advisory services).
- **Client outcomes:** Providers offer services to increase the income, wellbeing, independence, and resilience of the rural household or SME. The services themselves are a means to an end: the end being a richer, more resilient household or business.

While this typology focuses on identifying a provider’s *primary* objective for service delivery, it’s important to note that many organizations have secondary objectives. For example, a large cocoa off-taker may have a primary objective of securing a high-quality supply of cocoa for processing; but its secondary objective may be improving the wellbeing of smallholder farmers from which it sources the cocoa.

FIGURE 9

Primary objectives for service delivery

Primary objective for service delivery	Description of motivation	Examples of institution types	Relationship with farmer/SME	Funding	Sustainability
Supply Security	Providers offer services in exchange for produce. Primary motivation is to ensure the availability of produce for their trading or processing business at the right time and in the right quantity and quality	Large agribusinesses and off-takers	Farmer or SME is their supplier	Primarily self-funded, occasionally may receive grant funding for smallholder-specific programs / initiatives	Dependent on performance from downstream operations
Service Profitability	Providers offer services as their core business objective. Primary motivation is to grow the business while delivering value to customers.	Banks, MNOs, fintechs, social enterprises	Farmer or SME is their target customer	Initially some concessional startup funding, including grants; otherwise privately self-funded	Dependent on service business being profitable
Client Outcomes	Providers offer services designed to build client economic resilience and improve their livelihoods. Primary motivation is economic prosperity and empowerment of clients	State Banks, NGOs, Farm to Market Alliance, incubators	Farmer or SME is their target customer	Government and donors	Either short-term or long-term government adoption

Mapping out the scope of services, we have identified three key configurations of services:

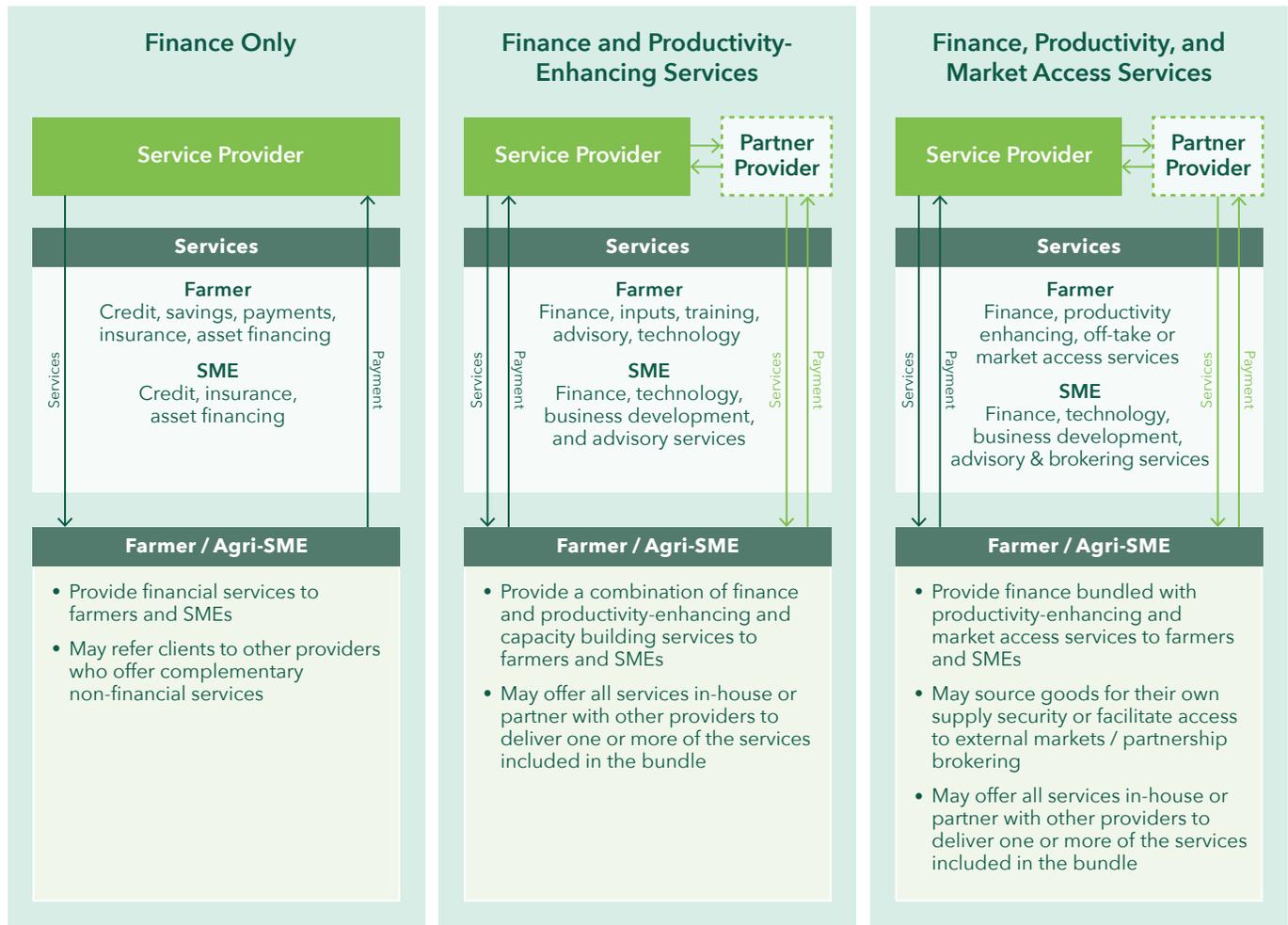
- **Finance only:** The provider only offers financial services to clients. These services may include credit, savings, payments, insurance, and asset financing for farmers; as well as credit, insurance, and asset financing for agricultural SMEs. Services are usually offered in-house, but the provider may refer clients to other institutions that offer complementary non-financial services.
- **Finance and productivity-enhancing services:** The provider offers a combination of finance and productivity-enhancing and capacity building services to clients. These services include finance and some combination of inputs, training, advisory, or technology for farmers; as well as a combination of finance, business development, technology, and

advisory services for agricultural SMEs. Services may all be offered in-house, or a provider may partner with others to deliver one or more of the services in the bundle.

- **Finance, productivity, and market access services:** The provider offers finance bundled with productivity-enhancing and market access services to clients. For farmers, this bundle may include finance, inputs, training, advisory, technology, and off-taking or market access services. For SMEs, the bundle may include finance, business development, advisory, technology, and market or partnership-brokering services. Providers may source goods for their own supply security or facilitate access to external markets. Services may all be offered in-house, or the provider may partner with others to deliver one or more of the services in the bundle.

FIGURE 10

Scope of services offered to farmers and agri-SMEs



By mapping providers' primary objective for service delivery against their service offering, we can create a new typology that acknowledges *why* providers are serving rural clients and with *what* services. This typology model establishes nine segments of financial service providers. In the current market, within each segment, providers may engage exclusively with either rural households or agricultural SMEs, or may address the needs of both types of client. Applying these segments to existing financial service provider models, we can begin to map out how the market currently looks, and how it is evolving over time as providers continue to innovate and scale.

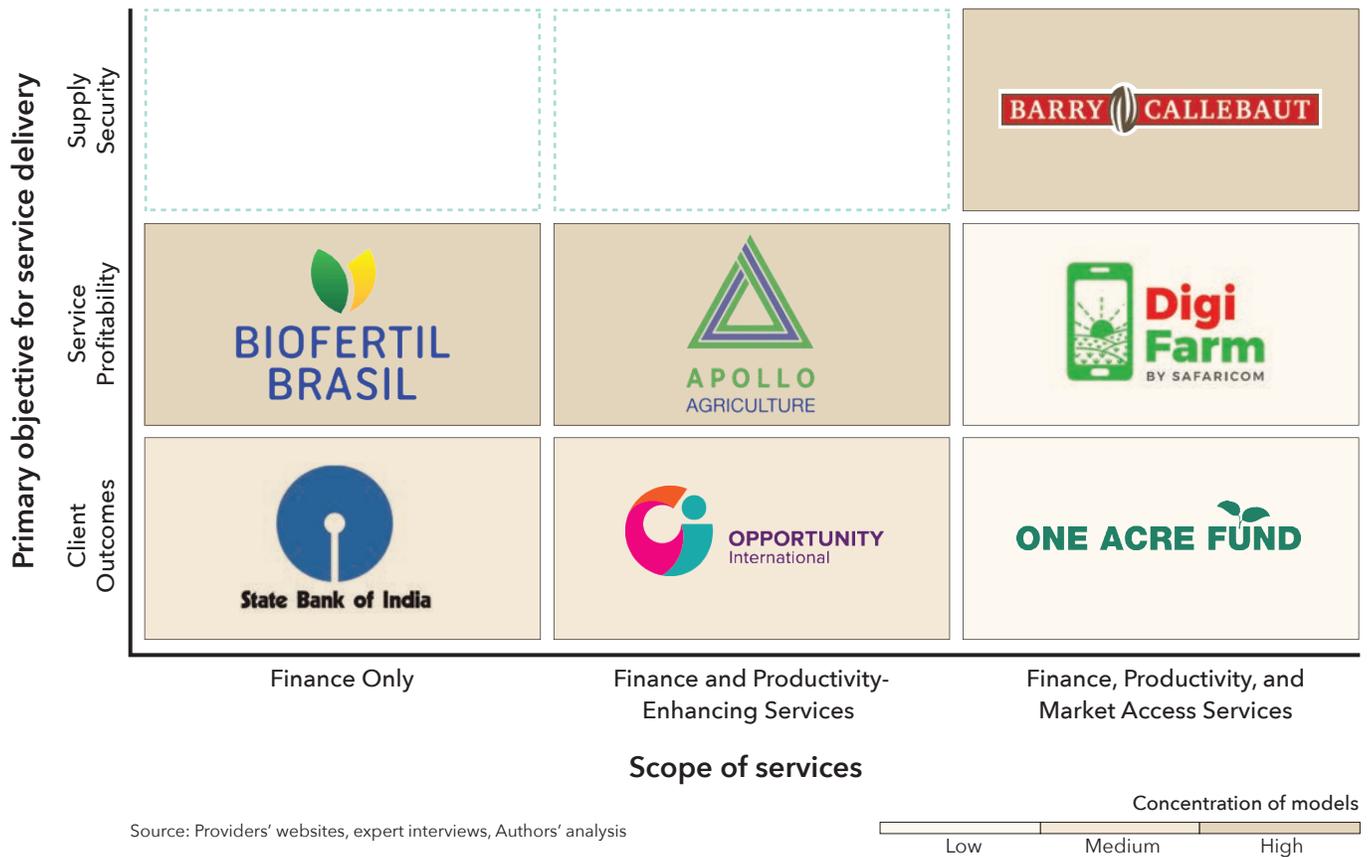
As can be seen in figure 11, an analysis of the current landscape of providers offering financial services *directly to smallholder farmers* reveals a few key insights. Firstly, there is a high concentration of finance-only models that seek to deliver profitable financial services

to rural households. This includes traditional banks, MFIs, and insurance companies, as well as new fintech players leveraging technology to increase reach while lowering costs. Secondly, there are also a large number of agribusinesses and off-takers working with smallholders to secure their supply of inputs for value-added processing and export. Many of these actors started with purchase agreements and then moved into finance and productivity-enhancing services to increase yields and improve product quality.

A rapidly growing segment of providers are offering finance and productivity-enhancing services to smallholder farmers; many are utilizing technology in an attempt to scale service delivery. While the highest concentration of these providers have for-profit models, some are social enterprises with explicit missions to improve rural livelihoods. Finally, there's a handful of service providers that are beginning to layer on market

FIGURE 11

Prevalence and examples of service delivery models serving farmers



Source: Providers' websites, expert interviews, Authors' analysis

access services in order to offer full end-to-end solutions to smallholder farmers. While providing market access services to rural clients can be operationally challenging, early research indicates that these services could be a lucrative source of revenue for providers.²⁷

As we will see when we present targeted investment theses (Section III), the prevalence of provider models will vary significantly when evaluated per pathway.

A similar landscape analysis showcases the prevalence of provider segments offering different financial services to *agricultural SMEs*. The highest concentration of providers working with SMEs continues to be finance-only players who offer credit, insurance, and asset financing. This segment includes traditional banks and microfinance institutions that have worked with SMEs for decades; but there is also a growing number of fintech companies introducing new innovations for this market segment. We are also seeing an increase in the number of providers offering a combination of

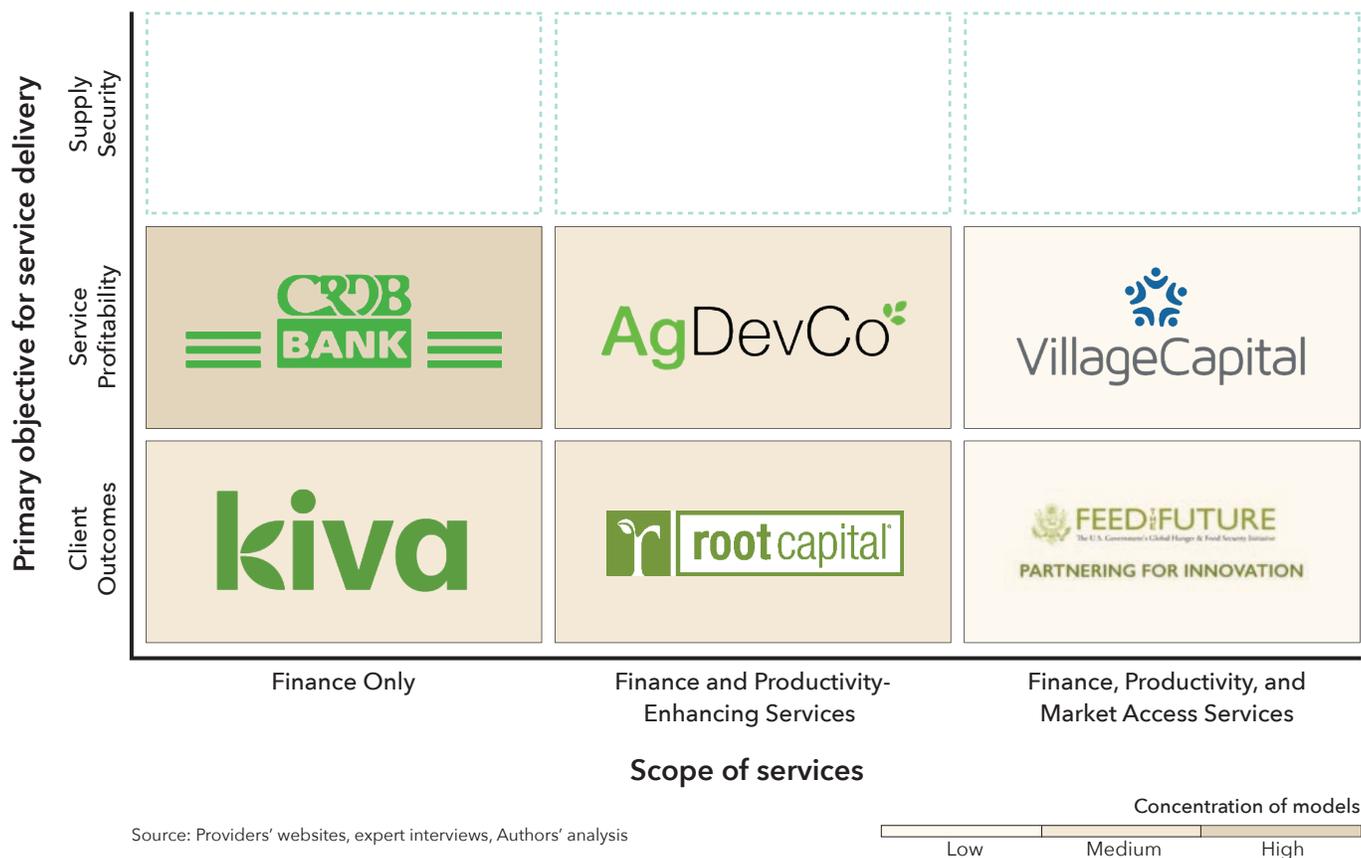
finance, business development services, advisory, and technology in order to optimize performance gains for agricultural SMEs. This segment includes commercial banks, microfinance institutions, and fintechs, as well as social lenders. As in the map of providers delivering services directly to farmers, a smaller number of providers focused on SMEs—primarily donor-funded programs or incubators—are beginning to experiment with layering on market brokerage services, often in the form of partnership facilitation.

When utilizing this new typology, it's important to note that—much like the rural pathways—service delivery model segments are not static. Service providers can have more than one objective and experiment with more than one type of service offering. Providers may inhabit an overlapping space between multiple segments. Many providers, such as Root Capital, also exist at the nexus of different segments, supporting a cross-subsidy model that allows them to balance sustainability and impact objectives. Others collaborate

27 Rural and Agricultural Finance Learning Lab, IDH Farmfit, Tulaa, "Tulaa SDM Case Study," August 16, 2019: <https://www.rafllearning.org/post/tulaa-sdm-case-study>

FIGURE 12

Prevalence and examples of service delivery models serving agri-SMEs



with partners in different segments to enhance their service offerings or resolve distribution challenges. Thus, the service delivery model typology should be considered primarily as an organizing framework to understand the breadth of providers in the market and their more fundamental differences.

Understanding underlying Service Delivery Models (SDMs)

This new typology allows us to understand both the *how* and *why* of service delivery. Looking at financial service providers in terms of their objectives and scope of services is a first step in reaching greater clarity about which providers are best fit to serve which rural clients within which transition pathways. However, as the preliminary mapping makes clear, there are a diverse number of ways that providers are designing their business models to optimize financial sustainability and impact. These design dimensions include, among

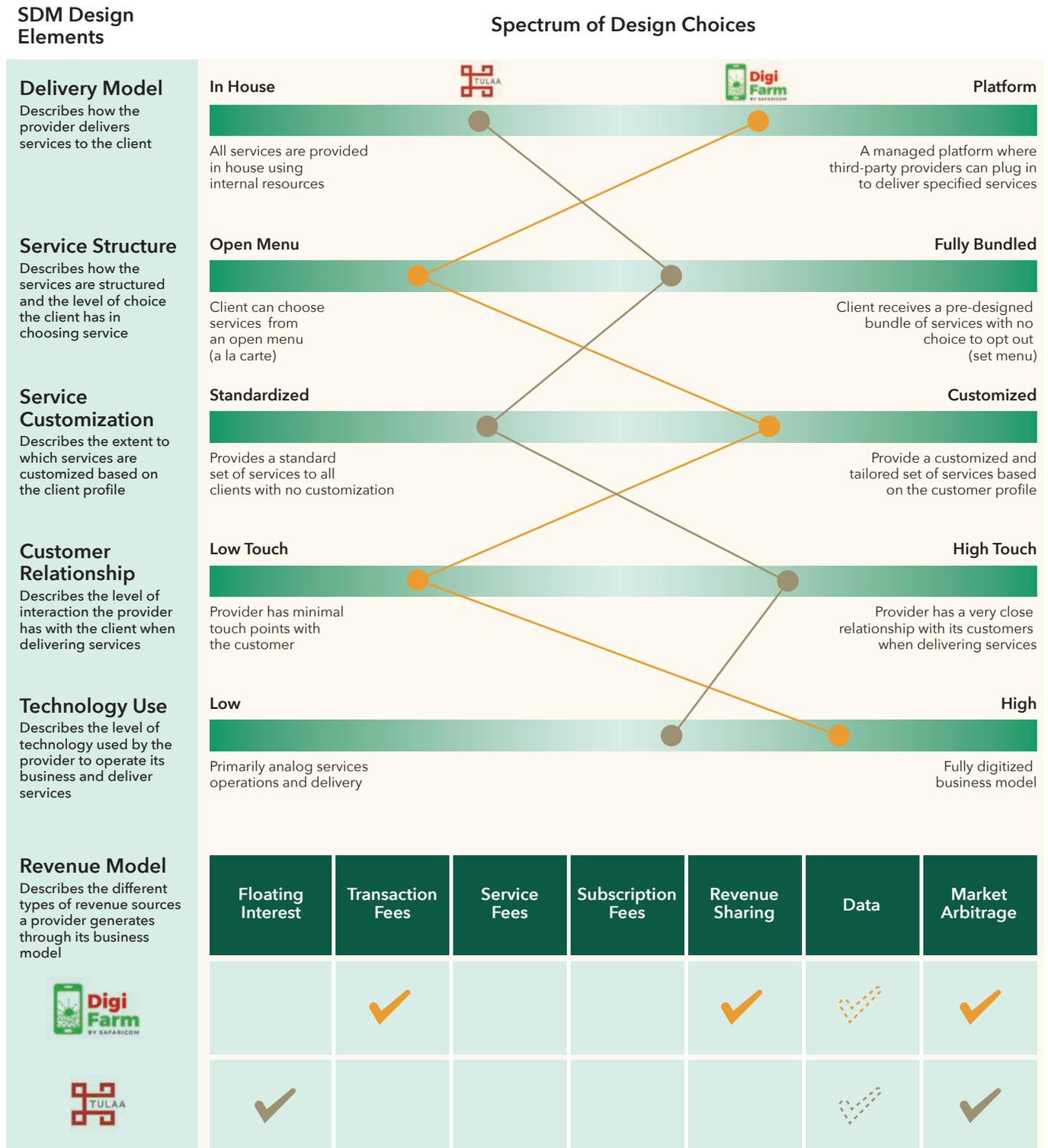
others, how services are structured and delivered, the extent to which technology is embedded in service delivery, how the customer relationship is approached, and how the provider generates revenue. Figure 13 below provides a snapshot of *how* different service delivery models are configured using a number of common design dimensions.

A given provider can fall anywhere along a spectrum for each of these design dimensions depending on the underlying structure of their model. By mapping providers to these service delivery model design elements, we can drill down for deeper insights into how their model is structured and what differentiates it from other models in the same segment. A thorough understanding of where financial service providers fall along these dimensions will enable stakeholders—especially those furnishing capital—to compare service providers and profitability profiles against one another.

FIGURE 13

Service delivery model design dimensions

Service delivery model design choices can be characterized on a spectrum related to different design elements. This chart shows where along the spectrum of design dimensions financial service provider Digifarm and Tulaa currently fall. Both Digifarm and Tulaa are aiming for service profitability and serve pathway #2 farmers with financial, productivity-enhancing, and market access services. It is important to note that providers like Digifarm and Tulaa are constantly evolving their service delivery models to create more value and reach scale and sustainability. This chart shows where along the spectrum of each design element each provider was positioned at the time this report was written.



Dashed check marks represent potential future revenue sources that are not being monetized at present. Source: providers self-assessment, Authors' analysis

WILL PLATFORMS TAKE OFF IN THE RURAL FINANCE SECTOR?

Digital platforms like Amazon, Google, and Alibaba have fundamentally changed the way the world does business. The platform model directly connects service providers with each other and with customers, generating vast economic value. In recent years, various thought leaders have pondered how platforms might be leveraged in financial inclusion strategies.²⁸ A number of non-traditional e-commerce platforms are already being used as infrastructure for the provision of rural financial services (e.g., Alibaba's establishment of the Alipay digital payment platform in Asia). Some providers also claim to be developing end-to-end platforms for delivering financial and non-financial services to smallholder farmers. But are these actually platforms?

We define "platform" as an infrastructure that facilitates the provision of services by third-party providers. A platform operator invests in setting up this infrastructure in order to eventually generate revenue through transaction fees. A true platform is open, allowing any third-party providers to plug in and offer their services to rural clients. In this way, the platform infrastructure would enable financial service providers to increase scale while lowering costs.

In contrast, many of the so-called platforms currently emerging in the rural agricultural finance space are from providers who are offering the full suite of services in-house. Others are setting up strategic partnerships with a handful of third-party providers to round out their core service offering, but not creating truly open platforms. While these pseudo-platform models don't fit the definition above, most have aspirations to transition into true platforms in the future. To do so, they will need to solve for the complex needs of rural customers, as well as the high costs associated with serving them. As farmers transition through different pathways, this complexity and cost may decrease—potentially allowing true platforms to emerge.

Why this new perspective matters

Over time, in response to both existing and new challenges, the diversity and complexity of models for service provision have increased. As a sector, we must continually update our collective understanding of what exists, what is working, and what differences there are between different models. With this new service delivery model typology, we can expose the most important dimensions of underlying models: scope and configuration of services; their primary objective; and, when mapped to the rural pathways model, their client base.

With this more robust typology, we can draw out lessons to help the sector tackle big questions, such as: What are the common experiences of different models across the world? What are the most promising innovations, and in what types of models are they emerging or scaling? What is the impact potential of a given model? What drives profitability in financial service provision for smallholder households and agricultural SMEs? How do we drive investment into scalable models?

A new typology of service delivery models also allows us to explain the broader ecosystems in which different financial service providers operate. For example, in some countries, platforms may eventually provide a distribution infrastructure that can be used by third-party providers to deliver services to rural clients (see callout box). This service ecosystem will look very different from a country in which multiple providers are competing to deliver different bundles of services directly to clients.

Perhaps most importantly, this new typology helps us better articulate how to align the three levels of the market: clients, providers, and capital. When combined with the rural pathways model, service provider segmentation can help us determine what type of service providers are best suited to serve different client segments—and eventually, what types and amounts of capital flow should be directed toward different types of service providers to help them reach sustainability and scale.

²⁸ See, for example: Porteous, David and Morawczynski, Olga, "The Superplatforms are Coming...And They Will Transform Financial Inclusion," *Next Billion*, December 21, 2018: <http://nextbillion.net/the-superplatforms-are-coming-and-they-will-transform-financial-inclusion>. CGAP blog series, "Platform Economy: What It Means for Financial Inclusion," 2018: <http://cgap.org/blog/series/platform-economy-what-it-means-financial-inclusion>.

III. APPLYING THE RURAL PATHWAYS MODEL: THE MICRO LEVEL

As noted in the previous section, the rural pathways model can help the agricultural finance sector develop more sophisticated analyses of how critical services address the specific needs of households as they pursue different livelihood strategies and transition along the pathways. As we will establish in the following sections, the rural pathways model also provides a new way of considering service provision from the micro-level all the way up to macro-level policymaking around the rural transformation agenda.

RETHINKING THE IMPACT-RETURN TRADE-OFF

The lack of a common understanding of the impact-return trade-off continues to be a major challenge for the rural agricultural finance sector. We know that service providers that choose to operate in more remote communities or work with lower literacy farmers increase their risk and cost to serve, which impacts their profitability. At the same time, these service providers are reaching the most vulnerable rural households and could deliver the greatest impact. Without a clear understanding of the different service delivery models, the differences in underlying client profiles, and quality outcome and impact data, it's nearly impossible to assess the impact-return trade-off. This also prevents stakeholders from accurately evaluating the need for subsidy to support certain models. By taking a pathways view of impacts and returns, we can begin to create more comparability between service delivery models and providers— which can shed more light on the impact-return trade-off.

Reconsidering impact

Rural agricultural finance was long considered a stand-alone agenda with the primary goal of generating productivity and resilience outcomes. But more recently, providers have come to see rural households as a meeting point for a number of critical global agendas. How these households evolve and what services they access over time will have a significant impact on issues such as the climate, gender equality, youth, food

security, and labor markets. Recognizing the convergence of these agendas, some donors have begun to adapt their grantmaking strategies and organizational structures. One example is the multi-donor initiative CGAP, which is shifting away from a strictly smallholder focus to a broader vulnerability agenda that highlights the intersections of youth, gender, rural development, and climate-driven migration.

In this context, the rural pathways model enables a new way of considering the range of impact outcomes that can be generated for rural populations as they move through different transitions. As noted in figure 14, the specific outcomes relevant to each pathway differ substantially. For example, climate-related outcomes in pathways #1 and 2 are primarily related to smallholder households adapting to climate change; but when households are engaging in commercial farming in pathway #4, limiting the carbon footprint of agriculture becomes more relevant. Similarly, gender-related outcomes in pathway #2 focus on increased financial independence and the accumulation of productive assets while in pathway #5 the focus is on a reduction in occupational segregation between women and men.

By reframing the different types of impact outcomes for rural populations as they move along the transition pathways, we can create clearer links between service and capital providers. Over time, we hope that service and capital providers will be increasingly specific about the impact outcomes they are pursuing and will establish appropriate benchmarks for success, including standardized indicators that can be used across the sector. The rural finance outcome map in figure 14 is a preliminary step in that direction. Based on headline outcomes in each area, stakeholders could use standardized indicators, such as those from the GIIN IRIS+ framework,²⁹ to measure the specific, expected outcomes within different impact areas and pathways. Standardization, we believe, is the only way the rural agricultural finance sector will be able to start systematically assessing the impact side of the impact-return trade-off across different models, providers, and geographies.

29 Found at <https://iris.thegiin.org>.

FIGURE 14

Rural transition pathways - outcome map

Farmer Pathways					
Outcome Areas:	#1 - Developing a resilience buffer	#2 - Farm intensification	#3 - Land consolidation	#4 - Transition to formal enterprise	#5 - Transition to service provision
Production 	Basic improvements in productivity and farm diversification	Intensification of production and increased offtake price realization	Increased production levels, efficiency, and price realization	Increased production/service levels, efficiency, and price realization	
Resilience 	Increased household food output for consumption and assets (including livestock)	Increased household food output, farm assets, and discretionary income	Increased land and farm asset ownership and greater discretionary income potential	Increased contract and asset protection from formalization and income potential from size	Increased asset ownership and income potential
Employment 		New (primarily informal) jobs created through hired farm labor	New (primarily informal) jobs created through hired farm labor	New formal jobs created and maintained through farm labor and agri-SME workers	New (primarily informal) jobs created from rural entrepreneurship and hired labor
Nutrition 	Increased food security and access to directly produced, nutritious food	Increased food security and access to directly produced and purchased nutritious foods	Increased production of affordable, fortified staple crops and reduced post-harvest losses	Increased production of affordable, fortified staple crops/processed foods and reduced post-harvest losses	
Climate 	Adaptation to climate-related shocks and changes	Adaptation to climate-related shocks and changes and mitigation of carbon-intensive production	Reduced farmland/habitat degradation and adaptation to climate-related changes	Reduced farmland/habitat degradation and reduction in carbon released through production	Adaptation to climate-related shocks and changes
Gender 	Increased control over household income and consumption decisions	Increased agency, financial independence, and accumulation of productive assets	Increased instances of joint asset ownership and labor renegotiation within the household	Increased participation in formal sector as enterprise owners and/or decision makers	Reduction in gendered occupational segregation, and increased agency and financial independence
Youth 	Improved perception of farming and increased engagement in household farming activities	Increased perception of farming as a business and investment of time and resources in farm and upskilling	Increased farm ownership by youth and retention of youth in rural areas	Increased rural employment opportunities in SMEs and large farms	Increased rural youth entrepreneurship and skills development

Reconsidering financial returns

On the other side of the impact-return equation, it is similarly difficult to understand and compare the financial returns of different service delivery models. A large number of privately-owned financial service providers are not subject to public disclosure of this data. At the same time, the lack of transparency around financial returns is also a function of limited data collection and segmentation. Often, rural agricultural finance is one part of a service provider's larger agriculture or consumer portfolio, leaving providers themselves with little insight into the economics of their smallholder and agricultural SME service offerings.

The capital orientation map below lays out how different types of financial service provider models align to profitability profiles, types of capital, and transition pathways. In this mapping, service provider profitability

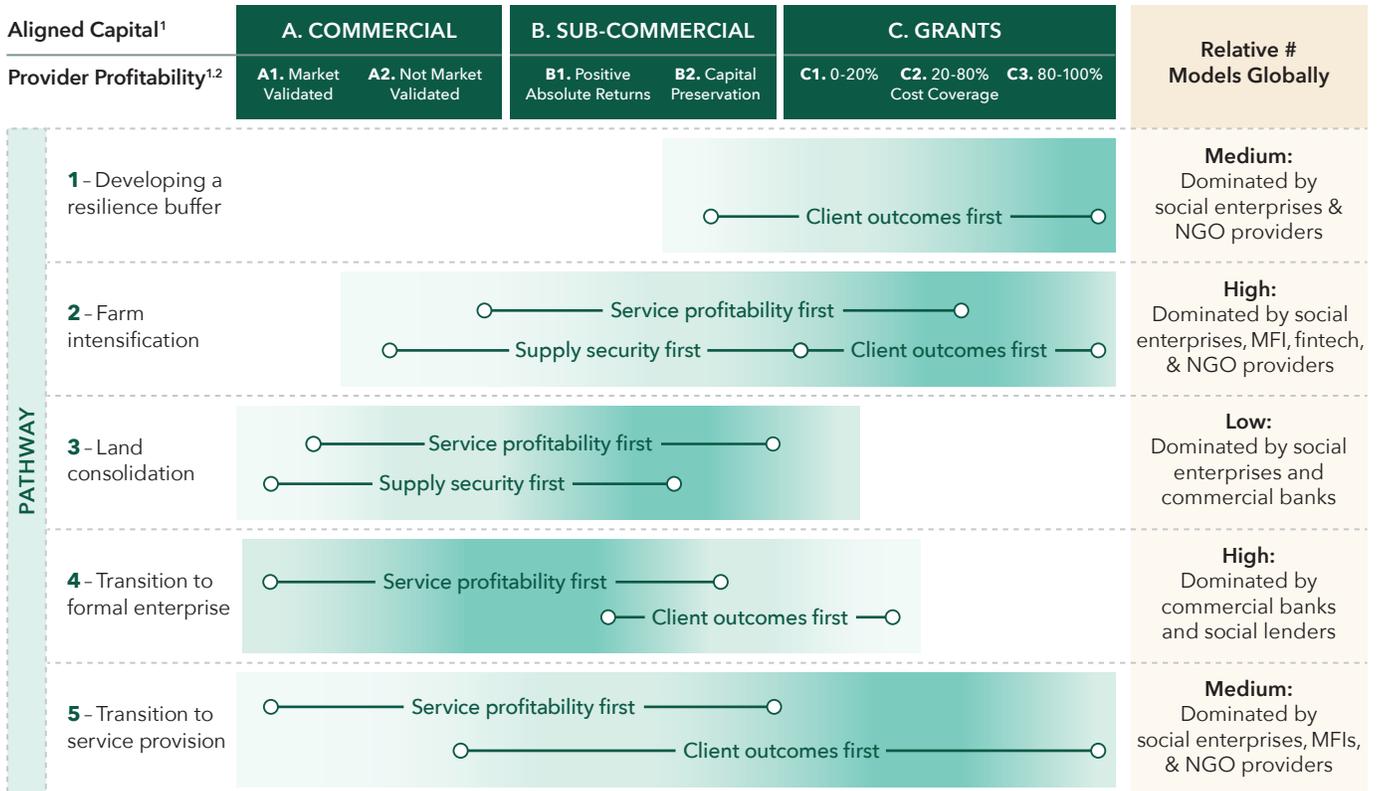
is considered the current profitability of a provider excluding any subsidy—and capital types are aligned with the profitability profiles on that basis. The prevalence of service provider models is depicted as a bell curve of sorts that shows the alignment of demand for different forms of capital based on the underlying profitability of the model. Seen through a pathways lens, it reveals a stylized global picture of rural agricultural finance models, their prevalence, and capital needs.

Viewing the demand for, and supply of, types of capital in this way creates a capital orientation “map,” rich with intersections and potential gaps that lie at the heart of the rural agricultural finance agenda. While the prevalence mapping is illustrative (based on expert opinion and the best available benchmarking data³⁰) and may vary from current reality, it shows the necessity of capitalizing multiple service delivery models with very different profiles.

FIGURE 15

Rural transition pathways - capital orientation map

Different provider types have different profitability profiles that align with different capital types. The following graph shows the prevalence of provider types across pathways and profitability levels based on their returns today.



¹ Adapted from Omidyar Network “Returns Continuum Framework”

¹² Provider Profitability refers to the current profitability of the service provider excluding any subsidy
Source: IDH Farmfit SDM Database, CSAF / Aceli Africa agri-SME financial benchmarking, Authors' analysis



30 Benchmarking data included analysis of 51 service delivery models in the IDH database and insights from agri-SME lending benchmarking by CSAF/Aceli Africa.

It is important to note that the profitability position of service provider models in the capital orientation map above represents a single point in time. In reality, providers are constantly evolving their business models, often becoming more profitable over time as they develop operational efficiencies, launch more lucrative services, discern opportunities for cross-subsidy, and/or realize economies of scale. As such, more commercial capital providers may invest in innovations even though

the current profitability profile of the service provider is sub-commercial. Blended finance approaches (discussed more in the callout box below) can also be used to bring more commercial capital into sub-commercial service provider models. With increasing deployment of program-related investments, credit guarantees, and technical assistance facilities, more commercial capital is participating in these markets than ever before.

THE RISE OF BLENDED FINANCE

As more diverse capital providers crowd in to the rural agricultural finance sector, the application of blended finance has also grown. Blended finance is the use of catalytic capital from public or philanthropic sources to increase private sector investment in frontier markets, with the aim of meeting the targets of the UN Sustainable Development Goals. Blended finance allows organizations to invest alongside each other while achieving different objectives, whether financial return, social impact, or a blend of both. By creating investable opportunities in developing countries, blended finance can generate significant development impact. For private investors, blended finance also addresses two main barriers: 1) high perceived and real risk, and 2) poor returns relative to investment. It is a structuring approach, not an investment approach, instrument, or end solution.

The following are four common blended finance structures:

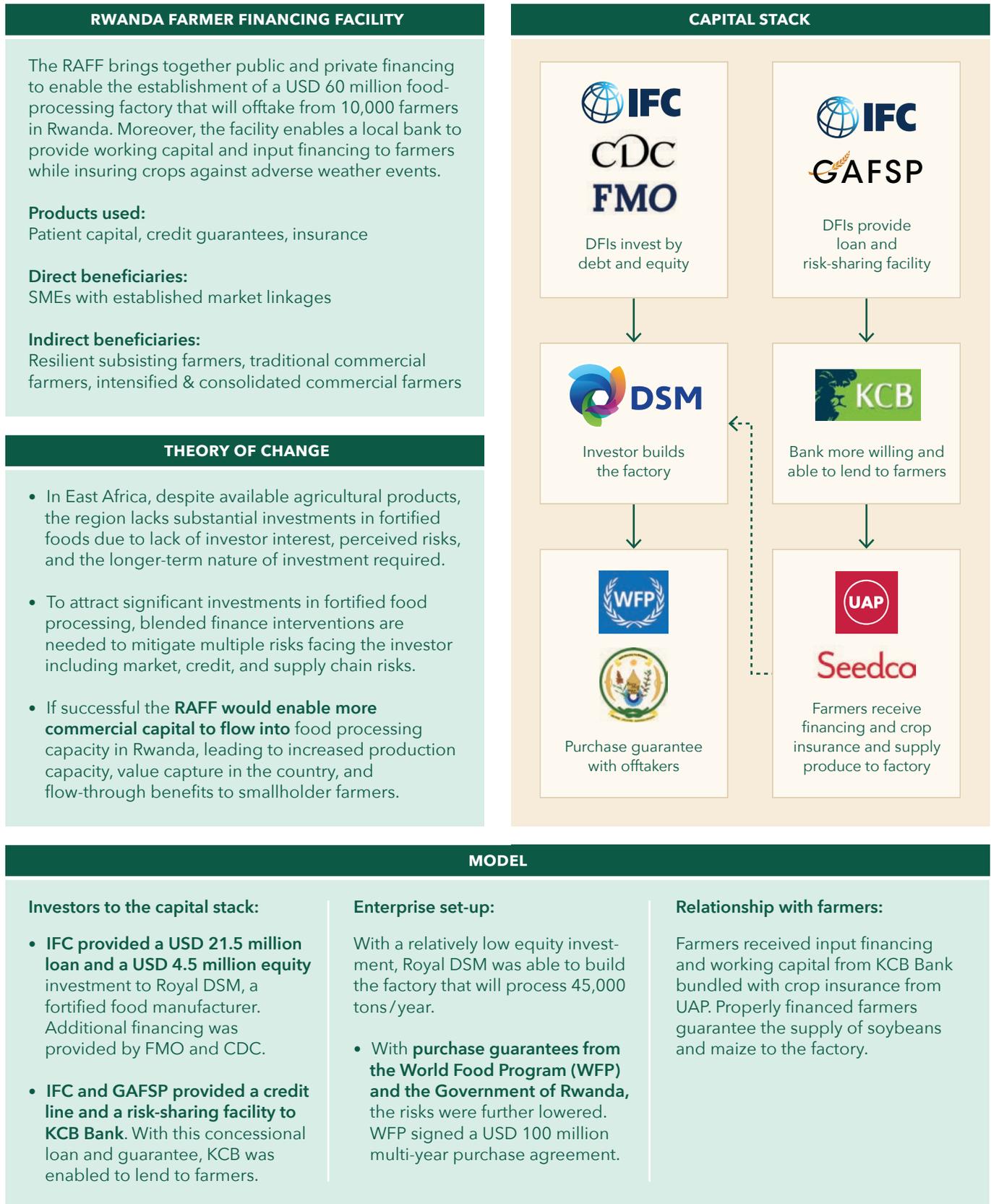
1. Public or philanthropic investors provide funds on terms below market within the capital structure (referred to in this document as concessional capital);
2. Public or philanthropic investors provide guarantees or insurance on terms below market (referred to as guarantee/risk insurance);
3. Transaction is associated with a grant-funded technical assistance facility (referred to as technical assistance funds); or
4. Transaction design or preparation is grant-funded (referred to as design-stage grants).

According to Convergence, blended finance has mobilized more than USD 140 billion in capital toward sustainable development to date, across all sectors.³¹ Within the rural agricultural finance sector, blended finance is increasingly used with commodity markets, funds, and service providers to support increased service provision. Figure 16 is an example of blended finance used to support the Rwanda Farmer Financing Facility.

³¹ Based on over 2,500 financial commitments to over 480 historical blended finance transactions where the majority of these transactions launched after the year 2000: <https://www.convergence.finance/resource/13VZmRUtiK96hqAvUPk4rt/view>

FIGURE 16

Case Study: Blended finance for Rwanda Farmer Financing Facility (RAFF)



Sources: OECD, Partnership Models in Blended Finance: An Overview, January 2018; FMO, *Addressing Child Malnutrition at Scale*, 2015

The need for subsidy and the challenge of making it “smart”

In the 2016 *Inflection Point* report, we noted the importance of “smart subsidy,” or subsidy that effectively and efficiently achieves its intended outcomes. The capital orientation map on page 31 shows a large number of service provider models with sub-commercial or grant-aligned profitability profiles—meaning they require some amount of subsidy to deliver services to rural clients. It’s important to note that the objectives of providing subsidy to service providers can vary, and may include:

- **Buying long-term impact** in impact-first provider models that are unlikely to transition to higher levels of financial sustainability. In these investments, smart subsidy means the highest possible level of impact per donor dollar—something that is extremely difficult to assess without credible benchmarks.³²

Applications of this type of subsidy are often seen in pathway #1: developing a resilience buffer, where subsistence livelihoods limit the capacity of clients to pay for services and the primary desired outcome is protection of vulnerable populations.

- **Subsidizing innovation in the short-term** in provider models with a clear plan to transition to higher levels of financial sustainability. In these investments, smart subsidy means identifying high-potential product, distribution, or business model innovations and working with service providers to chart an efficient course toward scale and sustainability.

Applications of this type of subsidy are most often seen in pathway #2: farm intensification, #3: land consolidation, and #5: transition to service provision, where a number of innovators require short-term subsidy to develop and pilot technology-driven “base of the pyramid” service delivery models.

- **Creating capital leverage** through subsidy to enable the participation of more commercially oriented

funding (i.e., the blended finance approach, discussed on page 32). In these investments, smart subsidy means high levels of capital leverage—a metric where credible benchmarks are beginning to emerge. Some early reviews³³ of blended finance transactions have begun to create global benchmarks related to capital leverage in different sectors and using different approaches.

Applications of this type of subsidy are often seen in pathway #4: transition to formal enterprise, where investment funds or service providers use credit guarantees and other blended finance models to crowd commercial capital into their investments.

As subsidy approaches become more diverse, the sector requires more sophisticated models and benchmarks in order to credibly manage impact-return trade-offs. Recent thought leadership by service providers and sector leaders is a step in the right direction. For instance, Root Capital developed the “Efficient Impact Frontier” concept to analyze and optimize the performance of its portfolio such that it achieves the highest social and environmental impact while also allocating philanthropic and investment funding efficiently.³⁴ The RAFL and IDH The Sustainable Trade Initiative are working together to publish research and case studies that present a holistic assessment of service delivery models (SDMs) in order to help financial service providers optimize key elements of their business model—including the use of smart subsidy—to serve rural households profitably and at scale.³⁵ Meanwhile, Omidyar Network and CSAF have produced a series of studies about investing for financial returns and social impact in emerging markets.³⁶

These types of frameworks can be used at a sector or portfolio level to set up a common approach that can allow the sector to define capital needs and pathway-aligned outcomes; understand the objectives and role of smart subsidy; and discuss the impact-return trade-offs involved in these transactions.

32 Recent analyses by CSAF and Dalberg Advisors (noted in Section I of this report) are working to establish these benchmarks for agricultural SME lending.

33 Callan, Paul and Anouar, Hafsa, *Private capital falls short in ‘blended finance,’* ImpactAlpha, February 5, 2019: <https://impactalpha.com/private-capital-falls-short-in-blended-finance/>

34 McCreless, Michael, *Toward the Efficient Impact Frontier*, Stanford Social Innovation Review, Winter 2017: https://rootcapital.org/wp-content/uploads/2018/01/Winter_17_Toward_the_Efficient_Impact_Frontier.pdf

35 Colina and van der Velden, *The business case of smallholder finance*

36 Bannick et al, *Frontier Capital: Early Stage Investing for Financial Returns and Social Impact in Emerging Markets*, Omidyar Network, 2015: https://www.omidyar.com/sites/default/files/file_archive/insights/Frontier%20Capital%20Report%202015/ON_Frontier_Capital_Report_complete_FINAL_single_pp_100515.pdf; USAID, CSAF *Financial benchmarking: Final learning report*.

Bringing more transparency to capital intersections

By using a common terminology and set of frameworks based on a pathways view of the market, there is an opportunity to more efficiently match capital need with capital supply. We are not in a position to be deterministic about these intersections by defining each service or capital provider's profile (which would necessarily only represent a snapshot in time). However, using a common language derived from the intersections revealed in the capital orientation map, the gaps in the market become much more apparent. In other words, this research presents a new standard for *describing* market positioning—for service and

capital providers—that can help channel the right capital more efficiently to the right service providers at the right time. It can also help the rural agricultural finance sector, as a whole, understand how different forms of capital relate to one another within a given market, ecosystem, or pathway.

To that end, we propose that every service and capital provider should be able to clearly articulate where they sit within the pathways-based capital orientation map on page 31, along the lines indicated in the figure below. In doing so, service providers will be better positioned to pursue right-fit capital, while capital providers will ensure that their subsidy is utilized in a smart and efficient way.

FIGURE 17

Aligning capital needs with capital supply

Every service provider should be able to clearly articulate:

1. Pathway orientation
2. Target outcomes and longer-term theory of change
3. Current profitability and risk profile
4. Future ambitions and plans that may change the three points above
5. What capital is needed to support service and growth ambitions
6. How they justify that they are in the efficient impact frontier relative to alternative investments (their value proposition)

Every capital provider (including funds) should be able to clearly articulate:

1. Pathway orientation
2. Target outcomes and longer-term theory of change
3. Target profitability and risk profile
4. Their investment philosophy and how different types of capital are used (e.g., growth capital, innovation subsidy, long-term impact subsidy, etc.)
5. Key limitations of finance and funding requirements
6. Approach to using subsidy within their investment model and how it relates to other investments and an end game

Note: Our research can likely associate types of providers, funders, and funds with different positions on this framework which we will attempt to do through pathway-based “impact theses.”

BRINGING IT ALL TOGETHER IN PATHWAYS-BASED IMPACT INVESTMENT THESES

Throughout this report, a number of new models and frameworks have been introduced to enhance our understanding of rural clients and their needs, service providers and delivery models, and the capital that can continue to support their growth. Here, we present an integrated “impact investment thesis” for each pathway that brings these frameworks together into a single view. The impact investment theses are intended to provide an integrated perspective of each pathway, service needs, outcomes, typical service providers, and types of capital. Our hope is that this integrated view will give financial service providers, funders, and policy-makers a richer basis from which to formulate strategies for working with different rural client segments.

SERVING WOMEN AND YOUTH THROUGH A PATHWAYS LENS

At the most foundational level, all smallholder farmers - as members or heads of rural households - have the same set of rural transition pathway options. Namely, they can stay in farming (pathways 1-4), move into rural services entrepreneurship (pathway 5), become rural workers (pathway 6) or migrate to urban areas (pathway 7). But in reality, some smallholder segments - particularly women and youth - face often significant and unique barriers in accessing the skills, networks and assets needed to transition through the rural pathways; effectively reducing their mobility or making their journey more precarious.

With this in mind, we have developed two separate supplements to the state of sector report - *Pathways to Prosperity: Understanding women's rural transitions and service needs* and *Pathways to Prosperity: Understanding youth rural transitions and service needs* - to consider the “overlay” that is needed to understand the unique characteristics of women and youth and the challenges and opportunities they face; how they may need to be served differently within the pathway impact investment thesis; and to profile some successful approaches to working with women and youth smallholder farmers. For more details, please visit www.pathways.raflelearning.org.

FIGURE 18

Impact Investment Thesis #2: Farm Intensification



In this pathway, the smallholder household takes a business-orientated approach to farming, and is able to generate a surplus and increase production value through improved inputs, better farming practices, and regular sales to buyers and traders

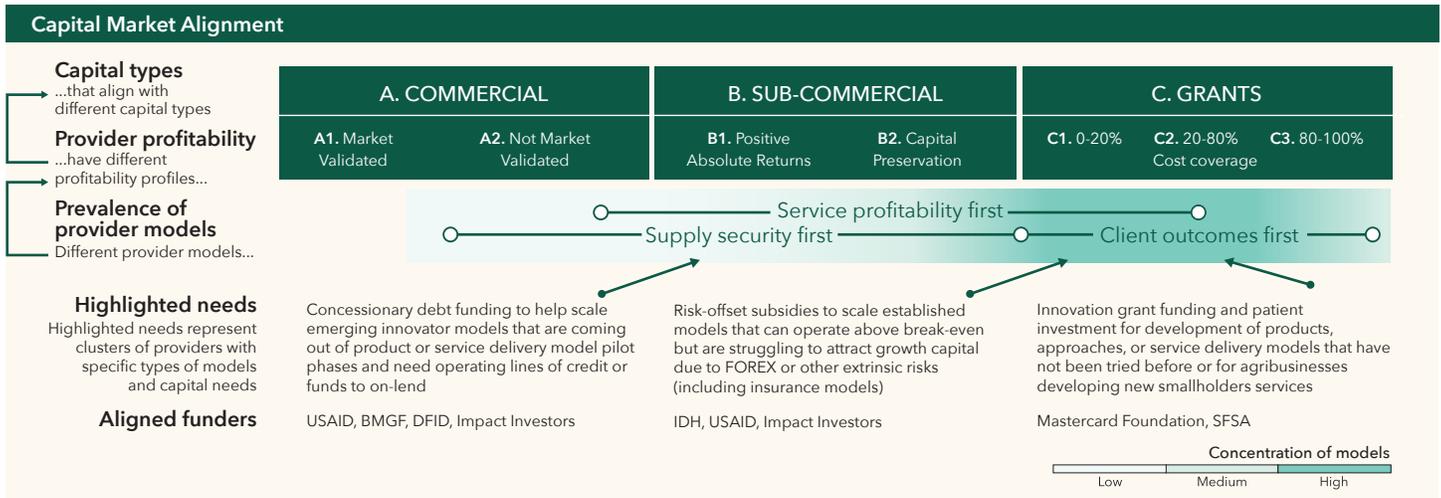
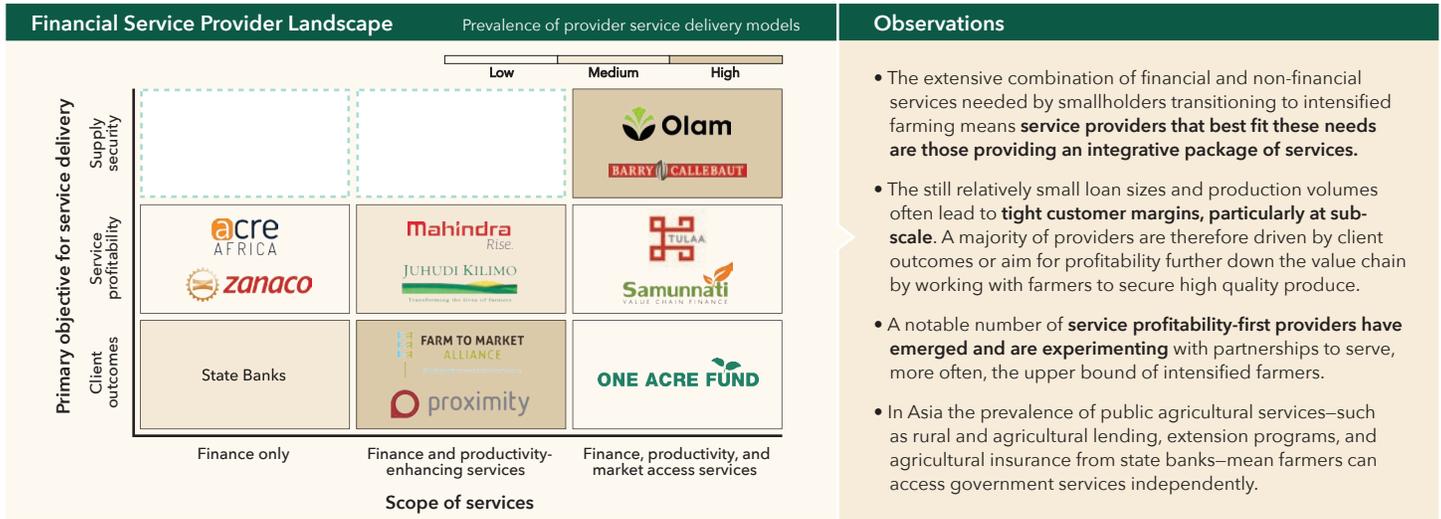


Please refer to Appendix 2 for impact theses for pathways 1, 3, 4, and 5.

Target Outcome Effects						
Production	Resilience	Employment	Nutrition	Climate	Gender	Youth
Intensification of production and increased offtake price realization	Increased household food output, farm assets, and discretionary income	New (primarily informal) jobs created through hired farm labor	Increased food security and access to directly produced and purchased nutritious foods	Adaptation to climate-related shocks and changes and mitigation of carbon-intensive production	Increased agency, financial independence, and accumulation of productive assets	Increased perception of farming as a business and investment of time and resources in farm and upskilling

Client Profile:
 Smallholder farmer continues to farm on 1-2 hectares of land but perceives their agricultural activities as a business and main source of income. Investments in farm intensification result in either an increase in volume through higher yields or an increase in production value, often through higher quality or price realization.

- Primary service needs**
- Loans for high quality inputs, including climate-resistant seeds, fertilizer, and crop protection
 - Advisory and information services customized to crop, location, and use of inputs (including soil testing)
 - Farm technologies and services related to irrigation, storage, and harvesting
 - Integration into the value chain through regular access to traders and buyers at fair prices
 - Agricultural insurance (indemnity or index based)
- Secondary service needs**
- Funeral and health insurance
 - Financial literacy and business skills training, including farm management
 - Working capital and harvesting loans
 - Mechanization services through lease or shared models



Enabling Environment Dependencies

- Rural infrastructure
- Farmer organization frameworks/policies
- Enabling digital finance policies

Source: providers' websites, expert interviews, Authors' analysis

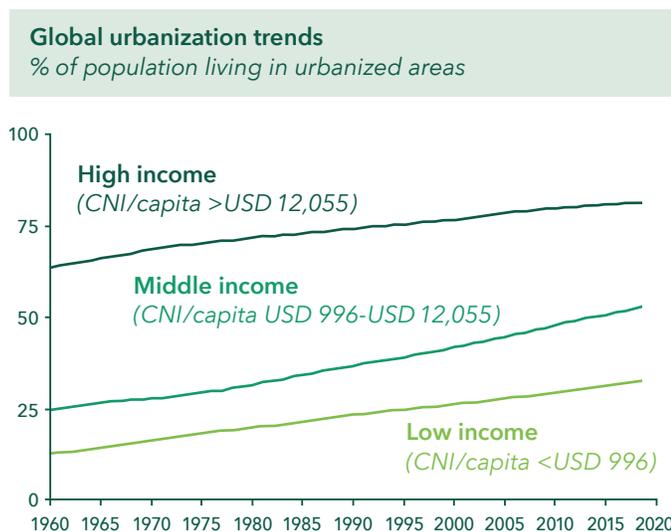
IV. APPLYING THE RURAL PATHWAYS MODEL: THE MACRO LEVEL

Recent longitudinal research has supported the growing evidence base that, without transforming agriculture, no country with a major agricultural sector has been able to become a wealthy, industrialized economy.³⁷ For countries undertaking agricultural transformation, the rural pathways model can be applied at the macro level as a powerful decision-making tool to help drive the planning process.

As rural areas develop and countries experience increased industrialization and urbanization, the impacts on rural economies can be dramatic. By 2050, the UN projects that 68% of the world's population will live in urban areas (compared to 54% in 2016).³⁸ In fact, by 2050, there will be very few countries where the proportion of population living in rural areas will exceed that in urban areas. As seen in the figure below, the most developed countries have long trended toward urbanization, with over 75% of the population in high-income countries living within urban areas.

FIGURE 19

Population living in urbanized areas



Source: World Bank

The process by which countries have transformed their rural economies varies from case to case. In some cases, countries have prioritized primary production and become leading exporters of agricultural commodities; in others, countries have moved away from primary production into agricultural processing to capture value further down the value chain. Whatever path a country decides to follow, agricultural transformation can end up being inclusive or socially and economically exclusive for rural populations. The level of inclusivity will be determined, in part, by what products and services governments and policymakers offer rural households, and the ways in which they are delivered. In all cases, agricultural transformation requires decades of sustained investment and delivery of public goods and services. The outcomes depend on how much governments, donors, and the private sector invest in unlocking an inclusive transformation process that builds greater resilience and agency for all.

The rural pathways model can be a powerful tool for considering the current shape of a given rural economy and informing tough decisions about where and how to invest in rural transformation. For the first time, data available through nationally representative surveys have allowed us to create a sophisticated, dynamic, and segmented view of the rural economy. Figure 20 shows the estimated number and profile of rural households in each of the sub-segments of the rural pathways model—representing an intricate baseline view of the shape of the rural economy.³⁹

Utilizing this new framework, service providers, funders, and policymakers can bring new clarity to potential rural transformation strategies. With the baseline pathways data presented below, and the emerging depth of data from more technology-enabled sources, economists and policymakers can start to project a series of rural transformation trajectories that reflect national priorities and extrinsic factors influencing the economy. These models will then show where different investments and services are needed to support inclusive transitions across different pathways.

37 Tsakok, Isabelle, *Success in Agricultural Transformation: What It Means and What Makes It Happen*, (UK: Cambridge University Press), 2011.

38 United Nations Department of Economic and Social Affairs, Population Division, "World Urbanization Prospects 2018": <https://population.un.org/wup/Publications/Files/WUP2018-Report.pdf>

39 Data for these projections came from CGAP's nationally representative surveys in 2017 and was analyzed using advanced modeling techniques alongside the transition pathways model.

FIGURE 20

Illustrative snapshot of rural household segments - Nigeria

Farmer segment	HH median land size (Ha)		HH below poverty line ¹		Access to offtake contract		Access to mobile phone		Intention to cont. in ag (<30 yrs old)		Female or joint decisions in ag	
	Number smallholder households (Mn)	HH mean monthly income	Illiteracy rate	Access to formal fin. services	Able to save for ag needs	Intention to cont. in ag (>30 yrs old)						
Vulnerable Subsisting Farmer (n=489)	11.66 (18%)	1.36 USD 102	88%	41%	7%	16%	69%	43%	74%	94%	32%	
Resilient Subsisting Farmer (n=305)	7.27 (11%)	1.09 USD 142	54%	23%	7%	30%	84%	67%	94%	94%	35%	
Traditional Commercializing Farmer (n=348)	8.28 (13%)	0.98 USD 116	75%	43%	5%	14%	68%	55%	82%	86%	37%	
Intensified Commercializing Farmer (n=441)	10.50 (16%)	1.77 USD 125	67%	32%	13%	27%	83%	56%	90%	96%	32%	
Consolid. Commercializing Farmer (n=189)	4.51 (7%)	2.40 USD 162	50%	23%	57%	44%	91%	75%	83%	98%	39%	
Micro and Small Service Entrepreneur (n=430)	10.24 (15%)	1.31 USD 173	73%	43%	6%	23%	76%	55%	89%	92%	18%	
Rural Worker (n=570)	13.58 (21%)	0.91 USD 109	80%	38%	10%	26%	76%	60%	90%	90%	26%	

¹ Poverty line threshold used: USD 2.50 / day

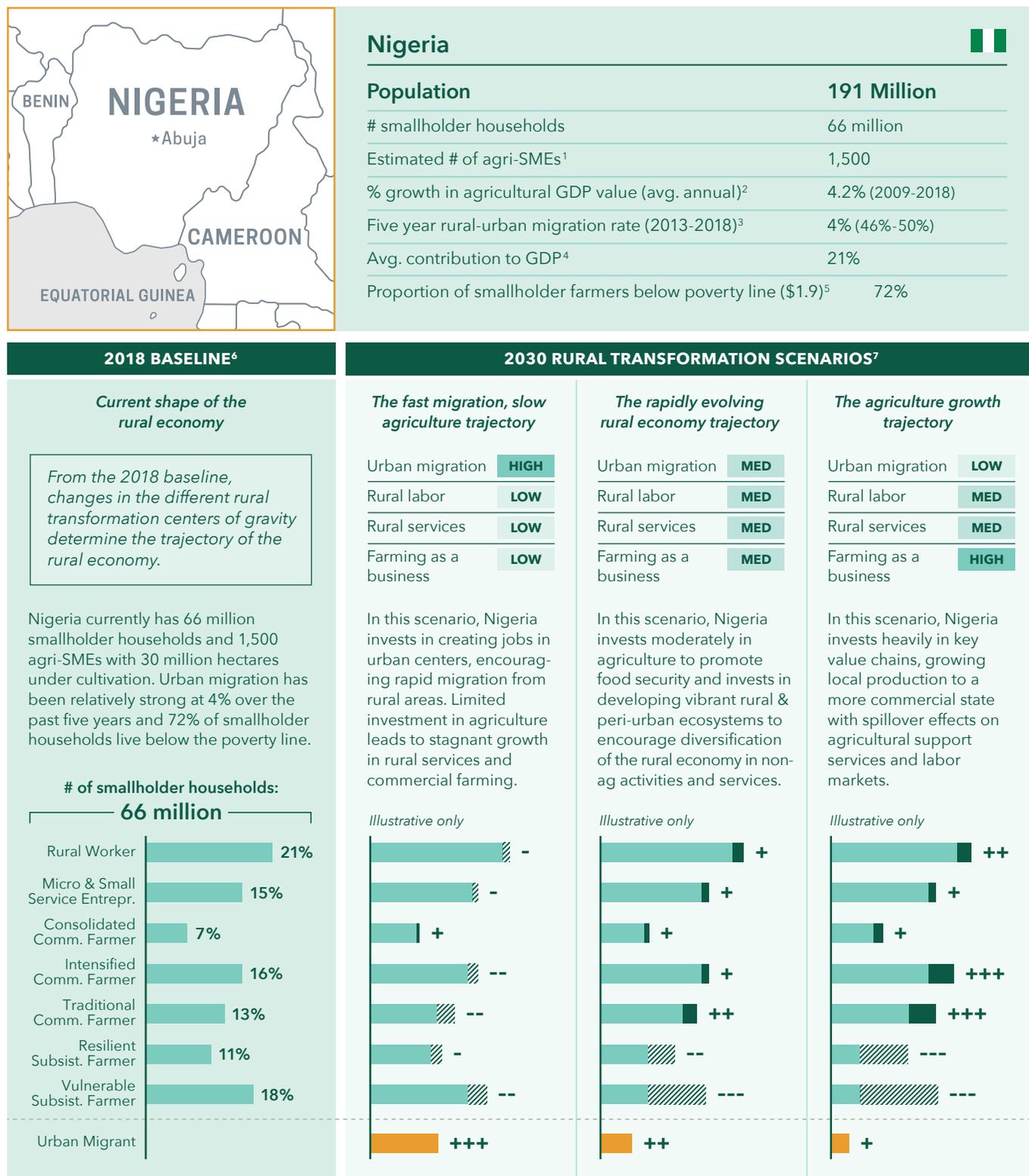
Source: CGAP nationally representative surveys of smallholder households in Bangladesh, Côte D'Ivoire, Nigeria, Mozambique, and Tanzania, 2016 and 2017. While the surveys are nationally representative overall, sample sizes become small when broken by sub-segments. Therefore data should be interpreted with caution and under the recognition that these are illustrative examples of relative and self-reported measures of poverty.

For example, based on the illustrative and stylized scenarios for Nigeria in Figure 21 we can see that there are a number of trajectories the country could take that would affect the shape of the rural economy. Using the “centers of gravity” as a simplified proxy for developments of different kinds, we can easily set up different scenarios, including:

- **A fast migration, slow agricultural development trajectory** where urban economic growth fast outpaces rural development, leading to high urban migration and a lagging rural sector.
- **A rapidly evolving rural economy trajectory** where urban growth and development is matched by developments in the rural economy to promote food security and encourage diversification of the rural economy in non-agricultural activities and services, leading to moderate urban migration and more vibrant peri-urban and rural ecosystems.
- **A rural agricultural growth-driven trajectory** where rural growth is anchored by significant investments in key value chains and primary production, creating an anchor for commercial agriculture, rural services, and formal employment that limits the amount of urban migration.

FIGURE 21

Nigeria case study: potential rural transformation trajectories



These different trajectories are dependent on a range of factors, including the growth of more urban industries, government policy and investment in rural areas, global markets, trade policy, the ongoing development of the private sector, and the maturity of enabling sectors such as banking and telecommunications. However, the national planning processes of most countries consider exactly these dimensions when developing forward-looking national visions and development plans.

If policymakers apply the rural pathways model to macro-level approaches to rural transformation, we believe they will uncover opportunities to:

1. **Ensure rural development plans are inclusive of the most vulnerable.** The first, most important step to ensuring rural transformation is an inclusive process is to understand the demographic makeup of rural households, including gender and age, and their current livelihood characteristics. This data informs, to a large extent, what the household may need in order to build viable livelihoods. A data-driven, pathways-based view of rural economies can provide new levels of clarity to rural development planning processes as they consider policy impacts on different segments of rural populations.
2. **Prioritize the level of specific services needed to support pathway transitions.** By understanding how many rural households will likely be looking to transition within different pathways, policymakers can identify service delivery gaps that must be addressed to support inclusive rural transformation.
3. **Engage across government, private sector, and civil society to build a common vision and coordinate action.** With a unified view of the shape of the rural economy and different development trajectories, these actors can engage in national conversations

about a vision of inclusive rural transformation and how different efforts can complement and reinforce each other. To be most effective, this process should be government-led, but actively involve the private sector, key rural actors, and civil society.

4. **Define the types and levels of capital required to support the envisaged rural transformation.** Ultimately, the process of rural transformation—regardless of the approach taken—requires coordinated investment by government, the private sector, and development partners. The rural pathways model allows a level of specificity about what services and supporting infrastructure are needed to support likely pathway transitions within the rural economy. If combined with the right data and scenario analyses, the rural pathways model can help define the types and levels of capital required to support different rural transformation trajectories.

Over the last 20 years, a number of transnational bodies have emerged to support governments in planning their agricultural transformation processes. Globally, multilateral organizations such as the World Bank and International Fund for Agricultural Development (IFAD) have advised national governments on agricultural transformation and finance policy based on global evidence and best practices. Regionally, platforms such as the Comprehensive Africa Agriculture Development Programme (CAADP), Alliance for a Green Revolution in Africa (AGRA), and regional development banks have supported specific planning processes. At the same time, donors, trade hubs, and others have facilitated the development of specific commodities or regions. In all of these cases, a data-driven rural pathways approach could enrich the process and enhance the development of comparable benchmarks across countries.

V. CALL TO ACTION

In Section I, we noted how the decades-old rural agricultural finance agenda has become more sophisticated and complex over the last 10 years. In the last three years alone, since the publication of the 2016 Inflection Point report, there has been a rapid acceleration in innovation and technology, and a more diverse influx of service and capital providers. This report has sought to bring together the latest research and thinking to illuminate next steps for the sector, identifying new opportunities for growth and for impacting some of the most vulnerable communities on the planet. In this section, we take stock of the major themes and insights from this report and call on the sector to focus on four agenda-defining needs in the years to come.

THE NEED TO THINK DYNAMICALLY AND LONG-TERM THROUGH A RURAL PATHWAYS LENS

This report is anchored in the belief that the rural agricultural finance sector needs to reconceive of “clients” not as individual farmers, but as dynamic households that are actively making decisions about how to build their livelihoods and opportunities. While moving from a static to a dynamic view of rural clients seems subtle, we believe it will be transformative for all actors involved in rural financial service delivery. The rural pathways model presented in Section II opens up the possibility for vitally important conversations between relevant national governments and the myriad of funders, service providers, and civil society actors involved in supporting inclusive rural transformation.

The rural pathways model also changes the way we, as a sector, conceive of service provision. No longer can we bluntly divide rural households into broad categories. Instead, we must recognize that they are dynamic clients acting with agency, driven by the need to make choices about how to sustain their livelihoods. With this understanding should come appropriate changes in how service providers tailor products, bundle offerings, and communicate with their clients. We believe the time is right for the whole sector to think more dynamically and long-term about how rural households make livelihood choices and access enabling services.

What will success look like for the sector?

- **Providers and funders adopt a new language** around rural service provision that describes needs, services, and challenges in a dynamic way around pathway transitions and inclusive agricultural transformation.
- **Providers design services and product features** with specific transitions, evolving customer needs, and target outcomes in mind.
- **Providers and governments cooperate** in support of a shared, emerging vision for inclusive agricultural transformation and pathways to progress.

THE NEED TO GET SERIOUS ABOUT SMART SUBSIDY

For many years, subsidy has been used to support rural service provision without the frameworks or data to systematically decide where it is needed and how it should be applied. The client and service delivery model distinctions introduced in this report—combined with a more sophisticated mapping of outcomes and profitability profiles—can support a new conversation around “smart subsidy.”

As described in this report, we believe that capital providers of all types will better match their subsidy to service providers as different asset classes are made clearer and more transparent. This will involve efforts to build out many of the concepts and frameworks introduced in this report. But we believe that, as standards and benchmarks are established, scarce subsidy will begin to be applied in smarter, more efficient and high-impact ways.

What will success look like for the sector?

- **Thought leaders articulate fundamental differences in the profitability and impact of service delivery models** to provide a real basis for comparison and learning about where and why subsidy is needed.
- **Providers, funders, and thought leaders develop harmonized impact areas, outcomes, and metrics** to be used as a shared basis for comparison about outcomes of service provision.

- **Funders and thought leaders publish benchmarks from portfolio-level analyses** of comparable models, outcomes, and financial returns to create a basis for establishing where, why, and in what forms subsidy is needed.

THE NEED TO REALIZE THE DIGITAL PROMISE

As noted in Section I, the use of digital technologies is dramatically changing the landscape of service provision for rural agricultural finance. Digitally-enabled innovations in credit scoring, distribution infrastructure, farmer training programs, and more are transforming how financial service providers conduct their business. However, early experimentation must evolve into proven, scalable solutions. This transition requires another stage and type of investment, by both service and capital providers, to ensure that early innovations don't stall. Though there is no blueprint for how digital innovations will mature, we believe that continued funding is needed to realize the promise of these technologies.

What will success look like for the sector?

- **Funders make appropriately structured and patient follow-on financing available** to support early innovators and later adopters who will take innovations to scale.
- **Providers continue to evolve innovative use cases** into scalable and refined solutions.
- **Thought leaders and researchers continue to support the innovation process**, building the evidence on the financial and impact returns of digital innovation, how different models achieve those returns, and what new investments they require.

THE NEED TO CONTINUE TO INNOVATE AROUND HOW CAPITAL COMES TO MARKET

Though the number and diversity of capital providers for rural agricultural finance has exploded over the last decade, the capital needed to close the gap on service provision is still far more than what can be provided through traditional channels. As innovation in service provision creates more viable service delivery models, the capital market will need to respond in lockstep. This requires more effective connections between capital need and right-fit capital supply, as well as advances in the structures used to deploy capital. We believe now is the time for continued innovation around how capital comes to market to support the plethora of service providers pushing the boundaries of what is possible in the rural agricultural finance sector.

What will success look like for the sector?

- **Funders develop new blended finance approaches, structures, and examples** to enable more commercial capital to flow into the sector.
- **Consortiums of development finance institutions, foundations, and other funders come together** to leverage different forms of complementary capital that builds a foundation for scalability.
- **Donors and impact-driven funders providing early-stage innovation funding actively support the transitions of innovators** from seed to larger commercial funding needed to scale up.
- **Intermediaries aggregate capital needs to make them more transparent**, allowing funding to flow while naturally defining asset classes that can be considered at a portfolio level.

APPENDIX

APPENDIX 1: METHODOLOGY

PROCESS

Building on our 2012 and 2016 “State of the Sector” reports—*Catalyzing Smallholder Agricultural Finance* and *Inflection Point: Unlocking growth in the era of farmer finance*—in early 2019, ISF Advisors and the Mastercard Foundation Rural and Agricultural Finance Learning Lab (RAFLL) kicked off a new global research effort to develop this latest report, *Pathways to Prosperity*.

Acknowledging the catalytic role that previous State of the Sector reports have played in rallying stakeholders around common goals and concerted action, this report involved a collaborative effort between the research team and key industry stakeholders from the very beginning. In January and March 2019, ISF and RAFLL engaged a core group of industry stakeholders in two scoping workshops to align on the objectives, scope of research, key learning questions, and overall approach. This group included representatives from CGAP, IDH The Sustainable Trade Initiative, Mercy Corps AgriFin Accelerate, and The Bill and Melinda Gates Foundation.

In addition, throughout the research process the team engaged a wider “Advisory Committee” to validate preliminary findings and test key hypotheses. In addition to the organizations that supported the scoping efforts, the Industry Reference Group included representatives from Aceli Africa, Alliance for a Green Revolution in Africa, Chemonics, IFAD, Mastercard Foundation, One Acre Fund, Opportunity International, Small Foundation, Syngenta Foundation, and USAID Feed the Future. Key insights coming out from these discussions are summarized in our “[Transition Pathways](#),” “[Rural Finance Providers](#),” and “[Capital Markets](#)” blog posts. The core research process was also supported by Dalberg Advisors and Nathan Associates.

In line with previous State of the Sector studies, this report took a data-led, holistic industry approach to break down the complexity of clients, providers, and capital markets, using innovative frameworks and a common language to guide stakeholder decision making and support greater sector alignment and coordination. It is important to note that, while the analysis and concepts laid out in this report draw from a variety

of sources (see “Research Inputs”) they are, above all, the result of a joint effort to break down, refine, and synthesize the collective experience, research, and wisdom of the Advisory Committee, ISF Advisors, and RAFLL—who together have decades of experience in rural and agricultural finance.

GEOGRAPHICAL SCOPE

As in our previous State of the Sector Report, *Inflection Point*, China, Central Asia, and the Middle East and North Africa were excluded from analysis throughout this report. This is primarily due to data availability, the unique conditions of smallholders in China, and recognition that donor interest in agricultural development in these regions has historically been relatively low.

RESEARCH INPUTS

1. Literature review

Collectively, the team reviewed more than 50 research documents that spanned a range of themes, including number of smallholder farmers, smallholder farmer segments and needs, financial and non-financial service providers and business models, capital providers and investment structures, market enablers, and government policy, gender and youth.

Sources of these reports included 1) multilateral agencies, particularly FAO and World Bank; 2) specialized independent market and research platforms, such as the Consultative Group to Assist the Poor (CGAP), the Council on Smallholder Agricultural Finance (CSAF), ISF Advisors, RAFLL, and GSMA, and 3) publications from market aggregators and service providers, such as Mercy Corps AgriFin Accelerate, Root Capital, and One Acre Fund. Specifically referenced documents are included in relevant footnotes throughout the report.

2. Specialized databases

While the quantitative analysis of demand and supply relied heavily on our previous *Inflection Point* report (see “Sizing Assumptions”), the team drew from several specialized databases to refine the

market sizing exercise with the most recent global data, where possible, and to validate key findings. These databases included:

- CGAP, Nationally Representative Surveys of Smallholder Households. Data on the demographic characteristics, income sources, and financial behavior of more than 13,000 rural households in Bangladesh, Cote D'Ivoire, Nigeria, Mozambique, and Tanzania was used to 1) validate smallholder farmer sub-segments and 2) profile key characteristics and service needs.
- IDH Farmit, Service Delivery Model Intelligence Center. Data on the financial performance of more than 40 service delivery models, including supply-first and service profitability-first providers, was used to validate hypotheses on the financial returns that can be expected from different provider types.
- ISF Advisors, Rural and Agricultural Finance Fund Database. Data on 100 funds investing in rural and agricultural finance was used to understand key trends within the capital markets, including who is investing and how.

3. Stakeholder interviews

Given the wealth of interviews conducted for *Inflection Point*—on which the sizing exercise continues to anchor—and the close engagement with the Advisory Committee, the team conducted interviews with a more limited, but carefully selected, number of experts, including representatives from CGAP, Bill and Melinda Gates Foundation, IFRPI, IDH The Sustainable Trade Initiative, The Mix, Harvesting, and Boston Consulting Group. These interviews aimed to fill in knowledge gaps, understand market trends, test key hypotheses, and validate findings.

4. Advisory Committee

As mentioned above, the Advisory Committee provided key inputs to inform the findings of this report and facilitated a collaborative research engagement between the team and important sector stakeholders.

Facilitated by ISF and RAFL, the Advisory Committee was engaged four times during the research process to stress test emerging thinking on four different topics:

- 1. Rural pathways model:** To stress test the importance of shifting away from a static view of smallholder household segments and present a new dynamic model that articulates how smallholders may evolve over time. See our [Rural Transition Pathways blog](#) for key insights coming from this discussion.
- 2. Rural finance providers:** To validate some of the major trends and shifts that have shaped the financial service provider market in the last three years and test a new service delivery model typology. See our [Rural Finance Providers blog](#) post for key insights coming from this discussion.
- 3. Capital markets:** To discuss major trends and shifts that have shaped the market for rural finance provision in the last three years and gather input on a new pathways-based approach for allocating capital. See our [Capital Markets blog](#) post for key insights coming from this discussion.
- 4. Call to action:** To brainstorm and gather input on the key agenda-defining needs that will continue to push the sector forward.

1 - Financial needs sizing

SMALLHOLDER HOUSEHOLDS (NON-PASTORALISTS)

Assumption Field	Assumption Value	Source
Number of farms (in millions)	~53 East Asia and the Pacific (without China) ~201 China ~169 South Asia ~15 Middle East and North Africa ~37 Central Asia ~21 Latin America and the Caribbean	Lowder, et al. "The Number, Size, and Distribution of Farms. Smallholder Farms, and Family Worldwide." United Nations. 2016. (Supplementary Data. Table 1: Number of agricultural holdings, by country, most recent census).
	~77 sub-Saharan Africa	Lowder, et al. "Transformation in the size and distribution of farmland operated by household and other farms in select countries of sub-Saharan Africa." African Association of Agricultural Economists (AAAE) > 2016 Fifth International Conference, September 23-26, 2016, Addis Ababa, Ethiopia.
% of farms that are classified as smallholder farms	~79% East Asia and the Pacific (without China) ~98% China ~81% South Asia ~79% sub-Saharan Africa ~70% Middle East and North Africa ~62% Central Asia ~51% Latin America and the Caribbean	Lowder, et al. "The Number, Size, and Distribution of Farms. Smallholder Farms, and Family Worldwide." United Nations. 2016. (Supplementary Data. Table 1: Number of agricultural holdings, by country, most recent census).

SMALLHOLDER HOUSEHOLDS (PASTORALISTS)

Assumption Field	Assumption Value	Source
% of population that is pastoralist	~4% Uttar Pradesh ~20% Karnataka ~21% Bihar ~11% Telangana ~16% Jharkhand ~6% Tamil Nadu ~10% West Bengal	Pastoralist Knowledge Hub Gathering. South Asia Workshop Report. Supported by FAO. Gujarat, India. March 2015.
% of rural populations that is pastoralist	~7% Kyrgyzstan ~6% Uzbekistan ~43% Turkmenistan ~68% Kazakhstan ~4% Tajikistan	Kerven, Carol. "Review of the literature on Pastoral Economics and Marketing: Central Asian, China, Mongolia and Siberia." Report prepared for the World Initiative for Sustainable Pastoralism, IUCN EARO. 2006.
# of adult equivalents per pastoralist household	~6 adults per household	Gentle, et al. "Transhumant Pastoralism in the Context of Socioeconomic and Climate Change in the Mountains of Nepal." International Mountain Society. 2016. Goldstein, et al. "Change & Continuity in Nomadic Pastoralism on the Western Tibetan plateau." 1991. <i>continued...</i>

SMALLHOLDER HOUSEHOLDS (PASTORALISTS) *continued*

Assumption Field	Assumption Value	Source
# of adult equivalents per pastoralist household	~6 adults per household	<i>continued...</i> ElHadi, et al. "Factors Influencing Transient Poverty Among Agro-pastoralists in Semi-arid Areas in Kenya." 2012.
Total number of pastoralists (in millions)	19.5 China	Kerven, Carol. "Review of the literature on Pastoral Economics and Marketing: Central Asian, China, Mongolia and Siberia." Report prepared for the World Initiative for Sustainable Pastoralism, IUCN EARO. 2006.
	4 Afghanistan	South Asia Pastoralist Alliance. "Pastoralist Background in Afghanistan." 2016.
	2 Nepal	Pastoralist Knowledge Hub Gathering. South Asia Workshop Report. Supported by FAO. Gujarat, India. March 2015.
	51 sub-Saharan Africa	Bonfiglioli, Angelo Maliki. "Pastoralists at a crossroads: survival and development issues in African pastoralism." 1992. Cervigni, et al. "Confronting Drought in Africa's Drylands: Opportunities for Enhancing Resilience." Africa Development Forum. 2016. UNECA. "New Fringe Pastoralism: Conflict and Insecurity and Development in the Horn of Africa and the Sahel." 2015.

FINANCIAL NEEDS

Assumption Field	Assumption Value	Source
Short-term agricultural needs (USD)	~\$1,670 per farmer in comm. cash crops ~\$560 per farmer in comm. staple crops ~\$110 per subsistence farmer	ISF Advisors and Rural and Agricultural Finance Learning Lab, "Inflection Point: Unlocking growth in the era of farmer finance" 2016. Values adjusted by 2012-2018 inflation rate from US Bureau of Labor Statistics.
Long-term agricultural needs (USD)	~\$2,080 per farmer in comm. cash crops ~\$560 per farmer in comm. staple crops	Same as above.
Non-agricultural needs (USD)	~\$670 per farmer in comm. cash crops ~\$220 per farmer in comm. staple crops ~\$110 per subsistence farmer	Same as above.
Split of smallholders by cash crop / staple crop / subsistence	Latin America: 27% comm. cash crops, 33% comm. staple crops, 40% subsistence sub-Saharan Africa: 5% comm. cash crops, 33% comm. staple crops, 62% subsistence South & SE Asia: 6% comm. cash crops, 33% comm. staple crops, 61% subsistence	ISF Advisors and Rural and Agricultural Finance Learning Lab, "Inflection Point: Unlocking growth in the era of farmer finance" 2016.

2 - Financial service provider sizing

STATE BANKS

Assumption Field	Assumption Value	Source
Agri lending disbursements (USD million)	~\$85 sub-Saharan Africa ~\$5,895 South & SE Asia ~\$2,470 Latin America	ISF Advisors and Rural and Agricultural Finance Learning Lab, "Inflection Point: Unlocking growth in the era of farmer finance" 2016. Disbursement values adjusted by compounded annual growth rate (2013-2017) of Agriculture, forestry, and fishing, value added (current USD), World Bank indicators.
Non-agri lending disbursements (USD million)	~\$20 sub-Saharan Africa ~\$1,475 South & SE Asia ~\$620 Latin America	Same as above.
Ratio of agri to non-agri lending	~80-20%	ISF Advisors and Rural and Agricultural Finance Learning Lab, "Inflection Point: Unlocking growth in the era of farmer finance" 2016.
Ratio of short-term to long-term lending	~85-15%	Same as above.

MFIs

Assumption Field	Assumption Value	Source
MFI Gross Loan Portfolio (GLP) (USD million)	~\$8,120 sub-Saharan Africa ~\$17,015 East Asia & Pacific ~\$22,495 South Asia ~\$41,735 Latin America	MIX. "Global Outreach & Financial Performance Benchmark Report 2016." 2016.
% of MFI GLP lent to household finances in rural areas	~65% sub-Saharan Africa ~77% East Asia & Pacific ~66% South Asia ~33% Latin America	Same as above.
% of MFI Rural GLP lent to smallholder farmers	~20% sub-Saharan Africa & Southeast Asia ~13% Latin America	ISF Advisors and Rural and Agricultural Finance Learning Lab, "Inflection Point: Unlocking growth in the era of farmer finance" 2016. The assumption for Latin America was scaled down proportionally to reflect a smaller proportion of smallholder farms (FAO ESA Working Paper No. 14-02).
Ratio of agri to non-agri lending	~55-45%	ISF Advisors and Rural and Agricultural Finance Learning Lab, "Inflection Point: Unlocking growth in the era of farmer finance" 2016.
Ratio of short-term to long-term lending	~85-15%	Same as above.

COMMERCIAL BANKS

Assumption Field	Assumption Value	Source
Total lending disbursements (USD million)	<i>sub-Saharan Africa</i> ~\$845 agri lending disbursements ~95 non-agri lending disbursements	ISF Advisors and Rural and Agricultural Finance Learning Lab, "Inflection Point: Unlocking growth in the era of farmer finance" 2016. Disbursement values adjusted by sub-Saharan Africa retail banking compounded annual growth rate (2012-2017) in "Roaring to Life: Growth and innovation in African retail Banking." McKinsey & Company. 2018.
	<i>South & Southeast Asia</i> ~\$265 agri lending disbursements ~30 non-agri lending disbursements	ISF Advisors and Rural and Agricultural Finance Learning Lab, "Inflection Point: Unlocking growth in the era of farmer finance" 2016. Disbursement values adjusted by Southeast Asia retail banking compounded annual growth rate (2013-2016) in "Asia Banking Agenda 2017." Oliver Wyman. 2017.
	<i>Latin America</i> ~\$520 Latin America ~60 Latin America	ISF Advisors and Rural and Agricultural Finance Learning Lab, "Inflection Point: Unlocking growth in the era of farmer finance" 2016. Disbursement values adjusted by banking compounded annual growth rate (2011-2021) in "Global Retail Banking: The Power of Personalization." The Boston Consulting Group. 2018.
Ratio of agri to non-agri lending	~90-10%	ISF Advisors and Rural and Agricultural Finance Learning Lab, "Inflection Point: Unlocking growth in the era of farmer finance" 2016.
Ratio of short-term to long-term lending	~85-15%	Same as above.

SOCIAL LENDERS

Assumption Field	Assumption Value	Source
Total annual disbursements (USD million)	~\$210 sub-Saharan Africa ~\$60 Asia ~\$340 Latin America	CSAF, "State of the Sector," 2019.
Annual disbursements to producer groups	~30% sub-Saharan Africa ~20% South & SE Asia ~60% Latin America	Same as above.
Ratio of short-term to long-term lending	~95-5%	ISF Advisors and Rural and Agricultural Finance Learning Lab, "Inflection Point: Unlocking growth in the era of farmer finance" 2016.

HIGH TOUCH NGOs

Assumption Field	Assumption Value	Source
One Acre Fund disbursements (USD million)	~\$50	One Acre Fund.

INNOVATORS

Assumption Field	Assumption Value	Source
Agri lending disbursements (USD million)	~\$45 sub-Saharan Africa ~\$5 Asia ~\$20 Latin America	<p>A multi-step process was used to size agri-innovator lending:</p> <ol style="list-style-type: none"> 1. Size a subset of known innovators by finding 'innovators' for each region (Latam, SSA, SEA, South Asia), then calculating the best proxy for the amount of money they've mobilized (e.g., the amount they've raised from investors or the number of farms they serve, combined with average loan size). Then use the proxy to make an estimate of the amount of capital the known innovators have mobilized per region. 2. Scale the innovators to represent the size of their region by calculating the % of people aged 15+ in each country who had ever received a payment for agriculture via their mobile phone (from the latest Finscope dataset), and the number of people aged 15-64 in each country to produce the total number of people in each region who had ever received a payment for agriculture via their mobile phone (using the regional average for countries missing data). 3. Using a set of known innovators where good data is available on the ratio of active payment users to active borrowers, calculate the implied use of digital borrowing for agriculture by scaling down the number calculated in step 2 and applying an average loan size estimate obtained from a set of known innovators. <p><i>Notes: Innovators do not include MFIs or banks as these are already included in formal financial service providers. Innovators must explicitly target farmers and the agricultural sector.</i></p>
Non-agri lending disbursements	~\$160 sub-Saharan Africa ~\$45 Asia ~\$5 Latin America	<p>A multi-step process was used to size non-agri innovator lending:</p> <ol style="list-style-type: none"> 1. The biggest source of mobile credit is mobile network operators (MNOs). In comparison to the non-agriculture specific credit supplied by fintechs, MNOs are much more significant, so we focus on them for this analysis. 2. The GSMA State of the Sector Mobile Money 2017 report shows that 23% of 272 service providers offer mobile credit. It also gives the total number of registered customers per provider. 3. Calculate the number of people with access to mobile credit from this data. 4. Use global financial inclusion data (latest Finscope dataset) and assume that selling agricultural produce using a mobile money account makes you a farmer. Calculate the number of farmers who have access to mobile money. 5. Using the global number of farmers and smallholder farmers (see Lowder et al source above), calculate how many of those farmers are smallholders. 6. Knowing the proportion of people who a) take up mobile credit and b) are actively using their registered mobile money account, calculate the number of SHFs who have taken credit offered to them through their MNO. 7. Define an assumption for average borrowing amount using the experience of a market-leading MNO lending product with public data (MShwari in Kenya) and multiply to get total borrowing. <p><i>continued...</i></p>

INNOVATORS *continued*

Assumption Field	Assumption Value	Source
Non-agri lending disbursements	~\$160 sub-Saharan Africa ~\$45 Asia ~\$5 Latin America	<i>continued...</i> 8. Under the assumption that ~85-90% of credit is used for non-agricultural purposes (based on previous expert interviews), scale the previous result accordingly. 9. Scaling by the number of farmers using mobile money per region, calculate the expected total lending to farming households in each region.

VALUE CHAIN ACTORS

Assumption Field	Assumption Value	Source
% of commercial smallholder farmers	~38% sub-Saharan Africa ~39% South & SE Asia ~60% Latin America	ISF Advisors and Rural and Agricultural Finance Learning Lab, "Inflection Point: Unlocking growth in the era of farmer finance" 2016.
% of commercial smallholder farmers in export crops	~15% sub-Saharan Africa ~15% Asia ~25% Latin America	Same as above.
% of smallholder farmers in export crops receiving credit from value chain actors	~75%	Same as above.
% of smallholder farmers in non-export commercial crops receiving credit from value chain actors	~35%	Same as above.
Average loan size (USD)	~\$500/farmer export crop ~\$250/farmer non-export commercial crop	Same as above. Values adjusted by 2012-2018 inflation rate from US Bureau of Labor Statistics.
Non-agri lending disbursements by Primary Agricultural Coops in India (USD million)	\$9,500	India NAFSCOB Annual Report, 2018.

INFORMAL FINANCIAL INSTITUTIONS

Assumption Field	Assumption Value	Source
% of smallholder borrowing from informal and community-based institutions	~30% sub-Saharan Africa ~25% South & SE Asia	FinScope Surveys.
	~20% Latin America	IMF Working Paper 15/206. "Financial Inclusion: Zooming in on Latin America." 2015.
Average loan size (USD)	~\$270	Average non-agri financial needs (see financial needs sizing assumptions above).



In this pathway, the smallholder household continues to farm primarily for subsistence with little or no surplus, but is able to improve farming practices and build assets to strengthen its resilience to external shocks



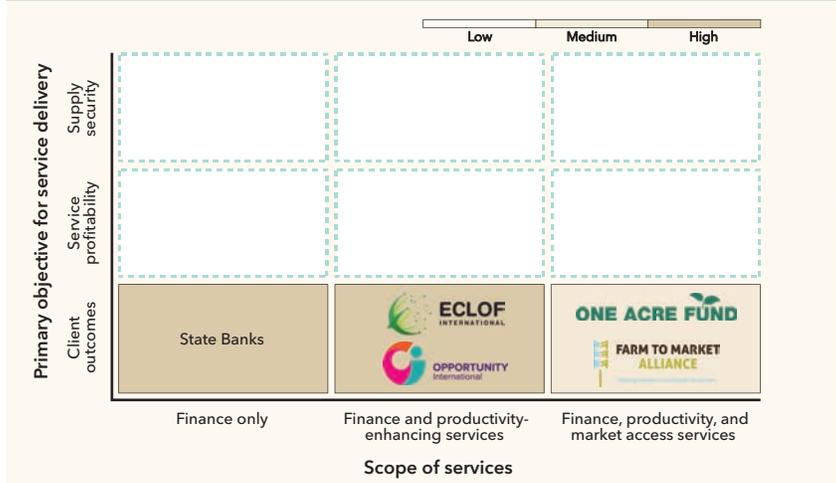
Target Outcome Effects

Production	Resilience	Nutrition	Gender	Climate	Youth
 Basic improvements in productivity and farm diversification	 Increased household food output for consumption and assets (including livestock)	 Increased food security and access to directly produced, nutritious food	 Increased control over household income and consumption decisions	 Adaptation to climate-related shocks and changes	 Improved perception of farming and increased engagement in household farming activities

Client Profile:
Smallholder farmer is in a subsistence state with little or no surplus for trade. These farmers typically do not see their farm as a business and farms are typically small (<1 ha). Farm income is typically supplemented with other non-farm sources, social networks, and government transfers. Many farmers do not wish to remain in farming and may have ambitions to generate increased income from farm, but lack the tools necessary to increase volume and production value. Farmer recognizes vulnerability of the farm to adverse events such as droughts and disease, but does not have access to tools to combat these risks.

- Primary service needs**
- Access to basic inputs including fertilizer and seeds (either subsidized or partially subsidized)
 - Training on agronomic practices focused on productivity and diversification
 - Simple farm technologies such as irrigation and on-farm-storage
 - Funeral and health insurance
- Secondary service needs**
- Producer organization set-up and capacity-building
 - Access to local markets for emerging surplus

Financial Service Provider Landscape



- Observations**
- Key needs of smallholder farmers in this pathway are **often not financial in nature**, thus many provider models exist outside of this framework. In particular, many NGOs, government-led, and supply-security providers offer services to pathway 1 smallholder farmers without financial services.
 - **Provision of finance alone is rarely seen** because 1) primary farmer needs are often not (directly) financial in nature; and 2) the high cost to serve and low willingness to pay for financial services.
 - Due to relatively high cost and high (touch) degree of support needed, client **outcome-oriented models are most prevalent** for this pathway, where the key objective is to enhance farmer resilience. Many of these models aim to move (or graduate) farmers to a state where they can access services from more commercially oriented models and are reliant on long-term subsidies to sustain service provision.
 - **In Asia and Latin America, governments have traditionally taken a stronger lead-provider and funding role through state banks and public extension programs than in sub-Saharan Africa.**

Capital Market Alignment

Capital types ...that align with different capital types

Provider profitability ...have different profitability profiles...

Prevalence of provider models Different provider models...

Highlighted needs Highlighted needs represent clusters of providers with specific types of models and capital needs

Aligned funders

A. COMMERCIAL		B. SUB-COMMERCIAL		C. GRANTS		
A1. Market Validated	A2. Not Market Validated	B1. Positive Absolute Returns	B2. Capital Preservation	C1. 0-20% Cost coverage	C2. 20-80% Cost coverage	C3. 80-100% Cost coverage

Client outcomes first

- Foundations:** Innovation funding for social enterprises and low-touch digital service providers, to support development of cross-subsidy or direct-to-farmer models that may be able to approach positive returns over time
- USAID, host country governments:** Long-term grant funding for innovative impact-oriented models, especially those explicitly intended to support farmers in transitioning to pathway 2 and beyond (e.g., One Acre Fund)
- Governments:** Long-term funding of social welfare-oriented services for most vulnerable rural populations. (e.g., input subsidies, floor pricing, price stabilization, technical assistance programs)

Concentration of models (Low, Medium, High)

Enabling Environment Dependencies

- Rural infrastructure
- Rural input markets
- Government extension



In this pathway, the smallholder household takes a business-orientated approach to farming, and is able to generate a surplus and increase production value through improved inputs, better farming practices, and regular sales to buyers and traders

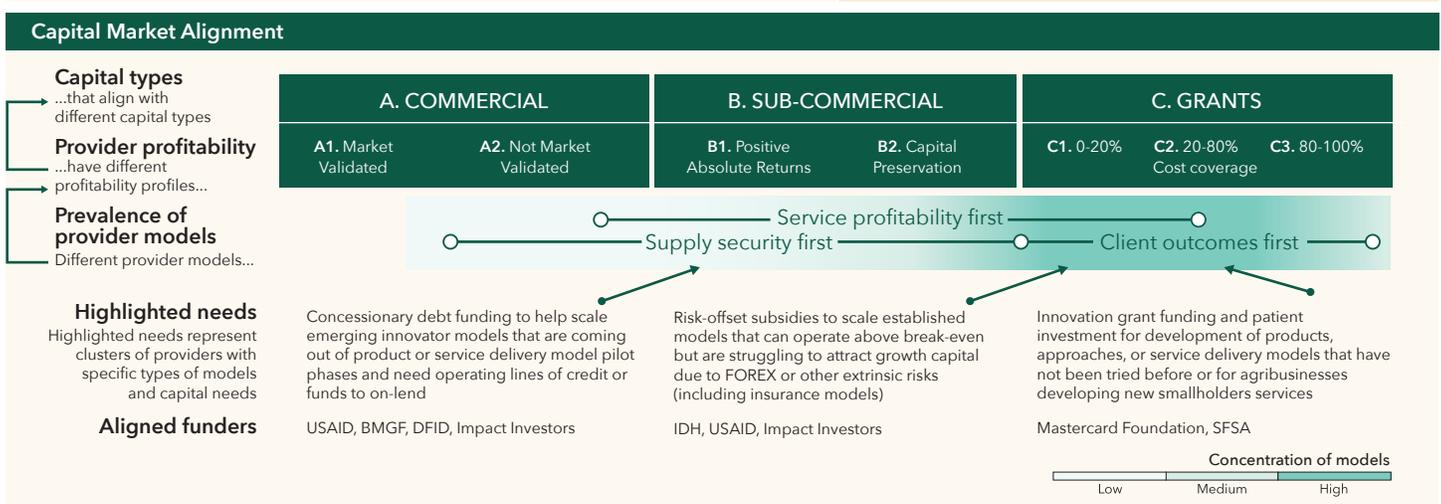
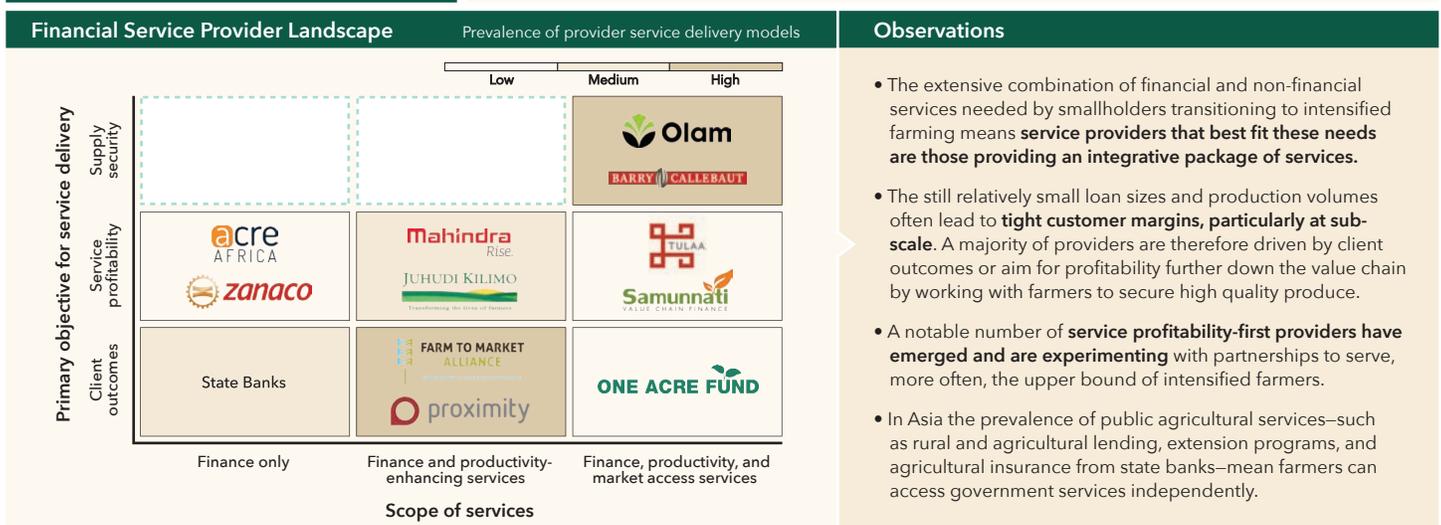


Target Outcome Effects						
Production	Resilience	Employment	Nutrition	Climate	Gender	Youth
Intensification of production and increased offtake price realization	Increased household food output, farm assets, and discretionary income	New (primarily informal) jobs created through hired farm labor	Increased food security and access to directly produced and purchased nutritious foods	Adaptation to climate-related shocks and changes and mitigation of carbon-intensive production	Increased agency, financial independence, and accumulation of productive assets	Increased perception of farming as a business and investment of time and resources in farm and upskilling

Client Profile:

Smallholder farmer continues to farm on 1-2 hectares of land but perceives their agricultural activities as a business and main source of income. Investments in farm intensification result in either an increase in volume through higher yields or an increase in production value, often through higher quality or price realization.

- #### Primary service needs
- Loans for high quality inputs, including climate-resistant seeds, fertilizer, and crop protection
 - Advisory and information services customized to crop, location, and use of inputs (including soil testing)
 - Farm technologies and services related to irrigation, storage, and harvesting
 - Integration into the value chain through regular access to traders and buyers at fair prices
 - Agricultural insurance (indemnity or index based)
- #### Secondary service needs
- Funeral and health insurance
 - Financial literacy and business skills training, including farm management
 - Working capital and harvesting loans
 - Mechanization services through lease or shared models



Enabling Environment Dependencies

- Rural infrastructure
- Farmer organization frameworks/policies
- Enabling digital finance policies



In this pathway, farming households take a business-oriented approach to farming and are able to consolidate multiple plots of land for more efficient, cost effective, and competitive commercial production.



Target Outcome Effects

Production	Resilience	Employment	Nutrition	Climate	Gender	Youth
 Increased production levels, efficiency, and price realization	 Increased land and farm asset ownership and greater discretionary income potential	 New (primarily informal) jobs created through hired farm labor	 Increased production of affordable, fortified staple crops and reduced post-harvest losses	 Reduced farmland/habitat degradation and adaptation to climate-related changes	 Increased instances of joint asset ownership and labor renegotiation within the household	 Increased farm ownership by youth and retention of youth in rural areas

Client Profile:
Smallholder farmer has expanded the farm after intensification and runs a small commercial farm. Farming is perceived as the primary livelihood source and the farmer is working to grow the area under cultivation and implement more sophisticated farming techniques for greater efficiency. Farmer intends to grow business, typically with ambitions to move into other value-added activities.

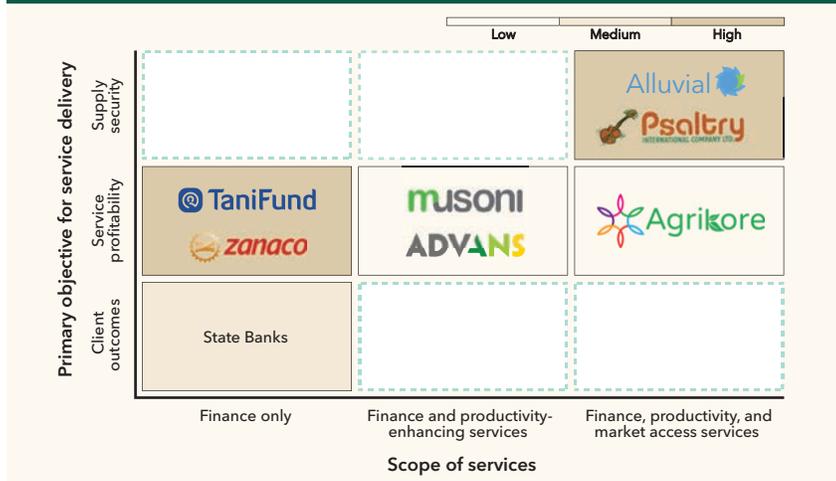
Primary service needs

- Securitized land purchase loans and working capital
- Advanced training on business and farm management practices
- Agricultural insurance (indemnity or index based)
- Support in expanding value adding activities on farm (incl. post-harvest processing, quality grading)
- Precision ag technology and knowledge
- Farming technology and (small-scale) mechanization

Secondary service needs

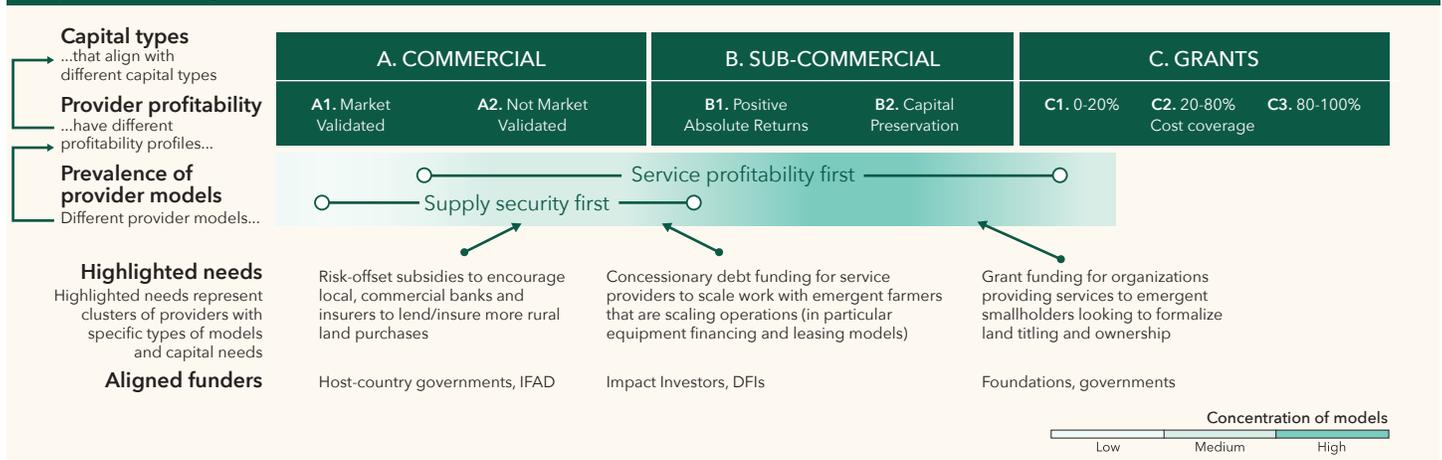
- Inputs including (improved) plant material, fertilizer, and pesticides
- Storage services, particularly for perishable crops
- Long-term financing for planting of perennial crops

Financial Service Provider Landscape



- ### Observations
- As farms increase in scale, farming operations are typically profitable and have collateral to offer in structuring finance. They are also likely to start actively sourcing more specialized services from a broader variety of providers and have less need for bundled service provision.
 - Local commercial and state banks often move in to provide collateralized debt finance to these emergent farmers for land purchase, supported by legal providers and brokers who support titling and rights transfer.
 - Additional specialized services such as equipment financing, insurance, and advanced training may be offered by service providers who are deeply integrated into the value chain or more generalist providers.
 - Certain supply security-oriented providers may also set up block farming models, where farmers receive or lease parcels of land of an optimized size, shape, and location, where the proximity of many of these farms makes (shared) services such as mechanized land preparation, input application, and harvesting economically viable.

Capital Market Alignment



- ### Enabling Environment Dependencies
- Functioning land rights system
 - Dispute resolution/arbitration system
 - Cultural norms around consolidation

Impact Investment Thesis #4: Transition to Formal Enterprise



In this pathway, the farmer or service entrepreneur consolidates their activities into a formal enterprise that is fully integrated into the value chain and relies primarily on hired labor and mechanization.



Target Outcome Effects						
Production	Resilience	Employment	Nutrition	Climate	Gender	Youth
 Increased production/service levels, efficiency, and price realization	 Increased contract and asset protection from formalization and income potential from size	 New formal jobs created and maintained through farm labor and agri-SME workers	 Increased production of affordable, fortified staple crops / processed foods and reduced post-harvest losses	 Reduced farmland/habitat degradation and reduction in carbon released through production	 Increased participation in formal sector as enterprise owners and/or decision-makers	 Increased rural employment opportunities in SMEs and large farms

Client Profile:

Farmer/entrepreneur has a registered, formal enterprise that is perceived and run as a professionalized business. This pathway includes both: 1) Larger commercial farms; and 2) medium and large agri-SMEs. In both cases, the farmer/entrepreneur runs an established business and typically intends to grow the size, sophistication, and scope of operations.

Primary service needs	Secondary service needs
<p>Larger commercial Farms:</p> <ul style="list-style-type: none"> Working capital and trade finance Longer-term asset and growth finance Insurance for production and farm-level storage/processing Marketing and promotional support to access premium export markets <p>Agri-SMEs:</p> <ul style="list-style-type: none"> Working capital Longer-term asset and growth finance Insurance for operational risks and liability Market access support (brokering between SMEs and larger (ag) enterprises) 	<ul style="list-style-type: none"> Agri-specific services, such as agronomic advice, product design, and farm management services Common business development services including: financial advisory, accounting, strategy, business planning, marketing, operational support, digital services, and quality assurance Specialized impact services such as M&E and blended finance advisory

Financial Service Provider Landscape

Prevalence of provider service delivery models

Primary objective for service delivery	Prevalence of provider service delivery models		
	Low	Medium	High
Supply security			
Service profitability	 	 	
Client outcomes	 	 	
	Finance only	Finance and productivity-enhancing services	Finance, productivity, and market access services

Scope of services

Observations

- Pathway 4 farmers and SMEs are typically more professional business partners, have choices among multiple providers, and no longer depend on bundled services and integrated offtake. This leads to a higher prevalence of more focused, commercially oriented service providers and a lower need for holistic models.
- However, finance options for many of these farms and agri-SMEs – particularly the relatively smallest in size – remain limited with higher costs to serve and risk profiles than other sectors. As such, an increasing number of funds, incubators and accelerators are seeking to specifically invest in the lower bound of formal SMEs with both a profit and an impact motivation. These funds typically include a significant business development services component and are therefore categorized as having client outcomes as a primary service delivery objective.
- For supply security-focused providers, offtake from farmers in pathway 4 is an attractive proposition. These farmers are larger, more professional, and can typically engage in a more commercial way, although providers tend to focus on offtake and occasionally on finance.

Capital Market Alignment

Capital types ...that align with different capital types	A. COMMERCIAL		B. SUB-COMMERCIAL		C. GRANTS		
	A1. Market Validated	A2. Not Market Validated	B1. Positive Absolute Returns	B2. Capital Preservation	C1. 0-20% Cost coverage	C2. 20-80% Cost coverage	C3. 80-100% Cost coverage
Provider profitability ...have different profitability profiles...	<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p>Service profitability first</p> <p>Client outcomes first</p> </div> </div>						
Prevalence of provider models Different provider models...							
Highlighted needs Highlighted needs represent clusters of providers with specific types of models and capital needs	Grant funding for investment readiness technical assistance in key markets to identify prospective agri-SME pipeline and facilitate follow up investment by larger funds and facilities		Concessionary debt funding, equity, and blended finance facilities to help scale socially oriented lenders that are seeking to lend further toward the impact frontier with lower returns (may or may not be in a cross-subsidy model)		Grant funding for investments in common measurement and evaluation standards to enable learning and benchmarks that can facilitate accurate assessment of impact-return tradeoffs		
Aligned funders	Foundations, DFIs, USAID		OPIC, DFIs		Foundations, USAID		
	<p>Concentration of models</p> <p>Low Medium High</p>						

Enabling Environment Dependencies

- Small business registration system
- Stable political and investment climate
- Enabling tax and concessions for SMEs



In this pathway, the smallholder farmer shifts away from agriculture production and instead pursues an entrepreneurship livelihood strategy in rural services, either related to agriculture (e.g., agro-vet) or not (e.g., mobile money agent).



Target Outcome Effects				
Resilience	Employment	Climate	Gender	Youth
Increased asset ownership and income potential	New (primarily informal) jobs created from rural entrepreneurship and hired labor	Adaptation to climate-related shocks and changes	Reduction in gendered occupational segregation, and increased agency and financial independence	Increased rural youth entrepreneurship and skills development

Client Profile:

The service entrepreneur could be a farmer transitioning out of farming into service provision or seeking diversified income besides farming. Services entrepreneurs offer agricultural or non-agricultural rural services through (usually informal) micro and small businesses (e.g., informal trader, mom & pop shop, mobile money agent) that account for their primary source of income. In the transition, the entrepreneur typically lacks skills around business management and financial literacy, struggling to find finance to start and develop their micro / small business.

Primary service needs

- Start-up micro loans for establishment costs and working capital for ongoing operating needs
- Checking and savings account
- Foundational training including financial literacy, business and management fundamentals, and marketing

Secondary service needs

- Enabling technology solutions (e.g., mobile money, inventory management)
- Market access support (brokering between entrepreneurs and larger enterprises)

Financial Service Provider Landscape		Prevalence of provider service delivery models			Observations
		Low	Medium	High	
Primary objective for service delivery	Supply security				<ul style="list-style-type: none"> • The micro and small entrepreneurs in this pathway are very different but there are commonalities in the types of services needed based on the profile of the transitioning entrepreneur. • The transition from farming to a rural services enterprise requires start-up capital and significant capacity development to help learn what is needed to run a business. • While much of this finance and support typically happens through informal channels, non-ag specific MFIs step in to support individuals with micro loans (starting from as low as USD 100), often coupled with financial literacy and professional skill building. • Some major agribusinesses explicitly aim to build capacity of subsets of farmers in their programs to take on (parts of) service delivery from the providers. Examples include Anagrams (building capacity of cooperatives in cashew value chains). • MNOs, commercial banks, and other companies looking to establish distribution networks may directly support the establishment of rural agent networks which are financed and supported with capacity building and market development.
	Service profitability				
	Client outcomes	State Banks			
		Finance only	Finance and productivity-enhancing services	Finance, productivity, and market access services	
		Scope of services			

Capital Market Alignment

	A. COMMERCIAL		B. SUB-COMMERCIAL		C. GRANTS		
	A1. Market Validated	A2. Not Market Validated	B1. Positive Absolute Returns	B2. Capital Preservation	C1. 0-20%	C2. 20-80% Cost coverage	C3. 80-100%
Capital types ...that align with different capital types	○ ————— Service profitability first ————— ○						
Provider profitability ...have different profitability profiles...	○ ————— Client outcomes first ————— ○						
Prevalence of provider models Different provider models...	○ —————						
Highlighted needs Highlighted needs represent clusters of providers with specific types of models and capital needs	Tax and other incentives for companies to invest in rural micro-services networks, including agents and key supplier contracts		Risk-offset funding for lending to enabling rural organizations (e.g., cooperatives and farmer organizations) that are supporting expanded service delivery through agent networks (e.g., collection, advice services)		Grant and concessionary debt funding for MFIs and NGOs to run higher-touch rural entrepreneurship incubators to support transitions into services sector		
Aligned funders	Governments		Governments, DFIs, Foundations		Governments, Foundations		
	Concentration of models Low Medium High						

Enabling Environment Dependencies

- Growing rural production base
- Rural commerce links to urban areas
- Trading infrastructure

APPENDIX 3: ILLUSTRATIVE SNAPSHOT OF RURAL HOUSEHOLD SEGMENTS

BANGLADESH

Farmer segment	Number smallholder households (Mn)	HH median land size (Ha)		HH below poverty line ¹		Access to offtake contract		Access to mobile phone		Intention to cont. in ag (<30 yrs old)		Female or joint decisions in ag	
		HH mean monthly income	Illiteracy rate	Access to formal fin. services	Able to save for ag needs	Intention to cont. in ag (>30 yrs old)							
Vulnerable Subsisting Farmer (n=349)	10.66 (11%)	0.34	USD 112	91%	73%	2.3%	46%	68%	48%	79%	84%	35%	
Resilient Subsisting Farmer (n=571)	17.44 (19%)	0.39	USD 143	73%	61%	2.8%	54%	83%	65%	80%	92%	28%	
Traditional Commercializing Farmer (n=311)	9.48 (10%)	0.43	USD 136	80%	54%	1.2%	45%	82%	57%	88%	96%	31%	
Intensified Commercializing Farmer (n=545)	16.64 (18%)	0.46	USD 144	76%	55%	4.1%	52%	86%	62%	87%	93%	31%	
Consolid. Commercializing Farmer (n=156)	4.75 (5%)	0.83	USD 160	59%	54%	20.3%	55%	89%	77%	89%	94%	22%	
Micro and Small Service Entrepreneur (n=464)	14.17 (15%)	0.27	USD 186	71%	67%	3.3%	65%	89%	76%	68%	80%	22%	
Rural Worker (n=652)	19.89 (21%)	0.20	USD 130	84%	68%	1.0%	45%	79%	55%	76%	82%	26%	

¹Poverty line threshold used: USD 2.50 / day.

Source: CGAP nationally representative surveys of smallholder households in Bangladesh, Côte D'Ivoire, Nigeria, Mozambique, and Tanzania, 2016 and 2017. While the surveys are nationally representative overall, sample sizes become small when broken by subsegments. Therefore data should be interpreted with caution and under the recognition that these are illustrative examples of relative and self reported measures of poverty.

CÔTE D'IVOIRE

Farmer segment	HH median land size (Ha)		HH below poverty line ¹		Access to offtake contract		Access to mobile phone		Intention to cont. in ag (<30 yrs old)		Female or joint decisions in ag	
	Number smallholder households (Mn)		HH mean monthly income		Illiteracy rate		Access to formal fin. services		Able to save for ag needs		Intention to cont. in ag (>30 yrs old)	
Vulnerable Subsisting Farmer (n=650)	1.71 (23%)	3.35	USD 98	80%	84%	6.1%	12%	76%	13%	90%	88%	18%
Resilient Subsisting Farmer (n=672)	1.77 (23%)	3.25	USD 169	65%	63%	5.9%	41%	89%	32%	89%	90%	21%
Traditional Commercializing Farmer (n=513)	1.35 (18%)	4.33	USD 134	74%	73%	4.6%	23%	85%	29%	90%	96%	25%
Intensified Commercializing Farmer (n=456)	1.20 (16%)	4.25	USD 156	72%	68%	16.5%	31%	93%	35%	94%	91%	23%
Consolid. Commercializing Farmer (n=164)	0.43 (6%)	4.70	USD 174	66%	66%	42.6%	48%	94%	43%	84%	97%	15%
Micro and Small Service Entrepreneur (n=167)	0.44 (6%)	1.85	USD 218	61%	62%	6.8%	50%	89%	43%	79%	84%	18%
Rural Worker (n=244)	0.64 (9%)	1.74	USD 102	72%	72%	1.8%	28%	87%	14%	71%	80%	20%

¹Poverty line threshold used: USD 2.50 / day.

Source: CGAP nationally representative surveys of smallholder households in Bangladesh, Côte D'Ivoire, Nigeria, Mozambique, and Tanzania, 2016 and 2017. While the surveys are nationally representative overall, sample sizes become small when broken by subsegments. Therefore data should be interpreted with caution and under the recognition that these are illustrative examples of relative and self reported measures of poverty.

MOZAMBIQUE

Farmer segment	HH median land size (Ha)		HH below poverty line ¹		Access to offtake contract		Access to mobile phone		Intention to cont. in ag (<30 yrs old)		Female or joint decisions in ag	
	Number smallholder households (Mn)		HH mean monthly income	Illiteracy rate		Access to formal fin. services		Able to save for ag needs		Intention to cont. in ag (>30 yrs old)		
Vulnerable Subsisting Farmer (n=413)	2.52 (20%)	2.19	USD 41	93%	49%	1.9%	4%	44%	37%	74%	90%	48%
Resilient Subsisting Farmer (n=231)	1.41 (11%)	1.40	USD 55	73%	28%	3.3%	18%	66%	31%	94%	92%	55%
Traditional Commercializing Farmer (n=202)	1.24 (10%)	2.49	USD 42	92%	40%	4.5%	5%	42%	26%	83%	98%	42%
Intensified Commercializing Farmer (n=131)	0.80 (6%)	2.50	USD 67	82%	29%	13.0%	23%	67%	58%	89%	90%	49%
Consolid. Commercializing Farmer (n=46)	0.28 (2%)	2.63	USD 90	76%	25%	36.8%	39%	70%	68%	97%	96%	56%
Micro and Small Service Entrepreneur (n=451)	2.76 (22%)	1.67	USD 78	81%	39%	2.3%	16%	67%	32%	79%	91%	56%
Rural Worker (n=591)	3.61 (29%)	1.93	USD 46	88%	44%	0%	8%	52%	27%	82%	87%	51%

¹Poverty line threshold used: USD 2.50 / day.

Source: CGAP nationally representative surveys of smallholder households in Bangladesh, Côte D'Ivoire, Nigeria, Mozambique, and Tanzania, 2016 and 2017. While the surveys are nationally representative overall, sample sizes become small when broken by subsegments. Therefore data should be interpreted with caution and under the recognition that these are illustrative examples of relative and self reported measures of poverty.

TANZANIA

Farmer segment	Number smallholder households (Mn)	HH median land size (Ha)	HH below poverty line ¹	Access to offtake contract	Access to mobile phone	Intention to cont. in ag (<30 yrs old)	Female or joint decisions in ag					
		HH mean monthly income	Illiteracy rate	Access to formal fin. services	Able to save for ag needs	Intention to cont. in ag (>30 yrs old)						
Vulnerable Subsisting Farmer (n=552)	5.09 (20%)	0.77	USD 48	97%	45%	1.5%	33%	69%	24%	96%	97%	63%
Resilient Subsisting Farmer (n=605)	5.57 (22%)	0.90	USD 73	79%	10%	2.3%	62%	89%	42%	95%	99%	63%
Traditional Commercializing Farmer (n=265)	2.44 (10%)	1.08	USD 70	85%	20%	2.5%	51%	88%	36%	100%	98%	69%
Intensified Commercializing Farmer (n=248)	2.28 (9%)	1.38	USD 94	78%	14%	8.4%	64%	89%	59%	100%	99%	64%
Consolid. Commercializing Farmer (n=41)	0.38 (2%)	2.72	USD 96	60%	8%	35.3%	79%	98%	71%	100%	100%	49%
Micro and Small Service Entrepreneur (n=468)	4.32 (17%)	0.53	USD 89	79%	14%	1.2%	60%	89%	28%	96%	94%	52%
Rural Worker (n=556)	5.12 (20%)	0.58	USD 47	87%	24%	0%	43%	72%	22%	90%	90%	90%

¹Poverty line threshold used: USD 2.50 / day.

Source: CGAP nationally representative surveys of smallholder households in Bangladesh, Côte D'Ivoire, Nigeria, Mozambique, and Tanzania, 2016 and 2017. While the surveys are nationally representative overall, sample sizes become small when broken by subsegments. Therefore data should be interpreted with caution and under the recognition that these are illustrative examples of relative and self reported measures of poverty.

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