

BEYOND THE FRONTIER: DECODING VIABILITY IN SMALLHOLDER FINANCE



RURAL AND AGRICULTURAL FINANCE STATE OF THE SECTOR REPORT



OCTOBER, 2025



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FOREWORD

For several decades smallholder finance has been one of the most complex challenges in global development. Over the past ten years ISF Advisors—alongside many others—has worked systematically to unpack and understand this market in all its complexity. Arguably more has been achieved in the last decade than the preceding fifty years—whether in the diversity of financial solutions, the depth of understanding around farmer needs, or the new possibilities unlocked by technology and innovation. And yet at times, it can feel as though little impact has truly been made. With the rapid acceleration in climate change, the lingering effects of the COVID-19 pandemic, the rise of deglobalization and the demographic changes in rural areas, the challenges facing smallholder finance are growing larger and more urgent.

Our ambitions for this report include:

- Understanding the current state of smallholder finance
- Establishing new frameworks to characterize and evaluate the provision of finance in unique market contexts—defined by farmer segments, value chains and enabling environments
- Benchmarking the unit economics and farmer-level impact of different channels and models of smallholder finance with clear comparability
- Exploring how the climate challenge is likely to shape smallholder financing needs, influence viability of financing approaches and affect the capital required to address these risks
- Using these proposed frameworks to examine how and where key leverage points can improve the viability and impact of providing finance—particularly in the context of the climate challenge—and how gains in viability could shift the positioning of financing channels and, ultimately, reshape the capital stack currently funding smallholder finance

- Integrating these findings using a systems approach to acknowledge the realities of concessionality and risk sharing/management, identify synergies and develop recommendations for implementers and broader stakeholders.

Ultimately, after more than a decade researching this area, we hope this report represents a new stake in the ground for practitioners globally. If successful, we hope this report makes people feel both uncomfortable and energized. Uncomfortable with the inherent complexity of serving smallholder farmers. Uncomfortable with the continued need for concessional capital and risk sharing/management to achieve key impact objectives. And uncomfortable with how hard-fought progress can be in this space. Yet also energized by the increasing clarity of insights, the emergence of new technologies and approaches, and the opportunity to continue pushing the frontier through collective innovation.

We also acknowledge that there is always a tendency to reach for reductive conclusions on these issues. Instead, we hope this report surfaces a set of critical tensions to be navigated: Commerciality but also affordability. Smart subsidies but also continued efforts to push to the financial viability and impact frontier. Efficiency but also a balance of power in value chain relationships. Global capital but also stronger capacities of local public and private institutions to provide finance and connect effectively with international markets. These issues are woven deeply into the smallholder finance puzzle and require ongoing analysis and informed dialogue to decode.

Thank you all for your ongoing efforts,

Matt Shakhovskoy

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EXECUTIVE SUMMARY



Global development finance is facing a twin crisis: progress on key development indicators is regressing, while access to affordable capital is declining. Smallholder farmers and agri-SMEs remain at the center of this challenge—underfinanced despite being vital to food security, livelihoods, and climate resilience.

Globally, more than **285 million smallholder farming households** (farms up to five hectares) produce **30% of the world's food**, yet remain chronically underfinanced. The demand for financing exceeds **USD 323 billion annually**, including short- and long-term agricultural and non-agricultural financing needs. Current supply stands at only **95B annually**, leaving an unmet gap of more than **200B**. This gap is not simply a financing shortfall—it is a systemic constraint that undermines food security, climate resilience, and rural livelihoods. The gap is also unevenly distributed, with the financing gap for women being higher than for men, given their lower access to markets, assets and services. Climate change is set to exacerbate this gap further, creating a “double squeeze”: rising adaptation-related financing needs (e.g., irrigation, resilient seed systems, risk-mitigation tools) alongside a likely contraction—or at best stagnation—of supply as lenders grow more risk-averse. Without urgent action, today's gap could swell by another USD 100–130 billion annually, pushing the sector beyond its already stretched limits. How the world responds to this challenge will determine not only the resilience of rural households, but also the trajectory of global food security and climate adaptation in the decades ahead.

LEARNING MORE ABOUT VIABILITY

Since our last State of the Sector report in 2019, the smallholder finance agenda has matured. We now have a deeper understanding of what drives commercial viability across different contexts—from market archetypes and business models economics to the roles of concessionality and climate risk. These insights sharpen the central question: not only how much finance is mobilized, but

whether it is fit for purpose, aligned with context, and capable of shifting business models toward long-term sustainability. This year's *'Rural and Agri-Finance State of the Sector Report: Beyond the Frontier: Decoding Viability in Smallholder Finance'*, introduces the concept of the **viability frontier**—a framework for understanding the balance between lending benefits, including client outcomes, and lending costs. This lens underpins the analysis that follows, shaping how demand, supply, and impact are assessed across markets and business models.

What the application of the viability framework suggests is that viability is incredibly complex and multifaceted and ultimately shaped by the interaction of:

- **Agricultural markets:** defined by the profiles of farmers and the underlying dynamics of commodity value chains
- **Business models:** the ways providers design products, manage risk, and generate value
- **The enabling environment:** the policies, infrastructure, and capital flows that shape both markets and models.

Together these dimensions determine where finance can be delivered sustainably for both providers and farmers, and where concessionality or innovation are needed to tip the balance. The interaction of these dimensions also helps explain why lending economics vary so widely—**results that have been quantified in this report through analyzing over 50 provider models operating in different markets.**

The insights are revealing. From a business model perspective, for instance, service-profitability providers such as MFI or banks—that seek to profit from the lending itself and typically have lower costs of capital and better access to risk mitigators—achieve modest but positive margins (10% with no shock; 7% with shock). By contrast, supply-security providers such as traders, processors or

commercial producers financing farmers to secure produce often lend at a loss (–13% with no shock; –42% with shock). **Yet when indirect sourcing benefits are factored in, the profitability picture changes dramatically: most supply-security providers can break even—and often exceed this—when the sourcing benefits of lending are realised over time.**

Even within the same provider type, viability varies significantly by geography, commodity market, and farmer segment. This suggests viability is not a fixed attribute of a product or provider. For example, value-chain-linked lending can succeed in commercial export crops with strong offtake (e.g., cocoa in Côte d’Ivoire, coffee in Mexico, rubber in Indonesia), but the same model struggles in fragmented staple markets without aggregation points (e.g., maize in Tanzania, cassava in Nigeria, wheat in Kenya). Similarly, digital platforms lower costs in markets with connectivity and dense populations, but face barriers in sparsely populated or low-infrastructure settings. Comparing lending models across market archetypes shows where different providers are best positioned to serve smallholder farmers, underscoring how market structure and provider type shape viability.

SHIFTING THE VIABILITY FRONTIER

A central conclusion of this report is that the viability frontier is not fixed—it can be shifted. Providers, funders and policymakers have three main levers to expand the space where smallholder finance is both sustainable and impactful:

1. **Changing fundamental market structures** that define markets’ viability “boundaries”—for example, through farmer aggregation, offtaker formalization, investment in irrigation or logistics, and public risk-sharing infrastructure. By improving the underlying viability of agricultural markets, the farmers engaged in those markets become more financeable—even if lending business models remain the same.
2. **Adapting business models** to break through market viability “boundaries”—through product design, bundled services, risk-mitigation tools, vertical integration, or smarter use of technology. By innovating on their business model options providers can improve the balance between the revenue and cost of lending

to serve more farmers within a given market or move “down-market” into segments previously considered unfinanceable.

3. **Strengthening the enabling environment** that ultimately shapes both markets and models—by aligning regulation, digital and physical infrastructure, and capital markets within the realities of agricultural finance.

Together, these three levers define the pathways through which viability can shift: **markets that become structurally more attractive for finance provision; business models that push deeper into existing markets; and enabling environments that reinforce both sides of the equation.** But no single lever is sufficient. Real progress will depend on how structural improvements, model-level adaptation, and systemic reforms reinforce each other to reduce the cost and risk of finance in a way that delivers lasting outcomes for both providers of finance and farmers.

THE ROLE OF CONCESSIONAL CAPITAL

The analysis also underscores that concessionality remains central to scaling smallholder finance—but must be applied with precision. Too often treated as a blunt instrument, concessional capital must evolve toward smarter subsidy:

- **Permanent roles** in non-viable markets, where finance is unlikely ever to be commercial, by funding social protection and livelihood diversification.
- **Catalytic roles** in transitional markets, investing in public goods, market infrastructure, and risk-sharing mechanisms that crowd in private lenders over time.
- **Tactical roles** in emerging business models, where guarantees, first-loss facilities, or concessional equity can de-risk innovation and demonstrate viability at scale.

This differentiated approach aligns concessionality with context and helps avoid both underuse and distortion.

THE SIZE OF THE OPPORTUNITY

Despite persistent barriers, the opportunity is substantial. Today’s unmet financing gap exceeds USD 200B+ annually, constraining food security, resilience, and livelihoods. Our analysis suggests that with market transformation, business



model innovation and a supporting enabling environment, as many as 60 million additional smallholder households could become financeable—nearly doubling today’s levels. This could unlock up to USD 110 billion annually, reducing today’s financing gap by up to 50%. Importantly, this opportunity requires a combined approach: strengthening markets so more farmers are addressable, and enabling providers to serve them through innovative, sustainable models. Realizing it will depend on concessional capital, deployed strategically to crowd in private finance while ensuring impact for smallholder farmers.

NAVIGATING THE WAY FORWARD

Closing the smallholder financing gap will require more than mobilizing additional dollars. It will demand aligning the type of capital with the context in which it is deployed, balancing commercial viability with client outcomes and concessionality, and recognizing climate risk as central to future models. The viability frontier provides a practical

tool for navigating these trade-offs, showing where finance can flow commercially and where catalytic capital is required to shift markets toward long-term sustainability.

Ultimately, this report sets a new milestone for the sector. It argues that the next five years must be defined by greater nuance in how viability is assessed, smarter application of concessional capital, sharper alignment of finance with both farmer realities and climate imperatives. The next five years will also require new levels of partnerships and collaboration. Because shifting the viability frontier requires interdependent action across governments, donors, investors, providers, and farmer organizations, no single actor will be able to tackle the challenge alone. The tools are better, the data richer, and the understanding deeper—what remains is to act with urgency, precision, and coordination, applying concessionality with discipline and embedding climate adaptation at the core to unlock the opportunity at stake.

1. THE CURRENT STATE OF SMALLHOLDER FINANCE



1.1 AN ONGOING SMALLHOLDER FINANCE GAP

There are an estimated 285 million smallholder farming households globally. These households—defined as farms cultivating crops or raising livestock on up to five hectares—represent approximately 95% of all farms globally. Despite their limited scale, smallholders collectively produce 30% of the world's food, underscoring their critical role in global food security and rural economies. Yet, while many developing economies have experienced economic advances in recent decades, smallholder households frequently remain disproportionately excluded from these gains.

ISF's updated market sizing suggests that smallholders across South and Southeast Asia, Sub-Saharan Africa, and Latin America collectively require **USD 323 billion annually** in credit across three primary categories:

Short-term agricultural finance

(~USD 138 billion annually):

Seasonal working capital for inputs like seeds, fertilizers, pesticides, and basic labor. Needs vary: subsistence crops (e.g. maize, millet, sorghum) often require more seasonal input use, leading to higher needs. Even perennial cash crops (e.g. coffee, cocoa, tea) which may require fewer inputs must meet market-driven quality standards.

Long-term agricultural finance

(~USD 115 billion annually):

Multi-season investments such as orchard establishment, perennial crop rehabilitation, irrigation systems, mechanization, and storage or processing facilities. Tree crops like cocoa, rubber, and coffee require high upfront costs whereas annual crops like rice or maize typically require less capital.

Non-agricultural finance

(~USD 70 billion annually):

Credit for livelihood diversification, education, healthcare,

consumption smoothing, off-farm businesses, housing, and infrastructure. These needs are crucial for household resilience and broader rural economic development.

Smallholder households currently receive approximately USD 95 billion in financing annually (up from ~\$70B in 2019), from three main sources:

- **Agribusiness Value Chain Actors (~45%; ~\$43B+):** The largest source of smallholder finance is provided by offtakers sourcing from farmers e.g., traders, processors and, to some extent, input suppliers. Primarily short-term and agriculture-specific, finance is typically delivered via advances, input credits, or contract farming.
- **Formal Financial Institutions (~30%; ~\$26B+):** This diverse group includes state-owned agricultural banks, microfinance institutions (MFIs), rural and commercial banks, and agri-fintech. MFIs are the largest contributors (~11B) primarily offering short-term microloans. Agricultural banks—especially in Asia and Latin America account for (~5B), commercial banks contribute (~2B) due to perceived high risk, and agri-fintech remains small (~\$0.8B) but is growing rapidly due to digital innovations.
- **Informal and Community-Based Finance (~25%; ~\$25B+):** This category includes village savings groups, informal moneylenders, and family networks. It offers the easiest and most flexible access, serving both agricultural and non-agricultural needs. Typically expensive, with high interest and unfavorable terms (except within family networks) but remains critical for subsistence farmers lacking formal finance options—despite limitations in scale and quality.

Increasingly understood as deeply interconnected, agri-insurance markets have also matured to meet the estimated \$240B-\$290B in insured value estimates for smallholder farmers. With an estimated premium value of ~\$12B-\$58B, insurance is one of the key “bundled” products that can help offset production and market risk for lenders to smallholder farmers and incentivize the uptake of credit and technologies to adapt to climate change.¹ Often conceived as a separate market we believe that insurance and credit increasingly need to be conceived as deeply interconnected at all levels—from macro-level policy, to meso-level regulation and

enabling infrastructure to micro-level product design and distribution. There are a range of key national initiatives that are encouraging bringing these markets together including the recently announced National Agricultural Finance Implementation Roadmap (NAFIR) launched by the Ministry of Agriculture and National Bank of Ethiopia and the Pradhan Mantri Fasal Bima Yojana (PMFBY) in India.² The agri-insurance market can go beyond providing underwriting capacities to also provide specialized risk expertise to help quantify and price risk within different lending models.

UNDERSTANDING THE DIFFERENCES IN MARKET SIZING, RELATIVE TO THE 2019 STATE OF THE SECTOR PATHWAYS TO PROSPERITY

This sizing analysis builds upon our work in 2019 by incorporating the latest global data to refine the number of smallholder farmers (SHFs) and offering a more granular perspective at both regional and value-chain levels. Our assessment of financing needs now provides deeper insights into crop-specific nuances and distinct farmer segments within key value chains. Additionally, we have sharpened our analysis of the supply-side landscape, particularly by examining value-chain actors and innovative financing providers, reflecting the growing sophistication and improved transparency of their activities and operational approaches.

Beyond methodological improvements, this updated sizing also reflects emerging shifts in the structure of financing demand, particularly a gradual increase in longer-term, resilience-oriented capital needs in response to climate stress. While short-term input credit remains foundational, climate pressures are beginning to re-shape the profile of capital required across many farming systems—pushing some needs toward more asset-based or bundled solutions. These evolving patterns suggest that the nature of the finance gap is becoming not just larger, but more layered—blending longstanding inclusion challenges with new forms of climate-adjusted

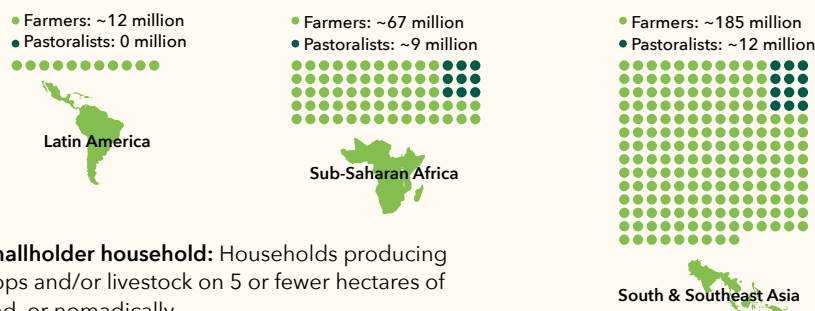
¹ Insurance figures are based on industry assumptions around % of agri-financing needs that can be insured (ranging from 75% in the base case to 90% in the high case) as well as the % of sum insured as premium (ranging from 5% in base case to 20% in high case).

² In Ethiopia, NAFIR provides a coordinated framework to expand smallholder access to credit through regulatory reform, risk-sharing facilities, and stronger linkages between financial institutions and agricultural value chains. In India, PMFBY is the world’s largest public crop insurance program, designed to de-risk farmer borrowing by providing subsidized, actuarially-priced coverage against weather and yield losses, with over 40 million farmers enrolled annually.

FIGURE 1. THE GLOBAL MARKET FOR SMALLHOLDER FINANCE

Number of smallholder households

There are ~285 million smallholder farmers and pastoralists across Latin America, Sub-Saharan Africa, and South and Southeast Asia

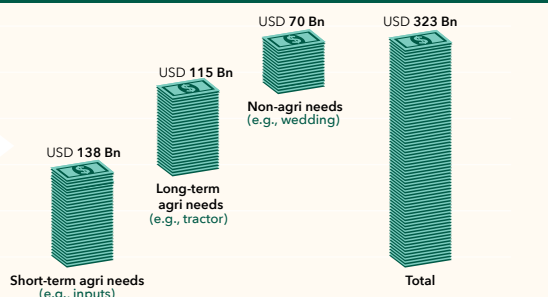


Smallholder household: Households producing crops and/or livestock on 5 or fewer hectares of land, or nomadically

Financing need

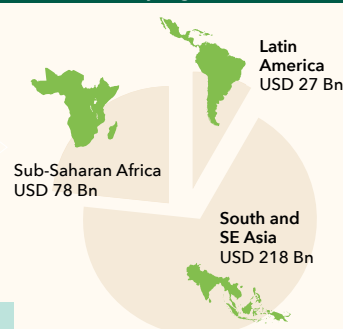
The financing need of these 285 million smallholder farmers and pastoralists is estimated at approximately USD 323 billion annually

Breakdown by type of financing needed



Total insurance needs estimated to be USD240B - USD290B;
Total premium value estimated to be USD12B - USD58B

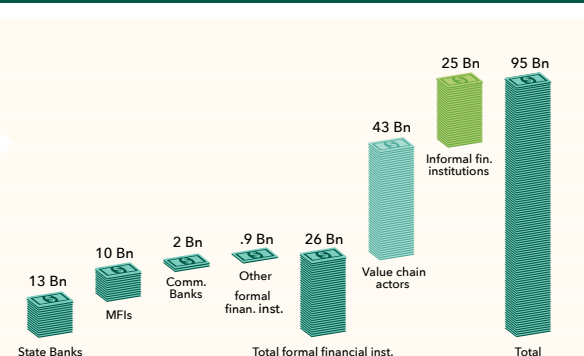
Breakdown by region



Current supply

In total, financial service providers, agribusinesses, and informal or community-based financial institutions supply an estimated USD 95 billion in annual disbursements

Breakdown by type of financial service provider



Total insurance supply estimated to be USD 4 Bn with 2.1% of rural population covered

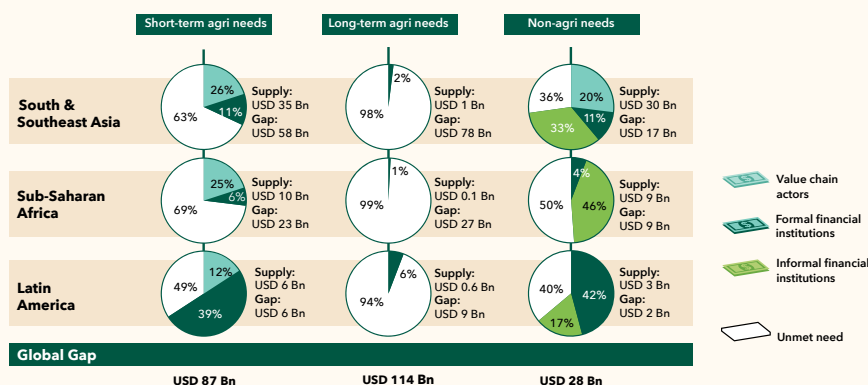
Observations

- **Agribusiness Value Chain Actors (~\$43B+):** Largest SHF finance source via traders, processors, and input suppliers. Mostly short-term, crop-specific, and export-oriented.
- **Formal Financial Institutions (~\$26B+):** Includes state banks, MFIs, commercial/rural banks, and agri-fintech. MFIs dominate; banks remain limited; fintech small but growing. Also includes social lenders, innovators, and NGOs.
- **Informal & Community (~\$25B+):** Savings groups, moneylenders, and family networks. Flexible but costly, essential for farmers lacking formal finance.

Smallholder finance gap

Over 70% of demand for smallholder finance goes unmet – the equivalent of USD ~230 billion per year

Finance gap by region and type of financing need



Source: ISF Advisors, Pathways to Prosperity: Rural and Agricultural Finance State of the Sector Report, 2019; McKinsey & Company, Winning in Africa's Agricultural Market, 2019; Lowder, S.K., Sánchez, M.V., & Bertini, R., Which farms feed the world and has farmland become more concentrated?, World Development, 2021; FAO ESA Working Paper No. 14-02; World Bank, World Development Indicators / Global Findex Database; GSMA, State of the Industry Report on Mobile Money, 2018; ISF Advisors analysis; Direct data collection from market participants; 50+ direct primary sources on financing needs across value chains; Providers' websites; Expert interviews; Microinsurance Network, The Landscape of Microinsurance, 2025.



1.2 KEY TRENDS AND PROGRESS INDICATORS

Since 2019, major global events have reshaped the smallholder finance ecosystem. The COVID-19 pandemic, for instance, disrupted supply chains and curbed farmer mobility, while also accelerating demand for digital, contactless service provision. Inflationary pressures and currency volatility have further squeezed both lenders and borrowers, heightening the need for efficient, lower-cost delivery channels. Meanwhile, the compounding impact of climate change—manifesting as more frequent droughts, floods, or pest outbreaks—has forced stakeholders across the system to revisit risk models, expand insurance products, and consider resilience investments for both short- and long-term financing.

At the same time, progress has continued to be made across a range of financing channels and underlying enablers. Value chain actors continue to embed credit as a core enabler of procurement, offering increasingly sophisticated digital data capture and risk-management tools. State banks, while often constrained by bureaucracy, are shifting toward more flexible products and public-private partnerships—many in response to

pandemic-driven needs. MFIs are diversifying into asset-based lending and climate-smart innovations, while commercial banks are exploring partnerships with fintechs to reach previously unbankable rural segments. Innovators—particularly digital platforms—continue to pilot novel underwriting methods and bundled service models. Even informal institutions remain essential for bridging household cash-flow gaps—but here too, technology and group-lending innovations are beginning to reshape traditional norms.

Each channel has evolved in distinct ways over the past few years, reflecting its unique history, target segments, and enabling environments. Collectively, the data points to a more dynamic and experimental smallholder finance ecosystem, albeit one still grappling with structural barriers such as side-selling, climate shocks, and regulatory constraints. While these advances are promising, the sector remains at a tipping point—future gains will hinge on resolving persistent frictions and accelerating innovations that meaningfully connect smallholders to the capital they require.

FIGURE 2. KEY TRENDS ACROSS LENDING CHANNELS

Channel (Underlying Model)	Lending Volume / Products	Innovations	Growth Trajectory	Key challenges
Value Chain Actors - Traders - Processors - Input providers - Vertically integrated commercial producers	~USD 43 Bn <i>Short term input loans, often tied to contract farming, pre-financing of inputs, or purchase agreements</i>	Data & Tech: Digital traceability, e-contracts, and basic data analytics have improved credit decisions. Embedded Services: Bundling agronomic training or crop insurance with loans.	The need to secure stable supplies of quality produce—combined with rising global commodity demand and greater vertical integration in supply chains—boosts volumes. Additionally, linking market access with finance creates opportunities to embed risk mitigants, driving potential increases in lending.	Farmer and Climate Risks: Side selling (farmers may sell to other buyers if offered higher prices) and climate risks Lack of Capital: for both on-lending and core business operations, especially local / regional actors Limited to Short-Term Needs: Long-term investments (e.g. machinery) rarely financed
State Banks - Through SACCOs - Through comm. banks	~USD 13 Bn <i>Subsidized credit for inputs, working capital, and in some cases asset finance</i>	Digitization: Some state banks are rolling out mobile-based loan applications. Mandated Lending Programs: Partnerships with gov. agencies to reach priority groups (women, youth, etc.). Interest Rate Subsidies: Often used to reduce borrower cost but can distort markets if not carefully managed.	Variable Growth: Dependent on government budgets and political will. - Some banks are expanding rapidly (where governments prioritize agri-finance); others face stagnant growth due to fiscal constraints. Policy Changes: Reforms can spur sudden shifts in lending volumes.	Political Influence & Subsidy Dependence: Can lead to high non-performing loans, while reliance on public funds can jeopardize long-term viability. Bureaucracy: Complex application processes that deter smallholders. Credit Risk Management: Often weak risk assessments and inadequate collateral requirements.
MFIs - Group lending - Individual lending	~USD 10 Bn Microloans for inputs, labor, short-term working capital	Group Lending & Guarantees: Social collateral reduces default risk. Mobile Money Integration: Streamlines disbursement and repayment, particularly in rural SSA. Flexible Repayment Schedules: Some MFIs synchronize loan payments with harvest cycles.	Steady Growth: MFIs continue to expand in underserved rural regions, though growth can flatten in mature microfinance markets (e.g., parts of Latin America). - Digital innovations are helping MFIs reach more remote areas cost-effectively.	High Operational Costs: Reaching remote SHFs is expensive. Limited Longer-Term Financing: Most MFIs focus on short-term loans. Interest Rate Caps/Regulation: Can squeeze margins and curb expansion in some countries. Market Saturation: In mature MFI markets, portfolio growth may slow without new product offerings (e.g. asset loans).
Commercial Banks - Individual lending - Through AgTechs - Through VCAs	~USD 2 Bn Seasonal working cap., occasional larger asset financing and long-term loans	Risk Mitigation Tools: Some banks use partial credit guarantees, crop/weather insurance, or warehouse receipt systems. Partnerships with Fintechs & Producer Organizations: Outsourcing credit assessments or distribution. Ag-Specific Credit Scoring: Incorporating satellite data on yields or weather patterns.	Mixed Growth: Commercial banks remain cautious about smallholder risk profiles and limited collateral. - Growth is slightly higher where government guarantees or donor-backed risk-sharing facilities exist. - Many banks focus instead on agri-SMEs rather than individual farmers.	High Perceived Risk & Limited Data: Agricultural lending requires specialized knowledge. Cost to Serve Remote Areas: Branch networks are thin, and digital channels are not yet fully scaled. Regulatory Barriers: Some banking regulations do not incentivize small-scale rural lending.
Innovators (Fintechs / Platforms) - Credit provider - Product marketplace - Integrated marketplace - Farm services rental - PayGo asset provider	~USD 0.9 Bn Mixed of short-term agricultural and non-agricultural loans	Digital Platforms & Scoring: Using mobile transactions, satellite imagery, or alternative data to assess creditworthiness. Digital Public Infrastructure: leveraging key developments such as mass mobile ID adoption and internet connectivity. Partnerships with NGOs & Co-ops: Building trust and local presence for credit delivery.	High Potential but Small Base: Rapid growth as investors seek impact-driven agri portfolios, but overall volumes are low. Expansion Across Regions: Especially in East Africa and Southeast Asia, where mobile penetration is improving.	Scalability & Sustainability: Many models rely on donor or philanthropic funding. Regulatory Uncertainty: Fintech regulations vary widely, sometimes limiting expansion. Credit Risk Management: New data sources can be unreliable if digital infrastructure is weak. Farmer Adoption: Low digital literacy slows uptake.
Informal - Individual lending - Group lending	~USD 25 Bn Loans can be used for any need	Mobile-Enabled Group Savings: Some informal groups are adopting basic apps to track contributions and loans. Hybrid Models: NGOs and fintech start-ups are formalizing ROSCAs with digital record-keeping or linking them to formal banks.	Stable/Incremental Growth: Remains a mainstay where formal options are absent or costly. Digital inclusion could gradually shift some informal lending toward more formal products, but cultural trust in community lending keeps demand strong.	High Interest & Limited Scale Vulnerability to Shocks: Social capital can break down in times of widespread crop failure or economic stress. Lack of Regulation & Consumer Protection: Can lead to exploitation. Minimal Investment Capital: Typically small, short loans that do not finance major upgrades.
Cross-cutting positive tailwinds: Growing digital adoption and big-data analytics, interoperability among platforms, expanded partnerships (fintechs, banks, NGOs), and blended finance to de-risk smallholder lending.				
Cross-cutting negative tailwinds: Pullback in donor funding, persistent structural barriers (land tenure, side-selling, collateral), climate/price shocks, and hidden over-indebtedness undermining sustainability.				
Other trends: renewed focus on resilience (climate-smart finance, insurance), post-COVID rebound fueling scaled digital approaches, and pilot innovations moving toward mainstream adoption.				

LOW	MEDIUM	HIGH
Limited activity or potential	Some activity or potential, context-dependent	Strong activity or potential, scalable or widespread

1.3 GETTING MORE GRANULAR ON KEY GROWTH CHANNELS

VALUE CHAIN ACTORS

Value chain actors (VCAs) remain the single largest source of smallholder finance globally, embedding credit within procurement and input supply models to secure reliable,

high-quality produce. They can be broadly segmented into four categories, each with a unique combination of drivers and opportunities for scale:

Breaking down value chain finance

Role in the agricultural supply chain

		Providers of agricultural inputs	Buyers of agricultural produce
Geographical scope and focus	Global players	Multinational input suppliers, typically offering a broad range of inputs (e.g., seeds, fertilizer, pesticides, machinery / technology) and with capacity to serve diverse agricultural markets and crops worldwide   Current lending to SHFs: USD ~720M	Multinationals, typically traders, processors and / or retailers / exporters, with a global footprint that are sourcing from multiple different countries and selling to customers globally   Current Lending to SHFs: USD ~2B
	Regional / local players	Typically, small to medium providers of agricultural inputs selling within one country or region, often have a more limited product offering and specialize in specific crops   Current lending to SHFs: USD ~200M	Typically, small to medium scale aggregators, traders and / or processors sourcing and selling to customers within one country or region   Current lending to SHFs: USD ~31B

GLOBAL OFFTAKERS:

- Profile & Motives:** Large multinationals sourcing export-oriented crops (e.g., coffee, cocoa). Financing is typically driven by sustainability targets and the need to ensure consistent volumes and traceable supply.
- Finance Approach:** Often provide in-kind or cash advances under contractual procurement arrangements.
- Potential & Constraints:** Their global footprint enables major scale, but side-selling, climate risk, and internal hesitancy to engage in direct lending can limit impact. Many initiatives are still driven by corporate social responsibility rather than tailored to local contexts, which hinders the development of strong service ecosystems and weakens linkages to other crops that farmers also produce. Partnerships with local financiers remain complex and underutilized.



REGIONAL/LOCAL OFFTAKERS

- *Profile & Motives:* Mid-sized traders, aggregators, or processors serving domestic or regional markets, with some also engaged in exports. Lending helps secure harvest volumes and farmer loyalty.
- *Finance Approach:* Short-term in-kind or cash advances, typically repaid at harvest. As much as 40% of their balance sheet may be tied up each season.
- *Potential & Constraints:* Often high capital costs, limited collateral, and frequent exposure to supply chain shocks hinder larger-scale lending.

GLOBAL INPUT PROVIDERS

- *Profile & Motives:* Major seed, fertilizer, and agrochemical companies selling to both commercial and smallholder segments. Credit is used to drive product uptake.
- *Finance Approach:* Frequently bundle financing with inputs, relying on local distributors to deliver goods and collect payments.
- *Potential & Constraints:* Could accelerate climate-smart agriculture adoption by partnering with financiers for co-lending or risk-sharing. However, the lack of a built-in offtake mechanism and fragmented distribution networks constrain expansion.

LOCAL/REGIONAL INPUT PROVIDERS

- *Profile & Motives:* Smaller agrodealers focused on local markets, typically operating in looser value chains (e.g., maize, sorghum, horticulture). Credit helps lock in sales and foster farmer loyalty.
- *Finance Approach:* Short-term in-kind loans; with thin margins and modest volumes.
- *Potential & Constraints:* Strong farmer relationships offer deep local insight, but limited working capital and minimal digital infrastructure restrict larger-scale growth. External partnerships, especially those involving blended-finance, could unlock new lending capacity.

WHERE SCALE AND IMPACT CONVERGE

While each actor plays a critical role, regional and local offtakers show the greatest immediate potential to expand fit-for-purpose finance. They combine strong local relationships with a direct commercial stake in farmer success—and could scale lending rapidly if affordable capital and cost-effective risk mitigation tools become more accessible. Collaborations that blend lower-cost funds, digital risk assessment, and enforceable offtake contracts can drive responsible growth in value chain finance, especially in under-served food crop segments. Emerging models, such as the service coalition approach highlighted in FarmFit’s [Service Coalitions Innovation Guide](#) (drawing on Syngenta’s experience), demonstrate how more coordinated partnerships can help overcome these constraints.

INNOVATORS

Over the past decade, a new wave of digital-first ventures—often labeled AgTech or FinTech providers—has emerged to address the persistent financing gaps in smallholder agriculture. While their business models vary, these “innovators” share a core promise: to leverage technology,

data, and agile service delivery to reduce costs, expand reach, and better meet the needs of smallholder farmers. Since 2012, their presence in emerging markets has grown significantly, with particular momentum in Sub-Saharan Africa.

BREAKING DOWN INNOVATOR LENDING

Credit Providers	Product and services marketplace	Farm services rental	PayGo asset service provider
Digital first MFIs, payments providers, and specialist fintechs that provide a broader bundle of services 	Digital platforms linking farmers to ag suppliers and buyers and/or facilitating access to holistic, bundled offerings for farmers 	Farm equipment rental companies establishing a network of owner-operator franchisees 	Asset-based businesses using PayGo financing model to support sales on credit 

Despite this growth, innovators still account for a relatively small share of total smallholder finance, dwarfed by established channels like value chain actors, MFIs, and state agricultural banks. Yet the potential for disruptive impact is significant. Digital-first models can reduce operating costs and extend credit to underserved farmers, while access to transaction-level data unlocks new opportunities for climate-smart lending, bundled services, and stronger risk assessments.

In practice, these innovators operate across several models:

- **Credit Providers** - Digital MFIs, payments-led lenders, and specialist fintechs that extend working-capital or input loans directly to farmers via mobile and agent networks. They price and underwrite using alternative data, then layer basic services (advisory, payments). Key constraints include acquisition costs, funding costs, and regulatory frictions.

- **Product and services marketplace** - Digital platforms that connect farmers to input suppliers and buyers, and facilitate end-to-end transactions. Finance is embedded at the point of trade and informed by platform data, enabling bundled offers and loyalty. Constraints include thin take rates, logistics execution, and the “chicken-and-egg” of building both sides of the market.
- **Farm services rental** - Equipment-as-a-service networks (e.g., tractors, threshers) that organize owner-operators and franchisees. Credit supports usage fees, spares, and operator working capital, converting lumpy capex into pay-per-use opex for farmers. The economics hinge on utilization, maintenance, routing density, and seasonal liquidity.
- **PayGo asset service provider** - Asset-based businesses that finance productive tools (e.g., solar irrigation) through pay-as-you-go contracts tied to

usage or smart meters. The model blends hardware, after-sales service, and credit to unlock long-tenor adoption. Key challenges: currency and working-capital intensity, repossession risk, and service quality over time.

KEY CHALLENGES

Although innovators are pioneering new approaches in smallholder finance, scaling impact remains difficult. Operational costs remain high—even for “digital” models—due to field agent networks and field operations required to reach rural customers. Limited access to commercial funding forces many to rely on grants or impact investment. Meanwhile, inconsistent regulations around mobile money and data usage increase complexity, and the reliability of alternative data streams is often undermined by static or incomplete information. Together, these factors slow progress toward sustainable, large-scale solutions.

PROMISING EXEMPLARS

A handful of standout models demonstrate what’s possible: from “marketplace hybrids” that embed finance in digital platforms for input and market access (e.g., Shamba Pride), to B2B analytics providers that enable banks and lenders to underwrite farm-level risk using satellite imagery and real-time weather data (e.g. Biological). These innovators combine the best of value chain finance—such as contract-based repayment—with the reach and agility of digital tools. While still early, they suggest that deeper partnerships, smarter data strategies, and bundled services could help reshape rural finance to benefit millions of smallholders.

Building on its prior research, ISF Advisors will publish a forthcoming State of the Sector deep dive on AgTech that will further unpack the Innovators channel, including business models, unit economics, and scaling pathways.

1.4 HOW CLIMATE CHANGE IS RESHAPING SMALLHOLDER FINANCE NEEDS

Climate change is fundamentally altering the outlook for smallholder agriculture. Rising temperatures, erratic rainfall, and more frequent extreme weather events are sharply increasing financing needs, while simultaneously pushing some farmers to exit production altogether.

In climate-risk hotspots, a meaningful share of rural populations, including many smallholder farmers, are expected to move as climate impacts mount. The World Bank projects internal climate migration hotspots emerging by 2030 and, by 2050, affected shares reaching a few percent of total population in many regions, driven by declining crop productivity and water availability.³ While this displacement lowers total demand, it imposes severe social and economic costs on rural communities. It will also shift financing needs—redirecting them from on-farm investment to support urban migration and resettlement.

At the farm level, climate impacts are reshaping not only how much finance is needed, but what it is needed for. Traditional lending models have been built around a

narrow set of needs: short-term seasonal working capital for inputs and labor. But as climate-related volatility rises, smallholder farmers increasingly need finance to **manage risk, absorb shocks**, and invest in long-term adaptation. Women are often hit hardest as they have less access to finance and other services needed to adapt to climate shock.

Based on these systemic changes three distinct shifts in financial demand are emerging:

- **From predictable to irregular liquidity needs.** Extreme weather events are undermining planting and harvest cycles, forcing farmers to seek capital on short-notice—for replanting, crop protection or recovery. Studies by CPI and CGAP, suggest that weather variability alone significantly increases seasonal working capital needs, driven by rising input costs for drought-tolerant seeds, pest-resistant inputs, emergency irrigation, and climate insurance.⁴ For example, smallholders growing crops vulnerable to erratic rainfall—such as maize, and rice—or facing new

3 World Bank. 2021. Groundswell Part II: Acting on Internal Climate Migration. Washington, DC: World Bank.

4 CGAP. “How Do Financial Systems Support Climate Resilience?” Blog, 29 February 2024.

5 Chemura, A. et al. “Contribution of improved varieties to maize productivity under climate change in Uganda.” Food Security (2025).

6 Wainaina, P., et al. “Trade-Offs across Cocoa Production Systems: What Are the Implications for Sustainable Intensification?” Sustainability 13, no. 11 (2021).

pest pressures like coffee and cocoa crops, are seeing annual input bills rise by up to USD 50–75 more per hectare.^{5 6}

- **From short-term to longer-term asset-based finance.** There is growing demand for medium-to-long-tenor finance to support adaptation investments, such as solar irrigation, post-harvest storage, mechanization, and drought-tolerant inputs. While these types of investments were typically being used for higher-value, perennial cash crops like coffee, cocoa, and tea, they are now increasingly required for most crop types. For instance, climate-proofing perennial systems (e.g. cocoa, rubber, coffee) can increase replanting and orchard rehabilitation costs by USD 1,000–3,000 per hectare.⁷ This includes the adoption of climate-resilient varieties, better soil and nutrient management, and improved water-use infrastructure. In parallel, mechanization and capital-intensive infrastructure, such as small-scale irrigation, water harvesting, and cold storage, can add a further 25–35% to baseline capital expenditure requirements.
- **From stand-alone to bundled solutions.** Financial products that work for farmers are increasingly bundled with regenerative agronomic advisory, weather alerts, insurance, offtake assurances, and access to critical inputs and assets—such as irrigation equipment or mechanization—often as part of broader landscape approaches or integrated production models (e.g., block farms). These bundled solutions are essential to ensure the success of resilience investments and to reduce risk for both farmers and lenders.

AGGREGATE IMPACT ON FINANCING DEMAND AND A POSSIBLE “DOUBLE-SQUEEZE”

The combined shift toward irregular short-term liquidity and longer-term asset financing is placing significant upward pressure on overall financing demand. If the current supply of finance remains static, the sector faces a widening imbalance—not only are farmers demanding more capital per hectare to climate-proof their production, but a substantial portion of this demand

(e.g., infrastructure, irrigation, insurance) falls outside the scope of many existing products and providers. Put simply, even with fewer active smallholders due to climate displacement, net financing needs could still sharply rise. Estimates suggest that if the average per-farmer financing needs increase by 30–40%, total demand could rise by USD 100–130 billion annually.⁸ This would expand the existing USD 230 billion annual finance gap to over USD 360+ billion per year, driven purely by demand-side shifts.

Climate-driven volatility may further erode lender risk tolerance and constrain the supply of capital—especially in fragile or underdeveloped markets. As noted in Chapter 5, rising climate exposure can degrade loan performance, spike insurance costs, and ultimately disincentivize lenders from operating in high-risk markets—unless backed by robust de-risking measures. This raises the possibility of a “double squeeze”: rising per-farmer financing demand coupled with a contraction of supply in the very markets most in need of adaptation capital. Without strategic intervention, such as blended capital, climate-smart product design, and stronger public-private alignment, the sector risks facing a widening gap between financing need and delivery capacity. In particular, insurance can play a dual role here, both protecting the higher investments that farmers must make to adapt and giving lenders greater confidence by ensuring that risks are properly assessed and managed.

Key takeaway: Climate change is driving a structural shift in smallholder financing needs—from productivity-oriented input credit to resilience-focused, often asset-linked finance. This shift is increasing demand, exposing gaps in product design, and raising fundamental questions about the viability of current delivery models. It also comes with heightened risks, as farmers are required to make larger upfront investments in unfamiliar practices. Finally, given women's lower access to services and finance, solutions need to be designed with a gender lens.

⁷ Hicks, “Cost-effective coffee farm renovation and rehabilitation,” Coffeelands blog (2023)

⁸ Authors’ analysis based on overall sizing estimates and interviews with market participants

1.5 CONSIDERING THE KEY SOURCES AND TYPES OF CAPITAL

While the industry has largely coalesced around a channel-based view of smallholder financing, truly understanding the market requires stepping back to also understand the flow of capital—from original sources to channels to end recipients. Yet sizing capital remains an even greater challenge than quantifying the financing flowing through individual channels. A stylized view, however, allows us to grasp not only *where* capital is sourced from but perhaps more importantly, *what* type of capital it typically is.

This lens helps illustrate how below-market funding and risk-sharing measures remain essential for scaling smallholder finance. It's a narrative we unpack progressively throughout this report, with each section adding layers of complexity, and nuance, to what is often oversimplified in market discourse.

At the most basic level, financing channels draw on capital from across a spectrum of commercial, sub-commercial (concessional), and grant-based sources⁹:

Commercial capital is provided by private investors, DFIs operating at market terms, and the internal resources of established lenders (e.g., retained earnings and customer deposits). This capital is deployed through senior, market-rate debt, working-capital lines, trade-finance instruments, and equity stakes—each priced to deliver risk-adjusted returns without subsidy.

Sub-commercial (concessional) repayable capital is typically provided by DFIs, development banks, public programs, and some philanthropic investors. Terms are below market or structured to absorb risk in order to crowd in private participation or enable lending that is commercially marginal. Instruments include below-market debt, subordinated or mezzanine tranches, and other junior capital that changes the risk–return profile for senior investors.

Grants (non-repayable) are provided by philanthropies, bilateral and multilateral donors, and public programs. Grants are used to build market infrastructure and to catalyze finance and client outcomes rather than to earn a financial return.

To avoid confusion, two cross-cutting elements are called out separately because they are **uses of concessionality**, not stand-alone funding types:

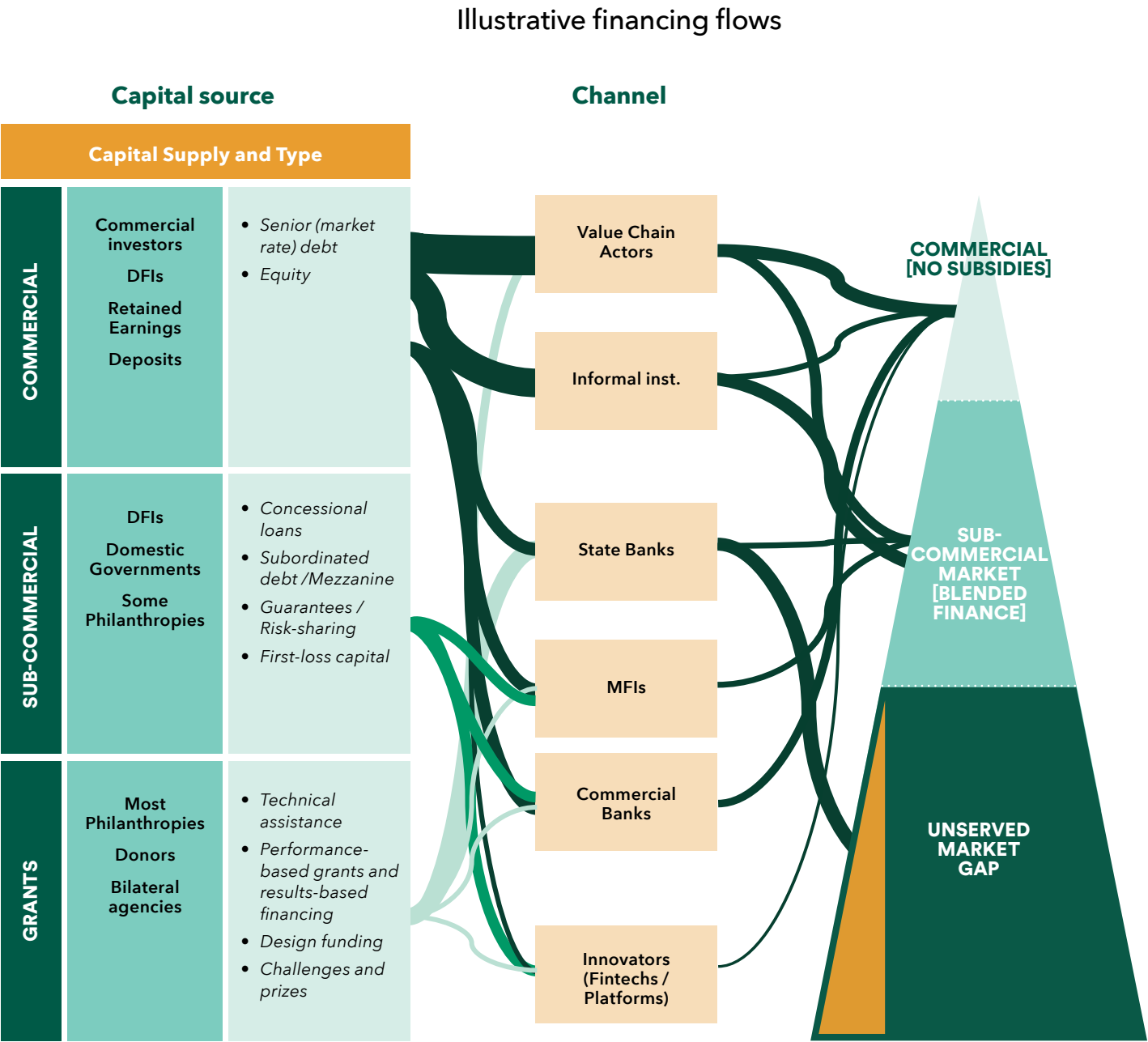
- **Risk-transfer instruments.** Guarantees and insurance transfer or absorb risk but are typically capitalized or subsidized by grants and can be combined with sub-commercial repayable capital. Premium subsidies and first-loss reserves commonly rely on grants. These instruments are especially important in high-default or climate-exposed markets.
- **Technical assistance and market infrastructure.** Technical assistance for providers and clients, product design, digitization, data systems, and other public-good investments are most often grant-funded and complement both commercial and sub-commercial flows.

This stylized view makes clear that below-market funding and risk-sharing measures remain critical for advancing smallholder finance—but they address only part of a much broader puzzle. Even with the right capital in place, FSPs face complex questions: *How should offerings be structured? Which segments should be prioritized? How do enabling factors like regulation, infrastructure, or data availability influence delivery?*

This underscores the need for a more holistic framework—one that captures not just **who** delivers finance and on what terms, but also **how** provider economics and impact potential are shaped by deeper variables such as farmer characteristics, market dynamics, and business model design. The next section introduces this new framework. It is designed to help stakeholders more precisely map the interplay between viability conditions and targeted concessional support, ultimately fostering both sustainable returns and meaningful smallholder impact.

⁹ It is also important to note that a significant share of both concessional and even some commercial flows ultimately pass through public finance channels or government budget lines, underscoring the central role of public actors in shaping capital availability.

FIGURE 3. ILLUSTRATIVE CAPITAL SOURCES AND DELIVERY CHANNELS



1.6 RETHINKING LENDING VIABILITY AND IMPACT, AND THE ASPIRATION FOR THIS REPORT

Since the last release of the State of the Sector report, the sector has made significant progress in assessing the cost and benefits of smallholder finance, particularly through IDH's and Aceli Africa's analyses and adjacent work by UNDP on agri-insurance. These efforts have enabled the sector to analyze the economics and impact of over 100 providers of financial and non-financial services to smallholders. Yet comparing business models across different value chains, regulatory environments and farmer segments remains complex. It is difficult to isolate individual variables or understand their interdependencies.

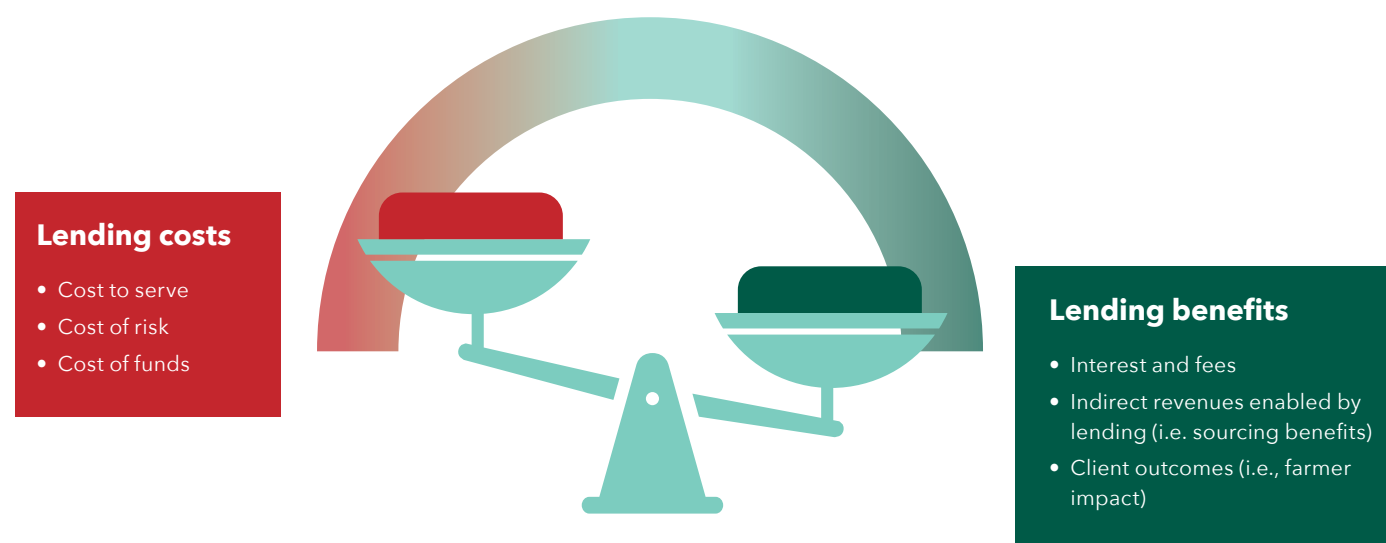
Without a systematic way to assess these elements, the commercial viability of smallholder finance, and its potential trade-offs or synergies with impact, remains a persistent blind spot. This constrains the efficient allocation of both commercial and concessional capital. We need a new framework—one that can better unpack the layered complexity of smallholder markets and better align farmers' financing needs with viable delivery models and sources of capital.

In other words: Can a more nuanced understanding of the market help us determine where, when and under what conditions smallholder finance can be both viable and impactful, and what that means for capital deployment, concessional support, and scaling pathways?

INTRODUCING THE SMALLHOLDER FINANCE VIABILITY FRONTIER

At the most fundamental level smallholder financing becomes viable when lending-related benefits, including client outcomes, outweigh lending-related costs, including the upfront cost of acquiring smallholder farmers as customers and establishing rural and agricultural lending infrastructure. These benefits may include direct revenue, indirect revenue (e.g., sourcing, sales), or broader impact outcomes, depending on the provider's underlying motivation.

FIGURE 4. LENDING VIABILITY MODEL



For SHF financing to be viable lending-related benefits need to outweigh lending-related costs

Viability is driven by the combinations of i) markets; ii) business models; and ii) enabling environments - this report will seek to establish a new way of systematically considering this balance

For some financing channels, such as commercial lenders or agribusinesses, viability is achieved when revenue from lending (or lending-enabling activities) exceeds costs without external subsidy. For others, such as social enterprises or NGOs, viability may be defined more broadly—where a combination of financial returns and positive climate, livelihood or gender outcomes justify the cost of delivery. Chapter 3 explores how these motivations shape the viability frontier for different types of finance providers.

Regardless of the differences, the viability of smallholder finance is never static. It is influenced by the interaction of three critical factors:

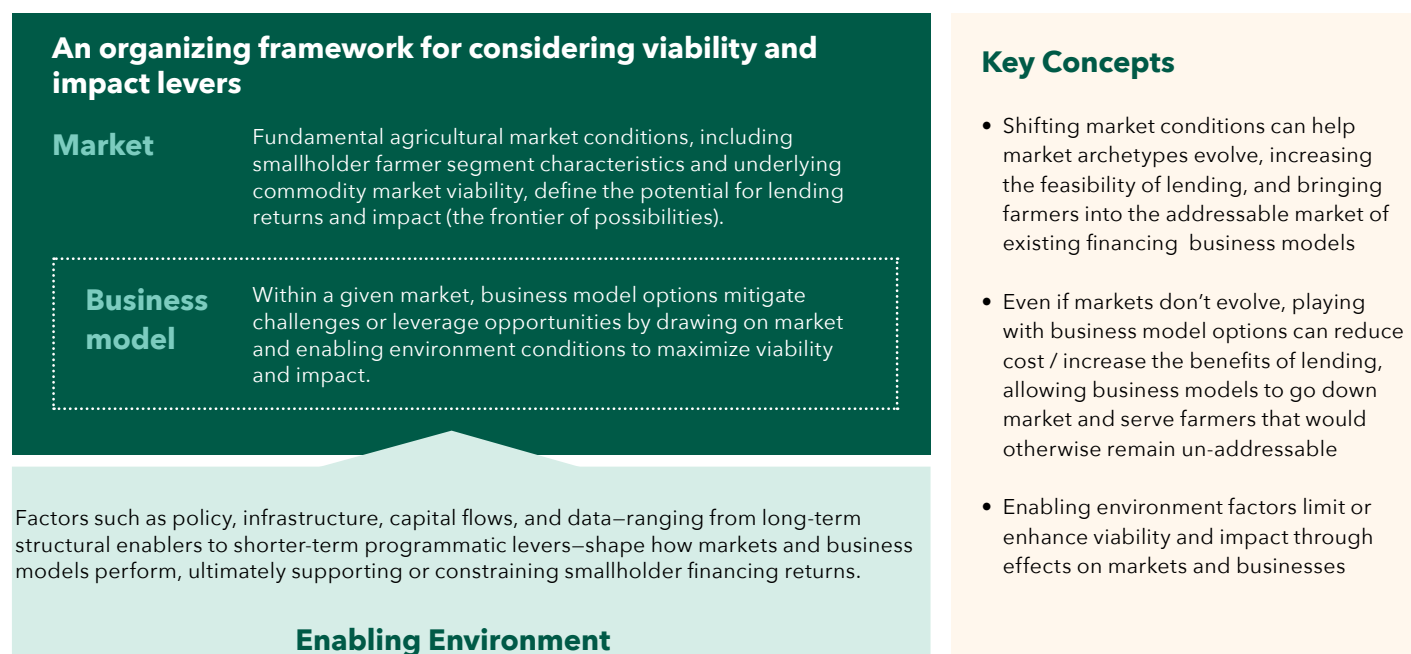
- **Interplay of markets** – the characteristics of smallholder segments and “underlying commodity viability conditions,” which shape the potential for financial and impact returns.
- **Business models** – the operational strategies and structures used to mitigate risks, lower costs and enhance value within a given market.

- **Enabling environment** – including external factors such as policy, regulation, and infrastructure—can support or constrain smallholder financing and impact returns; for example, the penetration of public agricultural insurance.

Together these elements define what we call the smallholder finance viability frontier—a conceptual boundary where sustainable-delivery and meaningful impact intersect. Like a Pareto frontier in economics, this curve can shift outward over time as delivery models improve, technologies evolve, or enabling conditions strengthen. The key challenges for stakeholders is to identify where each provider sits on this curve, and what interventions are needed to move them toward greater viability and impact.

To unpack this complexity, the following sections introduce a set of layered frameworks to help assess and compare lending models in more nuanced ways.

FIGURE 5. UNDERSTANDING THE LAYERS IMPACTING THE SMALLHOLDER FINANCE VIABILITY FRONTIER



A note on distinctions: For the purposes of this report and its analysis, we treat markets as the dynamics that shape demand and supply at the crop-country level (e.g., farmer profiles, value chain structures, business models), and enabling environment factors as the broader conditions that influence viability across markets (e.g., policy, infrastructure, capital flows, data, and coordination mechanisms).

2. UPGRADING THE INDUSTRY'S APPROACH TO CONSIDERING MARKETS AND CONTEXT



2.1 RETHINKING AGRICULTURAL MARKET ARCHETYPES

Historically, the agricultural development sector (broadly defined) has categorised agricultural markets using simplified archetypes—based on the strength of links between upstream and downstream actors (i.e., tight vs. loose value chains), the commodity target market (domestic vs. export) or the level of crop commercialization (food vs. cash crops). Previous State of the Sector reports also applied these lenses to segment smallholder finance needs.

However these categories can be misleading. Tight, export-oriented, cash crop markets are often associated with more ‘sophisticated’ farmer profiles, and greater commercial viability, whereas food crops, domestic markets or loose value chains are typically seen as lower-value and less financeable. As a result, lending viability has frequently been assessed using one—or at most a few—simplistic dimensions. In practice, the true viability of lending to smallholder farmers depends on a complex and interdependent set of factors linked to:

a) The underlying producer: the profile and characteristics of the specific smallholder farmer segments, based on the ISF smallholder farmer livelihoods “pathways model”.

b) Commodity market characteristics: conditions such as commodity market stability, potential for aggregation and value addition, quality and value potential, and risk profiles.

Together these dimensions shape the costs, risks and potential benefits of lending in any given context.

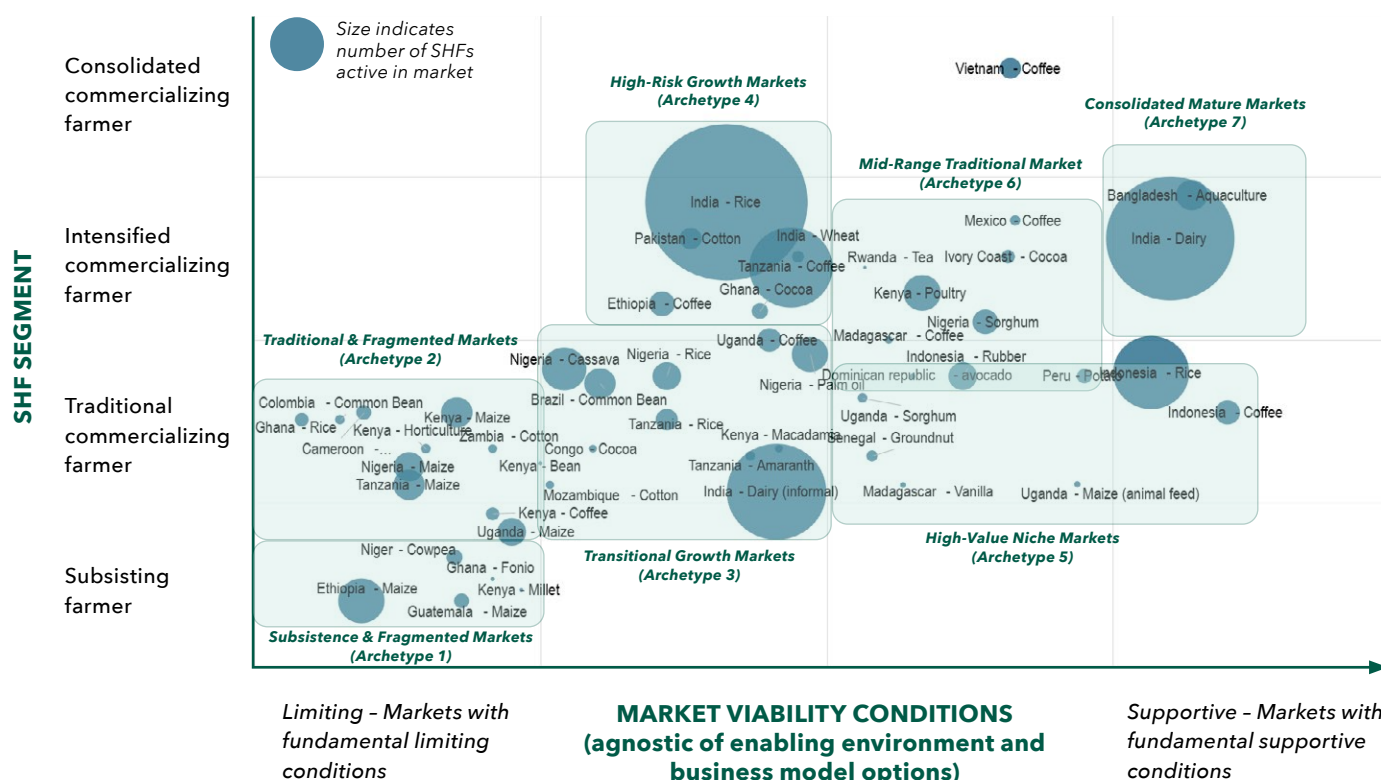
Drawing on our research over the past five years, this report introduces a more sophisticated model that distinguishes between market dynamics, business model design and enabling environment conditions. The aim is to benchmark and compare smallholder market types more accurately across regions, crops, and farmer profiles.

As a first step in this approach, we define **seven primary “market archetypes”**, clustered according to similarities and differences in lending feasibility profiles, agnostic of business model options and enabling environment conditions.

Note: These archetypes rely on two primary axes, i) *Primary farmer segments: based on the level of commercialization and consolidation; and, ii) Commodity market viability: based on market value, production levels, and risk profiles. Refer to the Annex for full details on methodology.*



FIGURE 6. MAPPING AN UPDATED VIEW OF MARKET ARCHETYPES



As agricultural markets mature and production and offtake markets develop, boundary conditions for lending shift and the “financeability” of smallholder farmers within them becomes more attractive, expanding the “addressable” market for existing financing channels, even without any changes to their current business models.

In Figure 6, the archetype map draws on 55 crop–country markets selected for geographic breadth and coverage of major smallholder crops. The purpose of the graphic is to illustrate how markets fall within the seven archetypes, highlighting their relative profiles and positioning. Bubble sizes are estimates representative of the specific markets plotted, giving a sense of concentration and

variation across contexts. The visualization is intended to be illustrative rather than exhaustive. The underlying analysis is based on research across 80+ sources of underlying value chains as well as triangulation with primary data from IDH. For methodological details and limitations, see the Annex.

2.2 KEY INSIGHTS ON MARKET ARCHETYPES AND DYNAMICS

Progression from Archetype 1 to 7 tracks increasing farmer commercialization and more supportive market conditions. This progression reflects a dual shift: farms become larger and more commercial, and surrounding infrastructure and market conditions improve. This “up-and-right” trajectory mirrors national agri-food transformations. As governments invest in public infrastructure, digital services, price transparency, and risk-sharing instruments, private capital naturally follows, moving agricultural production towards more intensified, consolidated systems.

Over time, this public-to-private shift moves the center of gravity of agricultural GDP (see ISF Advisors' latest [Role of Government research](#)) from predominantly subsistence-oriented households (Archetype 1) toward more intensified and consolidating producers (Archetype 7). While residual pockets of diversified, lower-value farming will always persist and merit targeted support, the bulk of lending opportunities—and, increasingly, food production—progressively shifts toward these consolidated and commercially viable segments, a dynamic we refer to as moving “up-and-right.”

Consequently, a positive correlation emerges between larger, more commercialized farmer segments and increasingly supportive market viability conditions. Larger, more consolidated farmer enterprises typically benefit from higher-value markets, larger loan sizes, lower transaction costs, and reduced risks, making lending significantly more viable and profitable. Likewise, stronger commodity market viability further enhances the overall feasibility of lending. Chapter 4 shows how this correlation between lending feasibility profiles and unit economics of different financing channels plays out in practice.

A note on framing: the archetypes describe different states of market organization, not necessarily a hierarchy of desirability. While greater commercialization and improved market conditions can expand the addressable market for finance, they also introduce new trade-offs and risks. For example access to finance will likely be higher in higher viability markets but these dynamics can also shift bargaining power away from farmers. The purpose of this framework is to help

finance providers and policymakers tailor support to the realities of each archetype, while recognizing that in many cases markets will remain in lower archetypes and require sustained subsidy or targeted support.

While the archetypes are presented in a sequence from 1 to 7 that broadly tracks farmers’ progression from subsistence to consolidation, not all markets follow this linear path. Some “niche” markets combine unusual characteristics—such as high volatility or highly specialized crops—that shape lending viability differently from what farmer commercialization alone would suggest. These niche Archetypes (4 and 5) are therefore included within the sequence but flagged as distinct, since they sit outside the typical “up-and-right” trajectory of commercialization and enabling conditions.

Market Archetypes in detail:

- **Archetype 1: Subsistence & Fragmented Markets:** Smallholder farmers primarily producing staple crops (e.g., maize in Ethiopia and Guatemala, and millet in Kenya) on small, fragmented plots, often with high exposure to climate shocks. A lack of surplus to engage in commercial production limits demand for financing—farmers are typically unwilling to invest in their farms, though they may seek short-term input credit. Commercial lending viability, where it exists, often comes from informal channels based on existing personal relationships or non-agricultural revenue sources.

Key needs: Access to basic inputs, such as subsidized or partially subsidized fertilizer and seeds, entry-level training in agronomic practices, simple financial tools (e.g., funeral or health insurance), and support to stabilize household consumption.

- **Archetype 2: Traditional & Fragmented Markets:** Emerging commercial smallholders, (e.g., maize in Tanzania, cassava in Nigeria, and wheat in Kenya) are beginning to diversify beyond subsistence farming but continue to face low productivity, high climate risk, and unstable local markets. Value chains remain informal and fragmented, resulting in high transaction costs and limited aggregation potential. Commercial lending is severely constrained, and concessional support is often essential.

Key needs: Building on Archetype 1 needs, these farmers also require training in improved agronomic practices focused on productivity and diversification, access to simple farm technologies such as irrigation and storage, and more consistent access to affordable inputs.

- **Archetype 3: Transitional Growth Markets:** Smallholders typically operate moderate-sized plots with mixed staple and cash crops (e.g., maize in Nigeria, rice in Uganda, and cotton in Mozambique). There is early structuring of cooperatives or farmer groups, and increasing engagement with markets but value chains remain largely informal and volatile. Productivity gaps persist due to limited input use and access. Lending remains challenging, with thin margins driven by uncertain yields and prices. Concessional financing, targeted guarantees, and technical assistance remain critical to unlock greater financing activity.

Key needs: Formation and strengthening of producer organizations, access to local markets for emerging surplus, input loans (especially climate-resilient seeds, fertilizer, and crop protection), farm advisory and information services, and basic farm technologies related to irrigation, storage, and harvesting.

- **[Niche Market] Archetype 4: High-Risk Growth Markets:** Large-scale, commercially oriented smallholder production within substantial yet volatile commodity markets (e.g., cotton in Pakistan, rice in India, and coffee in Ethiopia). Farmers have larger average landholdings, higher input use, and greater commercial orientation, but face significant price volatility, fragmented offtake structures, and climate-related vulnerabilities. Lending can be economically attractive given the scale and commercial potential, yet typically requires targeted risk-sharing mechanisms, such as partial guarantees, insurance, and first-loss arrangements, to adequately mitigate persistent market and production risks.

Key needs: Similar to Archetype 3, with increasing emphasis on professionalized producer organizations, access to regional market linkages, and financing for both productivity improvements and risk management tools.

- **[Niche Market] Archetype 5: High-Value Niche Markets:** Smallholders engaged in higher-value crop production within well-structured and relatively formalized value chains (e.g., robusta coffee in Indonesia, vanilla in Madagascar, and animal feed maize in Uganda). Farmers often operate small plots, but benefit from clear market linkages, premium pricing, and structured buyer relationships. Though yields may initially remain moderate, the presence of formal relationships, targeted agronomic support, and specialized markets significantly enhance lending feasibility. Financing providers tend to offer bundled solutions combining credit with improved inputs, and advisory services are well-suited to capitalize on opportunities within this archetype.

Key needs: Loans for higher-quality inputs, tailored advisory services (including soil testing and crop-specific recommendations), access to irrigation, storage, and harvesting services, agricultural insurance (index or indemnity-based), stronger integration into buyer and trader networks with fair pricing, and training in farm management and financial literacy.

- **[Niche Market] Archetype 6: Mid-Range Traditional Markets:** Moderately sized, commercially oriented smallholders operating in well-established value chains (e.g., cocoa in Côte d'Ivoire and Ghana, coffee in Mexico, and rubber in Indonesia). Farmers increasingly adopt intensified production techniques and improved inputs, and are integrated into partially formalized value chains. Market viability conditions are supported by government interventions, including price stabilization mechanisms or regulated offtake arrangements, which help reduce price volatility but can limit upside potential. Although still vulnerable to production and climate risks, these markets present increasingly attractive economics for commercial lending, with some continued need for concessional or blended financing solutions.

Key needs: Building on Archetype 5, these farmers require more sophisticated advisory tailored to their crop and region, working capital and harvest loans, expanded access to insurance products, and support to deepen their participation in structured buyer networks.

• **Archetype 7: Consolidated mature markets:**

Large-scale, highly commercialized smallholders integrated into formal, stable value chains (e.g., dairy in India, aquaculture in Bangladesh, rice in Indonesia, and coffee in Vietnam). Farms typically demonstrate high productivity, consistent use of advanced inputs, professional farm management, and strong market linkages, creating robust and predictable lending economics. Lending is highly viable with predominantly commercial capital, though residual risks, such as climate events or global market fluctuations, persist and may occasionally require minimal concessional support to enhance resilience or support market innovations.

Key needs: At this stage, farmers primarily need support to expand cultivated area and improve farming techniques for greater efficiency.

RECOGNIZING EXCEPTIONS AND NUANCES

Mapping markets based on predominant farmer segments and underlying viability conditions is not an exact science. It requires balancing analytical simplicity with the reality of complex, often heterogeneous agricultural systems. While archetypes offer a helpful starting point, they cannot capture every nuance. Most markets contain internal pockets or sub-segments that differ meaningfully from the dominant archetype classification.

Farmer concentrations and associated financial needs vary significantly by archetype and region. While estimates vary by region, the majority of smallholder farming households globally are concentrated in Archetypes 1 (estimated to be approx. 55M), 2 (approx. 50M), 3 (approx. 50M), and 4 (approx. 65M) based on estimated extrapolation from our sample of over 55 crop-country market assessments. Importantly, because women are significantly less likely to be the owners of the land that they work on or have access to productive assets and services, such as agricultural inputs or extension and training services there tends to be a higher concentration of women in the more challenging market archetypes (Archetypes 1, 2 and 3).

For example:

- **Nigeria Rice** is broadly classified as Archetype 2 due to fragmented structures and low yields, but includes a growing segment of intensified farmers more aligned with Archetype 3.
- **India Dairy** straddles Archetypes 2 and 6, with formal cooperative channels in some areas and informal local sales in others.
- **Kenya Poultry** spans a broad spectrum from subsistence, informal producers (Archetype 1-2) to vertically integrated, highly commercialised operations (Archetype 6).

In addition, the gender distribution across market archetypes varies. Women are overrepresented in Archetype 1: subsistence & fragmented markets and Archetype 2: traditional and fragmented markets. Their ability to engage in more attractive markets is limited, due to the fact that they often have less access to markets and productive assets and services such as information, extension, improved seeds, mechanization, irrigation and land.

Recognizing and responding to this nuanced internal diversity is essential. Lenders and policymakers must tailor financing and interventions to the specific sub-market dynamics within each archetype, rather than relying solely on broad classifications.

Considering this spread across regions, we can observe:

- **Sub-Saharan Africa:** Dominated by Archetypes 1, 2, and 3. These markets are characterized by weaker market viability conditions and limited commercialization. The majority of farmers fall within subsisting or traditional commercializing segments, revealing a regional economic concentration in lower-commercialized agricultural production.
- **South and Southeast Asia:** Primarily Archetypes 3, 4, and 7 are driven by large, relatively well-developed farmer segments in key Indian markets, such as rice (Archetype 4) and dairy (Archetype 7). More broadly, this region tends to exhibit relatively well-developed and functioning market viability dynamics.

- **Latin America (LATAM):** Reveals a sharp distinction between highly commercialized smallholder crops, such as avocado and coffee in Mexico, that map to the upper right-hand side of the archetype chart, and staple crops like maize in Guatemala and common beans in Colombia, primarily produced by subsistence and transitioning farmers. This split reveals a broader dynamic in the region, where a few well-supported, high-value smallholder crops, like coffee, exist alongside a wider base of staple crops that are less integrated into formal value chains and often under-financed.

Because most farmers sit in Archetypes 1–4, overall demand skews toward small, seasonal, and higher-risk loans that often depend on concessional support, while the smaller share in Archetypes 6–7 drives outsized demand for larger, multi-year adaptation and asset investments more suited to commercial capital. This distribution ultimately defines both the scale and structure of global smallholder finance demand.

From a pure market perspective, Archetypes 6–7—**accounting for ~15% of farmers** when extrapolated out—are far more conducive to lending viability and therefore attract more incentives for commercial capital. However, the majority of farmers, and particularly women, are in Archetype 1, 2, and 3 (**~55% of farmers**) where the conditions for financially viable lending to farmers are particularly challenging. This dynamic surfaces a critical trade-off between commercial viability and impact. It raises key questions around the enabling environment and business models needed to serve lower-viability segments. Can supportive policies and innovative delivery models tip the balance toward viability? If not, how much concessional capital or government subsidy is required, and where? At the same time, it is important to ask whether certain policies or subsidies may unintentionally hinder farmer professionalization and crowd out private investment, as highlighted in recent [IDH's analyses](#). Chapters 4 and 5 unpack these trade-offs through the lens of different financing channels and enabling environment conditions.

2.3 CLIMATE RISK IS REDRAWING THE MARKET MAP

Across the seven market archetypes, climate change acts as a viability modifier: amplifying pre-existing risk in some segments, and introducing new vulnerabilities in others. These impacts are not uniform.

In lower-viability markets (Archetypes 1 and 2), reliance on rainfed production, limited infrastructure and minimal adaptive capacity expose farmers to severe climate pressures, such as rising temperatures, erratic rainfall, and drought and flooding. More commercially integrated markets (Archetypes 6 and 7) tend to be relatively more resilient, but even these face rising adaptation costs.

In transitional markets (Archetypes 3 and 4) climate exposure presents both a challenge—such as degrading viability—and an opportunity for climate-smart business model evolution. With targeted investment in resilience infrastructure (e.g., irrigation, transport) and services, these markets may “push right” on the viability curve.

Importantly, while all archetypes are exposed to climate risks, market-based insurance solutions are only being used in some, often tied to the underlying farmer demand and viability of providing insurance, especially where supportive public policies are lacking.

FIGURE 7. IMPLICATIONS OF CLIMATE PRESSURE ON LENDING VIABILITY BY MARKET ARCHETYPE

Market Archetype	Climate pressure	Viability implications
1. Subsistence & Fragmented	High exposure with minimal resilience - rainfed, low productivity, few buffers (e.g., limited infrastructure and supporting services)	Extremely limited resilience. Lending is broadly infeasible without major public subsidy. Climate shocks will drive ad hoc, emergency liquidity needs rather than planned seasonal finance. Adaptation demand is mostly for grant-funded inputs, basic irrigation kits, or social protection measures (e.g. post shock payouts), which commercial lenders are unlikely to meet.
2. Traditional & Fragmented	High exposure but with slightly additional capacity for adaptation and resilience; some market access but weak service ecosystems	Marginal viability worsens. Climate volatility increases the need for short-notice working capital (for example replanting, pest control) and modest asset investments such as small pumps or improved seed. Requires high concessionality (guarantees, bundled technical assistance) to meet both urgent liquidity and small-scale adaptation finance demands.
3. Transitional Growth	Moderate to high exposure; early signs of service uptake and value chain engagement	Viability possible with climate-smart bundling such as irrigation, index insurance, advisory services. Demand will shift toward multi-season asset finance for adaptation (e.g., solar irrigation, post-harvest storage) alongside flexible short-term loans to manage irregular planting and harvest cycles. Blended models can scale if both needs are met together.
4. High-Risk Growth	Moderate to high exposure, but more commercialized underlying farmer segments are able to create additional resiliency layers	Higher risk offset by commercialization and cultivation of higher-value and growth-oriented crops. Lending viable with innovation and partial de-risking. Demand will rise for both larger input loans (e.g., climate-resilient seeds, crop protection) and long-term adaptive capital such as orchard rehabilitation and water infrastructure. Seasonal cashflow disruptions will require more flexible repayment structures.
5. High-Value Niche	Variable moderate exposure depending on crop and location; moderate resilience via premium value chains but mitigated in part by more traditional and subsisting farmers	Viable for commercialized segments operating in premium value chains. Less-commercialized farmers remain vulnerable and require resilience tools for finance (e.g., input bundling, forward contracts, weather-linked structures). Climate-risk drives seasonal and long-term capital needs.
6. Mid-Range Traditional	Moderate exposure with decent adaptation and resilience reach	Generally viable if adaptation practices are adopted. Requires flexible lending (e.g., variable repayment terms, multi-season capital) and risk-sharing mechanisms to maintain scale. Working capital may rise with climate adaptation uptake.
7. Consolidated & Mature	Lower relative exposure; high adaptive capacity via infrastructure, mechanization, and market access	High resilience due to infrastructure and management. Remains viable; the main climate-linked finance opportunity is long-term sustainability upgrades rather than basic working capital (e.g., regenerative agriculture transitions, capex for resilient infrastructure). Demand likely to shift toward long-term capex for resilient assets (e.g., regenerative agriculture transitions and water-efficient processing).

More broadly, climate pressure is reshaping the map of market viability. Some market segments may slip below the viability frontier (i.e., shift ‘down and to the left’ on the mapping of market archetypes created in Chapter 2), while others may retain their position—but only if adaptation investments and delivery innovation are mobilized at scale. These shifts reinforce the need for climate-linked finance,

blended capital, and new service models to preserve and expand investability in an increasingly climate-stressed world. Finally, given the role women play in agriculture and the fact that they are disproportionately affected by climate change, the application of a gender lens in those delivery innovations and adaptation investments is crucial.

3. BUSINESS MODEL ECONOMICS AND IMPACT ORIENTATIONS



3.1 UNDERSTANDING LENDING CHANNELS AND UNDERLYING BUSINESS MODELS

In Pathways for Prosperity, we introduced a service delivery model typology that segments providers based on their primary objective for lending to smallholder farmers. Understanding this underlying motivation is critical, as it reveals why certain actors engage in lending and helps explain how their business model decisions (e.g., target farmer segment, product structure, pricing) are made. These choices define the revenue, cost and risk profile of the model, as well as its potential to deliver positive outcomes for farmers.

We identify four primary objectives for lending to smallholder farmers, each with a range of sub-business model variations. These give rise to different business model structures and design choices, as outlined in Figure 8.

1. Supply security: lending to guarantee supply

These providers lend to ensure reliable access to produce that feeds their core operations. Lending is a means to an end—typically to secure more, higher-quality and consistent supply. Credit is often provided in the form of inputs and/or services, free or at minimum cost, and tied to a purchasing agreement—either formal or informal. Lending-related revenues (e.g., interest or input mark-ups) are often insufficient to cover the full cost and risk of lending, with viability only achieved through longer-term sourcing benefits.

Examples: traders, processors, vertically integrated commercial producers, AgTechs engaged in offtake agreements.

2. Service profitability: lending as a core product

Here, lending itself is the core business, aiming to generate revenue from financing smallholder farmers.

Credit is most often provided in cash, either as a stand-alone product, or bundled with additional services. Because lending revenues must fully cover both cost and risk to yield a positive margin, pricing is typically set to account for worst-case scenarios.

Examples: MFIs (group and individual lending), commercial banks individually lending or operating in partnership with value chain actors, AgFinTechs, SACCOs.

3. Service profitability: lending as an enabler of non-financial services

Providers lend to drive uptake of their core non-financial products or services. In this case, lending is not the business model itself, but a lever to generate sales or traction in the provider's primary offering. Credit is typically bundled with non-financial services, provided in kind, and offered either free or at a minimum cost. Because lending-related revenues rarely cover the full cost and risk, viability depends on the increased uptake of core non-financial services.

Examples: input suppliers, agricultural marketplaces, agricultural mechanization services.

4. Client outcomes: lending to improve farmer livelihoods

Providers lend to improve income, wellbeing and resilience among smallholder farmers. In this model, finance is a tool—not the end goal—with success measured by positive outcomes for farming households and businesses. Credit is typically in-kind, and bundled with high-touch, non-financial services such as training, extension, or market access. These services aim to unlock productivity, income, and resilience, often at concessional or below-market rates.

Examples: NGOs, development programs, social enterprises.

FIGURE 8. BUSINESS MODEL DESIGN CHOICES ACROSS KEY DIMENSIONS

Building on Chapters 1 and 2, this table offers a snapshot of typical provider sub-models design choices: delivery model, pricing, service customization, customer relationship, technology use, and revenue model. It is illustrative rather than definitive, as many of these choices exist on a spectrum and can vary by crop, country, client segment, and organizational capacity. Providers may also blend approaches or shift over time, so the variations shown reflect typical positioning rather than fixed rules. This view is intended to help compare models at a glance, while the chapter text explores the nuance and variation in greater depth.

	LENDING CHANNEL	DELIVERY MODEL	SERVICE CUSTOMIZATION	CUSTOMER RELATIONSHIP	TECHNOLOGY USE	PRICING	REVENUE MODEL	CREDIT STRUCTURING
Supply Security	Traders							
	Processors							
	Commercial Producers							
	AgTechs							
Service Profitability (Lending as Core)	Comm. banks - Direct lending							
	Comm. banks - Partnerships							
	MFIs - Group lending							
	MFIs - Individual lending							
	AgFinTechs							
	Informal Lenders (e.g., SACCOs)							
Service Profitability (Lending as Enabler)	Input Providers							
	AgTech Marketplace							
	Farm Services							
Client Outcomes	Social Enterprises							

DELIVERY MODEL - how services are delivered to the client

- In-house - all services delivered internally
- Partnership-led - curated partner network, not open plug-in
- Hybrid - mix of in-house and partners
- Open platform - third parties plug in to deliver services

PRICING - how lending is priced

- Market-based pricing (Interest rates and fees are set in line with prevailing commercial market rates)
- Partially subsidized pricing (Rates are lower than market due to concessional funding, donor programs, or strategic discounts)
- Fully subsidized / grant-based pricing (Clients bear little or no cost; funding is primarily donor or government-backed)

SERVICE CUSTOMIZATION - degree of tailoring to client profile

- Standardized
- Moderately tailored
- Highly customized

CUSTOMER RELATIONSHIP - interaction model during service delivery

- Low-touch, transactional
- Group-based
- High-touch, personal
- Long-term, recurring relationship
- Medium touch

TECHNOLOGY USE - role of digital tools in operations and delivery

- Manual, offline
- Basic digital tools
- Integrated digital systems (e.g., platform, APIs, analytics)

REVENUE MODEL - how value is captured

- Interest and loan fees
- Product/service sales or mark-ups
- Platform / transaction fees
- Subscription/usage fees
- Revenue sharing / partnership commissions
- Indirect/strategic value capture (e.g., sourcing benefits)

CREDIT STRUCTURING - How credit is disbursed and tied to production/use

- Cash-based loans (working capital or liquidity, not tied to input purchase)
- In-kind credit (inputs provided directly, e.g., seed, fertilizer, equipment)
- Bundled credit (loan tied to additional services, e.g., advisory, insurance, etc.)
- Cycle-tied (structured around crop/production cycles with seasonal repayment schedules)
- Flexible/unbundled (loan not linked to inputs or cycles; used for broader HH or farm needs)

It's important to note that many organizations have multiple objectives. For example, an offtaker may prioritize supply security while also aiming to improve farmer livelihoods (e.g., Landmark Milers). The motivation for lending will typically drive specific business model design choices. Figure 8 illustrates how provider types align with different design choices.

3.2 COMPARATIVE VIEW OF BUSINESS MODEL ECONOMICS ACROSS MODELS

3.2.1. A MODEL FOR ESTABLISHING ECONOMICS (AND POTENTIALLY IMPACT ORIENTATION)

More sophisticated thinking around the primary objectives for lending to smallholder farmers—and the associated design options—has enabled the sector to better understand the revenue and cost drivers of different business models and their potential influence on commercial viability and impact.

For example, one might expect digitally-native AgFinTechs to operate at a lower cost to serve, than traditional financial service providers like commercial banks or MFIs. Similarly, from a farmer's perspective, offtaker credit—heavily subsidized through sourcing activities, provided in kind, and structured around the agricultural cycle—often represents a more affordable and appropriate credit option than commercial banks or MFIs.

This line of thinking has helped unpack the complexity of business model variation. Yet, capital providers still struggle with a lack of evidence around what is possible in terms of commercial viability and impact in smallholder finance.

Beyond a few targeted research efforts (e.g., Aceli Africa, IDH), data on the financial performance of smallholder finance models is scarce, with even fewer insights into the relevance of revenue and cost drivers across those models. As a result, the commercial viability of smallholder finance—and its potential link to farmer-level outcomes—remains largely a black box. This makes it difficult to challenge deeply held assumptions about cost, risk, and impact and hinders effective capital deployment.

This report aims to bring more visibility to that black box. We benchmark the economics of various smallholder lending models, alongside a qualitative view of their impact orientation.

The goal is not to deliver a precise assessment of profitability or impact at the portfolio level, but to offer a comparative view of what may be possible. Specifically, we explore lending margins, revenue and cost drivers, and the nature of credit provision across models to generate insights into:

1. What business models are best suited to different market archetypes?
2. Which scale-up levers may be most relevant to which models?
3. How concessional capital can best be deployed to optimize both viability and impact?

A NOTE ON METHODOLOGY

We modelled the unit economics for seven key business models across seven countries, with over 90% of the models operating in Sub-Saharan Africa:

- **Supply security providers**, including traders, processors, commercial producers and AgTechs.
- **Service profitability providers**, including MFIs (group and individual lending), and commercial banks (lending both directly as well as via value chain actors).

Data sources included:

- Self-reported data for supply security providers (based on [IDH inclusive business analyses](#)).
- A mix of self-reported data and assumptions for MFIs, commercial banks, and AgFinTechs.

We captured all direct lending cost and revenues, as well as **indirect revenues** such as sourcing benefits (for supply security models).

Margins were calculated:

- **Annually**, and
- Over a **four-year period**, assuming one “bad” season every three “good” seasons.

To allow comparability, all revenue and cost figures are shown as a **percentage of the average capital advanced**.

Subsidies (if any) are included in revenue and costs calculations. Where known, we note how the subsidy was used (e.g., cost of funds, cost to serve, cost of risk etc.).

Impact was assessed qualitatively, based on credit characteristics across different financing channels (see Section 3.3.3)

For more details on methodology refer to the Annex.

3.2.2 UNDERSTANDING DIFFERENCES IN OVERALL COMMERCIAL VIABILITY AND UNDERLYING REVENUE AND COST DRIVERS

As introduced in Chapter 1, the viability frontier can be viewed in broad terms as the balance between the benefits and costs of lending, including not just financial returns, but also client outcomes. **However, for the purposes of the comparative view on the unit economics laid out in this section, we define commercial viability more narrowly: as the relationship between lending-related revenues and costs, excluding any farmer-level outcomes.** For lending to be commercially viable the lending-related revenues must outweigh the lending-related costs.

To better understand commercial viability of smallholder lending, we distinguish between:

- **Net lending margin** – the profitability of lending activities on their own, excluding indirect revenues. A positive net-lending margin requires that direct lending revenues (e.g., interest, fees, or other markups) exceed the cost and risk of lending.
- **Total net margin** – overall profitability, including both direct and indirect lending revenues (e.g., sourcing benefits for supply security providers or the increase in sales from non-financial services for the service profitability providers). A positive total margin means the combination of direct and indirect lending revenues outweighs the cost and risk of lending.

Because of the different nature of business models, the relevance of net lending margin vs total net margin varies across provider types, as do the underlying revenue and cost drivers. Figure 9 below shows a comparative view on revenue and cost drivers.

FIGURE 9. COMPARATIVE VIEW ON RELATIVE DIFFERENCES ACROSS KEY COST AND REVENUE DRIVERS FOR SUPPLY SECURITY PROVIDERS AND SERVICE PROFITABILITY PROVIDERS LENDING AS CORE BUSINESS

LENDING CHANNEL		UPFRONT COSTS (OF SETTING UP SHF LENDING UNIT)	COST TO SERVE	COST OF RISK WITHOUT SHOCK	COST OF RISK WITH SHOCK	COST OF FUNDS	DIRECT LENDING REVENUE (INTEREST RATE, FEES AND INPUT MARK UP)	INDIRECT REVENUE ENABLED BY LENDING (SOURCING BENEFITS)
Supply Security Providers	Traders							
	Processors							
	Commercial Producers							
	AgTechs							
Service Profitability Providers (Lending)	Commercial banks (direct lending)							
	Commercial banks (in partnership with VCA)							
	MFIs – group lending							
	MFIs – individual lending							

Relevance:

HIGH

MEDIUM

LOW

Understanding the profitability of stand-alone lending activities (net lending margin)

Service profitability providers – MFIs and commercial banks whose core business is lending – **show modest but positive average net lending margins: 10% (no shock) and 7% (with shock).** In contrast, **supply security providers** offering credit to enable supply typically **finance farmers at a loss: averaging -13% (no shock) and -42% (with shock).**

These disparities in net lending margins are driven by three main factors including pricing, cost of funds and cost of risk:

1. Pricing (revenues)

MFIs and banks will typically price to cover the cost and risk of lending. As a result, interest and/or fees average

23% of the loan balance, about two times higher than supply security providers.

- **MFIs** tend to price for worst-case scenarios to account for higher risk. Interest rates can range from 20-32% of the balance, equivalent to 33-34% per annum for individual and group loans respectively.
- **Commercial banks** in the sample priced loans at up to 14% of the balance (~21% per annum), though most were participating in donor- or government-supported programs that cap interest rates at single-digit levels. In the absence of such subsidy programs, market data suggests commercial banks may price smallholder loans in the range of 24–46% per annum, depending on country, crop, and farmer segment. This could lift net lending margins to as high as ~60%.

In contrast, supply **security providers, such as input providers and offtakers**, typically provide credit at significantly lower rates (avg. 12% of balance, 12% p.a.) – often structured as input markups aligned with retail prices. Among these, **commercial producers** stand out for offering credit for free or at discounted rates (avg. 16% of balance and 16% p.a.)

2. Cost of funds

MFIs and banks benefit from a lower average cost of funds (7% p.a.) compared to supply security providers (20% p.a.).

- **Commercial banks and MFIs:** Funding tends to include a meaningful contribution from customer deposits. In addition, these actors—particularly commercial banks—typically have greater access to capital markets, with larger capital requirements enabling them to secure better rates. Many also benefit from concessional funding pools; in our sample, at least 75% of commercial banks were funding lending activities this way. Examples include NMB and CRDB in Tanzania, which can secure funding at 3% p.a. through the Bank of Tanzania’s Special Loan Facility, and FMCB in Nigeria, which accesses 0% p.a. financing via Mastercard Foundation’s MSME Revitalization Fund.
- **Smaller traders and processors**—particularly those operating regionally—struggle to access fit-for-purpose credit from financial service providers, relying instead on their own equity, expensive trade finance, or commercial debt to meet farmers’ primary production needs.
- **Commercial producers** fare slightly better due to their scale, with an average cost of funds around 15% p.a.
- **AgTechs** often have relatively cheaper cost of funds but still depend heavily on their own equity or concessional capital—especially in early stages when affordable debt is hard to secure without a proven business model. For example, in Kenya, over 70% of AgTech deals from 2015-2024 came from concessional sources.

3. Cost of risk

Cost of risk is defined as the net write-offs on a given loan, after recoveries and varies significantly depending on whether a climate or market shock occurs.

- **With shock:** Service profitability providers have a far lower cost of risk when a climate shock hits (average 6%, compared to 38% for supply security providers). This advantage stems from stricter farmer targeting (selecting those with lower exposure to climate risk), access to risk mitigators—such as credit guarantees covering up to 50% of losses (e.g., a leading commercial bank in Tanzania active in the maize value chain), collateralized offtake contracts (e.g., one bank requires these in maize and other food crops), and micro/meso-level insurance. Importantly service profitability providers have higher recovery rates, while most offtakers do not pursue recoveries after a shock to avoid jeopardising farmer relationships. At the same time, evidence suggests that insurance at the client level can directly expand reach to riskier smallholders by giving providers confidence to serve farmers they might otherwise exclude.
- **Without shock:** Service profitability providers average slightly lower at 3% vs 5% for supply security providers, though variations are significant among offtaker sub-models.
 - **Commercial producers** - who control primary production, maintain tight farmer relationships, and offer a broader range of services—see costs of risk without a shock below 3%.
 - **Traders** - with lower-touch models and fewer de-risking mechanisms (e.g., guaranteed offtake, advisory)—face up to 14%.
 - **AgTechs** average around 6%, with outcomes closely linked to the maturity and training of their digital credit models.

A note on cost to serve

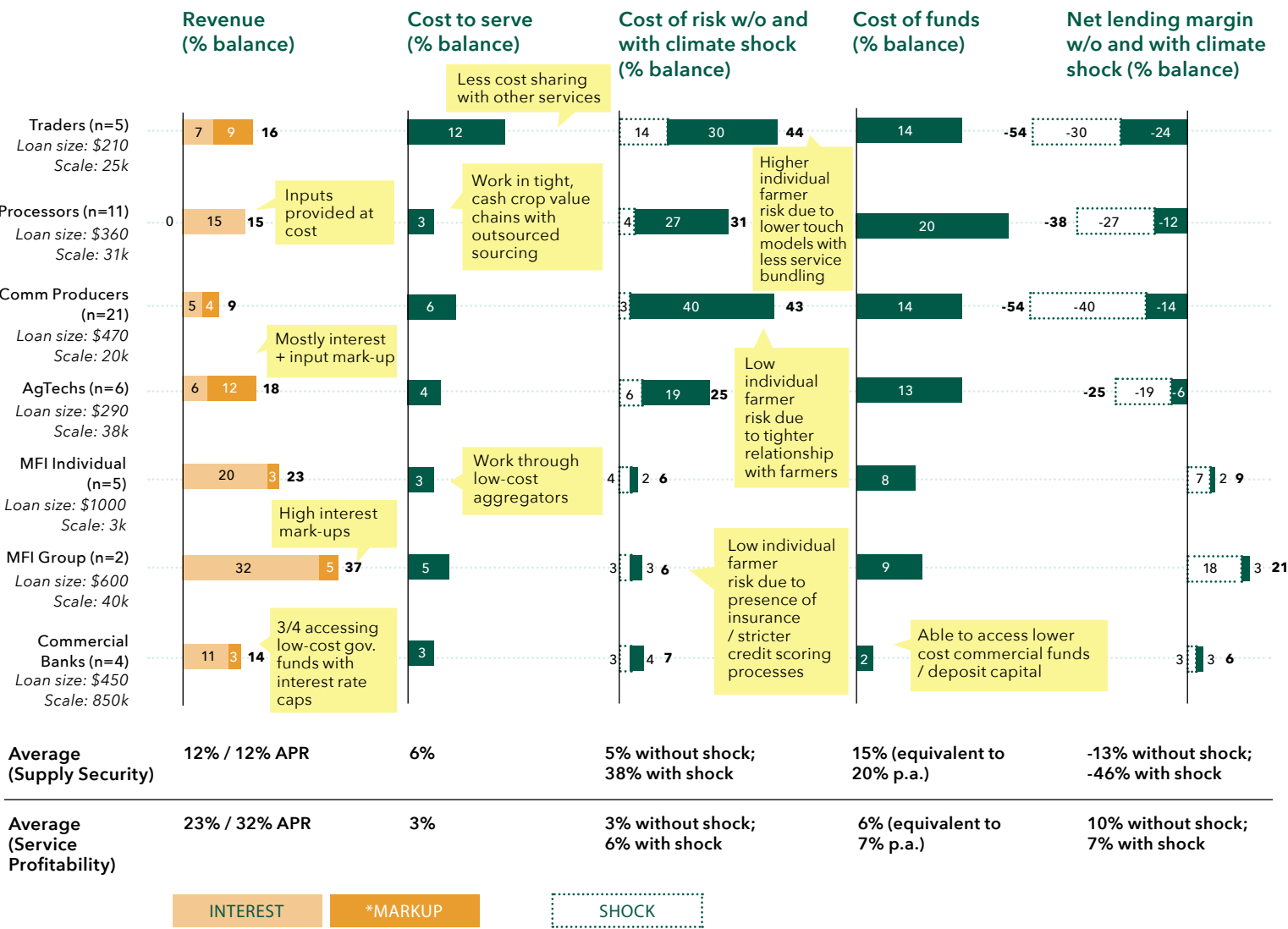
Supply security providers have traditionally held a cost to serve advantage relative to service-profitability providers. By leveraging existing sourcing infrastructure—trucks, staff, and farmer relationships—offtakers can deliver finance at marginal cost (6% on average, and as low as 3% for certain offtakers). This compares to an industry average of 18% for MFIs and 15% for commercial banks.

However, in the sample interviewed for this research, MFIs and banks reported unusually low costs to serve (around 3% on average). This reflects larger average loan

sizes (~\$450 for commercial banks and ~\$900 for MFIs, compared to ~\$375 for supply security providers) and significantly larger customer bases (MFIs in the sample served roughly twice as many smallholders as supply security providers).

While these efficiencies may not be representative of the broader industry, they highlight the potential for service-profitability providers to lower transaction costs by serving larger, aggregated farmer groups via value chain actors, and by leveraging digital tools and more efficient underwriting approaches.

FIGURE 10. COMPARATIVE VIEW ON NET LENDING MARGIN FOR SUPPLY SECURITY PROVIDERS AND SERVICE PROFITABILITY PROVIDERS



*Refers to input markup for supply security providers and fees for service profitability

The relevance of sourcing benefits (total net margin)

When indirect revenues from lending are factored in, the profitability picture for supply security providers changes dramatically. Although net margins vary widely by value chain and country, most providers can breakeven – and often exceed this – when the sourcing benefits of lending are realized over time.

For offtakers sourcing from smallholder farmers, lending drives more reliable volumes, higher-quality produce, and sourcing economies of scale.

In a good season with no shock, these benefits—particularly higher yields and farmer loyalty from input use—can outweigh the costs and risks of lending. On average, this results in annual total net margins of 60% (over 6× higher than the average returns for FSPs in a no-shock season). Vertically integrated commercial producers can achieve margins as high as 70%, due to economies of scale and greater value addition.

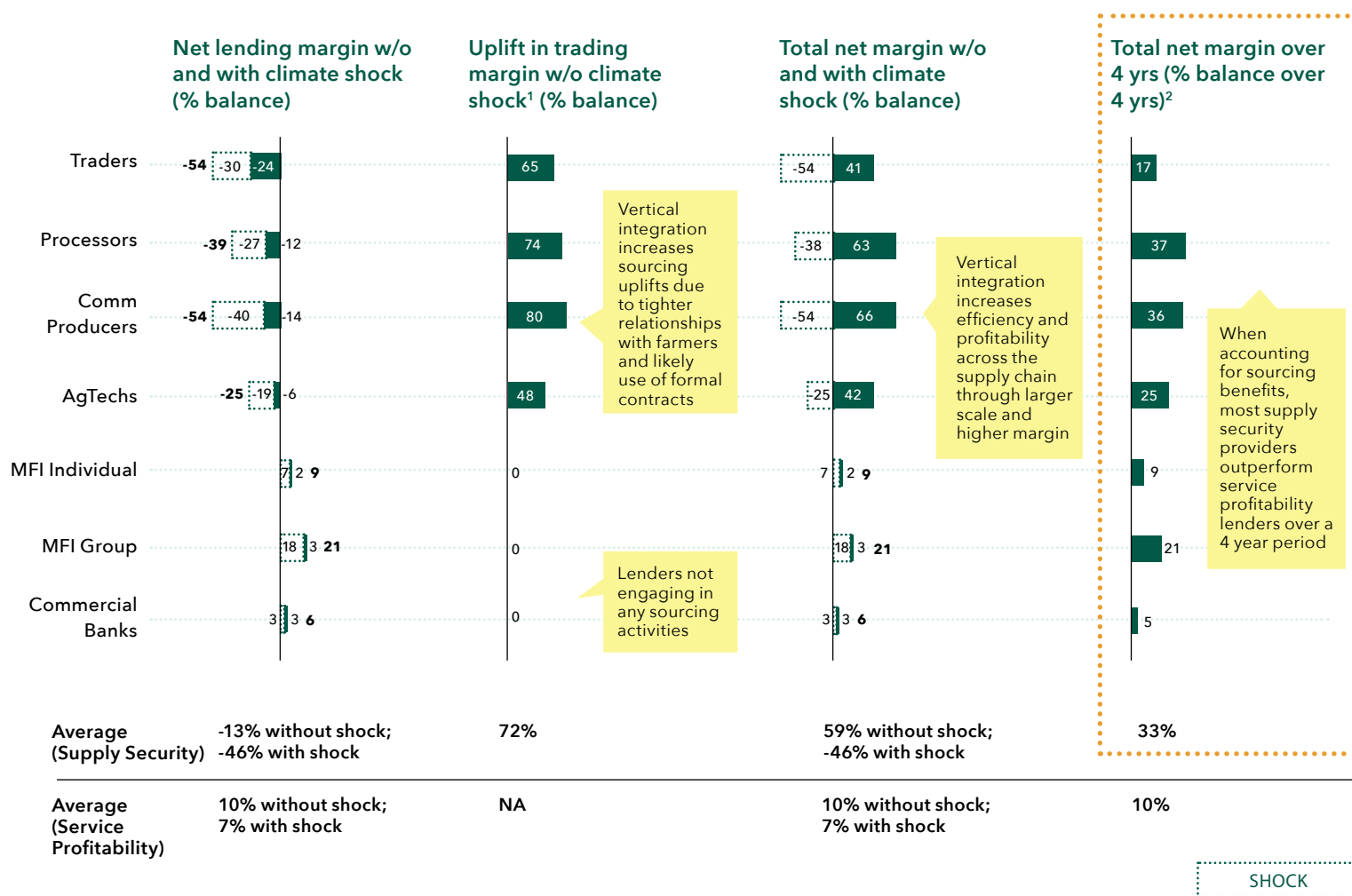
In a bad season, however, when a climate or market shock hits, the cost of risk spikes (as outlined above) and can erase most or all the associated sourcing benefits. Under the conservative assumption of zero sourcing benefits, in a “bad” season, supply security providers’ annual total net margin would be equivalent to their total net lending margin with shock, that is -46%, compared to 7% for FSPs.

The key question is: do the profits of the good seasons outweigh the losses of bad seasons? Assuming one bad season for every three good seasons and zero sourcing benefits during shocks, the data suggests the overall business case remains positive over a four-year cycle, although results vary by provider type:

- **Processors** – The highest four-year total net margins at 37%, primarily due to high value-add post-harvest.
- **Commercial producers** – Despite the largest lending losses in bad seasons (due to their low / discounted pricing), achieve the second highest four-year total net margin at 36%, driven by the sourcing benefits of lending.
- **AgTechs** - Second lowest at 25%, reflecting smaller sourcing uplifts (48%) and the absence of substantial value-add.
- **Traders** - Lowest four-year total net margins of 17%, constrained by higher cost of risk (14% with no shock, 44% with shock).

Across all provider types, the averages suggest sourcing benefits outweigh lending costs and risks. However, many smaller offtakers lack the liquidity or balance sheet resilience to withstand a single bad season. Without effective risk mitigation—such as insurance, guarantees, or diversified sourcing—a climate shock can force them under, given the mismatch between long-term cashflow gains from sourcing benefits and the immediate cashflow crunch of a loss-making season.

FIGURE 11. COMPARATIVE VIEW ON TOTAL LENDING MARGIN FOR SUPPLY SECURITY PROVIDERS AND SERVICE PROFITABILITY PROVIDERS



1. Only accounts for volume uplifts (not price premiums, which often also occur) in the form of increased yields and / or more surplus volume sold to offtaker. Assumes average trading mark-ups of 15% for non export and 25% for export; assumes lower and upper bound average net trading margins of 5% / 10% for loose value chains; 8% / 13% for tight value chains non export and 10% / 15% for tight value chain export crop. 2. Assumes one bad season for every three good seasons.

A note on the impact of upfront costs: this analysis separates potential upfront and startup costs of lending from the steady state unit economics to ensure a like-for-like comparison across channels and business models, given the high degree of variability. However, time to break even (or payback period) remains a key barrier for many FSPs and offtakers considering lending to smallholder farmers. Supply security providers generally face shorter payback periods due to **(1) Lower upfront costs** from cost-sharing synergies with their core

business **(2) Faster ramp-up** enabled by an existing farmer customer base they already engage with and **(3) Higher returns** when sourcing benefits are factored in.

That said, the surveyed providers reported payback periods ranging widely—from lending units that turn a profit in their first year, to sophisticated programs within large global offtakers that may require up to seven years to break even.

3.2.3 CONSIDERING IMPACT ORIENTATION

The motivation for lending—and the design choices within each lending channel—have significant implications for impact at the farmer level. Traditionally, smallholder finance has assessed “impact” through improvements in farm performance, particularly productivity and income gains.

However, benchmarking farmer impact based on these metrics remains challenging without reliable data that can isolate the specific contribution of finance from other services or enabling environment factors. In this context, we provide a comparative, primarily qualitative view of how different business models position themselves across three key credit characteristics: accessibility, affordability and appropriateness (see Figure 12 below).

- **Supply security providers** particularly processors and commercial producers, who often bundle additional financial services—tend to rank highest across all three dimensions. Assuming they can secure funding, their higher margins enable them to extend credit to a larger share of farmers. They are also the most affordable option, especially commercial producers who frequently provide credit at no cost or at a discount. Credit is typically offered in-kind or in cash for productive purposes (e.g., inputs or harvest/post-harvest activities), with repayment schedules tied to agricultural cycles. However, buyer power can also squeeze farm-gate prices through opaque terms, creating risks of mistrust and side-selling.
- **MFIs** offer relatively high accessibility (particularly via group lending models, which also improve access for women) and are becoming more appropriate as product design increasingly adapts to smallholder needs, including flexible repayment terms. However, their lending remains costly, with rates reaching up to 34% p.a.
- **Commercial banks** (direct lending) rank lowest across all three dimensions. Credit is generally inaccessible except to the most creditworthy farmers, and expensive outside of donor or government-backed programs with capped interest rates (e.g., the Bank of Tanzania’s Special Loan Facility, which provides single-digit rates for agricultural on-lending). Products tend to lack customization by segment or value chain. Accessibility and appropriateness improve, however, when banks partner with supply security providers, as they are more willing to serve customer segments they would otherwise avoid and can tie repayments to agricultural cashflows.
- **Client outcomes providers (e.g., social enterprises)** offer affordable and appropriate credit, particularly to women, and are accessible to the most vulnerable farmers. However, their limited resources and targeted mandates mean they are less likely to serve less vulnerable—but still credit-constrained—smallholders.

3.2.4. SUPPLY SECURITY PROVIDERS: THE SLEEPING GIANTS

Offtakers remain the largest source of credit for smallholder farmers, particularly regional and local actors who operate closest to production. Their financing is often the most accessible, affordable, fit-for-purpose and financially sustainable option available, precisely because it is grounded in a commercial incentive to secure supply. This makes offtaker models uniquely positioned to support not only working capital needs but also critical investments in climate adaptation.

Importantly, in markets where there is a clear commercial rationale, many offtakers demonstrate both the willingness and the operational capacity to scale their lending. What

constrains this growth is not demand from farmers, but rather access to the capital required for on-lending, working capital, and risk management—an issue further explored in Chapter 5.

That said, offtaker-led finance is not a complete solution. These models are not always structured to address the full diversity of farmer needs, especially when it comes to longer-term or specialized financing. For these gaps, complementary models play a critical role.

Finally, offtaker finance also carries real risks that must be managed. Buyer power can compress farm-gate prices

through opaque grading, weight deductions, or tying credit to unfavorable offtake terms, and farmers may respond with side-selling when trust is low. Scaling responsibly therefore requires basic safeguards: transparent and verifiable pricing and quality assessment, clear separation

of loan and offtake terms (with disclosed effective APR), and simple recourse mechanisms for farmers. Where concessional capital or guarantees are used, support should be conditional on these practices to ensure value is shared fairly.

FIGURE 12. COMPARATIVE VIEW ON CREDIT ACCESSIBILITY, AFFORDABILITY AND APPROPRIATENESS

BUSINESS MODEL	UNDERLYING MODEL	ACCESSIBILITY	GENDER ACCESSIBILITY	AFFORDABILITY	APPROPRIATENESS: PRODUCTIVE USES	APPROPRIATENESS: MATCHES AG CASHFLOWS	GENDER APPROPRIATENESS
Supply Security Providers	Traders						
	Processors						
	Commercial producers						
	AgTechs						
Providers Seeking to Profit from Lending	MFIs (group and individual lending)						
	Commercial banks (direct lending)						
	Commercial banks (in partnership with VCAs)						
	AgFinTechs						
	Community Based Financial Institutions						
Providers Seeking To Profit From Non-lending Services	Input providers						
	Agricultural marketplaces						
	Farm equipment / services providers						
Client Outcomes Providers	Social Enterprises						

Definitions of impact assessment metrics

Accessibility: The extent to which smallholder farmers can physically or practically access the service or lending product

Gender Accessibility: The extent to which women farmers can access the service or lending product, considering factors such as cultural, logistical, and systemic barriers

Affordability: The degree to which the cost of accessing finance or services is manageable for smallholder farmers relative to their income and cash flow

Appropriateness - tied to productive uses: Degree to which the uses of credit is tied to primary production uses e.g., inputs, agricultural services

Appropriateness - matches ag cashflows: Degree to which credit terms (disbursements and repayments) match agricultural cashflows

Gender Appropriateness: How well the product or service fits the specific roles, constraints, and preferences of women farmers in a given context

Relevance:

HIGH

MEDIUM

LOW

3.2.5 BUSINESS MODEL VIABILITY THROUGH GENDER-TAILORED DESIGN

According to the Food and Agriculture Organization (FAO), women represent approximately 43% of the global agricultural labor force. They produce more than two-thirds of the food in most developing countries and are responsible for roughly half of global food production. Yet women own just 15% of the agricultural land, have limited access to services, finance, and markets, and remain more food insecure than men—with the gender gap in food insecurity rising from 1.7% in 2019 to more than 4% in 2021.

Despite these challenges, women represent a large and diverse market segment, with varying profiles shaped by livelihood, location, social norms, ambitions, and needs. Despite their central role in global food production, women are often overlooked by businesses and governments particularly where data and experience to design tailored solutions are lacking, or where change is perceived as a risk or loss. Yet the evidence suggests otherwise.

A robust body of research demonstrates that women are strong clients for financial service providers. For example, [Zainuddin and Yasin](#), analyzing a sample of more than 5,400 observations from 42 countries over 14 years, found that the prevalence of women borrowers has a significant negative relationship with MFI portfolio-at-risk, as well as a positive impact on the self-sufficiency and profitability of microfinance organizations. These findings were echoed in Bangladesh, where [Chakravarty et al.](#) compared men and women from two distinct yet culturally similar patrilineal and matrilineal societies and found that women were less risky borrowers, with average repayment rates 17 percentage points higher than men. This implies lower cost of risk, both with and without shock, for service profitability providers targeting women.

[Data from IDH](#) further shows that supply security providers sourcing from 30–50% women farmers reported lower overall costs to serve—including inputs, training, equipment, labor, post-harvest services, market access and finance—compared to those sourcing mainly from male farmers. While this may be influenced by business model innovations or contextual factors, early findings suggest the lower cost of serving women is attributable to:

- Stronger community ties and collective action within women’s farmer groups;
- Higher loyalty rates and reduced side-selling by women farmers; and
- Higher loan repayment rates among women farmers.

Even when analyzing only the lending costs, women farmers present a compelling business case: they lower costs to serve and reduce portfolio risk. On average, providers sourcing from 30–50% women farmers achieved lending costs roughly 15% lower than those sourcing from fewer than 30%. Early data indicates that sourcing from more than 50% women farmers can deliver even greater cost-efficiency gains.

In sum, refining business models to integrate women is not just inclusive, it is profitable. Providers that actively do so report higher portfolio returns, lower cost-to-serve ratios, and stronger client retention. Effective refinements include expanding women’s access to productive assets, enabling income diversification, embedding digital tools, and leveraging women’s groups and male allies. The following examples illustrate how security supply providers adapted their business models to generate value for the business and for women farmers.

- *Coscharis Farms Ltd, a Nigerian commercial producer* enabled women’s **access to productive assets** through block farming. By intentionally integrating 1,740 women—33% of all block farmers—into its rice supply chain, Coscharis overcame gender-based barriers to land access and agricultural services. Women SHFs gained access to leased plots, tailored financial services, mechanization, and high-quality inputs, resulting in a 75% increase in productivity and a 103% rise in income. Moreover, this success quickly attracted more women SHFs from neighboring communities, who saw in the block farm a viable business opportunity. For Coscharis this improved engagement increased its SHF-supplied paddy rice from 16% to 52%, while reducing rejection rates from 40% to 5%.
- *Raphael Group Limited (RGL), a processor based in Tanzania* leveraged **women’s groups** and **male allyship to scale**. RGL formed 23 women-only farmer groups, supported by tailored services such as access to finance, training, and market linkages, reaching

approximately 42,000 women farmers. Male allyship—including support from community leaders and husbands—was key to success. Women demonstrated a 98% credit repayment rate, significantly outperforming men (70%), which reduced financial risk and enabled RGL to scale its operations confidently. As a result, the company increased rice sourcing by 87% and beans by 163%, expanding its regional trade footprint from 3,200 MT to 9,000 MT. Women SHFs experienced higher income, greater control over resources, and improved household decision-making, while RGL benefited from a secure supply of beans and maize and lower credit losses.

Digital innovations also demonstrate how service profitability providers can generate value for both their businesses and for women farmers. For example, [CGAP research](#) shows that embedding gender-disaggregated risk factors into bank credit-scoring models improves predictive accuracy, strengthening portfolio performance while enabling providers to reach women and men more effectively.

These examples demonstrate the commercial case. Yet the sector still lacks sufficient gender-disaggregated data to fully understand the dynamics of lending benefits, lending costs, and the role of concessional capital. This gap is more than a technical issue—it is a business risk, as efficiency and climate adaptation levers may be overlooked. Without visibility into how women participate and perform, it is unclear what drives value for women and for businesses, and how both adapt to climate shocks.

To address this gap, IDH and CGAP have partnered under [ABERA](#) to work with frontrunning supply security and service profitability providers to scale inclusive business models that drive commercial, social and climate resilience¹⁰. Through a structured, and data-driven approach, further evidence is being generated and will be shared widely on the key business drivers, as well as the resulting lending benefits, lending costs and the role of concessional capital¹¹.

Opportunity for further reading: [IDH's Innovation guide on gender transformative business models](#) provides practical guidance on how to serve women farmers in ways that benefit both farmers and companies. The [IDH Innovation Library](#) offers broader insights on business model innovation.

3.3 CLIMATE - BUSINESS MODELS UNDER STRAIN FROM RISING COST OF RISK

While climate change begins with physical risk at the farm level, its most consequential financial impact is systemic: it raises the cost of risk in ways that undermine the core economics of agricultural finance. For most providers, risk is not simply a pricing variable—it is embedded in product design, delivery models, and the assumptions that underpin viability. Climate disruption erodes each of those assumptions.

The impact of climate change on the cost of risk can be seen across several dimensions:

- **Probability of loss is increasing.** More frequent and severe climate shocks (e.g., drought, flood, pest outbreaks) are making repayment less reliable, especially in rainfed and monocrop systems—pushing up effective loss rates, even in well-structured portfolios. For example, supply security providers in our sample achieve four-year average total margins of ~33% (assuming one bad season for every three good seasons). However, if the frequency of bad seasons increases to one bad season for every two good seasons or one bad season for one good season, four-year average total margins would decrease to 24% and 6%, respectively.
- **Risk correlation is tightening.** When shocks hit whole regions or value chains at once, diversification advantages erode. Portfolio risk shifts from idiosyncratic to systemic, requiring larger capital buffers and more conservative growth strategies.
- **Recovery value is falling.** Climate events that destroy yields or assets sharply reduce recovery

¹⁰ Accelerating Business to Empower Rural women in Agriculture (ABERA) is a collaboration between CGAP and IDH that aims to improve the climate resilience of service providers and the rural women they serve by fostering innovations in inclusive finance that are commercially viable. Learn more: <https://www.cgap.org/topics/collections/abera>.

¹¹ See Were, Edel, Rashmi Pillai, Larissa Shnyder, Juan Caro Zambrano, and Jamie Anderson. Forthcoming. “Building Rural Women’s Climate Resilience: Seven Business Drivers Delivering Commercial Value.” Washington, D.C.: CGAP.

rates—weakening the assumption that non-performing loans can be partially salvaged.

At the same time, climate change increases the cost to serve. Providers must spend more on screening, monitoring, and client support—particularly where shocks disrupt income predictability and increase the need for early warning systems. Even digitally enabled models are not immune; data alone cannot stabilize highly volatile systems.

Together, these dynamics represent a structural elevation in both cost to serve and cost of risk. For many providers, the challenge is not simply adjusting loan pricing—it is recalibrating whether the model remains viable under climate-adjusted conditions.

This climate pressure translates differently across three major lending motivations:

- **Supply security models** are highly exposed to sourcing disruptions. In a bad climate year, both repayment rates and sourcing benefits may collapse simultaneously—undermining a model built on

consistent volume and quality. As noted above, even with positive sourcing benefits over time, a severe shock can trigger a liquidity crunch that many smaller regional or local offtakers cannot absorb, forcing some to exit the market.

- **Service profitability models** face rising defaults and higher client acquisition costs in climate-vulnerable regions. Passing these costs on to borrowers is often constrained by affordability limits, leaving the model commercially unviable without risk-sharing mechanisms.
- **Client outcome models** are well-aligned to deliver climate-resilient capital but remain structurally dependent on subsidy or blended finance to sustain their high-touch, low-margin delivery models.

Key takeaway: Climate-induced volatility is structurally raising the cost of risk—stretching unit economics and pushing many models below viability thresholds unless they adapt, de-risk, or access subsidies.



4. BRINGING MARKETS AND BUSINESS MODELS TOGETHER



4.1 WHERE MARKET ARCHETYPES AND LENDING MODELS INTERSECT

We mapped different smallholder finance lending models against the seven market archetypes identified earlier, building on Section 3's overview of the channels, models and “where they play”. This shows where different lending models are most likely to serve smallholder farmers (see Figure 13 below).

Supply security providers appear in most market archetypes as long as there is a commercial incentive to lend—typically to improve farmer access to productive assets and services that help to secure supply. They are most common in markets with more commercialized farmers and relatively attractive underlying commodity conditions (Archetypes 3-5), but where commercial banks are still hesitant. As markets become more attractive for lenders, offtakers become less prevalent because other finance providers step in. Current level of concessional capital observed is low, and where it is provided, it is usually technical assistance for overall value chain development and farmer training, especially in transitioning markets (Archetypes 1 and 2).

Commercial banks and AgFinTechs concentrate in the most attractive market Archetypes (6 and 7), where larger farmers, bigger loans, and lower risk make lending more profitable, with lower levels of concessional capital. However, banks are also active in higher-risk markets (Archetypes 2-5) when working with value chain actors or under specific donor or government schemes. Examples include:

- *Smallholder Credit Guarantee Scheme (Tanzania)*—up to 50% loan loss coverage specifically for smallholder farmers
- *Private Agricultural Sector Support Trust (Tanzania)*—up to 50% coverage plus capacity building, used by

actors across the market (e.g., agri-MSMEs as well as SHFs)

- *Mastercard Foundation's MSME Revitalization Fund (Nigeria)*—grants at 0% interest rates per annum for on-lending
- *Bank of Tanzania's Special Loan Facility*—concessional funding at 3% interest rates per annum for on-lending.

These schemes aim to trigger a “demonstration effect”—showing that lending by commercial banks to smallholders can be viable—but often fail to create lasting change. While donor and government schemes to boost smallholder lending are common across SSA, their intended “demonstration effect” is often short-lived once incentives or subsidies are withdrawn. Lasting change requires these mechanisms to be embedded more fully as a structural feature, often through ongoing public support (e.g., Aceli Africa's model, which aims to eventually be funded by national governments). The Central Bank of Nigeria's Anchor Borrowers Programme (ABP) is another example, aimed to channel more finance to smallholder farmers to boost agricultural production, offering banks low-cost funds (~3% p.a.) and capping interest rates at 9% p.a. to keep loans affordable for smallholders. Launched to stimulate production and encourage commercial bank participation, the program was halted in 2024 due to low repayment rates, misuse of funds and overall ineffectiveness. Once the low-cost capital disappeared, banks largely withdrew from smallholder lending. Without addressing structural market inefficiencies—such as the high cost of capital driven by inflation and onerous capital reserve requirements—the ABP failed to deliver a lasting “demonstration effect” that agricultural lending can be commercially viable.

MFIs, especially those using group lending, are more common in challenging markets, (Archetypes 1 and 2), where banks and offtakers are reluctant, as the group

FIGURE 13. PREVALENCE OF LENDING CHANNELS AND OBSERVED LEVELS OF CONCESSIONALITY

MARKET ARCHETYPE		Subsistence & Fragmented - Archetype #1	Traditional & Fragmented - Archetype #2	Transitional Growth Markets - Archetype #3	High-Risk Growth Markets - Archetype #4	High-Value Niche Markets - Archetype #5	Mid-Range Traditional Markets - Archetype #6	Consolidated Mature Markets - Archetype #7
SUPPLY SECURITY PROVIDERS	TRADERS	++	++	+	+	+	+	+
	PROCESSORS	++	+	+	+	+	+	+
	COMM PRODUCERS	++	+	+	+	+	+	+
	AGTECHS	++	+	+	+	+	+	+
SERVICE PROFITABILITY PROVIDERS (LENDING)	COMMERCIAL BANKS DIRECT LENDING	+++	+++	+++	++	++	+	+
	COMMERCIAL BANKS PARTNERSHIP LENDING	+++	+++	++	++	++	+	+
	MFIS GROUP LENDING	++	++	++	+	+	+	+
	MFIS INDIVIDUAL LENDING	++	++	++	+	+	+	+
	AGFINTECHS	+++	+++	+++	++	+	+	+
	COMMUNITY BASED FINANCIAL INSTITUTIONS							
SERVICE PROFITABILITY PROVIDERS (NON-LENDING)	INPUT PROVIDERS	++	+	+	+	+	+	+
	AGTECH MARKETPLACE	+++	++	+	+	+	+	+
	FARM SERVICES	+++	+++	++	+	+	+	+
CLIENT OUTCOMES	SOCIAL ENTERPRISES	+++	+++	++	+	+	+	+

Prevalence of financing channel

GENERALLY NOT OBSERVED

HIGH

MEDIUM

LOW

Observed level of concessionality

LOW: + MID: ++ HIGH: +++

lending model can help mitigate individual farmer risk. As farmers become more financeable and the underlying market attractive, individual lending by MFIs increases (Archetypes 4 and 5). Both group and individual lending taper off in the most attractive markets (Archetypes 6-7) as farmers have access to a wider range of more affordable financing options.

Informal lenders dominate in the most challenging markets (Archetypes 1-2) often at extremely high rates (e.g., up to 75% p.a. offered by moneylenders in Nigeria). Their presence falls as more affordable options emerge, including supply security providers, MFIs and commercial banks.

Service profitability providers, such as input providers or AgTech marketplaces, are more common in attractive markets.

a. Input and farm service providers

In the absence of sourcing benefits and with limited margins to offer additional services that can mitigate risk, there is little to no lending by input providers and providers of farm services in highly challenging markets (Archetypes 1-2). Some lending occurs in mid-range markets (Archetypes 3-4), mostly through agroverts and/or smallholder specific solutions (e.g., SunCulture, a provider of solar-powered irrigation pumps). Financing is relatively more common in markets where farmers have larger land sizes, and therefore, larger input orders and/or service needs.

With the exception of public subsidy programs through bio-inputs or by brokering tripartite agreements with financial institutions and offtakers (e.g., Griffin Services in Zambia partnering with ABSA Bank and grain buyers to offer input financing to smallholders), input providers tend to see little to no concessionality. In contrast, farm services providers, particularly those related to mechanization, irrigation, logistics and storage, have seen a significant influx of non-commercial and sub-commercial funding in markets engaging some of the most vulnerable farmers. For example, in Kenya, solar irrigation solutions have received over USD 50M in donor funding since 2015.

b. AgTech marketplaces

AgTech marketplaces—most designed to enable

access to inputs, finance and markets for farmers who would otherwise remain excluded—have relatively higher prevalence in more challenging markets (e.g. Archetypes 2 and 3). This is largely due to their ability to cross-subsidize the lending with fees from input sales and/or offtake facilitation. Their prevalence decreases as the underlying financeability of farmers improves and they gain access to productive assets and services without the need for intermediation.

Social enterprises focus on the hardest-to-reach markets (Archetypes 1 and 2) or socially excluded segments (e.g., women) in more attractive markets (Archetypes 3-6). While some price credit to cover costs, for example One Acre Fund prices its input loans at 13% interest (loan-adjusted), most rely on grants to cover operational expenses.

4.2 ESTABLISHING INITIAL VIABILITY POSITIONING

Financial returns for smallholder lending vary widely across market and channel combinations, but clear patterns emerge.

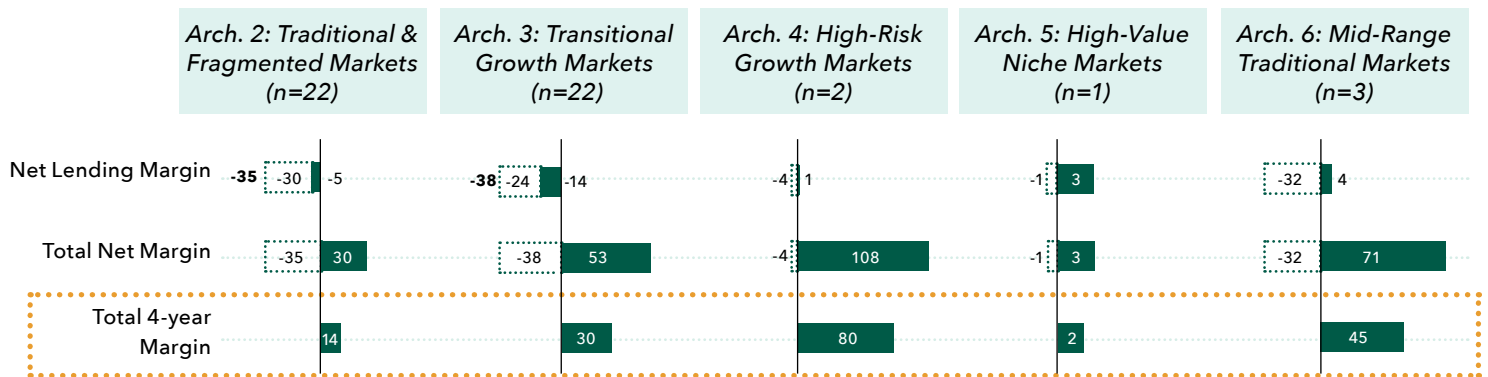
As predicted by the market archetype model, there is generally a positive correlation between the attractiveness of market archetypes for lending and the financial returns that a given lender can realize (see Figure 14 below). This holds for both supply security providers and for FSPs aiming to profit from the lending.

For **supply security providers**, more supportive conditions generally yield higher returns. Average four-year total net margins are 80% in Archetype 4, compared to just 13% and 38% in Archetypes 2 and 3. Notably, there is a “jump” from Archetype 2 to 3, where returns more than double.

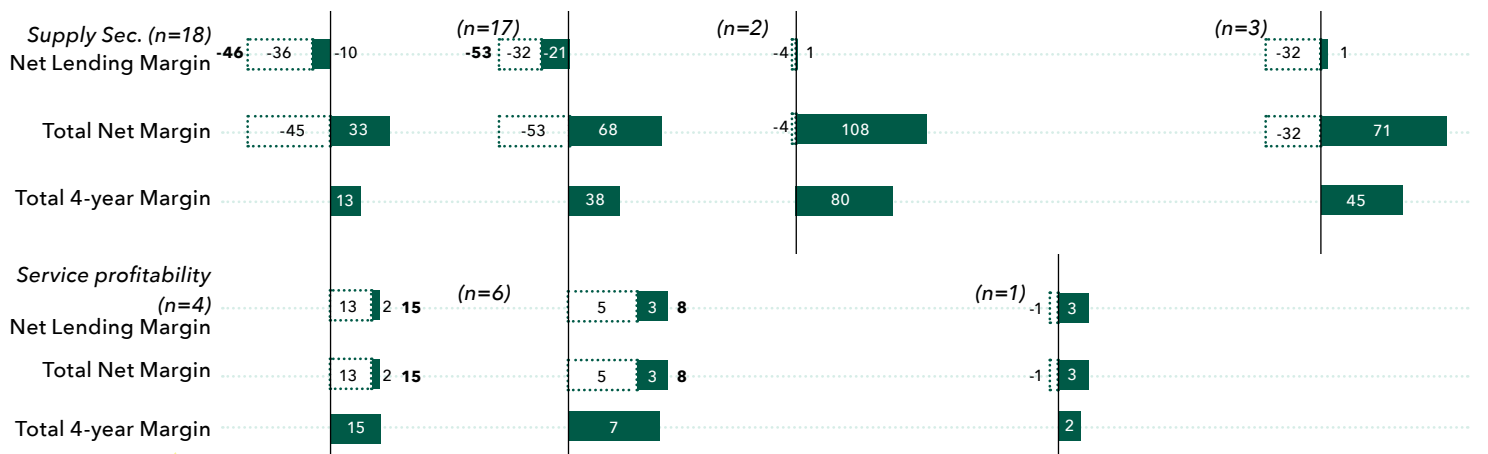
For **FSPs**, the correlation is clear – though the sample is concentrated in Archetypes 2 and 3. FSPs in Archetype 3 average a 7% four-year total margin, compared to 15% in Archetype 2. However, half of the FSPs operating in Archetype 2 benefit from highly subsidized cost of funds which inflate margins.

A note on Archetype 6: While more mature market archetypes generally deliver higher returns, Archetype 6 is a notable exception. Here, supply security providers record lower average four-year total net margins (45%)

FIGURE 14. MODELS X MARKET OVERVIEW: HOW DO FINANCIAL RETURNS VARY ACROSS ARCHETYPES? COMPARATIVE VIEW ON FINANCIAL RETURNS ACROSS MARKET ARCHETYPES BY FINANCING CHANNEL



Business model breakdown



Service profitability providers can be found even in less commercial archetypes; however, their margins are slimmer when there is no shock compared to supply security providers due to a lack of sourcing uplift. However when there is a shock, service profitability providers outperform.

SHOCK

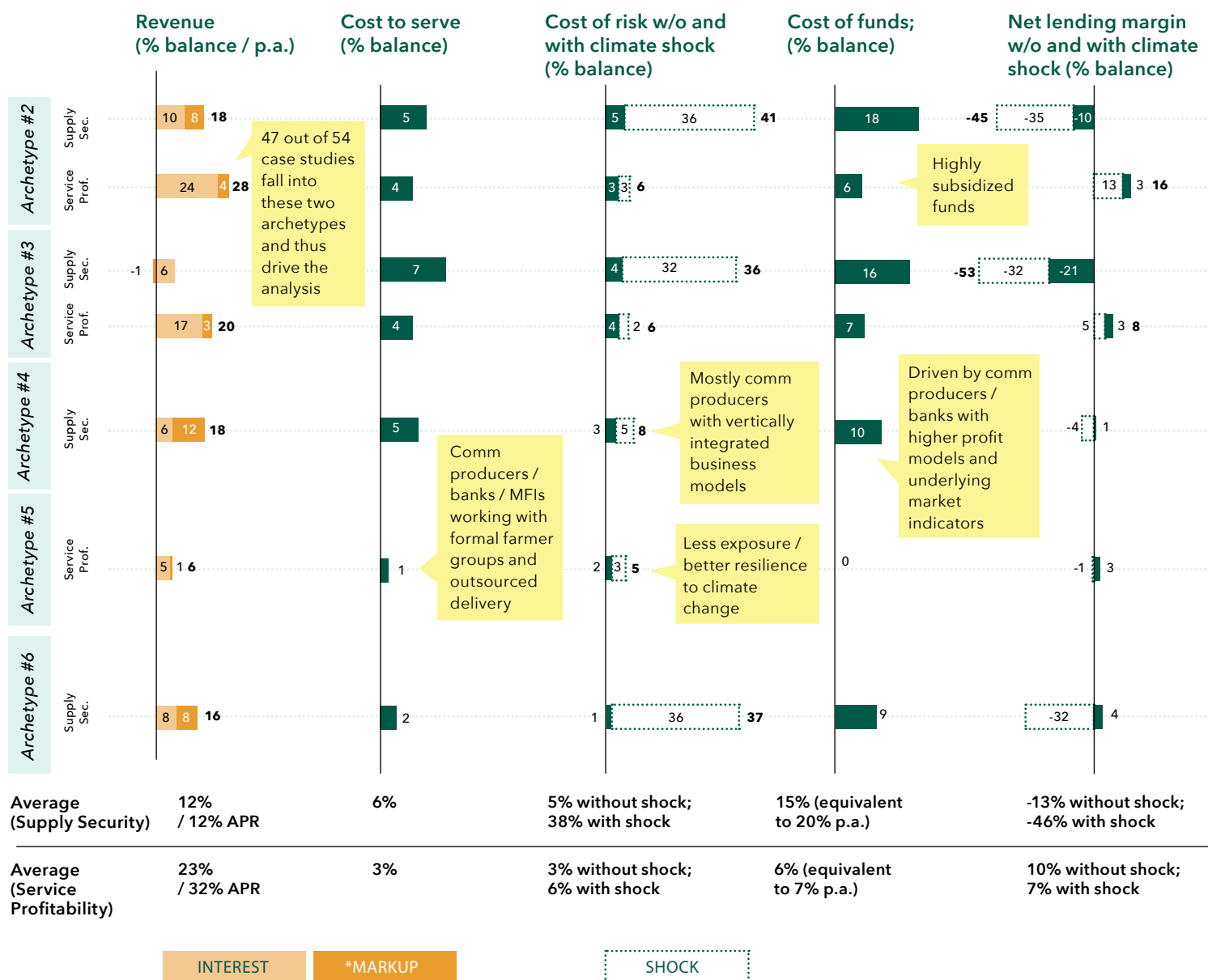
compared to Archetype 4 (80%). The small sample size (three providers) may partly explain this, though they do show a higher cost of risk during shocks (37%), lower smaller scale (i.e., working with ~1500 farmers, about 5% of the average scale of supply security providers) while facing particularly high climate risks in their specific markets. Ultimately, their lending losses are only partially offset by modest sourcing uplifts (67%). With a larger sample size, returns may align more closely with the maturity of the underlying market archetype.

Differences in key cost and revenue drivers

These differences across markets and business models combinations are explained by relative differences in key cost and revenue drivers (see Figure 15 below):

Cost to serve: Archetypes 2 and 3 have higher average cost to serve (5% and 6% respectively across both supply security providers and FSPs) compared to Archetypes 5 and 6 (1% and 2% respectively). This reflects larger average loan sizes in the more mature archetypes (e.g.,

FIGURE 15. MODELS X MARKET OVERVIEW: COMPARATIVE VIEW ON NET LENDING MARGIN ACROSS ARCHETYPES BY FINANCING CHANNEL



*Refers to input markup for supply security providers and fees for service profitability providers

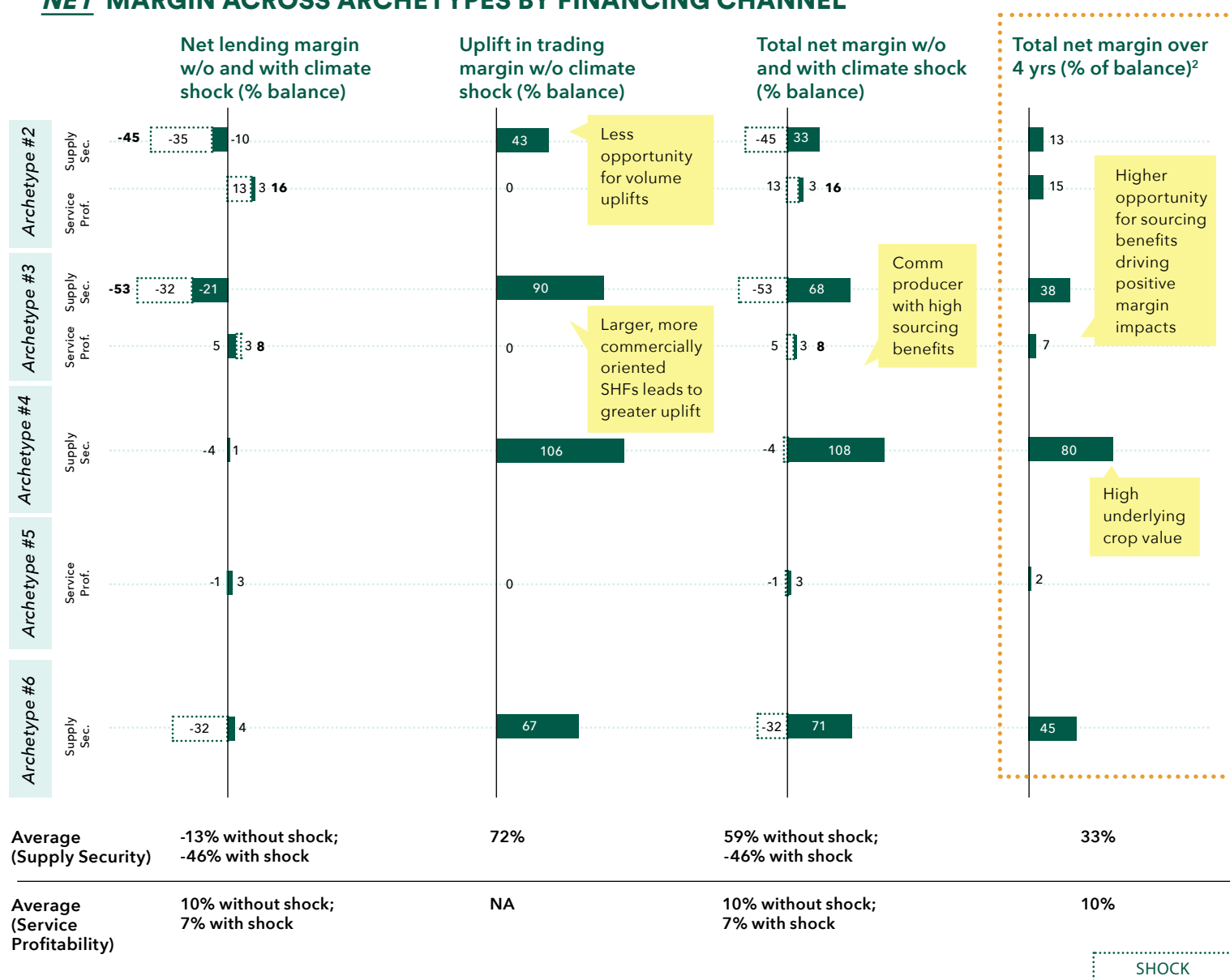
\$1,500 in Archetype 6 compared to \$300 and \$550 in Archetypes 2 and 3) and formalized, well-aggregated farmer groups with lower field officer/agent-to-farmer ratios. In Archetypes 2–3, many providers deliberately begin with narrow, seasonal input-credit bundles centered on planting material.

Cost of risk: Individual farmer risk (without a shock) increases as markets become more challenging. This holds

true for both supply security providers—who see limited individual farmer risk in (Archetypes 4–6)—and for FSPs. This trend is largely due to the lower competition and tighter value chains in more mature archetypes, as well as the vertical integration and bundled service delivery of the providers.

The dynamics shift when shocks occur. For FSPs, the cost of risk with shock is slightly higher in less mature

FIGURE 15 (PART 2). MODELS X MARKET OVERVIEW: COMPARATIVE VIEW ON TOTAL NET MARGIN ACROSS ARCHETYPES BY FINANCING CHANNEL



Archetypes 2 and 3 than in Archetype 5, likely due to lower risk recovery rates in more fragmented markets and limited penetration of risk mitigators (e.g., collateral and insurance). For supply security providers, shock-related losses exceed 35% of capital advanced across archetypes. The exception is Archetype 4, where cost of risk is about 8%. In the cases assessed, both models sit in tight robusta coffee value chains in relatively benign climates, with trees at a stage where input needs are limited. Neither provider includes insurance, but after initially pre-financing inputs at larger scale, both reduced loan sizes (and the number of borrowing farmers) to curb repayment risk—further containing losses. While some markets are less exposed

to climate risk, when shocks hit, providers are similarly affected given the general lack of risk mitigators across offtaker models and little to no focus on recoveries.

Cost of funds: Cost of funds correlates strongly with underlying market viability. For supply security providers and FSPs, average annual cost of funds drops from 20% and 19% respectively in Archetypes 2 and 3 to 10%, 3% and 5% respectively in Archetypes 4–6. These dynamics reflect how capital providers adjust pricing to market risk and to the business models present—with more mature markets hosting a large share of commercial producers able to secure better funding terms.

Direct lending revenue: For FSPs, lending revenues from interest and fees are 3-4x higher in Archetypes 2 and 3 than in Archetypes 4–6, reflecting pricing adjustments to perceived borrower risk. Archetypes 2 and 3 also have a greater concentration of MFIs whose pricing is higher than that of commercial banks, often capped by government programs or donor funding pools. For supply security providers, positive direct lending revenues are more common in challenging markets, while in more mature markets inputs on credit are often discounted (i.e. negative lending revenues). This suggests providers in riskier markets seek to offset lower sourcing uplifts by charging higher lending revenues, while those in mature markets are more willing to accept lending losses in exchange for higher potential sourcing benefits.

Indirect revenue: There is a strong positive correlation between underlying market attractiveness and the ability of an offtaker to realize sourcing benefits from lending. Sourcing uplifts nearly doubled from Archetypes 2 to 3 and 3 to 4—at 43%, 90%, and 106%, respectively. This reflects the ability to achieve higher sourcing benefits in markets that are larger, higher value (targeting premium markets and/or allowing greater value addition), and/or lower risk.

Farmer perspective and country patterns

From a farmer perspective, markets with higher concentrations of near or above market returns are typically characterized by more productive, higher-income, and more resilient farmers—reflecting both farmer capabilities and the strength of the surrounding service ecosystem. By contrast, markets with predominantly negative returns tend to serve more vulnerable, harder-to-reach farmers, where the impact potential may be higher. **This highlights a potential tension between financial and impact returns, and the role of concessional capital in bridging the gap.**

These patterns are also evident across countries as agricultural markets grow and mature, from largely informal agricultural systems of production and offtake (Archetype 1 and 2) to more formal systems (Archetypes 5, 6 and 7):

- **Early stage sectors** (e.g., Democratic Republic of Congo and Niger—as defined by ISF’s Agri Finance

Maturity Stage Assessment) are dominated by Archetypes 1 and 2, with some niches in Archetypes 3-5. Agri-finance is led by state banks and non-institutional moneylenders, with limited commercial bank lending. MFIs and value chain finance are emerging in specific niches.

- **Maturing sectors** (e.g., Cote d’Ivoire, Kenya, Ghana) show a growing presence of Archetype 3 and 4, and deepening Archetype 5 and 6 niches, as governments actively develop agricultural value chains. Value chain actors play a leading role, commercial banks engage in high-value niches, MFIs serve those underserved by other actors and banks and informal lending declines.
- **Formalizing sectors** (e.g., India, Brazil, Mexico) concentrate more farmers in Archetypes 5-7, though Archetypes 3-4 remain. For example, Brazil has largely transitioned to a market-based stage, where the government plays an enabling role and agricultural finance is dominated by banks offering sophisticated financial products (e.g., crop registries, securitization of crop receipts), but still has Archetype 2-3 markets such as common beans, from which commercial lenders steer away.

> **Opportunity for further reading:** *Past ISF research, including ‘The role of government in rural and agri-finance: building a market based system to support sustainable growth’ and ‘The role of government in rural and agri-finance: transitioning to private sector involvement’, provides a country-level view of how agricultural systems typically evolve.*

4.3 HOW TO CONSIDER OUTLIERS AND INNOVATION

While broad trends hold across archetypes and lending models, our benchmarking also surfaces notable outliers. These arise in two forms: (i) significant deviations within the same market and model, and (ii) providers operating successfully in markets that would not naturally align with their model objectives.

Outliers within archetypes and models. Even within the same archetype, financial returns can vary widely. In transitional markets (Archetype 3), overall margins are slim, yet business model design is often the decisive factor. For example, commercial producers and processors in this

archetype achieved four-year total net margins of 55% and 56%, well above the archetype average of 0% and –6% for AgTechs and traders. Their stronger performance reflects vertical integration and value addition, which drive higher sourcing uplifts than less integrated peers.

Outliers across markets. Some providers also operate successfully in markets outside their expected “fit”. For instance, commercial banks typically concentrate in more attractive markets with higher-return potential, yet some in Archetypes 2 and 3 have achieved four-year margins of 6% and 5%. This is largely explained by concessional capital (e.g., sub-commercial funds accessed by ~75% of banks in these markets), interest rate caps, and risk-sharing mechanisms. Cost discipline—through low cost of risk, digitization, and partnerships with value chain actors—further supports performance.

So-what’s

While Chapter 5 goes into more detail on the extent to which business model options can help break through market boundaries to enhance commercial viability, these outliers point to four key patterns.

1. **Benefits of vertical integration:** Supply security providers aggregating farmers, controlling production, and offering bundled services show higher returns than narrower trading models.
2. **Benefits of value addition:** Supply security providers engaging in value addition activities show higher returns than those engaged in the trading of produce only.
3. **Benefits of group-based lending:** MFIs using group lending achieved higher margins than MFIs offering individual loans or commercial banks, as group structures reduce risk while sustaining higher lending revenues.
4. **Influence of government and concessional capital:** Providers with access to first-loss capital, subsidized cost of funds, and interest caps were able to reach viability in markets that would otherwise be too risky.

Taken together, these four insights highlight that viability is not determined solely by farmer or market conditions. Strategic choices—around integration, lending

methodology, but also access to concessional capital and the broader enabling environment can significantly shift performance, creating outliers that challenge expectations and inform opportunities for innovation.

What explains these variations in financial returns and prevalence of lending channels across and within market archetypes? Beyond the farmer segment and market conditions already outlined, two main factors come into play:

1. Business model options of different lenders.

As introduced in previous chapters, business model options allow lenders to mitigate challenges or leverage the opportunities of a given market. For instance:

- Commercial producers that aggregate large numbers of farmers, control primary production and offer bundled farmer services (while also aggregating and processing produce) are able to achieve higher returns than supply security models that only trade, engage in limited processing and do not undertake primary production. Processors that both aggregate produce and process are generally able to achieve higher returns than AgTechs and traders due to the uplift from value addition.
- MFIs engaged in group lending realize higher four-year net margins than MFIs offering individual lending or commercial banks. This is due to the group-based lending approach lowering cost of risk while allowing higher lending revenues through interest charges and fee mark-ups. Overall, MFIs achieve higher margins than commercial banks. This reflects digitization of loan underwriting and KYC processes, as well as the strict interest rate caps faced by commercial banks that received subsidized funding from government and donors.

2. Enablers or blockers within the broader enabling environment that limit or enhance viability and impact through effects on markets and businesses. A particularly important factor is the availability of concessional capital in a market. As shown above, MFIs and commercial banks reach commercial viability largely through narrower lending criteria and higher interest rates. Concessional resources can enable them to move “down-market” into

harder-to-serve archetypes, though this rarely reduces interest rates charged. For example, FMCB Bank in Nigeria leveraged Mastercard Foundation’s MSME Revitalization Fund at 0% interest, while NMB Bank in Tanzania accessed the Bank of Tanzania’s Special Loan Facility, which imposes single-digit interest rate caps on agriculture lending.

Considering channels and markets in this way presents a different lens on how and where lending can be increased. Chapter 6 introduces a new organizing framework to more systematically consider levels of intervention, taking into account market and business models differences as well as the role of the enabling environment.

4.4 CLIMATE PRESSURE REPOSITIONS THE VIABILITY FRONTIER

The combined effect of rising risk, shifting demand, and stressed business model economics could drive a complete **repositioning of the viability frontier** introduced earlier in the report. Climate change is altering where and how models can operate at scale. Entire agroecological zones and markets may become unviable, while others may only become investable with structural innovation or subsidy. Under the combined effect of increased demand for financing of climate adaptation solutions and decreased supply as perceived risk increases, the net result could be a widening financing gap—the very challenge this report seeks to address.

Reinterpreting where markets and models intersect in a climate-adjusted world:

1. **Viability is not static – it must be actively maintained:** Even strong model-market pairings (such as mid-size banks in Archetype 6 or off-takers in Archetype 5) now face rising costs of resilience, requiring new capital tools to preserve margin. What was viable five years ago may not be tomorrow without structural adaptation.
2. **Unviable pairings of markets and business models remain strategically important:** Archetypes 1–3 may fall further below the commercial thresholds of supply security providers and FSPs, yet they are critical to food security. Financing here will

rely on layered concessional strategies—not only to enable access, but to stabilize production systems that wider markets depend on indirectly. Given women prevalence in these archetypes, incentives might be needed to ensure women are included.

3. **Innovation is possible with new “viability unlocks”:** Models built around client outcomes or ecosystem service payments may gain fresh relevance if supported by climate-aligned capital. For example, bundling solar irrigation with insurance and embedded agronomy could make service-profitability models viable where they were once priced out. Chapter 5 explores how business model innovation can help overcome these climate-related constraints.
4. **Capital fit is now as important as model fit:** A model may be viable in a climate-affected context if paired with the right capital stack—patient capital for long-tenor assets, guarantee coverage to absorb systemic risk, or results-based financing tied to resilience outcomes. Capital design is no longer a backdrop; it’s a core determinant of viability.
5. **Business model adaptability will determine resilience:** Models with rigid cost structures or linear repayment schedules are most exposed to climate volatility. Adaptive models—those that embed climate data, adjust to seasonal shifts, and integrate external partners—will be better positioned to withstand systemic shocks.
6. **The viability map must now be climate-adjusted:** Climate is no longer an externality; it is a determinant of viability. Each market-model pairing must be assessed not on past performance, but on future exposure, resilience readiness, and capital match.

Climate pressure is not just squeezing the viability frontier—it’s **redefining how viability is achieved**. The future of agricultural finance will depend on our ability to build more climate-resilient markets, reengineer business models, products, and capital structures to reflect a new climate-adjusted baseline. For many actors, the challenge is no longer assessing viability, but actively constructing it.

5. HOW TO REALIZE THE GROWTH POTENTIAL OF RURAL AND AGRICULTURAL FINANCE



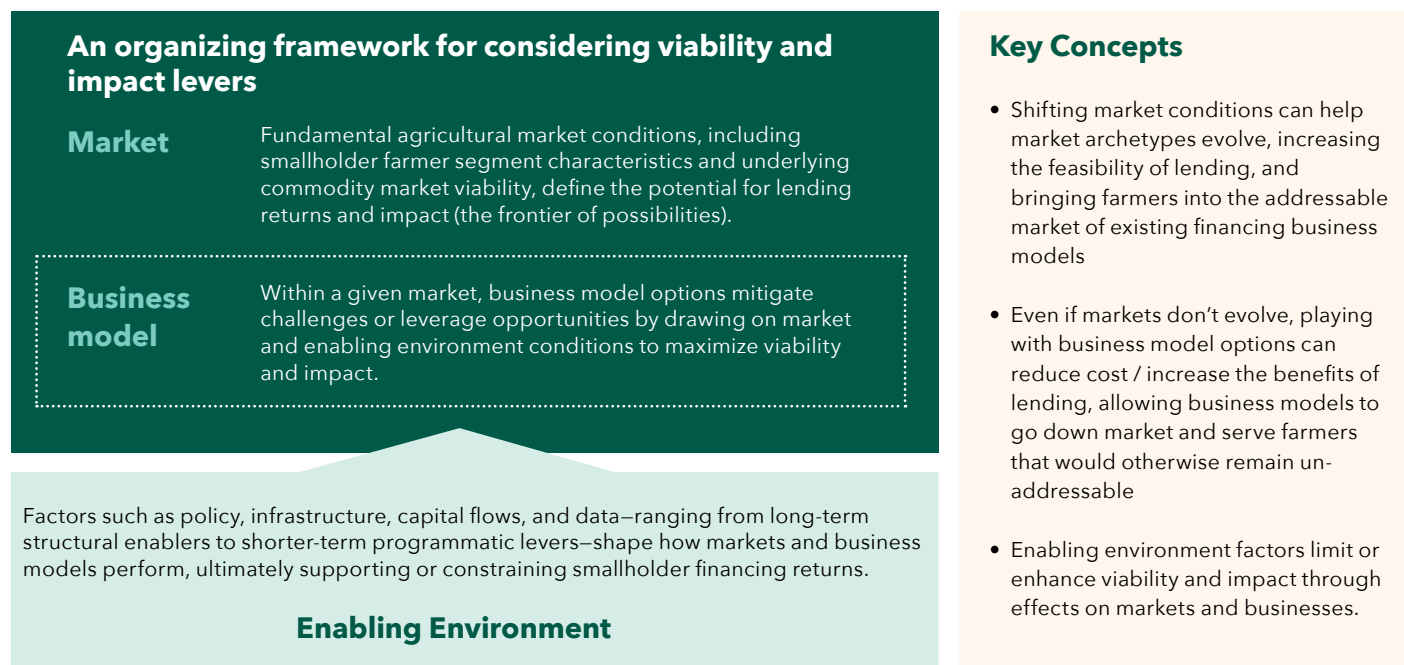
As outlined in Chapter 1, there are three levels of intervention that can unlock scale in smallholder finance, while improving commercial viability and farm level impact:

(1) Working on the demand side – shifting market conditions so that more farmers become “financeable”

(2) Working on the supply side – enhancing business models to strengthen providers’ ability to break through markets’ viability boundaries

(3) Building enabling environments – creating supportive systems that reinforce both demand and supply.

FIGURE 16. UNDERSTANDING THE LAYERS IMPACTING THE SMALLHOLDER FINANCE VIABILITY FRONTIER



For too long, these areas have been blurred together. Their natural limits and interdependencies are often misunderstood. Here, we aim to bring greater clarity to each area and the growth opportunity it presents.

5.1. WORKING ON THE DEMAND: SHIFTING MARKETS UP AND RIGHT

Chapter 2 introduced a new way of thinking about the foundational differences between markets that shape

commercial viability conditions for lending. These boundary conditions are not abstract—they constrain lenders in very real ways.

For many financial service providers, smallholder producer households are:

- Too small in scale
- Difficult to reach
- Operating informally

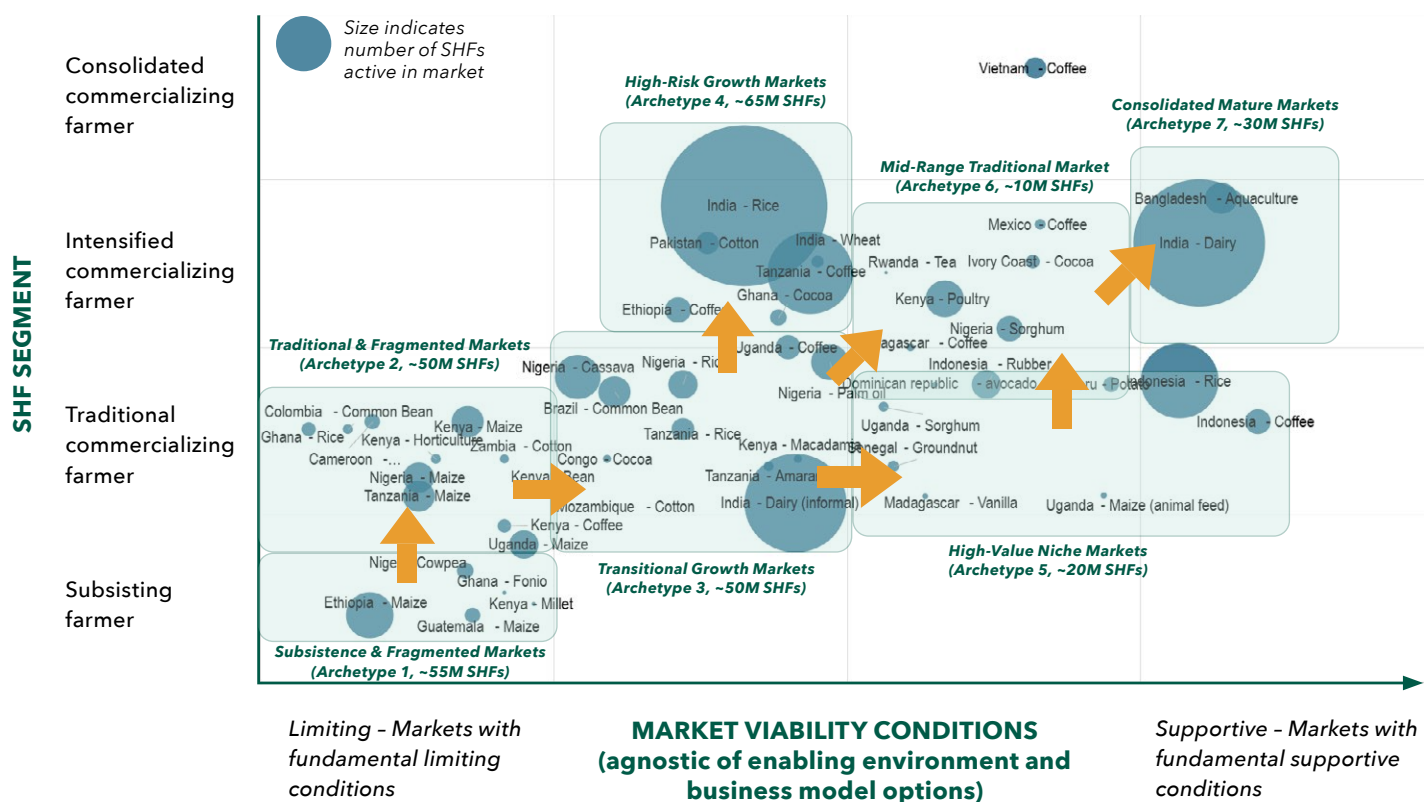
- Digitally disconnected
- Lack resilience and adaptation capacities
- Participating in fragmented, illiquid or poorly serviced markets.

As agricultural markets mature, farmers become more commercialized and underlying commodity markets strengthen, the boundary conditions for lending shift. In turn the “financeability” of smallholder farmers becomes more attractive, expanding the “addressable” market for existing financing channels.

Importantly, this can occur even without changes to business model design. Evolving characteristics of farmer segments and/or improvements in underlying market viability conditions can make the demand for smallholder financing more appealing to serve—both for financial service providers and value chain actors.

For example, Traditional and Fragmented Markets are typically low-value and high-risk, limiting their attractiveness for lending. Currently, only around 15% of the estimated 55M SHF households operating in these markets (when extrapolated out to a total global perspective) have access to finance, primarily flowing

FIGURE 17. ILLUSTRATIVE MARKET ARCHETYPES MATURITY PROGRESSION¹²



As agricultural markets mature and production and offtake markets develop, boundary conditions for lending shift and the “financeability” of smallholder farmers within them becomes more attractive, expanding the “addressable” market for existing financing channels, even without any changes to their current business models.

¹² Farmer household estimates by archetype are derived from analysis of 55 crop-country markets, triangulated with global and regional data sources (e.g., Lowder et al., 2021; FAOSTAT, 2024) to extrapolate a total number across Latin America, South & Southeast Asia, and Sub-Saharan Africa. While estimation is complicated by factors such as multi-cropping, overlapping livelihoods, and limited data availability—creating risks of both double counting and undercounting—these figures represent a best-efforts view of the relative distribution of households across archetypes, providing a directional basis for assessing market conditions and growth opportunities.

from a narrow set of actors: offtakers, community-based financial institutions, MFIs (via group lending) and social enterprises. By improving viability conditions—such as through farmer aggregation and greater offtaker formalization—these markets could evolve into Transitional Growth Markets. Such a shift could move up to 22M SHF households into the “addressable market” for financing channels already operating in Transitional Growth Markets, including a large share of offtakers, some commercial banks, MFIs and AgTech providers.

Moving archetypes “up” and “to the right”

While this report does not intend to position market archetypes as a ladder to be climbed, it offers a lens to help finance providers and policymakers tailor support to each context. Investing in either improving primary production and/or in strengthening market archetypes, will over time, move markets up and/or to the right.

- **Moving markets “up”** involves strengthening farmer-level conditions—for example increasing land sizes through aggregation, advancing commercialization, or raising production value through improved farming practices and access to productive services like extension support.
- **Moving markets “to the right”** involves strengthening the underlying commodity market-level conditions—such as increasing the value and the size of the underlying market (e.g. opening export markets or expanding local processing), reducing farmer-level risk (e.g. through stronger contract enforcement), decreasing market volatility (e.g. stabilizing supply and demand), or building resilience to climate change (e.g. through public irrigation schemes or public agricultural insurance).

This report does not propose a “how-to” for market development—country-level agricultural strategies or value chain development programs have been doing that for decades. Instead, our focus is to highlight the types of boundary conditions for lending that exist in different market archetypes and to provide guidance on what market-level approaches may be more relevant for each, given existing market realities.

Because archetypes are defined by distinct smallholder segments and viability conditions, not every lever is equally relevant everywhere. Unlocking lending requires identifying the biggest constraints to feasibility and impact in each market, then targeting interventions accordingly.

For example, Uganda’s maize-for-animal-feed market is relatively attractive thanks to strong and growing local and regional demand. Yet most farmers remain early in their commercialization journey, with small land sizes and limited productivity making them unattractive to most lenders, particularly FSPs. Shifting Uganda maize from a high-value niche market into a mid-range traditional market—where FSP activity is higher—will likely require aggregation and productivity-enhancing services. While every market requires its own analysis, Figure 18 offers an illustrative view of the potential levers and their “typical” relevance across archetypes.

Important caveats: Market-level levers are not quick fixes

1. They are long term plays requiring long term vision and commitment (e.g. formalization of offtake markets will not immediately raise smallholder finance flows)
2. They are highly context-specific, limiting replicability across value chains and countries
3. Real shifts usually require pulling multiple complex levers at once, underscoring the need for coordinated action across stakeholders.

Given these dynamics, estimating how archetypes might reconfigure if certain levers were pulled, is extremely difficult. Section 5.4 provides a high-level view of what opportunities may exist under different scenarios, considering both demand-side shifts (market movements) and supply-side changes (business model design).

Additionally, it is important to recognize that market archetypes are shaped not only by these factors, but also by power dynamics within value chains. In lower-viability contexts, fragmented markets can persist because traders, input dealers, or local authorities benefit from opacity and short-term transactional control. In higher-viability archetypes, consolidation and stronger buyer linkages may improve access to finance but can also shift

FIGURE 18. OPPORTUNITY #1: WORKING ON THE DEMAND | MOVING MARKETS UP AND RIGHT CAN BE DONE IN A RANGE OF DIFFERENT WAYS

CATEGORY	LEVERS	1. SUBSISTENCE & FRAGMENTED	2. TRADITIONAL & FRAGMENTED	3. TRANSITIONAL GROWTH	4. HIGH-RISK GROWTH	5. HIGH-VALUE NICHE	6. MID-RANGE TRADITIONAL	7. CONSOLIDATED MATURE
Underlying SHF segment	Land size & tenure							
	Input / tech adoption		Enables surplus production to be sold to markets + provides collateral for lending eligibility					
	Farmer aggregation				Less relevant for more mature markets where value chain fundamentals (i.e., land rights, good agricultural practices, aggregation, production standards) are well-established			
	Standardized production grades							
	Establishment of outgrower schemes		Aggregation + market access are critical for formalizing less mature markets by allowing farmers to commercialize and lowering transaction costs for lenders					
Underlying market conditions	Market access							
	Rural financial infrastructure							
	Rural physical infrastructure / transportation links		Allows farmers to sell surplus produce to markets, with the infrastructure necessary to reach markets and creates positive sourcing uplifts for offtakers		Assumes higher presence of formal offtake structures, access to markets and more established rural infrastructure			
	Value chain actor formalization / professionalization							
	Price control mechanisms		Price controls and irrigation lower lending risks with appropriate loss coverage and price floors					
	Public irrigation systems							
	Digital traceability systems				Streamlines collection of farmer data + lowers lending risks for traditional lenders to increase presence in smallholder finance markets			
	Digital public infrastructure / data privacy		Less relevant for early-stage markets where value chain fundamentals are a first order priority before digitization can occur					

Impact on shifting markets up

HIGH

MEDIUM

LOW

bargaining power away from farmers. These dynamics mean that markets do not automatically “graduate” to the next archetype; rather, they reflect negotiated outcomes between actors with differing interests, which in turn shape the financing options available to smallholders.

For concessional funders and actors, the implication is clear: seek to clearly understand the ROI of subsidizing lending in the short term versus investing in market development that shifts the need for subsidies in the longer term.

5.2. WORKING ON THE SUPPLY: DESIGNING BUSINESS MODELS FOR VIABILITY AND IMPACT

A lenders’ business model defines how it navigates market dynamics and the enabling environment to maximize both financial returns and farm impact.

Business model choices can mitigate challenges or leverage opportunities, allowing some providers to outperform others—even within the same market. Crucially, business

model innovation can also shift the viability frontier, enabling lending to farmers who would otherwise remain unaddressable.

As noted in Chapter 3, providers are experimenting across multiple design dimensions:

- **Distribution models** - how can distribution channels and models reduce the cost of customer acquisition, cost to serve, and cost of risk?
- **Risk assessment and management** - how can new approaches to assessing and managing risk reduce customer acquisition costs, cost to serve, cost of risk and cost of funds?
- **Bundling, service design and pricing** - how can the design of services, and their bundling with other offerings, reduce cost of risk and/or improve revenues and benefits?
- **Capital structure** - how can the types of capital used to finance lending reduce the cost of funds?

Identifying which business model options are most promising for breaking through viability boundaries and reaching further down-market requires a nuanced understanding of: (1) the relevance of cost, revenue and impact drivers across financing channels, and (2) the effect of different business model choices on these drivers.

In other words: because cost and revenue/impact drivers vary across channels, and because business model levers affect them differently, the options with the greatest potential to unlock lending will differ by financing channel.

Figure 20 maps business model design options to cost, revenue and impact drivers across financing channels, surfacing insights into which options show the most promise for which channels, while Figure 21 highlights how this could affect their positioning across market archetypes.

- **Supply security providers** face high cost of risk (especially under climate shocks) and cost of funds. Risk mitigators such as insurance (meso or micro), agroclimatic risk assessments, bundling of services, and

access to affordable lines of credit could radically shift the economics. For example, if offtakers were to bundle insurance within their credit offering or access meso level insurance, both with an assumed loss coverage ~70%, average cost of risk would fall from 38% to 11%. As shown in figure 19 below, this would allow offtakers to absorb more frequent and more severe shocks. This scenario-based modelling is supported by global evidence, with some studies pointing to a potential ~10% reduction in overall loan defaults where lenders hold first right to the insurance payout, directly lowering their expected risk exposure.¹³

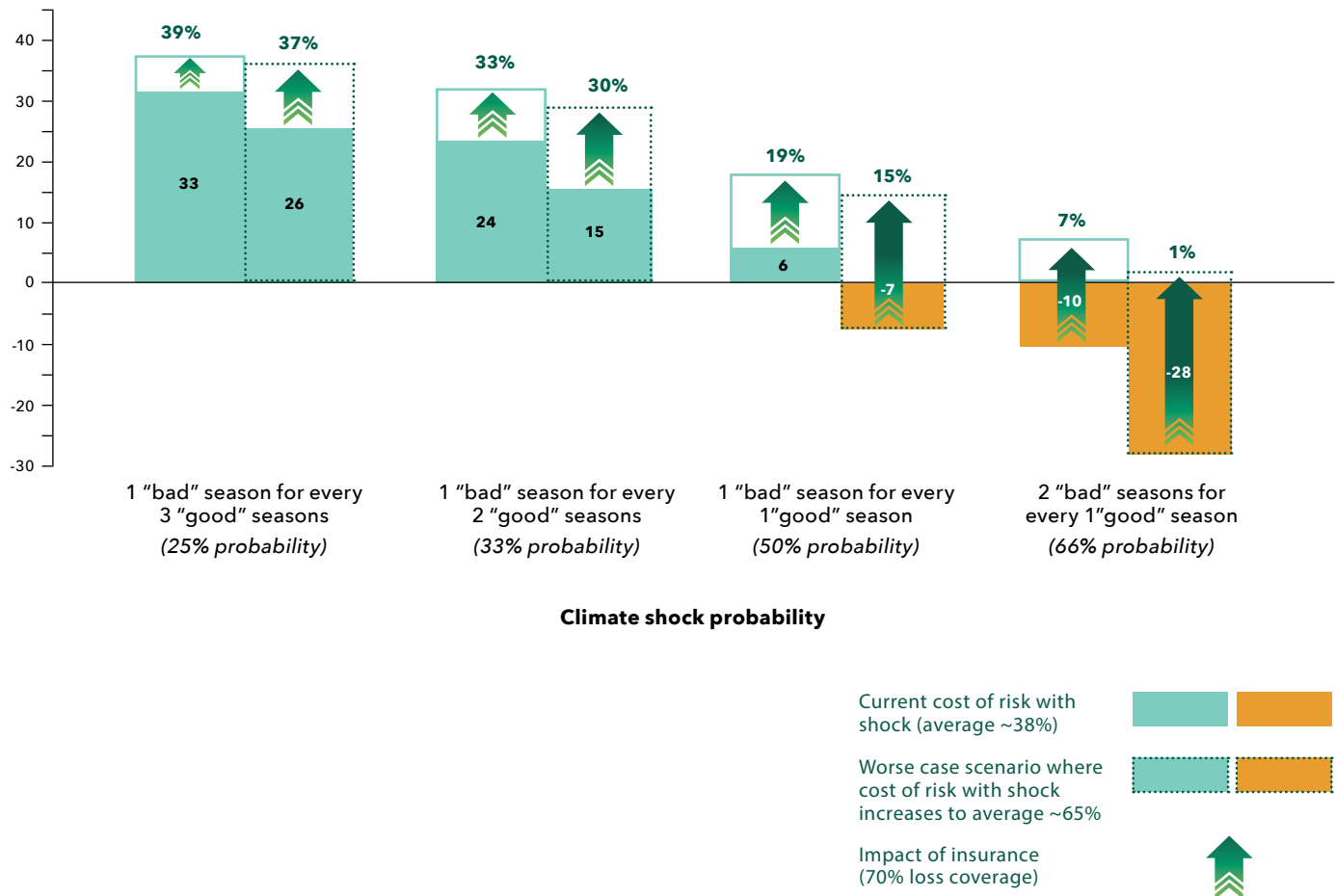
Bundled services, such as advisory, mechanization, and climate-smart practices, can reduce the cost of individual farmer risk (through loyalty and improved practices) and climate risk, while also increasing sourcing benefits. On the cost of funds side, access to fit-for-purpose credit lines priced at 10% p.a. (vs ~20% p.a. on average today), could increase net lending margins from -13% to -6% (no shock) and total margins from 59% to 66% (no shock). Distribution levers may unlock some marginal gains, but given supply security's relative strength in cost to serve, these are less critical.

- **Service profitability providers**, that aim to profit from lending, find the most impactful levers in reducing cost to serve and cost of risk (or perceived cost of risk). Alternative credit scoring (using mobile, transaction, agronomic, satellite and other data) can lower cost of risk by improving assessments of rural customers and increasing transparency for thin-file farmers who would otherwise be excluded. The main benefit lies less in reducing current non-performing loans (which are often already low due to collateral requirements and stringent credit thresholds) and more in enabling expansion into new customer segments. Guarantees and first-loss facilities can further reduce risk perception barriers, particularly in harder markets (e.g., Tanzania's Smallholder Credit Guarantee Scheme). Digitization of loan origination, monitoring, disbursement, and repayment can reduce the cost to serve by 10-20%, potentially lifting net lending margins by ~4-6%.

13 Wageningen Economic Research, "Using existing evidence to inform the design, implementation, scaling up, and evaluation of national agricultural insurance programs in the frame of climate adaptation", 2025

FIGURE 19. IMPACT OF AGRI-INSURANCE ON OFFTAKERS' 4-YEAR TOTAL MARGIN

Average four-year total margin for offtakers lending to smallholder farmers with and without out insurance (% of balance; n=43)



- **Client outcome providers**, insurance and bundled services are critical levers to reduce cost of risk, while improving farm income and resilience. Data from IDH's inclusive business models show that when farmers have access to inputs, advisory, finance and market access, income uplifts can be up to two times greater than finance alone. Because these models are high-touch, digitization of loan origination, monitoring, or repayment can help unlock cost efficiencies. However, given many clients'

lower digital literacy, full digitization is often difficult without compromising farmer outcomes. Partnerships with agents and ecosystem actors can extend reach and safeguard farmer outcomes.

>> **Opportunity for further reading:** [IDH's innovation library](#) is a tool showcasing inclusive business innovations, practical "how-to" guides, and case studies to help you design viable business models with impact.

FIGURE 20. WORKING ON THE SUPPLY | THERE IS A DIVERSE NUMBER OF BUSINESS MODEL OPTIONS TO OPTIMIZE FOR FINANCIAL SUSTAINABILITY AND IMPACT

BUSINESS MODEL LEVERS		RELEVANCE TO DRIVERS						RELATIVE RELEVANCE TO CHANNELS								
CATEGORY	TYPE	LENDING COSTS			LENDING REVENUES AND BENEFITS			SUPPLY SECURITY PROVIDERS	SERVICE PROFITABILITY PROVIDERS (LENDING)				SERVICE PROFITABILITY PROVIDERS (NON-LENDING)			CLIENT OUTCOMES PROVIDERS
		COST TO SERVE	COST OF RISK	COST OF FUNDS	DIRECT LENDING REVENUES	INDIRECT LENDING REVENUE	CLIENT OUTCOMES	VC ACTORS	COMM BANKS	MFIS	AG-FINTECHS	INFORMAL LENDERS	INPUT PROVIDERS	AGTECH MARKET-PLACE	FARM SERVICES	SOCIAL ENTERPRISES
Risk assessment & mitigation	Index insurance															
	Alternative credit scoring				Lowers lending-related risks through better assessments of farmer credit worthiness and mitigates potential shocks						Comm banks and MFIs are constrained by high perceived lending risks due to lack of familiarity with agri-lending					
	Agroclimatic risk assessment															
Distribution	Digitization of loan origination / monitoring															
	Embedded disbursement / repayment				Digitization & embedded and intermediated distribution channels makes lending more efficient and lowers operational costs				VC actors are most constrained by high lending risks, lack of digitization raising lending costs and low lending revenues due to lack of additional services							
	Delivery via intermediaries															
Bundling & service design	Dynamic / risk-based pricing															
	Bundled credit / advisory / inputs															
Capital structure	Local currency debt				Bundling services can increase revenues from lending activities while lowering cost of risk through greater yield uplift and improved resilience											
	Concessional working capital															
	Guarantees / first loss tranches															

Impact in shifting supply down

NA

HIGH

MID

LOW

FIGURE 21. OPPORTUNITY #2: WORKING ON THE SUPPLY | DESIGNING BUSINESS MODELS FOR VIABILITY AND IMPACT

MARKET ARCHETYPE		SUBSISTENCE & FRAGMENTED - ARCHETYPE #1	TRADITIONAL & FRAGMENTED - ARCHETYPE #2	TRANSITIONAL GROWTH MARKETS - ARCHETYPE #3	HIGH-RISK GROWTH MARKETS - ARCHETYPE #4	HIGH-VALUE NICHE MARKETS - ARCHETYPE #5	MID-RANGE TRADITIONAL MARKETS - ARCHETYPE #6	CONSOLIDATED MATURE MARKETS - ARCHETYPE #7
SUPPLY SECURITY PROVIDERS	TRADERS				+			
	PROCESSORS		←		+			
	COMM PRODUCERS				+			
	AGTECHS				+			
SERVICE PROFITABILITY PROVIDERS (LENDING)	COMMERCIAL BANKS DIRECT LENDING				←		+	
	COMMERCIAL BANKS PARTNERSHIP LENDING						+	
	MFIS GROUP LENDING				+			
	MFIS INDIVIDUAL LENDING		←		+			
	AGFINTECHS				+			
	INFORMAL LENDERS							
SERVICE PROFITABILITY PROVIDERS (NON-LENDING)	INPUT PROVIDERS				+			
	AGTECH MARKETPLACE		←		+			
	FARM SERVICES				+			
CLIENT OUTCOMES	SOCIAL ENTERPRISES							

Prevalence of financing channel

HIGH	MID	LOW
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Impact of Levers

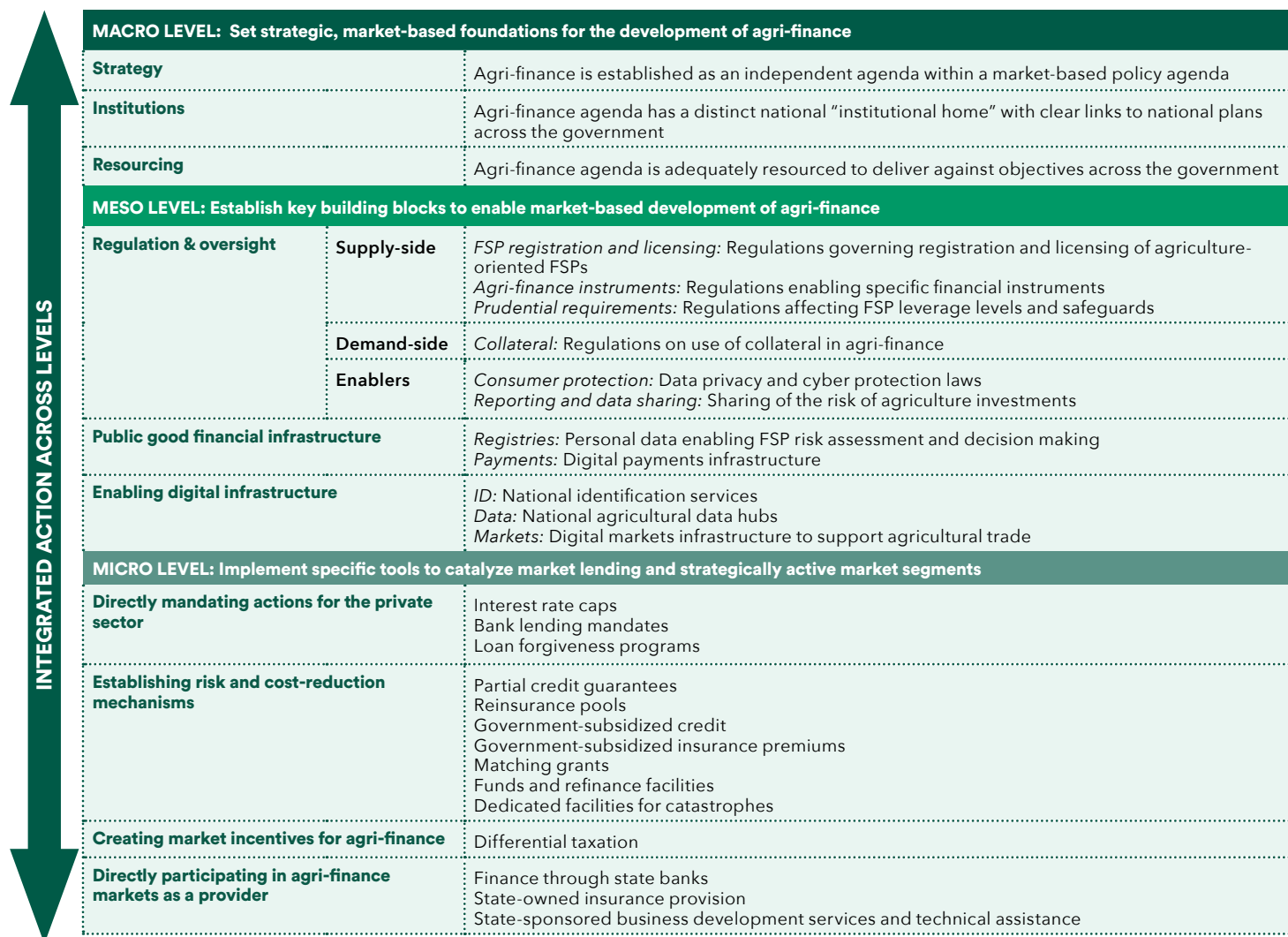
+	←
INCREASING SHARE WITHIN EXISTING MARKETS	GOING FURTHER DOWN MARKET

5.3. BUILDING SUPPORTIVE ENABLING ENVIRONMENTS THAT ENHANCE DEMAND AND SUPPLY

Elements of the enabling environment can either support or hinder lending viability and impact through effects on markets and businesses. Recent ISF research in the [Role of Government in Agri-Finance](#)

produced a comprehensive inventory of actions that governments can take to enable agri-finance. This work categorized interventions at macro, meso and micro levels and assessed their effectiveness over the past 40 years.

FIGURE 22. FRAMEWORK FOR GOVERNMENT ACTIONS IN SUPPORTING AGRI-FINANCE



>> **Opportunity for further reading:** [Recent ISF research](#) on the Role of Government in Agri-Finance provides an evidence-based review of these levers and their effectiveness.

Structural vs Programmatic enablers. The impact of enabling environment levers on smallholder finance can be significant, both positively and negatively. It's useful to distinguish between:

Longer-term structural enablers that strengthen market fundamentals and expand the range of business model options. Examples include: i) digital public infrastructure (e.g., IDs, payment systems) to support digitization, increase access to relevant services for farmers, and reduce costs of risk assessment and service delivery, ii) physical infrastructure (e.g., public irrigation systems) to lower production and market risks, and iii) market transparency systems that provide reliable data on volumes and prices.

Short-to medium-term programmatic enablers that act directly on the cost and revenue drivers of financing channels. Examples include: i) guarantee facilities to reduce risk and free up balance sheet space, ii) interest rate subsidies that lower borrowing costs without compromising financial revenue, and iii) subsidized agri-insurance to bundle with credit and lower cost of risk.

Agricultural vs. financial sector enablers. It is also important to recognize the differences between financial and agricultural sector enablers.

Financial sector reforms and enablers (e.g., mobile money regulation, regulatory sandboxes, lending mandates) often accelerate delivery of innovation and unlock finance in shorter timeframes.

Agricultural sector enablers and investments (e.g., research and development, farmer aggregation, rural infrastructure) strengthen market fundamentals of smallholder production and offtaker markets, but usually require longer timeframes to deliver impact.

This report does not attempt to unpack these levers in detail, given their complexity and the micro-level focus on our analysis. However, any market analysis must account for how structural and programmatic enabling factors shape both the size of the addressable market and the viability of the business models.

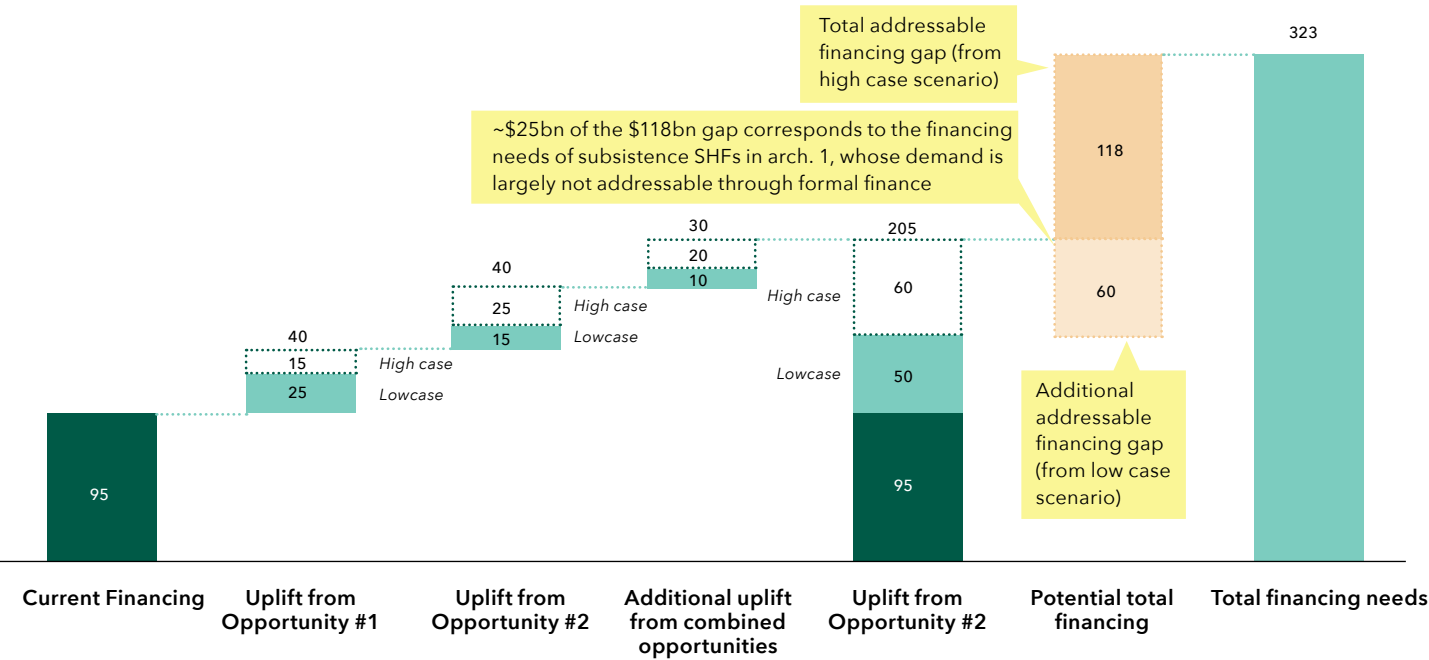
Priority opportunities for action

Building on existing work we highlight several areas where enabling environment interventions can have outsized impact:

- **Adapt financial regulations** to agricultural realities (e.g., lowering minimum capital requirements for small financial institutions, simplifying licensing for non-banks, and expanding legal frameworks to enable for products, such as warehouse receipts and factoring).
- **Unlock capital** by adapting risk and management requirements (e.g., tailoring capital adequacy ratios to encourage agri-lending, adapting collateral requirements to make them less restrictive for SHFs, adapting loan provisioning requirements to meet seasonal demands of agriculture, and formalizing agri-loan classifications).
- **Stimulate innovation** by creating supportive policies and infrastructure (e.g., establishing regulatory sandboxes for testing new products, investment in digital public infrastructure such as interoperable payments and data-sharing, consumer protection frameworks, and establishing consumer protection laws).
- **Establish an institutional home for agricultural finance and insurance** to coordinate public and private efforts and better align capital flows with domestic financial sector priorities and local realities. [UNDP's Institutionalization Framework](#) to build resilient and inclusive agriculture insurance markets is an example of where a more holistic approach is being promoted in the closely associated agri-insurance market.

FIGURE 23. HOW BIG IS THE SCALE UP OPPORTUNITY IF REALIZED? | ~60MN FARMERS AND ~\$110BN / YR (~50% OF CURRENT FINANCING GAP)

Financing for SHFs in LatAm, SSA, and SEA (\$B)



5.4. HOW BIG IS THE SCALE UP OPPORTUNITY IF REALIZED?

Estimating the opportunity at stake requires considering two types of potential changes:

- **Market level shifts** that expand the number of farmers who are addressable by existing financing channels
- **Business model innovations** that allow providers to break through viability boundaries and serve farmers previously considered unfinanceable.

Note that because enabling environment factors ultimately affect how markets and businesses operate, the analysis of the opportunity at stake presented below has accounted for the effect of changes in the enabling environment within market level and/or business model shifts.

Under a scenario where both market transformation and business model innovations are applied, an additional ~60M SHF households could become financeable – an increase of ~90% relative to 2025 projections. This could reduce today’s ~\$230B financing gap by up to 50% annually.

Important caveats

This sizing should not be read as a precise forecast. Instead, it provides a directional estimate of the potential scale of the opportunity. The intention is to highlight the relative contribution of different levers—market transformation and business model innovation—rather than predict precise outcomes. Additionally, this sizing uses extrapolated numbers of farmers per archetype globally to ensure a holistic picture of the overall opportunity.

In practice, these opportunities need to be considered at the level of individual markets by value chain and by country. Movement across archetypes will inevitably be shaped by a host of local conditions, from policy dynamics and infrastructure investments to crop-specific price volatility and farmer preferences. Similarly, the feasibility and pace of business model innovation will depend on provider strategies, access to capital, and the regulatory environment. As such, the direction and effect of market transformation and business model interventions will vary significantly across individual markets.

Even under the most optimistic scenarios, more than ~50M smallholder households will remain unfinanceable by commercial or quasi-commercial models. Many of these smallholders are in subsistence or highly fragmented markets with low marketable surplus (Archetypes 1-2) which also account for a large share of women farmers. They are likely to remain outside the reach of viable financial services, and their numbers are too large to be absorbed by privately funded client-outcome models alone. For these groups, targeted public investment will remain essential—whether in the form of social protection schemes, livelihood diversification programs, or basic service delivery that builds resilience and well-being.

Scenario #1: Market transformation alone

Moving markets “up and right” increases the pool of farmers that existing financing channels serve. Current estimates suggest ~285M SHF households across archetypes, with a combined financing need of ~\$320B—of which about 70% remains unmet. This gap however is not evenly distributed. For farmers in Archetypes 1 and 2, an estimated 95% and 85% of the financing needs go unmet, compared to 65% and 75% in Archetypes 5 and 6. If market transformation approaches enabled even 10-20% of farmers to transition to the “next” archetype (e.g., Arch 1 to Arch 2, Arch 2 to 3 and so on), between 10-15 million farmers could become addressable by existing financing channels, unlocking ~\$25-40B in additional annual financing.

Scenario #2: Business model innovations alone

Business model innovation offers another pathway by allowing financing channels to break through viability boundaries and serve farmers that would otherwise remain “unfinanceable”. If providers were able to lower key cost drivers and/or increase revenue drivers to meet internal return expectations, the reach could expand significantly. Input providers, for example, could serve 250,000-300,000 additional farmers within Archetypes 2-7. Offtakers—including commercial producers, processors, traders, and AgTechs—could serve 15-35M more farmers. Commercial banks could expand to reach 100,000-300,000 more, MFIs an additional 300,000-550,000 and FinTechs 300,000-600,000. In total, these innovations could bring ~40M more farmers into the scope of existing

business models, unlocking up to \$15-40B in additional annual financing.

>> Note on methodology: Importantly, this sizing is based on the major actors with significant shares of smallholder financing—input providers, offtakers, commercial banks, MFIs, and FinTechs—where there is enough unit economic data to model cost and revenue drivers. While one could imagine a “spillover” effect allowing lenders to enter entirely new archetypes, this analysis is conservative, focusing on the financing uplift achievable within the archetypes these providers already operate in. Archetype 1, in particular, would still require high levels of concessionality for entry, given the inherent risks.

Scenario #3: Combined impact

When combined, market transformation and business model innovations have the potential to make an additional ~60M farmers financeable—an increase of ~115% in annual financing capacity. This corresponds to ~110B in additional annual financing, reducing the existing gap by ~50%. These figures represent a steady-state scenario; in reality, such impacts would be phased in gradually, particularly where market-level approaches are involved. It is also important to note that these projections do not account for the additional financing needs arising from climate adaptation, which could further reshape the landscape of smallholder finance.

5.5. REFRAMING THE ROLE OF CONCESSIONAL CAPITAL IN CAPTURING THE OPPORTUNITY

Despite progress in market development and business model design, agri-food lending still struggles to attract commercial capital at scale. Returns remain low relative to other sectors, or even compared to government bonds. For example Aceli Africa’s benchmarking shows average profitability on agri-SME bank loans of just 3.5% vs 28.3% for banks overall and 16.2% for treasury bonds across five countries over the past four years. Structural challenges underpin this gap: smallholders and agri-SMEs are typically higher risk, loan sizes remain small, transaction costs are high and climate volatility further compounds uncertainty.

Concessional capital will therefore remain central—helping to leverage private investment while pursuing goals of food security, poverty reduction, inclusivity, resilience and sustainability. What must evolve as a sector, however, is our framing and deployment of concessionality. Too often “subsidy” is oversimplified or treated as a “one size fits all” solution, being either celebrated as the only solution or criticized as crowding out private capital. A related priority is strengthening the understanding and management of risk, where the insurance industry—such as intermediaries and modelers (e.g., Global Parametrics, Celsius Pro)—can provide tools to improve pricing and facilitate risk transfer. This report argues instead for a more nuanced and differentiated approach to concessional capital, one that recognizes that concessionality must play different roles across market archetypes, business models and time horizons. The frameworks developed in this report—linking market archetypes and business model economics—provide a foundation for more strategic deployment of concessional capital for governments, donors supplying non-commercial capital and impact investors providing capital at below risk-adjusted return levels.

We highlight three distinct pathways for concessionality:

1. Permanent role: social protection and livelihood support in unfinanceable markets

In many contexts, particularly Archetype 1: Subsistence and Fragmented Markets and large portions of Archetype 2: Traditional and Fragmented Markets, commercial viability will likely not be viable. Here, the primary role of concessionality is not about catalyzing finance but about supporting household resilience and livelihoods, often through a mix of farming and non-farming activities.

Government actors, likely with donor support, should prioritize social protection programs, livelihood diversification schemes and public service delivery that stabilizes incomes and reduces vulnerability particularly in the face of climate shocks. Examples of such schemes include Ethiopia’s *Productive Safety Net Programme* and India’s *National Rural Employment Guarantee Act*, which blend cash transfers and basic services. Agricultural subsidies in fertilizer or seed programs are also relevant when targeted at subsistence farmers seeking incremental yields to increase family food consumption.

However, such efforts are often implemented in parallel rather than in coordination with agricultural finance markets, underscoring the need for stronger alignment between social protection and finance to maximize impact.

2. Catalytic role: building agricultural and finance market fundamentals

In transitional markets (Archetypes 2-5), concessionality should focus on market development functions that can reduce structural risk in agricultural finance and attract private lenders over time. This includes investment in public goods, services and institutions, including farmer aggregation, offtake formalization, market transparency platforms, irrigation, storage and logistics infrastructure, contract enforcement regulations and instruments (e.g., credit bureaus, crop receipt systems, or agri-insurance schemes). Governments can play a critical role as funders and regulators, while donors can play key roles in filling gaps where government budgets are insufficient, spurring innovation and supporting value chain development.

Examples of concessionality acting as a catalyst for more supportive agricultural finance markets include India’s *Central Scheme for the Formation and Promotion of 10,000 Farmer Producer Organizations*, which works with state governments to establish and strengthen farmer producer organizations through a mix of equity grants and a credit guarantee fund; Kenya’s *Warehouse Receipt System Reforms*; and donor-backed insurance premium subsidies across Africa, such as FCDO and KfW efforts to subsidize insurance premiums and scale ARC or the World Bank’s *Global Insurance Facility*.

3. Tactical role: enabling business models to mobilize private capital themselves

In markets where business models are emerging with potential for scale (primarily in Archetypes 3-7), concessional capital should be deployed tactically to crowd in private capital.

Governments and donors providing non-commercial capital will continue to play an important role, but specialized impact funds and DFIs are uniquely positioned to back models with potential for financial returns. These actors are mission-driven and often willing to take subordinate positions to unlock mainstream commercial capital. Impact funds such as the Acumen Resilient

Agriculture Fund, GAWA Capital, or Farmfit Fund bring sector-specific expertise and flexibility to support offtakers, AgTechs and FSPs. DFIs, by contrast, can operate at larger scale and anchor blended vehicles with strong credibility to attract institutional investors. Together, impact investors and DFIs provide the bridge capital that allows promising business models to demonstrate viability, creating pathways for commercial capital to follow.

Concessional instruments range from guarantees and first-loss facilities (to reduce perceived or actual risk), to concessional debt or equity (to lower funding costs), and innovation grants or technical assistance (to reduce upfront costs and enable experimentation). The choice of instrument should be guided by the business model and market archetype targeted, balancing private capital leverage with impact outcomes. This also requires attention to risk at the farmer level, where tools such as insurance and stronger risk assessment can reduce exposure and share risk more evenly across the value chain.

- **Supply security providers:** Concessional support could take the form of liquidity guarantees during poor seasons, helping offtakers remain solvent through climate shocks and lowering perceived risks that otherwise constrain on-lending to smallholder farmers, even when these offtakers are eager to scale their sourcing operations.
- **MFIs and commercial banks:** Partial guarantees (e.g., Aceli Africa's guarantee scheme), first-loss covers, and concessional debt or equity (including in the form of grants) can reduce the perceived cost and risk of entering more challenging market archetypes. Technical assistance can further support product customization and partnerships with supply security actors or AgTechs. CGAP research, for instance, highlights Caja Los Andes and Confianza, where aligning repayment schedules to seasonal incomes and upgrading MIS systems enabled MFIs to expand sustainably into agricultural lending. With the right leadership commitment, concessional support through MFIs and banks can quickly unlock large volumes of lending—though evidence remains limited on whether such lending continues once incentives are withdrawn, given smallholder lending often clashes with rigid internal policies.

- **Ag-FinTechs and mechanization of service providers:** Grants and early-stage risk capital are critical to help these actors across the “valley of death” (notably beyond the US\$500,000 threshold, according to AgBase data). While scale-up is slower and riskier, supporting AgTechs can unlock breakthrough lending models with replication across other provider types.

Ultimately, whether used permanently—as a form of social protection—or temporarily—to catalyze structural improvements that make finance viable or crowd in private capital—concessional capital will remain a cornerstone of agricultural finance. The central challenge for the decade ahead is not whether concessionality is needed, but how and where to deploy it most effectively.

6. A VIEW TO THE FUTURE AND CONTINUING THE MOMENTUM



Looking back to the very first *Smallholder Finance State of the Sector Report* in 2012, it is clear how far this agenda has advanced. With this report marking another milestone, we believe the next five years should be characterized by five priorities:

6.1 BUILDING ON A STEP-CHANGE IN UNDERSTANDING WHAT DRIVES COMMERCIAL VIABILITY TO BRING MORE NUANCE TO ALIGNING CREDIT WITH CONTEXT

For years, practitioners have sought clarity on what “commercially viable” smallholder finance looks like. While not definitive, this report introduces a more nuanced way of thinking about markets, models (and sub-models), and smallholder segments than ever before. The opportunity now is to consider relative differences for commercial viability much more precisely.

Signs of progress will include new debates about the viability of lending channels in different market archetypes, how much cost or risk compression is feasible for different models, and which subsidies must be structural versus temporary. If successful, this will also generate new levels of sophistication in data and research—framed around the questions this report has not yet been able to answer.

6.2 USING SUBSIDY MORE STRATEGICALLY TO BUILD CREDIT MARKETS

This report distinguishes three areas for developing smallholder credit markets: enabling environment reforms, agricultural market building, and lending model development. Combined with a more granular understanding of markets and models, stakeholders now have an opportunity to align more effectively on where scarce funding can have the greatest impact.

Evidence of this shift will come when policymakers,

investors, donors, development programs and FSPs are talking in new ways about the interdependencies and sequencing—coordinating actions rather than operating in silos.

6.3 KEEPING AN EYE ON GAME-CHANGING INNOVATIONS

While this report largely focuses on optimizing existing systems and models, it is important to remember that the landscape is not static. Emerging technologies and approaches—such as AI applied to advisory and risk modelling, carbon-related income from regenerative practices, innovations in agri-insurance, and advances in remote sensing—could significantly shift what is possible in smallholder finance. Although cataloguing these technologies was not the focus of this report, the industry must continue to place “big bets” on such breakthroughs to expand the viability frontier in new ways.

6.4 CONSIDERING HOLISTIC RISK AND MITIGATION APPROACHES IN NEW WAYS

A recurring theme throughout this report is that financing viability is as much about managing risk as it is about providing capital. Going forward there is an opportunity to use new risk modelling approaches as well as underlying market archetypes and lending models to consider the full set of lending risks—and where and how those risks could be transferred. In certain circumstances, portfolio-level risk transfer approaches—such as guarantees or meso-level insurance—could be appropriate. However a more sustainable approach will be looking at how to manage different aspects of the risk stack through other approaches that include transferring that risk to other value chain actors, linking to macro-insurance schemes, accessing other derisking services, or using more climate-adaptive technologies and farming techniques. New innovations are needed in these approaches for holistic risk transfer beyond simply covering a portfolio.



6.5 CONTINUING THE MOMENTUM BY ANSWERING THE BIG QUESTIONS

Industry consultations during this research revealed a strong appetite for more specific guidance on how to capture the smallholder finance opportunity—where to invest, what to invest in, how much is needed and who should act. While this report has gone as far as possible, several research questions remain to be answered to continue to inform industry action, including on:

- **Demand:** How much can realistically be expected from different smallholder segments before more structural changes are required?
- **Climate adaptation:** What are the true costs of regenerative and climate-adaptive practices, and how can finance models respond when such practices cannot be offered commercially?
- **Trade-offs:** What are the commercial-impact trade-off benchmarks across different models and markets to guide investment decisions?
- **Subsidy:** When and where is concessionality appropriate, how much is needed, and who is best positioned to deploy it (governments, donors, DFIs, impact funds)?
- **Subsidy efficiency:** What are the relative benefits and costs of different instruments? How should they be structured to balance short-term viability (e.g., guarantees or first-loss cover to help a commercial bank enter Archetype 2-3) with long-term market building, ensuring lending remains once concessional support is withdrawn?

6.6 BUILDING NEW PARTNERSHIPS AND COORDINATION STRUCTURES TO UNLOCK MARKETS

The size and complexity of the smallholder finance challenge demands unparalleled levels of collaboration over the next five years. No single actor, whether a donor, government, investor, financial institution, or agribusiness, will be able to drive meaningful progress on their own. Yet, despite this recognition, the global agri-finance agenda remains fragmented. Efforts are too often pursued in silos, with donors funding isolated pilots, governments introducing stand-alone subsidy schemes, and private providers experimenting with business models in narrow

pockets. This fragmentation is a key reason why progress has been slow, relative to the scale of the challenge.

What is needed is a step-change toward systemic, multi-actor partnerships that align incentives, pool resources, and sequence interventions across markets, business models, and enabling environments. For example, in a traditional and fragmented staple crop market highly exposed to climate risk and with low penetration of supply security providers and some MFIs, a consortium could bring together:

- Government, to formalize offtake and invest in shared irrigation infrastructure and build supportive public financial infrastructure
- Agribusiness and offtakers, to anchor produce demand through transparent sourcing agreements and processing capacity
- MFIs, to extend tailored financial products to producer organizations and farmer groups
- Commercial banks, to extend tailored financing to agribusiness to fund offtakers on-lending activities and increased sourcing activities
- Input providers, to encourage cost and risk sharing agreements particularly with offtakers engaging on input financing
- Donors and DFIs, to provide concessional capital, guarantees, and blended funds to break risk perception barriers and protect providers' balance sheets, gradually catalyzing the penetration of more private sector players
- AgTechs and service providers, to deliver bundled solutions—inputs, advisory, and insurance—that lower cost and risk.

Taken together, such coordinated action could over time transform an entire market from an unfinanceable context to one where multiple provider types can operate sustainably. Similar coalitions have begun to emerge—for example, Farmfit's service coalitions linking input providers, offtakers, and financiers; or national insurance facilities that blend donor, government, and private resources to crowd in market-based solutions. These examples should not remain exceptions—they must become the norm.

The next frontier of smallholder finance will be defined less by individual innovations and more by the collective architecture of partnerships that enable them to scale. Building that architecture, globally, regionally, and at the level of specific value chains, will be one of the defining priorities of the next five years.

These, and other questions, should continue to shape an industry learning agenda, driving the next step-change in sophistication within the next three to five years.



ANNEX



ANNEX 1: OVERALL APPROACH AND METHODOLOGY

METHODOLOGY

Process

Building on our 2012, 2016, and 2019 State of the Sector reports—*Catalyzing Smallholder Agricultural Finance*, *Inflection Point*, and *Pathways to Prosperity*—as well as over a decade of advisory work with leading stakeholders, ISF Advisors initiated a new global research effort in 2025 to reassess the state of agricultural finance.

Recognizing the role of past reports in rallying stakeholders around a shared vision, this study was similarly designed as a collaborative effort from the outset. In February 2025, ISF convened a core group of industry stakeholders in scoping sessions to align on objectives, scope, and priority learning questions. Participants included 60 Decibels, Aceli Africa, AGRA, Briter Bridges, Ceniath, CGAP, Council on Smallholder Agricultural Finance (CSAF), Gates Foundation, IDH, IFC, Mercy Corps AgriFin, One Acre Fund, SAFIN, Small Foundation, and UNDP.

Throughout the research process, this Working Group engaged to validate findings, test key hypotheses, and stress-test emerging frameworks. Insights from these discussions are reflected throughout the report and, where relevant, in accompanying outputs (blogs, briefs, etc.).

A special thank you goes to IDH Intelligence and Business Analytics for providing data from their database to inform the majority of unit economic case studies. This dataset was critical for understanding lender economics and underpins much of the analysis in this report. Additionally, CGAP and 60 Decibels contributed important inputs, including gender-related insights and callouts.

As with past reports, the 2025 study uses a data-led, holistic industry approach to untangle the complexity of recipients, providers, and capital markets. Using updated frameworks and shared terminology, the analysis is designed to guide

stakeholder decision making, strengthen alignment, and support more effective coordination across the sector.

Geographical scope

Consistent with prior reports, this study has a primarily global focus but excludes China, Central Asia, and the Middle East and North Africa. Exclusion was based on limited 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

Literature review

The team reviewed more than 65 reports spanning smallholder financing demand, market segmentation, lending models, capital markets, enabling environment, gender, and climate impacts. Sources included multilaterals, industry platforms, service providers, academic articles, and government publications. Referenced documents are cited throughout this report. The quantitative analysis of demand and supply also builds heavily on the [Pathways to Prosperity report](#) (see “Sizing Assumptions”).

Unit economic case studies and interviews

A total of 54 case studies were evaluated, drawing on direct data collection from lenders through conversations and interviews, as well as data from IDH. This involved rigorous data gathering, cleaning, and analysis. Beyond informing the case studies themselves, these inputs were critical for validating quantitative findings and contextualizing regional and value chain dynamics.

Thought partner contributions

Our thought partners IDH, CGAP, and 60 Decibels convened multiple times to review preliminary findings,

test emerging frameworks, and provide practitioner insight. These discussions ensured that the report reflects both empirical rigor and practitioner perspectives from across the industry.

Working group sessions

Targeted workshops and feedback sessions with stakeholders were held to review findings, pressure-test emerging hypotheses, and refine frameworks. These sessions helped ensure that the analyses reflect both global trends and the on-the-ground realities across different regions and value chains. Key areas of focus included:

- Revising market archetypes
- Exploring lending channels and evolving business models
- Understanding how business models converge with realities on the ground
- Identifying growth opportunities and future potential
- Developing a call to action to help move the sector forward.

SIZING OF SMALLHOLDER FINANCE DEMAND AND SUPPLY

1 | FINANCIAL NEEDS SIZING

SMALLHOLDER HOUSEHOLDS

Assumption Field	Assumption Value	Source
Number of farm households (<5 hectares)	Latin America: ~12 million Sub-Saharan Africa: ~67 million South & Southeast Asia: ~185 million	Lowder, S. K., Sánchez, M. V., & Bertini, R. (2021). <i>Which farms feed the world and has farmland become more concentrated?</i> <i>World Development</i> , 142, Article 105455 Triangulated using analyses of tables and underlying value chain by value chain analysis
Number of pastoralists	Sub-Saharan Africa: ~9 million South & Southeast Asia: ~12 million	<i>ISF Advisors and the Mastercard Foundation Rural and Agricultural Finance Learning Lab. 2019. "Pathways to Prosperity: Rural and Agricultural Finance State of the Sector Report." Washington, D.C.</i>

FINANCIAL NEEWWS

Assumption Field	Assumption Value	Source
Short-term agricultural needs (USD)	Latin America: ~\$1034 per farmer Sub-Saharan Africa: ~\$435 per farmer South & Southeast Asia: ~\$470 per farmer	An extensive analysis was conducted to establish financing needs: - We looked at the top 15 smallholder value chains in each region (45 value chains each across) and did deep research to unpack the following data: estimated number of households in each value chain regionally, average smallholder farm size, type of typical value chain (subsistence, commercial, mixed), average short-term financing needs per hectare in each crop/region, average long-term financing needs per hectare in each crop/region (based on crop by crop and geography by geography data research and confirmed by primary sources and interviews) - We then used the weighted average of the estimated financing needs for each type of value chain (e.g., subsistence, mixed, commercial) in each region weighted by number of farmers in each segment with an adjustment for commerciality, to arrive at these weighted financing needs that represent a step forward in really unpacking the underlying needs
Long-term agricultural needs (USD)	Latin America: ~\$791 per farmer Sub-Saharan Africa: ~\$358 per farmer South & Southeast Asia: ~\$400 per farmer	
Non-agricultural needs (USD)	Latin America: ~\$390 per farmer Sub-Saharan Africa: ~\$230 per farmer South & Southeast Asia: ~\$240 per farmer	

STATE BANKS

Assumption Field	Assumption Value	Source
Agri lending disbursements (USD million)	~\$87 Sub-Saharan Africa ~\$7,163 South & SE Asia ~\$3,547 Latin America	<i>ISF Advisors and the Mastercard Foundation Rural and Agricultural Finance Learning Lab. 2019. "Pathways to Prosperity: Rural and Agricultural Finance State of the Sector Report."</i> Disbursement values adjusted by compounded annual growth rate (2019-2024) of Agriculture, forestry, and fishing value added (current USD), World Bank indicators.
Non-agri lending disbursements (USD million)	~\$22 Sub-Saharan Africa ~\$1,791 South & SE Asia ~\$887 Latin America	Same as above
Ratio of agri to non-agri lending	~80-20%	Same as above
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)	~\$10,263 Sub-Saharan Africa ~\$21,507 East Asia ~\$28,435 South Asia ~\$52,757 Latin America	ISF Advisors and the Mastercard Foundation Rural and Agricultural Finance Learning Lab. 2019. <i>"Pathways to Prosperity: Rural and Agricultural Finance State of the Sector Report."</i> GLP values adjusted by compounded annual growth rate 2018-2022 based on MFI data from Atlas Data
% 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	Same as above
Ratio of agri to non-agri lending	~55-45%	Same as above
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)	Sub-Saharan Africa ~\$891 agri lending disbursements ~\$99 non-agri lending disbursements South & Southeast Asia ~\$326 agri lending disbursements ~\$36 non-agri lending disbursements Latin America ~\$555 Latin America ~\$36 Latin America	ISF Advisors and the Mastercard Foundation Rural and Agricultural Finance Learning Lab. 2019. <i>"Pathways to Prosperity: Rural and Agricultural Finance State of the Sector Report."</i> Disbursement values adjusted by triangulation of datapoints between credit to agriculture compounded annual growth rate by region (FAOSTAT, 2024)
Ratio of agri to non-agri lending	~90-10%	ISF Advisors and Rural and Agricultural Finance Learning Lab, <i>'Inflection Point: Unlocking growth in the era of farmer finance'</i> 2016.
Ratio of short-term to long-term lending	~85-15%	Same as above

HIGH TOUCH NGOS

Assumption Field	Assumption Value	Source
One Acre Fund disbursements (USD million)	~\$130	One Acre Fund

2 | FINANCIAL SERVICE PROVIDER SIZING

Assumption Field	Assumption Value	Source
Number of active AgFinTechs	# of active Fintechs - SSA: 151 # of active Fintechs - LatAm: 23 # of active Fintechs - S&SE Asia: 44	- GSMA, "Digital Agriculture Maps: 2020 State of the Sector in Low and Middle-Income Countries" 2020 - Updated numbers based on CAGR of 'financial access' solutions from 2019-2022 using <i>Beanstalk D4Ag Solutions Database</i> - AgBase, 2025
Median customer base	75,000 per AgFinTech	Calculated using <i>Beanstalk D4Ag Solutions Database</i> - Median of 'Financial Access' solutions users
Total active users receiving loans	15,000 per AgFinTech	- Calculated using <i>Beanstalk D4Ag Solutions Database</i> - Median of 'Financial Access' solutions active users - GSMA, "Improving farmer livelihoods through digitized value chains", 2023 - Interviews and unit economics collection
Average loan sizes	\$290	Expert interviews and unit economics collection
Number of active platforms	SSA: 122 LatAm: 54 &SE Asia: 59	- GSMA, "Digital Agriculture Maps: 2020 State of the Sector in Low and Middle-Income Countries" 2020 - Updated numbers based on CAGR of 'market linkages' solutions from 2019-2022 using <i>Beanstalk D4Ag Solutions Database</i> - AgBase, 2025
Median customer base	SSA: 73,050 LatAm: 2,500 S&SE Asia: 100,000	Calculated using ISF Platforms Database - Median of solutions by region
Total active users	SSA: 21,915 LatAm: 750 S&SE Asia: 30,000	Calculated using CTA, "The Digitalisation of African Agriculture Report", 2019 - Assuming 30% of users are active across regions
Distribution of customer base	SFH - 80%, SME - 20%	GSMA, "Improving farmer livelihoods through digitized value chains", 2023
Percent of active users receiving loans	~10% of users	Expert interviews and unit economics data collection
Average loan size	~\$290	Expert interviews and unit economics data collection

2 | FINANCIAL SERVICE PROVIDER SIZING

VALUE CHAIN ACTORS - INPUT PROVIDERS

Assumption Field	Assumption Value	Source
Total seed and pesticides sales in SSA, SEA and LATAM going to SHFs from global providers	~\$3,286 million	Sales by leading multinational seed companies were used to approximate the total market in SSA, SEA, and LATAM. These figures were scaled to reflect the overall size of the input market in each region, and the share of sales going to smallholders was applied to estimate total smallholder seed purchases.
Total seed and pesticides sales in SSA, SEA and LATAM going to SHFs from local and regional providers	~\$1,324 million	Sales data from leading regional and national seed companies in SSA and SEA were analyzed and scaled to represent the broader market. The proportion of sales directed to smallholders was then applied to derive estimates of total seed sales to smallholders across the two regions.
Percentage of input providers applying credit to sales	~73%	Analysis based on data from McKinsey & Company. <i>Winning in Africa's Agricultural Market</i> . February 2019.
Percentage of sales with credit from those providers	~30%	Same as above

VALUE CHAIN ACTORS - REGIONAL AND LOCAL OFFTAKERS

Assumption Field	Assumption Value	Source
Total number of smallholders in export value chains engaged by reg / local off-takers	~55 million	Key smallholder crops were identified (based on FAOSTAT), and the share of production destined for export was calculated by comparing production and export values. This export share was applied to estimate the number of smallholders in export-oriented value chains, with the portion already served by global off-takers subtracted to determine the remaining smallholder population.
Total number of smallholders being financed by reg / local off-takers in export crops	~28 million	ISF Advisors and Rural and Agricultural Finance Learning Lab, <i>'Inflection Point: Unlocking growth in the era of farmer finance'</i> 2016. Triangulated using primary data from unit economic analysis.
Average loan size by regional and national off-takers in non-export crops	~\$370 per loan	Unit economic data collection and analysis, triangulated with research on publicly available loan data across
Total number of smallholders in non-export value chains engaged by reg / local off-takers	~201 million	Local consumption value chains were estimated by identifying key smallholder crops and the total farmer base, calculating the share consumed domestically, and applying the proportion reaching formal markets. This provided an estimate of smallholders engaged in non-export chains served by regional and local off-takers.
Proportion of smallholders receiving credit from regional / local off-takers	33%	ISF Advisors and Rural and Agricultural Finance Learning Lab, <i>'Inflection Point: Unlocking growth in the era of farmer finance'</i> 2016. Triangulated using primary data from unit economic analysis.
Average loan size by regional and national off-takers in non-export crops	~\$310 per loan	Unit economic data collection and analysis, triangulated with research on publicly available loan data across

VALUE CHAIN ACTORS - GLOBAL OFFTAKERS

Assumption Field	Assumption Value	Source
Total number of smallholders engaged by global off-takers	~5 million	Estimated by collecting farmer engagement data from leading multinational companies, aggregating totals, and scaling to reflect the broader market by assuming these firms represent the majority share of smallholder engagement.
Proportion of smallholders receiving credit from regional / local off-takers	75%	ISF Advisors and Rural and Agricultural Finance Learning Lab, <i>'Inflection Point: Unlocking growth in the era of farmer finance'</i> 2016. Triangulated using primary data from unit economic analysis.
Average loan size by regional and national off-takers in non-export crops	~\$540 per loan	Unit economic data collection and analysis, triangulated with research on publicly available loan data across

METHODOLOGY FOR MARKET ARCHETYPING

Market archetypes can be characterized based on seven key variables that ultimately drive the viability of smallholder lending. Figure 23 lays out these variables in further detail.

FIGURE 23. RETHINKING AGRICULTURAL MARKET ARCHETYPES: THERE ARE 7 KEY VARIABLES THAT “MATTER” WHEN IT COMES TO SHF FINANCING VIABILITY

VARIABLE	WHY IT MATTERS?		
Land size	How small and fragmented are smallholder farmers?	Small and highly fragmented farms have smaller loan sizes and are more expensive / difficult to serve	SMALLHOLDER FARMER SEGMENT
Level of commercialization	Are farmers growing crop primarily for food consumption or for commercial sale?	Farmers growing primarily for food consumption are unlikely to make a positive return on the loan, affecting loan size, loan pricing, cost of risk	
Potential for production value add	Can farmers generate sufficient value add from financing?	Farmers with low production value add tend to have smaller loan sizes, and are less likely to make a positive return on the loan, affecting willingness to pay and cost of risk	
Market size and value	Does the underlying market create the incentives for financing?	Large and high value markets (export, high value add, tight value chains) tend to be associated with bigger loan sizes, greater willingness to pay and lower cost of risk	UNDERLYING MARKET VIABILITY CONDITIONS
Individual farmer risk	Are farmers likely to default even if they have production value add to pay back?	Highly competitive markets can make cost of risk (side selling) unviable	
Market risk	To what degree do market conditions enable predictable returns?	Highly volatile markets create high levels of risk that are untenable for most lenders	
Climate risk	Are farmers likely to default due to production shocks?	High exposure to climate shocks can make cost of risk unviable	

FIGURE 24. RETHINKING AGRICULTURAL MARKET ARCHETYPES: SMALLHOLDER SEGMENTS

	SUBSISTING FARMER	TRADITIONAL COMMERCIALIZING FARMER	INTENSIFIED COMMERCIALIZING FARMER	CONSOLIDATED COMMERCIALIZING FARMER
Land size	Small (<1ha)	Small-mid (1-1.5ha)	Mid (1.5-2ha)	Large (>2ha)
Level of commercialization	Low (<35%) Primarily growing crops for household consumption	Mid (35-50%) Growing crops for both household consumption and commercial sale	High (50-75%) Primarily growing for commercial sale	High (>75%) Almost exclusively growing crops for commercial sale
Potential for production value-add	Low High yield gap but very small land sizes makes absolute production value add low	Mid High yield gap but still small land sizes	High Significant yield gap and bigger land sizes	High Lower yield gap but bigger land sizes
Overall				

All other context factors being equal, the larger, the more commercialized and the higher the potential for production value add, the greater the viability of smallholder financing

Supportive of smallholder financing viability

HIGHER

MID

LOWER

1. Defined by land size and yield gap

FIGURE 25. RETHINKING AGRICULTURAL MARKET ARCHETYPES: UNDERLYING MARKET VIABILITY CONDITIONS

	EXTENT TO WHICH VARIABLES ARE SUPPORTIVE OF SHF FINANCING VIABILITY (SIMPLIFIED SPECTRUM OF POSSIBILITIES)			
Market size and value¹ (60%)	Low value markets (domestic, little value add, loose value chains)	Low value markets (domestic, little value add, loose value chains)	Domestic / export markets with some value addition and tighter value chains	Export markets with high value addition and tight value chains
Individual farmer risk² (13%)	Informal markets with high competition for sourcing (high side selling and low contract enforcement)	Formal / semi formal markets with mid-high competition for sourcing (mid-high side selling risk) and limited contract enforcement	Formal / semi formal markets with mid-high competition for sourcing (mid-high side selling risk) and limited contract enforcement	Markets with some, but manageable, competition for sourcing and strong contract enforcement
Market risk (13%)	Highly volatile markets	Relatively stable market	Relatively stable markets	Stable markets with predictable changes in prices
Climate risk (13%)	Markets with high exposure to climate shocks	Markets with mid exposure to climate shocks	Markets with mid exposure to climate shocks	Markets with limited exposure to climate shocks
Overall				
	MARKETS WITH FUNDAMENTAL LIMITING CONDITIONS	RELATIVELY SMALL-MID AND / OR LOW -MID VALUE MARKETS BUT WITH LOWER RISK	LARGER / HIGHER VALUE MARKETS BUT WITH HIGH RISK	MARKETS WITH FUNDAMENTAL SUPPORTIVE CONDITIONS

All other context factors being equal, the larger, the higher value of the underlying market and the lower the individual and climate risk the greater the viability of smallholder financing

Supportive of smallholder
financing viability

HIGHER

MID

LOWER

1. Defined market size (volume), target market, level of value addition and value chain structure.
2. Defined by level of competition for sourcing.

ANNEX 2: GUIDANCE ON HOW TO USE THIS REPORT

This report is designed to be read not just as a set of findings, but as a tool for decision-making. The five steps below provide a simple framework for engaging with the ideas and evidence presented, ensuring that insights are interpreted and applied in context.

1

Be clear on who you are and what you are trying to achieve

Before interpreting findings or recommendations, anchor yourself in your own role, mandate, and objectives. Clarity on who you are and what outcome you seek to influence ensures that the report's insights are read through the right lens and applied with purpose.

2

Understand the market you are working in and its archetype-specific conditions

Market archetypes and their underlying conditions shape what is commercially viable and what types of impacts are possible. Knowing the structural realities, such as aggregation levels, infrastructure, enabling environment, and climate exposure, provides essential context for interpreting viability analysis, financing models, and intervention strategies discussed throughout the report.

3

Consider the business model you are working with and its viability frontier

Different models, whether led by financial institutions, value chain actors, AgFinTechs, or others, operate with different cost structures, risk profiles, and break-even points. Understanding where your model sits relative to its viability frontier helps you read the report's findings with a sharper eye for the levers that can shift economics in your context.

4

Identify the right level(s) of intervention to focus on in a systems-based view

As introduced in Chapter 5, three levels of intervention can help scale smallholder finance while improving commercial viability and farm-level impact: (1) shifting market conditions to boost demand, (2) strengthening business models to expand supply, and (3) building enabling environments that support both. Considering the "system" of other actors that are working on different levels and types of intervention is also pivotal in aligning interventions within the broader market.

5

Think carefully about the role of subsidy and concessional capital

Many models require targeted support, through concessional finance, risk-sharing instruments, or technical assistance, to become viable or to crowd in private investment. Understanding how different forms of subsidy are used in the cases and analyses presented here will help you assess when such support is justified, how it should be structured, and how it can be time-bound.

A framework for industry dialogue: We aspire for this report to create a new platform for industry dialogue and debate about where and how to build credit markets for smallholder farmers and to what ends. Used well, we believe this process can create new levels of alignment across countries, value chains, landscapes and agendas.