BILL & MELINDA GATES foundation

Women and Equitable Growth in a Resource-Constrained World

Unleashing Capital for Women Entrepreneurs in Africa

Foreword by Melinda French Gates

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Foreword

By Melinda French Gates, Co-Chair, The Bill & Melinda Gates Foundation

For nearly two and a half decades, I've had the privilege of meeting women from across the world and speaking to them about their dreams and challenges. Through that experience, I've learned that if you want to understand the realities of someone's life, the best thing to do is ask them questions. That's why, as part of our work to expand women's economic power, the Bill & Melinda Gates Foundation recently commissioned a survey asking more than 200,000 women in Kenya and Nigeria about their greatest economic ambition.

The number one answer we heard, across both countries, was that women wanted to own or expand a business. Their individual dreams were wide-ranging: Some wanted to open clothing boutiques; others wanted to expand their restaurants. But when we asked them what was standing in the way of those dreams, nearly two-thirds had the exact same answer: They couldn't get the startup capital and equipment they needed.

One in four African women is an entrepreneur—but women receive only a fraction of the capital that men do. There are a number of interrelated reasons why: Women are less likely to own property in their own name, which means they lack collateral for a loan. They're also less likely to have a bank account and formal credit history, so they're seen as a riskier investment.

On top of all that, women face unconscious biases—if not overt sexism—from lenders who are used to dealing with men and skeptical about lending money to women, even though women are actually more likely to pay it back. (Research from M-KOPA, a digital micropayment company serving customers across Africa, shows that women are 10% less likely than men to default on their repayments.) And all of these lenders operate within a bigger system that wasn't designed with the needs of small borrowers—particularly women—in mind.

Globally, there's a <u>US\$1.7 trillion gap</u> between the amount of capital women want and the amount they get. By closing that gap, we can <u>add as much as US\$6 trillion</u> to global GDP.

When women succeed financially, they and their communities are more resilient to the kind of health, security, and climate shocks that come more frequently each year. They invest their earnings back into their families' health and education, accelerating social progress and economic growth. They create jobs for other women, breaking down gender barriers in the workplace. And collectively, they have the potential to help lift entire countries out of poverty.

In a moment when so many nations are struggling to reinvigorate their economies, it's urgent to break down the barriers that prevent women from accessing capital and pursuing economic opportunity.

In this paper, we call on countries and economic decision-makers to embrace promising, systemic solutions for closing the financing gender gap. Among them:

• Governments should pursue regulatory reforms that remove the barriers faced by responsible lenders that are trying to serve low-income customers while still protecting people from predatory lenders. Rather than treating small microfinance lenders the

same as large banks, regulatory systems should increase minimum capital requirements and compliance expectations along with the size and complexity of the financial institution.

- Governments should invest in digital infrastructure so financial institutions can adopt digital tools that make it easier to add customers and assess creditworthiness. While women may often lack collateral and formal credit histories, there are ways to assess less traditional data—like whether they pay their bills on time or their track record of participating in informal lending systems like self-help groups.
- The development community should make funds from donor countries available to lenders in order to manage their perception of risk—because if lenders know they're covered, they're more likely to invest in a more diverse range of entrepreneurs. And by providing those guarantees, donors can incentivize larger African lenders to loan to smaller, more nimble lenders in their own countries. When those smaller lenders are able to work with local currency rather than hedging against volatile international exchange rates, they can save money, and offer lower interest rates to their borrowers in turn.

Any economy is better off when women are able to access the capital they need. But in Africa in particular, which has the highest proportion of women entrepreneurs in the world, the potential benefits are enormous.

It's been inspiring to see the momentum generated in West Africa by Thiaba Camara Sy's WIC Capital, which has raised over US\$5 million in capital and supported eight women-owned businesses, which in turn have already employed 372 workers and quintupled sales. Meanwhile, Janngo, a firm founded by Fatoumata Bâ, invests in women-led companies that develop technology for the public good, and builds digital platforms in high-growth sectors like agribusiness and health care that help women entrepreneurs develop their skills.

Because of these investments, individual women are building businesses, creating opportunities, and fulfilling their dreams. But no financial system can depend solely on the work of a few investment funds, no matter how visionary. And those funds can't make up for the massive shortfall left by lenders, who can and must do more to serve those women who fall through the cracks of financial systems. The women who run boutiques and beauty salons, who operate restaurants and sell vegetables at the market: They are the ones who stand to benefit most, just as their countries stand to benefit by investing in them.

At a time when African countries are looking for ways to grow their economies and lift up their people, they need to unlock women's economic power. When women can create jobs and grow businesses—when they're equipped to meet old problems with new solutions—everyone is better off. By building a financial system that connects women with the capital they need, we can build the future that *everyone* needs.

Executive Summary

This paper addresses the need to reform the international development finance architecture in ways that expand access to affordable credit for women entrepreneurs in the Global South at a time of many loud and competing demands for funds and attention. In laying out an evidence-based pathway, it emphasizes the importance of linking macro-level resource mobilization to effective deployment at the micro level.

In arguing for increased access to affordable productive capital and economic participation for women, the paper focuses particularly on sub-Saharan Africa due to its urgent need for growth and relatively high female labor force participation (including high levels of entrepreneurship), coupled with low credit availability.

Despite their high levels of economic activity, African women often work in informal microenterprises, facing income instability and inferior credit terms compared with men. We advocate for credit as a cost-effective development tool that supports women in building resilience against economic shocks, managing cash flows, and expanding their businesses, leading to a reduction in poverty and increased economic growth.

Addressing the Demand for Productive Credit

The first section highlights the importance of credit for entrepreneurial activity in Africa, particularly for women in the informal sector. It distinguishes between *productive credit*, used for investments that are expected to yield financial returns, and *consumer credit*, used for consumption without direct financial returns. It emphasizes the blurred lines between these two types of credit for low-income households, exacerbated by the digital revolution's facilitation of high-cost, easy-to-obtain consumer loans. It argues for understanding the capital needs of the ultra-poor and subsistence entrepreneurs, where women are overrepresented, and it highlights successful efforts to enable these populations to access more growth-oriented commercial borrowing. It describes a fragmented supply-side landscape of capital providers—from highly concessional to fully commercial, with women concentrated on the concessional end—and argues that the intersection of public and private capital offers the greatest potential for using development finance to support women's economic mobility and encourage private-sector capital to move down market.

Evidence for the Positive Impact of Credit Products

This section revisits the extensive evidence base on the role and impact of productive credit over the past 15 years. Despite some reservations about microfinance based on initial evaluations, a growing body of evidence with an expanded scope presents a more positive picture of its role in poverty alleviation, showing that microcredit can lead to better business outcomes, higher profits, and increased assets, particularly for households with existing enterprises. The evidence also points to the value of tailoring loan products to borrower needs, using strategies such as matching repayment schedules more closely to cash flows, using financed assets as collateral, offering longer grace periods, providing flexible repayment schedules, switching to less frequent payments, and offering individual liability loans. These tailored approaches have led to increased investment, higher profits, greater household income and assets, and lower default rates.

However, designing credit products for women comes with specific challenges because these products must address persistent gender inequities in the credit market. These disparities are driven by both *endowment effects*, where women have fewer resources to access credit, and *structural effects*, including discrimination and societal norms. Women often have less collateral, fewer data trails, and less formal-sector experience, leading to smaller loan sizes compared with male entrepreneurs.

Understanding Supply-Side Constraints

This section examines the main constraint on supply, namely: the high cost of serving customers with small loans, which affects unit economics and profitability. These costs are driven by credit risk considerations, operating expenses, and funding costs. Credit risk can be managed by pricing loans to cover potential losses and profit margins, but lenders often face asymmetrical information, leading them to either avoid certain population segments altogether or charge high-interest rates to cover perceived risks. Operating expenses are high due to the need for a large workforce in traditional microfinance and the need to support low-income borrowers who are unfamiliar with credit products. Funding costs are another challenge. External funding in foreign exchange is expensive once hedging costs are included. Commercial banks have local currency liquidity and risk management skills, but they prioritize lending to less risky segments, which often leads to microfinance institutions (MFIs) and micro and small enterprises being charged much higher interest rates. Supply-side constraints limit the ability of lenders to offer impactful credit products, especially to small-scale borrowers and women. Digital technology can help mitigate some of these challenges, and, along with more responsive regulatory regimes, can also help enable dynamic entrepreneurs in the informal sector to access larger amounts of credit from a range of formal financial sector institutions.

Building a More Equitable Ecosystem

The final section highlights two Global South exemplars that have built linkages between informal financing mechanisms and the formal financial sector: BRAC in Bangladesh and DAY-NRLM in India. It also lays out four foundational pillars for building a more inclusive formal finance ecosystem, particularly to serve women in Africa, that address the cost and risk challenges.

- A supportive regulatory framework that enables and protects. Regulators need to balance
 financial system stability and integrity with innovation-friendly policies. Examples from the
 Global South, including Peru, show that sensible regulatory policies and oversight can
 nurture inclusive credit ecosystems.
- A diverse set of fit-for-purpose institutions. Serving women across the income spectrum
 requires a variety of institutional types to meet the specific needs of different levels of
 entrepreneur. Subsidies may be justified for noncommercial services such as financial
 education to ensure that borrowers understand the products and to help mitigate risk.
- A cascade of affordable local currency wholesale financing. Diverse lenders need access to local currency financing at affordable rates to avoid foreign exchange risks. Blended finance, first-loss guarantee schemes, and performance-related incentive payments can spur domestic financial sector involvement and reduce borrowing costs.
- Digitization and data sharing infrastructure. Digital finance and data on borrowers can
 enhance credit risk management and service efficiency. Addressing the data gap for poor
 women is crucial, and strategies such as digitizing data trails can improve access to
 commercial credit and help women move up the capital ladder.

The paper concludes by emphasizing the need for development partners to use their funding more effectively to help build inclusive credit markets in Africa, focusing on creating robust institutions across regulation, financing, market infrastructure, and delivery. The Bill & Melinda Gates Foundation acknowledges the complexity of these challenges and the need for collaboration among multilateral development banks, development finance institutions, donors, and the private sector to support low-cost local currency funds, encourage technology use by financial services providers, assist regulators, and invest in digital public infrastructure. This coordinated effort can empower customers, promote competition, and foster inclusivity in African markets.

Introduction

A compounding and destabilizing series of shocks—the COVID-19 pandemic, rising inflation and its impact on debt burdens, and accelerating climate change—has made reform of the international development finance architecture a global priority. While momentum is clearly building toward mobilizing resources to address the twin challenges of climate change and equitable growth at the macro level, far less attention has been paid to building channels that can link those efforts with deployment of financial resources at the micro level. If the woman who sells tomatoes in a market in Nigeria, who grows millet in India or weaves saris in Bangladesh does not benefit from this mobilization, the world faces the risk of fundamental and growing misalignment of interests between the Global South, which is primarily focused on economic growth and jobs, and the Global North, which is increasingly directing development finance toward climate objectives.

An equitable growth agenda requires more widely available access to affordable productive capital¹ as well as far greater attention to economic participation by women. The barriers to women's economic participation—such as the disproportionate burden of unpaid work, restrictive social norms, and unequal legal rights—are numerous and well-documented, but this paper focuses on improving women's access to finance as a transformational opportunity to spur equitable economic growth. It lays out a vision for how to build a more diverse financial architecture at the grassroots level that can channel financing more effectively to women, especially in Africa.

We focus on access to finance for women in sub-Saharan Africa for three reasons: the urgent need for economic growth on the continent, the relatively high levels of economic participation and entrepreneurship among African women (with a corresponding need for capital), and low levels of credit availability. Africa is demographically the youngest and fastest-growing region in the world, but its economic growth has barely kept pace with population growth² (McKinsey & Co., 2023). With the African population expected to double to 2.5 billion by 2050, it is imperative that the world supports a growth strategy that creates jobs for the continent's rapidly expanding labor force. Unlike in South Asia, female labor force participation across sub-Saharan Africa is relatively high, at 61% (International Labour Organization, 2023), and Africa has the highest share of female enterprises in the world, at 26% (Global Entrepreneurship Monitor, 2017). But African women are more likely to own or work in informal microenterprises, which means they are likely to be paid less and have more income instability than men. For example, in Kenya women represent 32% of licensed business owners and 61% of unlicensed business owners (Kenya National Bureau of Statistics, 2016). Women are also overrepresented as employees of microenterprises that have only one employee. Access to capital, especially for women-led microenterprises, remains highly constrained in Africa. Africa lags behind all other regions in credit supplied to the private sector³ (World Bank, 1960–2022). It is only 36% in Africa, compared with 47% in South Asia, 56% in Latin America, and 158% in high-income countries. And women in Africa continue to receive credit on inferior terms to men.

We believe in the value of credit in development because credit products, when designed thoughtfully, can be powerful tools for building resilience (Morduch, 1998), (VoxDevLit, 2023), managing cash flows optimally (Fink et al., 2020), (Burke et al., 2019), growing businesses (Meager, 2019), reducing poverty (Barboni et al., 2023), (Khandker & Samad, 2014), (Cai et al., 2023), (Cai, 2022), and promoting economic growth (Sahay et al., 2015), (Garg & Gupta, 2021). On the flip side, the absence of inclusive financial systems contributes to persistent income inequality and slower economic growth (Beck et al., 2007). A clear example comes from India: When government

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¹ Although the main focus of this paper is credit, we use the term *capital* to refer to a wider range of instruments that get money into women's hands. *Credit* in this instance is a subset of capital resources that also includes cash grants, asset transfers, and capitalization grants to women's groups.

² Africa's real annual GDP growth of 3.7% since 1990 has translated to only 1% growth in per capita GDP over the same period (compared with 8% in China and 5% in India).

³ As a percentage of GDP, a standard measure of credit depth.

regulations radically reduced credit supply in certain communities in Andhra Pradesh in 2010, people in those communities subsequently experienced lower wages, consumption, and household income than counterparts with access to credit in otherwise identical communities (Breza & Kinnan, 2023). Development actors currently support a diverse set of providers to deliver various types of capital, but they do so in a fragmented way that leaves many of those providers subscale and many women without access to better options. Intentional linkages between providers are needed to help them identify more appropriate forms of capital to offer to women who have demonstrated that they are good credit risks.

Efforts to strengthen the credit ecosystem to contribute to wider development goals, including macroeconomic growth and improved financial resilience among low-income populations, should be grounded in a strong macro-level understanding of how economies develop, drawing on both historical evidence and projections of how economic development in the 21st century may diverge from past trends. Historically, large-scale growth has been spurred by widespread shifts in the organization of labor, whether by moving workers from less productive to more productive sectors (e.g., transitioning subsistence farmers to manufacturing and service sector jobs) or by making the organization of labor within a particular sector more productive (e.g., transitioning subsistence farmers into agricultural production on larger-scale farms) (Rodrik and Stiglitz, 2024). In lower-income economies, most people—and especially women—are self-employed out of necessity, and the proliferation of growth-oriented firms can help provide people in this cohort with higher-quality wage work opportunities. One critical pathway for achieving structural transformation is to identify and support growth-oriented entrepreneurs—whether they are operating micro, small, or medium-sized enterprises at baseline—who can, in turn, provide wage work opportunities to others.

In parallel, a stronger credit ecosystem can help to "meet people where they are" in addressing their short-term financial needs. While some credit products should be targeted at growth-oriented entrepreneurs, others will be better suited to subsistence-level workers, who can harness credit to smooth their consumption patterns and build financial resilience, providing a pathway to seeking higher-quality work opportunities.

The goal is not to provide credit indiscriminately to everyone; rather, it is to use scarce resources more effectively and to make more and better productive credit available to smaller, creditworthy enterprises, including women who demonstrate the capacity to use it well. In a scarce official development assistance funding environment, credit has the benefit of being a "renewable resource"—loans come back with interest to the creditor and can therefore be used again in a way that simple cash transfers and other grant-based investments cannot, even if they generate returns to the receiver. Given low levels of median subsidy, rough calculations suggest that the benefit-cost calculus for microcredit is especially positive, even with modest benefits, compared with more expensive anti-poverty programs (Cull et al., 2018). Exemplars from the Global South illustrate fresh approaches to building and funding domestic financial architecture that can deliver capital in ways that suit the needs of women's enterprises. They use a greater array of incentives and concessions to extend capital to vulnerable segments, with an eye toward creating onramps for a subset of capable borrowers to access credit from nonsubsidized formal sources of finance as they gain more experience.

This paper is organized into four sections. First, we examine who we are intending to reach and the different modalities for addressing their productive capital needs. Next, we explore the evidence base for the positive role that targeted credit products can play. We argue that women can benefit from productive credit that is well targeted, more tailored, and always responsible. From there, we focus on the supply-side constraints on offering credit. We argue that both provider and market-level constraints must be addressed to improve credit affordability for women at the necessary scale. And finally, we look at the wider institutional, regulatory, financing, and infrastructure environment required to build a more inclusive finance ecosystem. We also consider ways that these

gaps can be filled through coordinated action so women can more fully participate in the economies of lower-income countries.

Addressing the Demand for Productive Credit

In markets where wage jobs are limited, most remunerated work comes from entrepreneurial activity, sometimes by choice but most often by necessity. In Kenya's 2016 survey of micro, small, and medium-sized enterprises (MSMEs), the most commonly cited reason for engaging in entrepreneurship was lack of any alternative, closely followed by better income (Kenya National Bureau of Statistics, 2016). While the long-term aim of a growth transition in Africa should be the creation of jobs, in the near term, the majority of people, especially women, earn their living in the informal sector, where employment is both scarce and unreliable. Supporting stable incomes in the microenterprise sector will be essential to sustaining and building livelihoods until more formal jobs can be created. Access to affordable credit will be an important contributor to this effort.

Credit can play many roles: It can play a resilience function in the event of shocks, a stability function in managing uneven cash flows, and a growth function in the form of investment capital. There are important differences between credit for consumption and for productive purposes. *Productive credit* is defined as loans taken out to invest in activities that are expected to generate a financial return higher than the total cost of the loan (e.g., for inventory, agricultural inputs, equipment, or machinery). This is distinct from *consumer credit*, which is typically used for consumption of goods and where a direct financial return is not expected (e.g., food, other household goods, education, health care, funerals, or wedding expenses). For low-income people, the line between these two types of credit is often blurred because it can be difficult to separate household expenses from enterprise expenses. The digital revolution has made high-cost consumer loans widely available and easy to obtain in many markets and, while these sources of credit can play a role in resilience (e.g., for managing shocks), they are prohibitively expensive for those trying to operate or grow an enterprise (FSD Kenya, 2019). The focus of this paper is on increasing the supply of affordable productive credit that can support enterprise stability and growth.

A More Expansive View of Demand

Meeting the capital needs of low-income women requires, in the first instance, a clear understanding of who we are trying to reach. Estimates of the gap between the demand for and supply of productive credit in Africa vary, ranging from US\$86 billion in unmet demand among microenterprises alone to US\$245 billion for the broader group of MSMEs⁴ (International Finance Corporation, 2017). In most emerging markets, the overwhelming majority of MSMEs are microenterprises. Data from an International Finance Corporation (IFC) survey in Uganda illustrates this clearly: Uganda has 1.1 million MSMEs, of which 94% are microenterprises (employing between one and four people), 4% are small enterprises (employing five to 49 people), and 2% are medium-sized enterprises (employing 50 to 100 people). IFC estimates that these MSMEs contribute close to 20% of GDP in Uganda and create 2.5 million jobs.⁵ But the total adult population of Uganda is roughly 23 million, so according to this analysis, almost 90% of Ugandans don't have jobs or microenterprises at all. How do we account for these people?

Many of these people are likely in population segments not regularly counted in enterprise surveys, namely the ultra-poor and subsistence entrepreneurs. The ultra-poor are destitute: people for whom financial services are largely irrelevant because they do not have money to put into a formal

⁴ Estimates use different methodologies.

⁵ Uganda's breakdown is not so unusual. In the United States, 99.9% of firms are small businesses (employing fewer than 500 employees) and 82% of those are sole proprietorships with no employees. Small businesses account for 46% of private-sector employment and generated 63% of net new jobs from 1995 and 2021. Ironically, what is unusual in Africa isn't the large number of microenterprises but rather that there are so few of them, with large numbers of people still operating in the informal agricultural economy.

account and could not afford to participate in a village savings and loan association (VSLA) or other community-based mechanism. Subsistence entrepreneurs are largely income diversifiers—households that engage in part-time entrepreneurial activity to augment a primary income source. This is likely to involve many of the 80% of Ugandans who are smallholder farmers (Uganda Bureau of Statistics, 2019), who might have home-based activities that bring in incremental income beyond their main farming income. Or they may be urban households that run a small shop in their home but do not have employees. They might be gig workers or sell on e-commerce sites part time. Importantly, women are overrepresented in the ultra-poor, subsistence, and microentrepreneur segments.⁶ Data on how many people fall into each of these categories is very limited, but it is a large number and the kinds of tools – from grants to informal savings to loans – that work for these communities are very different from those offered by the formal financial sector.

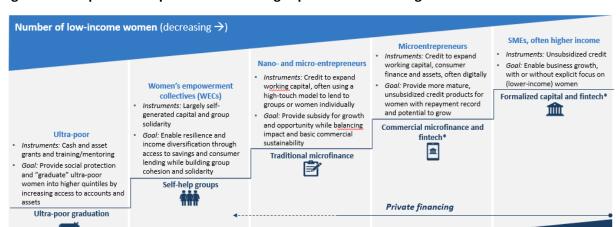
All of this implies that meaningful efforts related to women's economic empowerment in low-income countries must by definition grapple with the challenges of working with subsistence and microenterprises, particularly in the agricultural sector. While there is important work to be done in supporting women's small and medium-sized enterprises (SMEs), the subsistence and micro segments cannot be ignored, for the simple reason that this is where most women are in low-income countries. Equitable economic growth inherently requires meaningful potential for upward mobility, including through enterprise growth. Given the role that these segments can play in the growth transition— as a means to generate income and support job creation— we need a deeper understanding of the mechanisms of upward mobility on the income spectrum and the role that finance can play in facilitating such mobility.

A Fragmented Supply-Side Landscape

The development community has engaged with a diverse ecosystem of capital providers for many years, with international nongovernmental organizations (NGOs) such as CARE nurturing the VSLA ecosystem, microfinance institutions like FINCA and BRAC delivering more formal loans through groups or to individual borrowers, and development finance institutions (DFIs) financing banks and nonbank financial institutions to deliver formal loans to SMEs. More recently, in response to concerns about poverty traps faced by low-income borrowers, institutions including BRAC and Village Enterprise have successfully introduced ultra-poor graduation (UPG) schemes, which deliver a combination of grants, assets, accounts, training, and mentoring in ways that have helped people lift themselves out of extreme poverty for sustained periods of time. All these efforts focus fundamentally on getting money into the hands of low-income people using different modalities to generate income (e.g., one-way transfers or returnable instruments delivered at different price points, from highly subsidized to fully commercial). Broadly speaking, we can think of all these approaches as capital interventions that sit on a spectrum from highly concessional to fully commercial.

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⁶ For example, 31% of women in the informal economy in low-income countries are classified as contributing family workers (unpaid labor in a small family enterprise) compared with 14% of men. In household surveys from Uganda (spanning 2009–19), the share of female-owned enterprises was 59% in the micro segment, and within that segment there was a significant clustering toward zero: 90% of female-owned enterprises had one or zero employees.



Supply of credit to all MSME segments (increasing →)

Figure 1. The spectrum of providers delivering capital to different segments of women

*Fintechs also offer consumer credit, with some MSMEs using it for business purposes (e.g., income smoothing and liquidity management – typically for trade/retail)

Public financing

While much has been learned about capital provision within each of these distinct intervention areas over the last 30 years, less attention has been paid to understanding potential links *across* these intervention types, with the aim of supporting mobility between categories. Capital plays different roles along this spectrum, and it is offered by providers with differing incentives. Toward the left-hand side, capital provides resilience, getting basic resources to ultra-poor and subsistence families so they can avoid falling back into destitution or can diversify their income sources. These services are usually supported by NGOs and government agencies and are fully concessional, either in the form of cash/asset transfers or capitalization grants for groups. The right-hand side of the graphic represents the traditional commercial credit space—few borrowers have access, given the requirements for collateral, formal financial statements, and a credit history. Importantly, women are concentrated on the left-hand side of the spectrum and capital is concentrated on the right. The salient question for women's access to capital therefore must be: How do we move women up the ladder and move capital down?

We contend that the middle space, where public and private capital meet, offers the greatest potential for using development finance to support women's economic mobility while incentivizing private-sector capital to move down market. Even at the very bottom end of the market, substantial evidence shows that carefully targeted interventions can provide mobility toward more commercially delivered sources of capital. For example, BRAC's work on UPG in Bangladesh has demonstrated that as many as two-thirds of participants went on to access microfinance loans within five years (Shams et al., 2010). Enabling people to graduate into more commercial solutions is not only possible but desirable. But it requires that concessional and commercial capital work closely together, with a central focus on impact and a long-term perspective, and this has not always been an explicit objective of development interventions.

VSLAs, chamas, ⁷ and other community finance organizations represent an important intermediate type of credit vehicle in Africa, particularly for income diversifiers in the subsistence segment. Uganda has a highly developed VSLA ecosystem, with at least 163,870 savings groups with 1.7 million members identified as of 2021 (CARE Uganda, 2021). Women are overrepresented in these groups, accounting for 66% of group members and 61% of group leaders. Group-based credit has many attractive features: The system is based on trust, to eliminate the need for collateral or formal financial statements; it is self-managed, to keep costs and therefore interest rates low; and

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⁷ Another form of informal savings and loan association, common in Kenya.

repayment rates in well-functioning groups are high. However, group loans come with limitations—the capital available for lending among members is constrained by how much members can pool together, members have to wait their turn to borrow, and required weekly meetings can be time consuming. While it is appropriate capital for income diversification or for one-off purchases, it is not a reliable or significant enough source of finance to run a business. Some proportion of women in these groups would likely benefit from access to individual credit, but steppingstones to formal credit are limited in Africa.

The role and expectations for microfinance and fintech should be reconsidered in this context. Microfinance was originally presented as a silver bullet that would "solve poverty" and, when it failed to deliver on that promise, disillusionment set in and the search for the next silver bullet began. In recent years, over-indebtedness crises in places like Andhra Pradesh, questions raised by researchers about impact, and a failure to reach scale, particularly in Africa, have led to reduced development funding for productive microcredit relative to other solutions. The resulting shift to a financial inclusion framing has ushered in a focus on access to and use of accounts, with a particular focus on payment products. While payments (Riley, 2022) and fintech providers (Björkegren et al., 2023) have advanced the sector and development outcomes in important ways (Suri et al., 2021), persistently low usage rates for digital accounts indicate that these efforts are also not silver bullets. In reality, there are no silver bullets because access to financial services for low-income populations is fundamentally a market systems challenge, with interdependencies among different kinds of financial services. The financial sector needs further deepening, which will involve both payment systems and responsible providers of productive credit.

The role of the formal financial sector also requires consideration, for the simple reason that this is where the money is. While commercial banks like Equity Bank in Kenya have made impressive progress in extending their reach to the MSME segment and have been particularly effective at using digital tools, they often face limits on how far down market they can go, as we explain in more detail later. Many banks have experimented with serving the MSME sector, but success stories like Equity Bank have been relatively scarce across Africa. Any consideration of how an inclusive financial system can be built must involve crowding in banks. The question is: Should we expect banks to deliver directly to the bottom of the pyramid or are there more effective ways to crowd them in?

Meeting the diverse capital needs of low-income people requires a broader view of how supply-side solutions can cost-effectively reach different segments of the population with appropriate products. It requires identifying approaches that support income generation and mobility along the capital spectrum for women who have demonstrated the capacity to use more commercial sources of capital. It also requires considering how capital providers can best be supported to meet demand, including with the judicious use of subsidies. This requires a clear articulation of the underlying market failure and a design that does not introduce significant market distortions. Some models are beginning to show linkages between these different types of solutions, including at the level of the ultra-poor, the traditional domain of social protection. Technology increasingly makes it possible to target borrowers and enable mobility across providers—for example, from a VSLA to an individual loan from an MFI.

Before exploring the ways that countries are trying to address this challenge, it is worth revisiting the evidence base for productive credit as well as the constraints providers face in serving low-income women, as these are pertinent to understanding the roles of different providers in an inclusive finance ecosystem.

Evidence for the Positive Impact of Credit Products

The microfinance sector has been the subject of rigorous impact studies over the past 15 years. An initial wave of randomized controlled trials (RCTs) punctured the industry's claims of transformational impact and subsequently diminished enthusiasm for the industry. Researchers

have continued to explore the role of credit in poverty alleviation, and this maturing evidence base paints a more nuanced picture of how credit can be deployed in ways that have impact.

The first wave of evidence, captured in a well-known review of six microcredit RCTs (Banerjee et al., 2015), showed limited impact on business growth for the *average* borrower. This early stage of research focused narrowly on one type of traditional microcredit product, short-term working capital, and did not capture impact on broader outcomes such as empowerment, health, and resilience or look at the heterogeneity of impact. The studies also had important geographic gaps—namely, Latin America (which has a highly developed microenterprise lending sector) and much of Africa. More recent research has been wider in scope, looking at a range of lending methodologies and loan products in more geographies, with a broader range of impact metrics. The evidence from this research shows that microcredit interventions can lead to improved business outcomes, higher profits, and increased assets, especially for households with existing enterprises. Pooling data across the six original studies, this research shows that even nontargeted, traditional microcredit models had statistically significant impacts, leading to a 22.5% increase in revenues (Meager, 2019). In addition, new research demonstrates that the impact can be significantly higher when credit is targeted and made available to high-performing entrepreneurs (Bryan et al., 2023) and designed to meet borrower needs in terms of flexibility and loan size (Field et al., 2013), (Bari et al., 2021).

We know that entrepreneurs in low- and middle-income countries (LMICs) can put capital to good use. Evidence of high returns for nonrepayable capital infusions has been confirmed by several studies of cash transfers. De Mel et al., using a randomized shock to capital stock in a sample of Sri Lankan microenterprises, found real returns to capital of 4.6% to 5.3% per month, substantially higher than market interest rates (De Mel et al., 2008). A study of BRAC's Ultra-Poor Graduation Initiative (UPG), an asset transfer program in Bangladesh, found an average internal rate of return of 22%, indicating that a sizable fraction of ultra-poor households would have enjoyed positive returns had they been able to finance these investments with affordable credit (Bandiera et al., 2017). The model has been replicated and estimated (through RCTs) to be equally effective in six countries (Banerjee et al., 2015).

If returns for nonrepayable instruments are so high, why don't we see the same consistent returns to capital when it is financed through credit? The short answer is that returns to capital financed through credit for LMIC entrepreneurs vary significantly. The sample of entrepreneurs targeted in the original microcredit RCTs was significantly heterogeneous. In fact, two re-analyses of the original data found evidence of positive returns for selected groups of entrepreneurs. Households with a business track record experienced larger treatment effects, particularly on profits, relative to households without business experience. One of these studies, which looked across all the evaluations, found that the same group of households with previous business experience had greater heterogeneity in treatment effects. This may be interpreted as evidence that microcredit is less effective at kickstarting new business formation than in helping existing businesses grow. The re-analysis of the India microcredit RCT (Banerjee et al., 2015) found that households that were running a business before the microfinance intervention had 35% more assets and generated double the revenues compared with those in control neighborhoods (Banerjee et al., 2023). Targeting should clearly be a priority to ensure impact in credit interventions.

Loan size is also important for ensuring impact. In a 2022 study in Pakistan, microfinance borrowers were given the opportunity to finance a business asset worth up to approximately US\$2,000, which represents a capital injection approximately four times greater than the previous borrowing limits for these clients (and substantially more than the loan amounts offered in comparable research). Using an 18-month hire-purchase contract, clients were able to purchase a business asset of their choice and then paid "rent" on the MFI's proportional ownership share of the asset at the start of each month until that ownership was bought out. The effects were large, significant, and persistent. Treated microenterprise owners ran 40% larger businesses with 11% higher profits, while default rates remained low (<4%). Moreover, household income increased 8%. Consequently, household

consumption increased (6%), particularly on food and children's education (26%) (Bari et al., 2024). In another example, the Women Entrepreneurship Development Program (WEDP) in Ethiopia targeted high-growth women entrepreneurs in large cities with medium and large-sized loans. The average WEDP loan size was US\$12K, an increase of 870% over the average loan size previously accessed by WEDP clients. Impact evaluation data showed that, over three years, firms that participated in WEDP had income growth 40.8% higher than a control group and 55.7% higher employment growth. By improving loan appraisal techniques, the project helped the country's leading financial institutions reduce collateral requirements from an average of 200% of the value of a loan in 2013 to 125% in 2018 (World Bank, June 2019).

Beyond targeting and loan size, the evidence shows that improved tailoring of loan products to the needs of the borrower can significantly improve impact⁸ (Abdul Latif Jameel Poverty Action Lab, 2023). Examples include:

- Repayment schedules that match borrowers' cash flows. This is especially important for smallholder farmers and small-scale producers, who experience volatile and seasonal income that affects household savings and can lead to hunger (Fink et al., 2020). Typical microcredit products are often structured in a way that does not make sense for smallholder farmers, who have concentrated expenses and income during the planting season and harvests. Agricultural lending that matches seasonal cash flows can increase farmers' investments in their farms during the planting season (Beaman et al., 2023) and allow households to time the sale of crops to capitalize on higher prices, thereby smoothing seasonality of income (Burke et al., 2019).
- Using a financed asset as collateral. A 2019 asset financing study offered Kenyan dairy farmers a water tank on credit, with a selling price of 20% of the typical yearly income. This was seen as a technology upgrade for many farmers without reliable water access. The water tank acted as collateral for the loan, which enabled more borrowers to take a loan of a much larger size than would normally be possible, given that historically only 2% of borrowers had access to appropriate collateral. Those who took the loan saw benefits like increased water access, higher school enrollment for girls, and less child time spent on water-related tasks. Defaults were below 1% across the portfolio (Jack et al., 2019). Similar approaches have been taken in the PAYGO space, where the asset financed is used as collateral for the loan—for example, in the case of M-KOPA's smartphone product.
- **Grace periods.** Grace periods—where repayments begin several months after the disbursement of the loan—can also improve outcomes. An adapted microfinance RCT in India (Field et al., 2013) found that repayment terms in the standard contract—which stipulated repayment starting two weeks after signing—inhibited entrepreneurship by making high-return but illiquid investments too risky for poor borrowers. The experiment offered a grace period of two months to randomly selected borrowers and compared outcomes with those receiving the standard contract. The evidence showed that investment was approximately 6.0% higher relative to those on the regular contract. Furthermore, nearly three years after grace-period clients received the loan, their weekly business profits and monthly household income were an average of 41.0% and 19.5% higher, respectively, and they reported roughly 80% more business capital.
- Flexible repayment schedules. Similar to grace periods, flexible repayment schedules with the option to delay payments at a time of the borrower's choosing can increase a loan's impact. Bangladeshi clients who received the option to delay business loan repayment by two months experienced 87% higher revenues, 25% higher profits, 17% higher household

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⁸ A recent evidence review from J-PAL found numerous studies showing that more tailored loan products and adjusted loan disbursement modalities can increase women's returns on and control over capital.

income, and 25% more household assets than clients receiving a loan on traditional terms; this occurred without a change in risk of default (Battaglia et al., 2023). When Indian borrowers were allowed to select between two types of contracts—one with rigid repayment terms and one allowing the borrower to temporarily suspend payments, with a higher interest rate to compensate for risk—those who chose the flexible contract saw 22% higher monthly sales and greater profits than borrowers who took a standard loan (Barboni & Agarwal, 2023).

- Monthly repayment. Switching to less frequent payments can also be beneficial for both borrowers and lenders: Borrowers have increased liquidity throughout the month, and lenders can lower operating costs for collections. A 2008 study in India showed that switching from weekly to monthly repayments did not increase the risk of default (Field & Pande, 2008).
- Individual liability. Individual liability loans can be more attractive to lower risk borrowers than group liability loans. A 2013 study in the Philippines showed that converting group liability loans to individual liability loans led to larger lending groups that reached more people, and that these groups were 13% less likely to be dissolved. "Good-risk" borrowers who were reluctant to join group liability centers joined after the centers converted to individual liability, but no "bad-risk" borrowers followed (Giné & Karlan, 2014). Neither this study nor other studies have found a difference in default risk between borrowers with individual liability loans and those with group liability loans (Attanasio et al., 2015).

Challenges of Designing Credit Products for Women

Unsurprisingly, women entrepreneurs face particular constraints. Global Findex data shows a narrowing of gender gaps in basic access to credit, but these trends mask significant gender inequities in the *quality* of that access. Gender gaps in the credit market can be thought of as driven by an *endowment effect* (i.e., women have access to fewer resources required to access credit) and by a *structural effect* (i.e., even after controlling for gender difference in resources, women face discrimination because of household or societal norms).

The endowment effect is not surprising and is well documented. Lending requirements have been shown to disadvantage women, who have less access to collateral and co-signers, generate fewer data trails, and have less track record in the formal sector (Beck et al., 2008), (Holloway et al., 2017). A 2019 World Bank report showed consistently large gender gaps in the size of loans offered to various target groups of female entrepreneurs in Africa. In the Democratic Republic of the Congo, loans obtained by female entrepreneurs were on average only 43% of the value obtained by male business owners. In Malawi (microenterprises), South Africa (SMEs), Togo (microenterprises), and Uganda (microenterprises), this proportion ranged from 38% to 74%—pointing to a sizable gap in the volume of credit for women at both the microentrepreneur and SME levels. The same study showed that the typical male-owned firm had more than six times the capital investment of female-owned enterprises across the 10 countries in the study. These gender gaps came with real economic costs, both for the entrepreneurs (in the form of a gender profit gap—23% in the same World Bank sample) and at macro level (in the form of potential GDP loss, estimated at US\$1 billion a year for Ethiopia) (World Bank, March 2019).

Harder to discern is the structural effect, which may be as simple as outright discrimination. A study of banks in Turkey showed that loan officers were 26% more likely to require a guarantor for an application from a female entrepreneur than an identical application coming from a man (Brock & De Haas, 2023). In other instances, the structural effect is more subtle. A study of one-time cash or capital transfers to a group of randomized business owners in Sri Lanka looked at the status of the

⁹ Benin, Democratic Republic of the Congo, Ethiopia, Ghana, Malawi, Mozambique, Nigeria, South Africa, Togo, and Uganda.

businesses five years later and found an increased likelihood of survival and higher profits for male-owned enterprises but no significant effects for female-owned businesses. The authors suggest that capital transfers are more likely to be used by male-owned firms to grow their business but are more likely to be "cashed out" from female-owned firms and diverted to household uses (De Mel et al., 2012). These findings, pointing to an implicit "pressure to share" placed on women entrepreneurs, have been corroborated in other settings (Bernhardt et al., 2019), where capital directed to female entrepreneurs is often allocated to the household's most profitable business, which is usually the man's enterprise, due to the fact that women tend to work in more vulnerable business sectors and gendered norms (Bernhardt et al., 2019). These findings are bolstered by the finding that women in single-enterprise households see returns to credit while those in multiple-enterprise households do not. Designing credit products for women must account for such normative factors if they are to have impact.

Risk of Harm

Despite the examples of the benefit of targeted credit noted above, credit is a product that requires balance and safeguards. Too little credit can result in harm, as can easily be seen in welldocumented wealth differentials in the United States resulting from decades of redlining for housing loans, which are the primary way Americans accumulate asset wealth. Ample evidence from emerging markets shows that the absence or withdrawal of broad-based credit can contribute to slower economic growth, lower income growth, and increased income inequality, by limiting growth opportunities (Demirgüç-Kunt & Klapper, April 2012), (Demirgüç-Kunt & Klapper, June 2012), (Klapper et al., 2006), (Breza & Kinnan, 2023). On the other hand, the overprovision of credit is also associated with risks and potential harm, most notably demonstrated by the 2010 Andhra Pradesh crisis in India. Real risk of harm to consumers can be mitigated through regulatory, technological, and institutional solutions. But when regulatory authorities have not focused on instituting safeguards and do not monitor potential risk, harm occurs. Such was the case with digital consumer credit in Kenya, where the population was flooded with venture-capital-backed, fintech-led credit that was made available instantly to virtually anyone with a mobile money account. This form of digital credit is expensive: One study in Kenya found that it had a mean effective APR of 280.5%. This was mainly attributed to borrowers being charged the full term of interest even when they repaid the loans early (Putman et al., 2021). Even when lenders adhered to basic responsible finance practices, lending rates typically ranged from 44% to 300% APR for 30-day loans¹⁰ (Putman et al., 2021). The influx of easy credit without appropriate safeguards resulted in more than 4.2 million digital borrowers in Kenya having negative listings with credit bureaus until the central bank enacted a credit repair framework in November 2022 (Central Bank of Kenya, 2022).

The risk of this type of consumer harm can be reduced through regulation and consumer protection measures, such as legal requirements for the transparent disclosure of fees. A study in Ghana found that informing vendors to share correct pricing information with nearby consumers heighted the salience of vendor reputation and led to significantly reduced vendor misconduct and a reduction in transaction fees of about 40% (Annan, 2022). It should also be noted that at least one study found evidence of positive impacts of digital consumer credit, which acted as a liquidity cushion much as credit card debt does in high-income countries. In that study, borrowing households were 6.3 percentage points less likely to forgo expenses due to negative shocks (Suri et al., 2021). This suggests a potential resilience role for credit, even when delivered at relatively high cost.

Understanding Supply-Side Constraints

If we know what works for credit interventions to have impact, why aren't more providers designing products with these features in mind? What the evidence base generally does not account for are the supply-side constraints under which credit providers operate. The primary constraint for most

10 Based on data from the Competition Authority of Kenya and Innovations for Poverty Action.

lenders is the high cost of serving customers with small loans that generate modest returns on a revenue-per-loan basis, which puts downward pressure on unit economics and profitability. Three main cost components affect the price of bank loans: credit risk, operating expenses, and funding costs.

Credit Risk. Risk aversion from lenders can be managed in part through product structure and underwriting process, but it can be fundamentally mitigated by assessing the risk or expected loss of a loan (based on term, collateral availability, and past performance) and then pricing to cover potential loss and ensure a reasonable profit margin. One challenge with serving low-income entrepreneurs is asymmetrical information. Entrepreneurs know more about their abilities, intentions, and risks than lenders do, but they cannot credibly communicate this information to lenders. As a result, in data-poor environments like those found in LMICs, lenders either avoid certain borrower segments altogether or they structure and price products to maximize revenue from higher-risk borrowers, covering the high default risk with high interest rates. While the microcredit industry has done an admirable job of managing default risk—as measured by portfolio at risk, or PAR—it is highly susceptible to fluctuations in PAR rates, which reinforces risk aversion on the part of lenders. Mistakes made on risk assessment can be existential, particularly for smaller microlenders. Despite the potential for a new generation of innovative lenders to manage credit risk through digital pathways, lenders are more likely to avoid women because women have more limited digital footprints—fewer of them own mobile phones than men across LMICs, they borrow phones more, and they spend time on lower-quality data networks (Vidal & Salman, 2023).

Operating Expenses. Operating expenses are a particular challenge due to small loan sizes (and therefore low per unit revenue). If a lender is offering loans with an average ticket size of US\$200, the return on any individual loan is relatively small, which means they need to deliver many loans to earn the same level of revenue as an investment in a treasury bond or a corporate loan. Traditional microfinance requires a large workforce to manage large numbers of loans, which increases operating expenses. Low-income borrowers are also often inexperienced with credit products and require support to be onboarded and maintained as clients. As a result, traditional microfinance providers have high-touch operating models that lead to high marginal costs. Fintechs have highly digitized processes that lower marginal costs, but this is accompanied by higher fixed costs that need to be spread over a large portfolio to bring the average cost down. In both instances, scale is required to effectively cover costs (Table 1).

Table 1. Unit cost data from Kenya showing tradeoffs for different institutional types of serving lower-income segments

	Microfinance Loan						Approaches to
		(often for consumption)	Micro	SME	Corporate	achieving scale	
Loan Size (\$)	\$773	\$50	\$3,500	\$30,000	\$500,000	include:	
Interest Rate (%)	31%	90%	26%	18%	15%	Lowering operating	
Cost of Funds (%)	20%	40%	4%	4%	4%	costs: Agile product	
Loan Officers (#)	450	Not applicable	1,415	325	80	development to build a	
Loans per Loan Officer (#)	350	Not applicable	175	100	25	scaling platform for financial institutions	
Loans Outstanding per Loan Officer (\$)	\$216,440	Not applicable	\$490,000	\$2,400,000	\$10,000,000		
Lender Constraints	High-volume, high touch Thin margins make it hard to invest in digitization institution highly vulnerable to credit risk -> risk aversion Labor intensive and constrained by human capital. To get the same return for one corporate loan requires 647 MF loans, supported by two full time loan officers	Lenders often ride on MNOs rails and data reducing the direct interface with customers The predictive value of these data sets is limited forcing lenders to focus on low-value, high-volume, and high-velocity product	Mobilizes large amounts of aversion to lending to micr products because of low tic Answerable to shareholders their their sheet return. Shareholder e MSMEs are unregistered, hinancial service providers financial service providers to Banks ALWAYS have bette cost/bigh-return/no-risk in n Can afford to invest in digit.	Lowering funding costs: Reducing cost of local currency capital Improving risk management: Managing portfolio risk through			
Ability to Serve Low-Income Borrowers	High – MFIs typically serve customers not served by banks High touch approach enables support to inexperienced borrowers	Shareholder expectations prioritize scale and profitability over impact Predatory practices not uncommon	Has strong capabilities but I and micro-entrepreneurs. To options Lower limit to loan size and are not eligible	focus on digital data trails			

Source: Microsave Consulting Analysis

Returns to scale are significant. For MFIs, lower interest rates and higher profitability are dependent on scale (Table 2). Drawing on a sample of MIX data from 2018, researchers found that small and

medium-sized MFIs charged annual fees and interest of 22.2% and 20.6%, respectively, and had median net income margins between 8.8% and 9.4%. Large MFIs charged lower interest, at 17.8%, and had higher net income margins, at 17.1%. Very large MFIs were able to offer their clients loans priced at 13% and had even higher net income margins, at 22.8%. Median costs per borrower were around US\$250 for the smallest MFIs and US\$17 for the very large MFI sample. Unfortunately, most institutions are subscale, with only 18% of lenders falling into the large and very large categories (Watkins, 2020). Most MFIs in Africa (77%) and South Asia (71%) were operating below a minimum cost-efficiency level as of 2015 (Eremionkhale & Watkins, 2021).

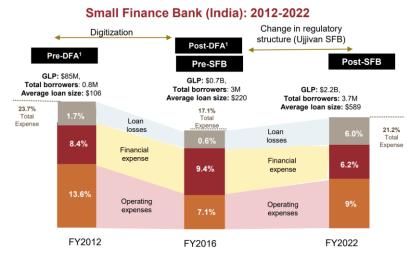
Table 2. The inverse relationship between scale and interest rates among microfinance institutions

Measures of outreach and efficiency	MFI scale (number of active borrowers)					
	Small (<10K)	Medium (10K–100K)	Large (100K–1M)	Very Large (>1M)		
% of total number of MFIs	41	41	16	2		
% of all borrowers	1.3	12.0	38.2	48.6		
% of all savers	2.6	20.5	48.1	28.8		
Median real interest rate + fees (% annual)	22.2	20.6	17.8	13.0		
Medium profit margin (% of revenue)	8.8	9.4	17.1	22.8		
Median cost per borrower (US\$)	250	200	50	17		

What this analysis does not address is the average loan size for these providers. Cost structures are highly correlated with average loan size and, as lenders grow and particularly as they commercialize, average loan sizes tend to increase. The evidence is mixed on the extent to which this represents mission drift or is instead a reflection of growth and maturity on the part of lending institutions serving low-income people. What is clear is that running an effective microcredit operation comes with significant fixed costs, including for investments in technology and compliance, which require economies of scale to reach sustainability. And most African MFIs have not yet reached this level of scale.

As lenders grow, they face difficult choices about licensing, which can also affect operating expenses. By acquiring a deposit-taking banking license and submitting to high levels of prudential regulation, providers can offer a much wider range of services. At scale, it can also help lower the cost of funds because customer deposits are often considered the lowest-cost source of funding. But deposit taking can come with significant compliance and cash management burdens that can outweigh savings in the cost of funds in the near term, before the provider reaches a minimum point of scale. This can be seen clearly in the case of Ujjivan in India (Figure 2). Ujjivan implemented digital field applications in 2012 to streamline operations and enhance efficiency. This led to a reduction in operating costs, from 13.5% to 9.1% by 2022. Ujjivan transformed into a small finance bank in 2017, which added compliance costs to its overall operating costs. As a small finance bank, however, Ujjivan was able to finance its loan book through retail deposits rather than wholesale finance, so it was able to generate further savings in financing costs. As Ujjivan continues to scale and digitize its operations, operating costs will gradually decline as a percentage of overall costs. Ujjivan is now in a strong position to reap the benefits of its investments in digital technology as well as its transformation into a bank. Institutions that remain small will struggle to achieve such benefits (Ujjivan Financial Services, 2011–2022), (Ujjivan Small Finance Bank, 2021–2022), (Accion, 2015).

Figure 2. The need for scale to reap the benefits of transforming into a deposit-taking institution: Ujjivan in India



Funding Costs

The cost of funding more broadly is another challenge. As long as mobilizing savings and intermediating them remains out of reach, MFIs and fintechs contend with high costs of funding from wholesale providers of capital and often face the dilemma of taking expensive financing from a local bank or taking lower-cost funding from a DFI in hard currency that must include additional hedging costs. Data from Gates Foundation partners in East Africa (from June 2023) suggests that large commercial banks could borrow at about 5%-7% in foreign currency and either lend to large customers in foreign currency or hedge the currency risk themselves. An international MFI or fintech could borrow from a local bank at 11%-12% (provided the funding is on offer) or from an international lender at 15%-16% (of which 600 to 700 basis points would be hedging costs). When base price margins are added to cover operating expenses, mitigate risk, and ensure a profit component, the result is high rates passed on to end-borrowers.

Other providers, such as commercial banks, face different constraints on serving low-income borrowers. They tend to have plenty of local currency liquidity and are good at managing risk, including foreign currency risk, but their shareholders expect them to optimize their balance sheets—to get the best return with the least risk. Unfortunately, commercial logic favors many other borrower segments over MSMEs when it comes to striking this balance. In many emerging markets, government borrowing often crowds out borrowing by the private sector. After government, lenders tend to prioritize lending to large corporations, and so on. Given the costs associated with identifying risk in micro and small borrowers, high provisioning requirements against that risk on the bank's financial statements, and the need to manage operating expenditures related to underwriting and servicing a large number of small loans, MSMEs can be very low on a bank's list of relative priorities. Consequently, without strong capacity to screen micro and small enterprises, banks also tend to misprice the risk of lending to these segments and therefore charge them higher interest rates¹¹ (Cavalcanti et al., 2023).

Many had hoped that data-driven fintechs would help solve some of the operating cost problems identified above, and they still might. But solutions have not come as quickly as anyone had hoped, for a couple of reasons. First, many fintech providers in the early stages were funded by venture capital out of the U.S. and Europe and, as a result, expectations to reach scale quickly and high

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¹¹ For example, in Brazil, after controlling for firms' actual and likely defaults, the range of bank spreads was 32 percentage points. It has been argued that this friction undermines the ability of banks to allocate capital to firms with higher marginal returns on capital.

valuations were baked into incentives. This led many of the early lenders to focus on expensive digital consumer credit, which is cheaper to deliver and requires less capital due to its fast turnover cycles. Based on the data from their consumer lending operations, these providers have not yet transitioned to providing lower-cost productive credit. Second, data availability is significantly constrained, particularly in Africa, where feature phones and USSD engagement with payment systems – which limits dating sharing – remains common. Most data from call data records and mobile money transactions sits in "walled gardens" of mobile network operators, if it exists at all (Vidal & Salman, 2023). So potential fintech providers must either acquire that data at a cost (assuming the data holder is willing to share it) or construct it themselves. This data acquisition approach has worked in certain markets with open payment systems or well-defined value chains, but particularly in low-income segments in Africa, data has been expensive or unfeasible to access. Also, women typically have less data visibility than men, exacerbating the challenge.

Building a More Inclusive Credit Ecosystem

Given the compelling evidence on the benefits of well-targeted productive credit, as well as the daunting range of constraints facing women entrepreneurs as they attempt to access such credit, we believe that a more concerted effort is needed to build a diverse and connected ecosystem of providers in Africa so the requisite capital can be delivered to women in ways that lead to impact. Overcoming the supply-side constraints on offering commercial credit to low-income people will require greater investment of public resources in, for example, improved regulations, digital public infrastructure (DPI) that spurs more efficient onboarding and data exchange, and risk sharing to spur more accurate pricing of capital. At the same time, more intentional investment of public resources may be required to build pathways for a subset of creditworthy entrepreneurs—a large share of the population in many countries, including women in the subsistence and microenterprise sectors—into the formal financial sector.

As noted earlier, the goal is not to provide credit indiscriminately to everyone. Rather, it is to better match credit supply with demand from different segments, making better use of scarce donor resources in resilience settings, and building pathways into productive credit for women who demonstrate the capacity to use it well for growth purposes. Central to this goal is demonstrating that women-led enterprises are, in fact, good credit risks when served by appropriate products. The experience of the microfinance sector demonstrates that some proportion of the many people outside the formal financial system is likely to be creditworthy. Despite having to borrow at rates exceeding 70% APR in much of Africa, many borrowers are paying those loans back—portfolio at risk in MFIs routinely sits well below 5%. These are not disproportionately risky or "sub-prime" borrowers—they are paying back loans *despite* their high costs and inflexibility. Think of what more women could do with their businesses, and the livelihoods and jobs created, if they could borrow at affordable rates and with better terms and conditions based on their credit histories.

Pathways from Informal to Formal Credit: Two Exemplars

Providers in the Global South are using concessional resources to build pathways for women, including those among the ultra-poor, to transition from informal sources of capital to the formal financial system. Two exemplars are BRAC and the Indian government's Deendayal Antyodaya Yojna - National Rural Livelihoods Mission (DAY-NRLM).

BRAC Bangladesh was an early pioneer in this space, combining commercial and concessional approaches to meet the needs of low-income women across the full capital spectrum while making efficient use of scarce donor resources. BRAC is the world's largest NGO, supporting programs in rural development, education, health, family planning, and ultra-poor graduation, focusing primarily on women and recognizing both the disadvantages under which they operate in South Asia and their important role in improving household and community welfare. Early on, BRAC recognized the value of its commercial operations for sustaining its charitable work, leading it to build social enterprises including BRAC Microfinance, BRAC Bank, bKash, and Aarong. Today, revenue from its commercial

enterprises supports roughly 85% of BRAC's overall operating costs in Bangladesh, making BRAC its own largest donor. Donor funding in Bangladesh has become increasingly scarce, so BRAC continues to innovate to find ways to make public money go further. Recognizing that the cost of its Ultra-Poor graduation was too high to fully meet demand, BRAC began to experiment with the use of concessional loans to replace a portion of grants for families who were classified as ultra-poor but who sat at the higher end of the spectrum—for example, by having two earners in the family. Recent evidence from an RCT of this "hybrid" UPG implementation model, which included a soft loan with a 20% interest rate, showed an improvement in women's labor supply, household income, assets, savings, and consumption (Field et al., 2013). Graduation rates into formal borrowing from BRAC Microfinance are significant—according to administrative data provided by BRAC, over 50% of participants in the last five years have gone on to access microcredit within a year, demonstrating that even very poor women can be moved into more commercial forms of financing if offered appropriate levels of support.

BRAC began to expand into Africa in the early 2000s, leading with microfinance on the assumption that it could play a similar role in financing its charitable work. But BRAC has struggled to reach the scale required to do this in Africa. Why? A combination of small, tough markets (such as Liberia and Sierra Leone), structural factors (including high levels of poverty and low population density), the high cost of capital, relatively high personnel costs, competitive pressure from emerging mobile money providers, and rigid regulatory frameworks all likely played a role. Arguably, the most basic reason for BRAC's relatively modest growth in Africa has been a lack of comprehensive donor support across the foundational areas required for *all* microfinance institutions to flourish—such as access to affordable financing, enabling regulatory frameworks, and basic infrastructure.

Impact-first microfinance institutions like BRAC often sit in the liminal space between the informal and formal credit ecosystems, which makes them potential entry points into formal finance for firsttime borrowers. While the focus in recent years has been on assessing the ability of MFIs to deliver development impact, less attention has been paid to ensuring that they have viable business models that can operate at scale. There is often a tension between commercial returns and development returns, so it is worth interrogating the assumption that MFIs should be able to operate on fully commercial terms in Africa, given the constraints. The microfinance industry made a necessary decision to raise the commercial capital it needed to grow when it commercialized and transformed in the 2000s. This instilled financial discipline, but MFIs accepted a Faustian bargain that required them to operate in a different way. Evidence shows that commercial equity investments led to scale with greater leverage (in the form of debt); however, there was a relative decrease in outreach to the very poor (Hoque et al., 2011). In the African context, we posit that commercialization without the necessary ecosystem preconditions may also have contributed to keeping microcredit lenders subscale. More strategic partnering between commercial and donor capital to create the conditions that would help institutions reach scale before expecting them to operate on commercial terms would have enabled impact-first providers like BRAC to grow more quickly and sustainably. Given the proven impact of the BRAC model in Bangladesh, helping BRAC get to scale in Africa would appear to be a good use of donor resources, but it would also require BRAC to operate more efficiently in an increasingly digitized market context.

The Indian government has taken a different approach to building pathways to formal finance, using very different tools and methods. While the digital infrastructure known as the India Stack¹⁴ has been widening access to financial services in a predominantly cash-based economy, the role of the Indian government in building an inclusive credit and financial services ecosystem reaching millions

¹² Estimates from BRAC International.

¹³ Estimates from BRAC Institute of Governance and Development.

¹⁴ Comprising, among other things, the Aadhaar digital ID, the Unified Payments Interface, and innovative solutions for data sharing.

of rural women has received less attention internationally but is equally impactful. DAY-NRLM, the flagship program of India's Ministry of Rural Development, launched in 2011, promoting an aggregation platform and last-mile service delivery system aimed at reducing poverty and enhancing livelihood opportunities for poor rural households. DAY-NRLM does this by organizing women from rural households into self-help groups (SHGs), which provide skills training, financial services, and market linkages. Although the program did not begin with an explicit focus on gender, over time it has increasingly focused attention and resources on women, incorporating women's economic empowerment as a formal objective in 2018. Today, over 100 million women are members of SHG networks. Women in SHGs save and lend among their members, ¹⁵ providing a vital source of financing to subsistence households and microenterprises. As groups begin to accumulate resources and experience, they also access additional financial resources, including a one-time capitalization grant of up to 30,000 INR (US\$366), which augments the corpus of savings accumulated by the group. After six months in good standing, groups become eligible to apply for bank loans through a program that links SHGs to commercial banks and other financial institutions.

NRLM achieves significant leverage, using SHG savings and government investment to crowd in financing from the formal banking sector. Since the program's inception, the national government has invested over US\$11 billion in NRLM, while states have contributed an additional US\$4 billion to their respective state programs. These funds have been used to build the administrative foundations of the program, as well as financing capitalization grants for SHGs and interest subsidies on bank lending that keep interest rates affordable for SHG members, at 7% per annum. Since the program's launch, groups have accumulated over US\$6 billion in savings for interlending purposes. These resources are significantly augmented by inflows of capital from the banking sector through the SHG-Bank Linkage Programme. Since 2013, the program has facilitated cumulative disbursement of over US\$100 billion in credit to SHGs participating in the program, representing nearly 7x leverage on government spending. As of February 2024, US\$30.2 billion in loans were outstanding to 8.5 million SHGs, reaching roughly 42.5 million borrowers. Portfolio quality, which was variable in the program's early years, has improved significantly, with nonperforming assets across the system sitting at just 1.64%, which is in line with global benchmarks for commercial microfinance.

The Indian government recently began to include ultra-poor households in the SHG ecosystem, as well as using the India Stack to build digital steppingstones for rural women into the formal financial sector. JEEViKA, Bihar's state rural livelihoods mission, was an innovator in this space, implementing the Satat Jeevikoparjan Yojana (SJY) program, which has used the SHG ecosystem to identify and facilitate the delivery of services to ultra-poor households in their communities. As of the end of 2023, JEEViKA had reached 162,000 of the state's poorest households with graduation programming (J-PAL South Asia, 2023), making it one of the largest graduation programs in the world, second only to BRAC's Ultra Poor graduation. It hopes to take advantage of existing government infrastructure and economies of scale to significantly reduce the per-unit cost of graduation programming. NRLM is also building pathways for rural women into the more formal financial sector as individual borrowers¹⁹ (Samaranayake et al., 2021). By digitizing the credit histories of SHGs and their

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¹⁵ The basic building block at the community level is the SHG, which has 10 to 20 members who voluntarily associate for the purpose of saving and allocating credit to members, based on group decisions. To be an SHG in good standing, the group must meet five criteria: regular meetings, regular savings, active interlending, timely repayment, and up-to-date, accurate accounts.

¹⁶ Source: MSC, Estimate for SRLM budgets, based on a funding ratio of 75:25 federal to state, which has shifted over time to 60:40.

¹⁷ Sources: National Bank for Agriculture and Rural Development (NABARD) and NRLM data. For individual borrowers, we estimate that approximately five women borrow in any given year.

¹⁸ Sources: NABARD, State of Microfinance Reports, and NRLM Portal.

¹⁹ Samaranayake et al. (2021) showed that annual per-household expenditure for basic program activities under JEEViKA declined from approximately US\$34 per member when the program served <60,000 households to almost US\$3 per

individual members through the Sakhi digital tool, NRLM hopes to create pathways for SHG members to borrow as individuals in the formal financial system.

The Global South is taking notice, and the World Bank is beginning to finance elements of the NLRM approach in other rural development programs, including in Uganda, Kenya, and Nigeria. The Nigeria for Women Project, a comprehensive rural livelihoods program financed through a loan from the World Bank, most closely reflects the range of design elements of NRLM, although much work remains to connect women in the program to both finance and markets. In Kenya, the World Bank has incorporated capitalization grants and supported rural savings and credit cooperatives (SACCOs) to digitize. These programs use concessional resources to help women enhance their familiarity and confidence with credit. They can also enable women's entry into more formal sources of finance by generating credit histories and streamlining linkages with providers. These approaches have significant relevance for African countries with high poverty rates, rural populations, and ubiquitous, lightly regulated financing schemes, such as SACCOs, VSLAs, and chamas. Increasing digitization of the formal financial sector in Africa will open up new pathways for women who use informal financial services to access more and better credit, but it will require significant and coordinated investment of public funding.

Four Pillars of Inclusive Formal Finance

In the regulated financial services space, we believe that four foundational pillars are necessary for building a more inclusive formal finance ecosystem at scale, all of them addressing the cost and risk challenges identified earlier.

- A regulatory and supervisory environment that supports the emergence of a diverse ecosystem of providers, including impact-driven "lean lenders";
- A diverse set of fit-for-purpose institutions that can deliver services cost-effectively to their target segments, increasingly with digitization;
- More capital available to inclusive providers in the form of local currency wholesale financing at affordable rates, increasingly from the domestic financial sector;
- Greater data visibility and availability so credit risk can be more fully understood and managed.

We will explore each of these areas in turn.

A Supportive Regulatory Environment That Enables and Protects

Financial services regulators across Africa typically lack the resources to keep up with the dizzying pace of innovation. As a result, they tend to operate in a broadly conservative fashion that aims to protect the integrity and stability of the financial system, consistent with their mandate. However, this approach leaves less room for lighter-touch, risk-based approaches that would allow new entrants to scale, leaves gaps that encourage regulatory arbitrage, makes limited use of supply-side data, and offers relatively light consumer protections. If the broader goal is to encourage more borrowers to access formal finance, and underlying this is a need for a diversity of institutional types, it is imperative that regulators be equipped to support this.

Experiences from the Global South demonstrate that good, enabling regulatory models increase minimum capital requirements and prudential oversight incrementally as an institution grows in size and complexity. Peruvian regulators successfully used this approach to nurture the emergence of an

member when the program reached 11 million households. In graduation programs, costs per beneficiary are bounded by the value of the transferred asset, typically 30% (https://bracupgi.org/news-updates/cost-effectiveness/understanding-the-costs-of-graduation-investing-in-long-term-gains/). The average cost per beneficiary of SJY is US\$1,040, of which roughly 90% represents transfers. The 90% figure implies that SJY is a positive outlier, given its low implementation overhead and broad reach. For comparison, an NGO-implemented graduation program in West Bengal had a much higher average cost: US\$2,163, of which 56% represented transfers (Banerjee et al., 2021).

inclusive credit ecosystem by effectively creating a "lean lending" regime. It has a stepped model that supports providers in evolving from an NGO to an EDPYME²⁰ to a nonbank financial institution and eventually to a bank. All these institutional types operate successfully in Peru, filling different borrower niches. Critical to this success has been Peruvian regulators' collection and use of granular supply-side data to track the underlying health of the financial system in near real time²¹ (Central Reserve Bank of Peru, 2024), enabling them to spot emerging problems early, as they did during the COVID-19 pandemic. A specialized supervisory unit for microfinance engages regularly with providers in ways that enable innovation and growth in the sector while also calibrating appropriate levels of prudential oversight. Stepped lean lender models such as this one could create transformative possibilities for inclusive finance in Africa in the digital era if regulators are willing and able to go beyond a focus on basic financial stability to invest in more agile, data-driven approaches to regulation and supervision.

At the same time, regulators must be attentive to the risks of arbitrage that can inadvertently arise with well-intended policy choices, and this requires agility to respond quickly to new developments. For example, when Kenya's parliament imposed interest rate caps in 2016 on the banking and microfinance sectors, it did not impose similar limits on digital consumer loans; this diverted capital from the banking sector and fueled a boom in consumer credit that not only left many borrowers negatively listed with the credit bureau but also measurably shrank credit availability more broadly (World Bank, 1961–2022). Because supply-side data did not adequately cover consumer loans, regulators did not have a strong grasp of the size of the problem until it got out of hand.

Regulators must be similarly attentive to consumer protection risks, particularly those of over-indebtedness. The over-indebtedness crisis in Andhra Pradesh caused real damage to borrowers and the Indian microfinance sector. To its credit, the Reserve Bank of India course-corrected quickly by putting in place stronger consumer protections. Regulators in Kenya have initiated a credit repair framework to help the 4 million people who have taken digital consumer credit and defaulted; lenders are required to offer a 50% discount to borrowers on the outstanding nonperforming balance so they can more readily delist from the credit reference bureaus. As is the case in most countries, there is more to do, such as improving transparency, credit information sharing, and supply-side data collection and usage to avert crises like this in the first place.

A Diverse Set of Fit-for-Purpose Institutions

Reaching all categories of women who need fit-for-purpose productive credit will require a range of institution types that can cost-effectively and responsibly channel financial resources to borrowers. The further down the income spectrum a potential borrower is, the fewer the number of providers that can serve them on a fully commercial basis. Reaching the large numbers of low-income women not presently covered by formal financial services will require a range of providers that are appropriately incentivized and have cost structures that enable them to operate in lower-income segments cost-effectively.

Digitization of providers and better use of borrower data will be crucial to improving operational efficiency and credit risk management across all provider types. Banks and fintechs have invested heavily in the digitization of their commercial operations. Significant effort and resources have also been expended to digitize MFIs (Alliance for Financial Inclusion, 2018), but the process has been a challenge for many. Digital transformation is hard for any business—firms fail to meet profitability goals from digital transformation 50% of the time (McKinsey & Co., 2019). For MFIs, failure stems from a few common pitfalls, including a lack of defined and measurable goals for increasing customer and business value, an inability to recruit qualified technical personnel, underestimating

²⁰ In Spanish, Entidades de Desarrollo para la Pequeña y Micro Empresa, or Small and Micro Enterprise Development Entity.

²¹ The level of available granular data on credit markets in Peru is exceptional and worthy of emulation in itself.

change management requirements, or failing to get the business model right (CGAP, 2021–2022). The challenges are not insurmountable, but donors supporting MFI digitization efforts should act more like investors than benefactors—conducting due diligence on the readiness of the firm to digitize, assessing the realism of digitization plans, supporting management in defining and measuring performance, and aligning expectations among management and shareholders.

Emerging business-to-business (B2B) solutions could help lower the barriers to serving low-income customers sustainably. In recent years, fintechs in developed markets have emerged to offer B2B services with cloud-native architecture to financial institutions, with the aim of reducing costs and/or increasing efficiency. These fintechs support everything from regulatory compliance and risk management to customer support and transaction processing services. For financial institutions with legacy technology systems, B2B fintechs can enable rapid deployment of flexible, personalized banking services to customers at much lower cost. ²² Similar players are entering emerging markets, but the industry is still nascent. Specialist businesses are emerging that allow banks to digitize and automate their back-office operations and create relevant digital financial products without investing in expensive infrastructure or hiring specialized staff. Providers of data analytics services that enable MFIs to plug into data analytics middleware, providing credit analytics and a comprehensive dashboard of real-time portfolio performance, are also expanding. These emerging innovations could lead to powerful gains by allowing providers to specialize their roles, ultimately lowering the costs of serving low-income customers and improving the value proposition for those customers.

Another factor in providing lower-cost and better services to customers is scale. Institutions that reach sufficient size are more resilient in the face of shocks, can invest in better IT systems and technical personnel, can offer products better tailored to their customers' needs, and can bear the regulatory costs that allow them to offer more sophisticated services like savings. They are also able to spread their operating costs over a much larger customer base, which helps improve their unit economics. In order to grow, providers will have to offer a better range of services tailored to borrowers' needs so they can improve their retention rates as their customers grow and evolve.

Finally, there may be a rationale for providing subsidies for noncore services that are essential to ensure that low-capacity consumers fully understand the credit product they are taking on. Many MFIs offer extensive onboarding and financial education services to their customers. This carries a high cost, which might merit some degree of external support. Similarly, one appropriate use for donor funds would be for derisking development of new credit products that can help address the flexibility constraints outlined earlier but represent additional risk while lenders manage the rollout. For more informal systems, like those in VSLAs and SHGs, there is a clear rationale for providing concessional support that will help digitize group performance data so borrowers can take their credit histories with them to formal lenders. B2B fintech providers and banks are exploring ways to serve borrowers in the informal ecosystem, and concessional capital could help in the initial stages while encouraging responsible approaches. An appropriate role for donors would be to help banks and fintechs that are seeking to go down market better understand and pilot services for lowincome segments, with a focus on ensuring responsible lending practices. Providing subsidies to commercial entities always requires a clear rationale, but if the provider is serving low-income, newto-credit borrowers and is trying to do it on reasonable terms, targeted subsidies that lower the risk and accelerate the pace of innovation could be justified.

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²² For example, U.S.-based Chime offers banks the ability to offer early access to paychecks and peer-to-peer payments. Providers of banking-as-a-service can enable nonbanks to offer financial services without even needing their own banking license. For example, Marqeta can help an online provider of, say, accounting services to small businesses to accept and manage payments, including card payments, online payments, and payouts.

A Cascade of Affordable Local-Currency Wholesale Financing

If we accept that a variety of lenders are needed to serve different segments and that some of them will be able to do this only if they carry a lighter regulatory burden with correspondingly lower costs, then it is vitally important that wholesale funding be available to them in local currency at affordable rates. The precipitous decline in the value of the Nigerian naira and other African currencies against the U.S. dollar in the last year starkly underlines the dangers for local institutions that borrow in foreign currency and earn only in local currency. Even if the foreign financing comes with notionally lower interest costs, a ballooning obligation in a foreign currency can pose an existential threat to a lender's balance sheet. This is a familiar issue in Africa: Attempts by DFIs to make local currency financing available at affordable rates have been well intentioned but limited in scope and have generally been transaction-based rather than addressing systemic barriers. The fact that sub-Saharan Africa has 48 separate jurisdictions and 42 different currencies also complicates matters, as individual markets are fragmented and small. Solutions like the Currency Exchange Fund (TCX) try to address this challenge by offering currency hedging services, but prices remain high and reflect very real macro challenges. Some DFIs have done their own hedging to bring costs down, with positive results, but doing this requires concessional risk capital. Ultimately, the most durable solution for mitigating foreign exchange risk is to crowd in domestic financial institutions, which have ample local currency liquidity. Bond issuances have stimulated some local currency financing, but much more needs to be done to deepen capital markets and unlock lower-cost sources of funds.

Some countries in the Global South have successfully addressed this problem in targeted ways. Peru built the foundations of its microfinance sector not only with enabling regulations but also by reforming its insolvent state-sponsored development bank, COFIDE. In 1991, COFIDE was stripped of its retail operations and repositioned as a wholesale bank with an explicit arms-length relationship with government, to avoid political interference. COFIDE's wholesale financing became an engine of growth for Peru's microfinance sector^{23,24} and emerged as an efficient apex channel for DFIs to place and manage their funding in the Peruvian market. India, by contrast, has pushed bank lending into designated priority sectors through a mandate, whereby 40% of adjusted net bank credit must be directed to sectors such as agriculture, housing, and social infrastructure as well as to MSMEs and SHGs, with financial penalties for those that fail to meet the requirements and incentive payments for those that exceed their obligations (Reserve Bank of India, n.d.). While the prescriptive nature of this approach can be questioned, the policy has had an undeniable and substantial impact in terms of unlocking finance for previously underserved sectors. The mandate has also been an important driver of demand for securitizations that enable microlenders to access additional funds. Variations on both approaches are worth examining in the context of sub-Saharan Africa.

Creating a cascade of local currency financing from the domestic financial sector into second- and third-tier financial institutions is essential to bringing down the overall cost of borrowing. Blended finance could play a catalytic role in making this happen. Lenders suggest that first-loss guarantee schemes can be an effective tool to encourage them to provide financing they would not consider on purely commercial terms. If sufficient coverage is provided, lenders should be able to substantially derisk their portfolios as they build the capacity to screen and price lending in this area, while tying up less of their capital to bring down their own costs of lending. Ideally, they would pass on part of

²³ For a comprehensive history of the evolution of Peruvian microfinance through 2010, it is worth reading *The Mustard Tree: A History of Microfinance in Peru* by, among others, Richard Webb, a former two-term central bank governor (1980–85 and 2001–03). For those who find reform of microfinance in Africa a daunting proposition, it is worth bearing in mind that Peru's microfinance sector began to grow and commercialize in the wake of an extended period of hyperinflation, economic crisis, a wave of bank failures, and a terrorist insurgency.

²⁴ Other examples of successful apex lending institutions include the Microfinance Investment Support Facility for Afghanistan, which is still operating, as well as Palli Karma-Sahayak Foundation (the rural employment assistance program in Bangladesh), and the National Rural Support Programme in Pakistan. Banca de las Oportunidades in Colombia plays a market-building role for the microfinance sector but is less an apex structure than a technical assistance and advocacy platform.

the gain to borrowers who demonstrate creditworthiness and, in the process, increase their lending portfolios. Performance-related incentive payments can also help reduce costs for borrowers by linking interest rate step-downs to the delivery of key performance indicators. Aceli in East Africa is one innovator using these tools—blending subsidies and incentive payments to help move commercial banks into lending to sectors that they had previously steered clear of, in this case agriculture. Blended finance facilities can streamline due diligence and standardize reporting and legal processes to reduce the transaction costs for investors, and with sufficient scale and coverage across countries they can also offer diversification benefits for hedging. Some larger commercial banks in Africa already provide wholesale financing to microfinance providers, but at high cost and with high collateral requirements; derisking through first-loss guarantees could help them lend on better terms and gain comfort with these counterparts over time.

Additional sources of local currency liquidity are also needed, including from pension funds and insurance companies. Specialized local currency bond issuances supported by targeted risk mitigation measures can draw in finance from local pension funds and other holders of long-term liquidity that are seeking long-term assets. This is an area actively supported by FSD Africa. In many of these transactions to mobilize financing from domestic sources, funders deploy a targeted and judicious use of subsidies, as defined by the OECD's blended finance approach²⁵ (OECD, 2020), which offers guardrails against market distortion. Greater visibility into credit risks and efficiencies through digitization could also make securitization more viable, enabling credit originators to access more financing while transferring risk to the institutional investors that are best placed to manage them.

Digitization and Data-Sharing Infrastructure

The increasing digitization of finance and data on borrowers more broadly creates new opportunities for financial service providers to manage credit risk and improve their efficiency. In addition to lowering operating costs and reducing risk, data enables providers to target credit offers more effectively, tailor products to the cash flows of enterprises, and offer larger loan sizes, which for some customers is vital to increasing their incomes. Data can also be used to match lenders' portfolios to a broader range of financing suppliers with differing risk profiles, enabling securitization and other mechanisms to increase capital flows into the sector.

While data trails for more affluent segments that use smartphones are growing, there remains a dearth of data about low-income people and women in particular. Gender disparities in mobile broadband and mobile money account access and usage exacerbate the data gap for women in many regions. Providers consequently continue to fly blind when data is nonexistent. In these instances, experimentation with probabilistic modeling techniques could enable lenders to manage default risk at the portfolio level instead of the individual level, eliminating the need for intensive borrower-level data to conduct accurate credit risk assessments. These approaches are more commonly used in developed markets in commercial real estate, for example, but could potentially be tested and scaled in an emerging market context.

More intentional digitization strategies can help generate data trails for women and thereby expand women's access to more and better commercial credit. Private providers like Kaleidofin in India and Kuunda in East Africa are demonstrating the value of digitizing data on low-income borrowers to improve credit offers. In India, DAY-NRLM is bringing new borrowers into the digitized world through its investment in the Sakhi platform, which will generate data trails on women's existing financial and enterprise activity in the informal credit ecosystem. The growing adoption of digital services enabled by DPI, such as Unified Payments Interface for payments and Aadhaar for identity in India,

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²⁵ The OECD's Blended Finance Guidance and Blended Finance Principles advise decision-makers to use subsidies only to address market failures when there is a strong development rationale and consideration of local conditions and to identify pathways to long-term commercial sustainability.

also shows the promise of generating additional transactional payment data for use in credit underwriting.

In Africa, digital platforms that serve a growing base of merchants and agents are partnering with fintechs to make use of new data trails. Unfortunately, much of the data in Africa sits in providers' walled gardens and are either shared with third parties at a cost, driving up the cost of lending to those merchants, or locked into a single provider ecosystem. Unlocking these digital data trails will be crucial to creating a more open and competitive credit landscape in Africa. Open data-sharing regimes and infrastructure can make existing financial data available to many lenders, incentivizing them to compete and offer better services, as seen with open banking in the UK and Singapore, rather than capturing data in silos. The introduction of account aggregators in India has enabled consent-based sharing of financial data, although it has yet to crowd in relevant data about previously underserved groups. Effective data infrastructure enables lenders to go further down market as they better understand borrowers' capacity and willingness to repay. Importantly, lenders in India are also enabled by DPI to conduct more efficient identity verification to comply with Know Your Customer regulatory requirements, making it more profitable to serve customers with lower borrowing needs. While open data regimes should not be entered into lightly, given the risks regarding data privacy, consent, and misuse, African governments should be supported in building the infrastructure and guardrails for exchange of financial and nonfinancial data, which will not only facilitate including more low-income women in the formal credit ecosystem but will also unlock the data that will make the provision of credit more competitive.

An Important Role for Funders

Building inclusive credit markets in Africa will require that development assistance partners use the significant amounts of funding they already deploy far more effectively, with a priority placed on building fit-for-purpose institutions across regulation, financing, market infrastructure, and delivery. Only when credit providers have robust institutional capacity can they offer the kinds of products that the evidence base shows have impact. And this needs to happen in ways that both recognize the challenging context in Africa and have an eye toward building scale. The good news is that there are considerable resources to work with. CGAP estimates that funders spent US\$10 billion on financial inclusion in Africa in 2021 alone (CGAP, 2023). The largest part of this funding (58%) was in the form of investment capital (debt, equity, and guarantee financing). But Africa receives relatively little in investment compared to other regions, where the share of investment in overall spend is 83%. Clearly, the African financial sector is seen as unable to absorb as much financing as other regions. And yet this is the region where the need for financing is arguably greatest. Conversely, Africa receives relatively high levels of grant funding compared to other regions, absorbing a little more than half of all grant funding globally. But a surprisingly small portion of those grant resources go directly to capacity building for financial service providers (2.68% of the total) and regulators (5%). There is a need to build more robust institutions, both commercial and regulatory, so investment dollars can flow.

Guarantees are another gap to address in Africa. While almost 6% of all funding for financial inclusion across developing countries goes to guarantees, this figure is just over 4% in Africa, reflecting lower levels of commercial financing in African markets. Given the need for capital in the region and the risks associated with lending there, donors may need to be bolder about where and how they place their concessional resources to catalyze greater financing for African financial service providers. Donors also need to be more intentional about creating a cascade that moves resources beyond the banking sector into a stronger group of second- and third-tier lenders and, when concessional resources are offered, donors should insist that the benefits get passed on to borrowers rather than being absorbed by banks. There is a clear need for the use of concessional resources, such as International Development Association (IDA) financing, to both build market systems and crowd in more commercial capital from DFIs and private investors. And yet, the IDA Private Sector Window at the IFC is underutilized—only US\$1.3 billion was used against a US\$5.5

billion allocation (IDA, 2023) between 2018 and 2020, with only US\$795 million deployed for guarantees.

Business as usual is simply insufficient—the inclusive finance community must work together in a new way, taking advantage of all that technology has to offer while remaining attentive to the basics. Developing inclusive financial markets in Africa will require mobilizing and delivering both technical and financial resources, and that will require working together to achieve common aims. For example, according to Convergence, by working together more effectively to offer blended finance, investors, multilateral development banks, DFIs, and donors could increase private-sector mobilization into emerging markets from an "anemic" US\$45 billion per year to US\$286 billion per year without the need for additional public-sector financial resources, and this would double total investment in developing economies to US\$530 billion (Convergence, 2022).

African governments must also do their part. Regulatory frameworks are built and managed by governments and shape the financial sector in ways that contribute to policy objectives. Donors can provide support, but ultimately these reforms must be implemented by governments. Governments also have a role to play in building more inclusive access to wholesale funding on affordable terms, by encouraging participation by the domestic financial sector in economic development. They must be attentive to the risk of regulatory arbitrage and market distortion in their interventions and build more robust systems for protecting consumers. Simple solutions like interest rate caps and rotating credit facilities are not enough—if African countries want their financial sectors to contribute more fully to economic growth, they must embark on the kind of robust engagement with the private sector seen in countries like Peru and India. Building truly inclusive credit markets that work for low-income people requires a full ecosystem of policy interventions.

The solutions offered in this paper essentially describe a market systems approach to financialsector development, recognizing the important interconnections between regulation, wholesale financing, market infrastructure, and institutions. Focusing on only one of these areas is unlikely to yield long-term success; focusing on all of them, as markets in Latin America and South Asia have successfully done, is more likely to move the African financial sector in a more sustainable and inclusive direction. The Gates Foundation is exploring ways to address these complex challenges, but we do not have the resources to do this alone. The effort will require the financial strength of multilateral development banks and DFIs that are interested in finding ways to ensure a flow of lowcost local currency funds. It will need donors to help support the use of technology to improve the operational efficiency of inclusive financial service providers and broaden the range of products that meet the needs of women-led microenterprises. It will also need donors to help regulators build agile, data-informed systems that can enable the entry and oversight of lenders that can more effectively serve low-income segments. And it will need donors to mobilize partners to invest in DPI to ensure that data flows in ways that empower customers and crowd in others so African markets can be more open, competitive, and inclusive. All of this will require the targeted use of scarce concessional resources and close partnership between the public and private sectors. Philanthropic capital can play a role in establishing proof points and bringing other ecosystem actors together, but significant additional investment from other funders, both public and private, will be needed to transform Africa's financial sector in ways that support the growth that Africa needs.

The world is mobilizing to address the twin challenges of equitable economic growth and climate change, and the priorities are distributed unevenly between the Global North and the Global South. But the two goals are intertwined: For Africa to have the resources to meet the adaptation challenges inherent in the climate crisis, it needs growth. And an important way to support growth is to develop a supportive financial sector that provides credit right down to microentrepreneurs and particularly women, who represent a large part of the population and will play an important role in delivering growth on the continent. It is not just about giving people bank accounts: Those accounts must enable the development of stable livelihoods, jobs, and economic growth. In the short term, capital will need to be mobilized from the Global North. On the ground, it will need to be channeled

through stronger financial systems that incorporate not only banks but nonbank financial institutions that can serve the needs of low-income people more efficiently. But in the longer term, Africa must generate resources that can support its own development, while eventually creating the conditions for capital to flow to the continent from abroad as investment capital rather than as official development assistance.

We contend that the large number of people who currently operate outside the formal financial sector must eventually be included for that transformation to happen, not only to mobilize the savings that currently sit outside formal finance but to support the growth of businesses and economies from the bottom up. And that will require a strategic combination of public and private capital, along with investment from governments in stronger market infrastructure and supportive policies, with a view to long-term development. Women, who participate fully in economic life in Africa but earn less for their efforts, must be a part of that transformation.

References

Abdul Latif Jameel Poverty Action Lab. (2023). *Microcredit: Impacts and promising innovations*. Retrieved from https://www.povertyactionlab.org/policy-insight/microcredit-impacts-and-promising-innovations

Accion. (2015). *Digital Field Applications: Case Study*. In partnership with Ujjivan Financial Services, Musoni Kenya, and Opportunity Bank Serbia. Retrieved from https://red-accion.org/wp-content/uploads/2015/12/Case-Study-DFAs-ENG.pdf

Alliance for Financial Inclusion. (2018). *Digital Transformation of Microfinance and Digitization of Microfinance Services to Deepen Financial Inclusion in Africa*. Retrieved from https://www.afiglobal.org/publications/digital-transformation-of-microfinance-digitization-of-microfinance-services-to-deepen-financial-inclusion-in-africa/

Annan, F. (2022). Gender and financial misconduct: a field experiment on mobile money. *SSRN*. Preprint posted online March 5, 2020, and revised January 18, 2022. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3534762

Attanasio et al. (2015). The impacts of microfinance: evidence from joint-liability lending in Mongolia. *American Economic Journal: Applied Economics*. 2015;7(1):90–122. Retrieved from https://www.aeaweb.org/articles?id=10.1257/app.20130489

Bandiera et al. (2017). Labor markets and poverty in village economies. *Quarterly Journal of Economics*. 2017;132(2),811–870. Retrieved from https://www.jstor.org/stable/26495150

Banerjee et al. (2015). A multifaceted program causes lasting progress for the very poor: evidence from six countries. *Science*. 2015;348(6236):1260799. Retrieved from https://www.science.org/doi/10.1126/science.1260799

Banerjee et al. (2015). The miracle of microfinance? Evidence from a randomized evaluation. *American Economic Journal: Applied Economics*. 2015;7(1):22–53. Retrieved from https://www.aeaweb.org/articles?id=10.1257/app.20130533

Banerjee et al. (2021). Long-term effects of targeting the ultra poor program. *American Economic Review: Insights*. 2021;3(4):471–486. Retrieved from https://www.aeaweb.org/articles?id=10.1257/aeri.20200667

Banerjee et al. (2023). Can microfinance unlock a poverty trap for some entrepreneurs? *SSRN*. Working paper posted online October 7, 2019, and revised June 28, 2023. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3465363

Barboni, G., & Agarwal, P. (2023). How do flexible microfinance contracts improve repayment rates and business outcomes? Experimental evidence from India. *SSRN*. Preprint posted online February 16, 2023, and written February 14, 2023. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4358795

Barboni et al. (2023). Rural banks can reduce poverty: experimental evidence from 870 Indian villages. Preliminary working paper, not yet complete. Retrieved from https://egc.yale.edu/sites/default/files/IE/RuralBanks_BFP%20(002).pdf

Bari et al. (2021). Asset-based microfinance for microenterprises: evidence from Pakistan. *SSRN*. Working paper posted online February 18, 2021, and written January 29, 2021. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3778754

Bari et al. (2024). Asset-based microfinance for microenterprises: evidence from Pakistan. *American Economic Review*. 2024;114(2):534–574. Retrieved from https://www.aeaweb.org/articles?id=10.1257/aer.20210169

Battaglia et al. (2023). Repayment flexibility and risk taking: experimental evidence from credit contracts. *Review of Economic Studies*. 2023;rdad107. Retrieved from https://academic.oup.com/restud/advance-article/doi/10.1093/restud/rdad107/7425423?login=false

Beaman et al. (2023). Selection into credit markets: evidence from agriculture in Mali. *Econometrica*. 2023;91(5):1595–1627. Retrieved from

https://www.econometricsociety.org/publications/econometrica/2023/09/01/Selection-into-Credit-Markets-Evidence-from-Agriculture-in-Mali

Beck et al. (2007). Finance, inequality and the poor. *Journal of Economic Growth*. 2007;12:27–49. Retrieved from https://link.springer.com/article/10.1007/s10887-007-9010-6#citeas

Bernhardt et al. (2019). Household matters: revisiting the returns to capital among female microentrepreneurs. *American Economic Review: Insights*. 2019;1(2):141–160. Retrieved from https://www.aeaweb.org/articles?id=10.1257/aeri.20180444

Björkegren et al. (2023). Instant loans can lift subjective well-being: a randomized evaluation of digital credit in Nigeria. *SSRN*. Preprint posted online March 11, 2023. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4385266

Breza, E., & Kinnan, C. (2023). Measuring the equilibrium impacts of credit: evidence from the Indian microfinance crisis. *SSRN*. Working paper posted online February 21, 2018, and revised June 24, 2023. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3127070

Bryan et al. (2023). Big loans to small businesses: predicting winners and losers in an entrepreneurial lending experiment. *SSRN*. Working paper posted online March 2, 2022, and revised November 6, 2023. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4047267

Burke et al. (2019). Sell low and buy high: arbitrage and local price effects in Kenyan markets. *Quarterly Journal of Economics*. 2019;134(2):785–842. Retrieved from https://doi.org/10.1093/qje/qjy034

Cai et al. (2023). Microfinance can raise incomes: evidence from a randomized control trial in China. *SSRN*. Preprint posted online September 24, 2020, and revised November 27, 2023. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3670721

Cavalcanti et al. (2023). Financing costs and development. *Inter-American Development Bank*. Working paper posted online October 2023. Retrieved from

https://publications.iadb.org/en/publications/english/viewer/Financing-Costs-and-Development.pdf

Central Bank of Kenya. (2022). *Credit repair framework*. Press release. November 14, 2022. Retrieved from https://www.centralbank.go.ke/uploads/press_releases/318500544_Press%20Release%20%20Credit%20Repair%20Framework.pdf

Central Reserve Bank of Peru. (2024). *Weekly reports: Statistical tables*. Retrieved from https://www.bcrp.gob.pe/en/publications/weekly-reports/tables.html

CGAP. (2021–2022). *Pitfalls in MFI digitization: What they are and how to avoid them*. Blog series. Retrieved from https://www.cgap.org/blog/series/pitfalls-mfi-digitization-what-they-are-and-how-avoid-them

CGAP. (2023). Funding explorer: Interactive data for the 2021 CGAP funder survey. Retrieved from https://www.cgap.org/research/data/funding-explorer-interactive-data-for-2021-cgap-funder-survey

Convergence. (2022). *The Action Plan for Climate and SDG Mobilization: For Emerging Markets and Developing Economies*. Retrieved from https://www.convergence.finance/resource/the-action-planfor-climate-and-sdg-investment-mobilization/view

Cull et al. (2018). The microfinance business model: enduring subsidy and modest profit. *World Bank Economic Review*. 2018;32(2):221–244. Retrieved from https://elibrary.worldbank.org/doi/10.1093/wber/lhx030

De Mel et al. (2008). Returns to capital in microenterprises: evidence from a field experiment. *Quarterly Journal of Economics*. 2008;123(4):1329-1372. Retrieved from https://www.jstor.org/stable/40506211

De Mel et al. (2012). One-time transfers of cash or capital have long-lasting effects on microenterprises in Sri Lanka. *Science*. 2012;335(6071):962–966. Retrieved from https://www.science.org/doi/10.1126/science.1212973

Eremionkhale, A., & Watkins, T. A. (2021). The effect of the global financial crisis on the cost structure and double bottom line goal of microfinance institutions. *International Journal of Business & Management Studies*. 2021;2(7):8–17. Retrieved from https://ijbms.net/assets/files/1628455014.pdf

Field et al. (2013). Does the classic microfinance model discourage entrepreneurship among the poor? Experimental evidence from India. *American Economic Review*. 2013;103(6):2196–2226. Retrieved from https://www.aeaweb.org/articles?id=10.1257/aer.103.6.2196

Field, E., & Pande, R. (2008). Repayment frequency and default in microfinance: evidence from India. *Journal of the European Economic Association*. 2008;6(2/3):501–509. Retrieved from https://www.jstor.org/stable/40282659

Fink et al. (2020). Seasonal liquidity, rural labor markets, and agricultural production. *American Economic Review*. 2020;110(11):3351–3392. Retrieved from https://www.aeaweb.org/articles?id=10.1257/aer.20180607

FSD Kenya. (2019). 2019 FinAccess Household Survey. Retrieved from https://www.fsdkenya.org/wp-content/uploads/2019/04/2019-FinAcces-Report-Web-05-JAN-2020.pdf

Garg, S., & Gupta, S. (2021). Financial access and gender gap in entrepreneurship and employment: evidence from rural India. *SSRN*. Preprint posted online October 28, 2021, and written September 14, 2021. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3923735

Giné, X., & Karlan, D. S. (2014). Group versus individual liability: short and long term evidence from Philippine microcredit lending groups. *Journal of Development Economics*. 2014;107:65–83. Retrieved from https://www.sciencedirect.com/science/article/abs/pii/S030438781300165X

Global Entrepreneurship Monitor. (2017). *Women's Entrepreneurship 2016/2017 Report*. Retrieved from https://www.gemconsortium.org/report/gem-20162017-womens-entrepreneurship-report

Brock, J. M., & De Haas, R. (2023). Discriminatory lending: evidence from bankers in the lab. *American Economic Journal: Applied Economics*. 2023;15(2):31–68. Retrieved from https://www.aeaweb.org/articles?id=10.1257/app.20210180

Holloway et al. (2017). Women's Economic Empowerment Through Financial Inclusion: A Review of Existing Evidence and Remaining Knowledge Gaps. Retrieved from https://poverty-action.org/sites/default/files/publications/Womens-Economic-Empowerment-Through-Financial-Inclusion.pdf

Hoque et al. (2011). Commercialization and changes in capital structure in microfinance institutions: an innovation or wrong turn? *Managerial Finance*. 2011;37(5):414–425. Retrieved from https://doi.org/10.1108/03074351111126906

IDA. (2023). *International Development Association (IDA): Management's Discussion & Analysis and Financial Statements*. Retrieved from

https://thedocs.worldbank.org/en/doc/b38629a142167d3f5b6dcf39646379c5-0040012023/original/IDA-Financial-Statements-June-2023.pdf

International Finance Corporation. (2017). *MSME Finance Gap: Assessment of the Shortfalls and Opportunities in Financing Micro, Small and Medium Enterprises in Emerging Markets*. Retrieved from https://documents1.worldbank.org/curated/en/653831510568517947/pdf/121264-WP-PUBLIC-MSMEReportFINAL.pdf

International Labour Organization. (2023). *ILO modelled estimates (ILOEST database)*. Retrieved from https://ilostat.ilo.org/resources/concepts-and-definitions/ilo-modelled-estimates/

CARE Uganda. (2021). Village Savings & Loan Associations Annual Report 2020. Retrieved from https://www.care.org/news-and-stories/ideas/village-savings-loan-associations-annual-report-2020/

Jack et al. (2019). Borrowing requirements, credit access, and adverse selection: evidence from Kenya. *SSRN*. Working paper posted online September 26, 2016, and revised February 25, 2019. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2843542

J-PAL South Asia. (2023). *JEEViKA, Bandhan-Konnagar, and J-PAL South Asia launch the Satat Jeevikoparjan Yojana Playbook to double down on the fight against extreme poverty at scale*. News release. August 22, 2023. Retrieved from https://www.povertyactionlab.org/updates/jeevikabandhan-konnagar-and-j-pal-south-asia-launch-satat-jeevikoparjan-yojana-playbook

Kenya National Bureau of Statistics. (2016). 2016 Micro, Small and Medium Enterprises (MSME) Survey Basic Report. Retrieved from https://www.knbs.or.ke/2016-micro-small-and-medium-enterprises-msme-survey-basic-report/

Khandker, S. R., & Samad, H. A. (2014). Dynamic effects of microcredit in Bangladesh. *SSRN*. Working paper posted online April 20, 2016, and written March 1, 2014. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2417519

Klapper et al. (2006). Entry regulation as a barrier to entrepreneurship. *Journal of Financial Economics*. 2006:82(3):591–629. Retrieved from https://www.sciencedirect.com/science/article/abs/pii/S0304405X06000936

Beck et al. (2008). Financing patterns around the world: are small firms different? *Journal of Financial Economics*. 2008:89(3):467–487. Retrieved from https://www.sciencedirect.com/science/article/abs/pii/S0304405X08000986

Demirgüç-Kunt, A., & Levine, R. (2009). Finance and inequality: theory and evidence. *SSRN*. Working paper posted online April 20, 2016, and written June 1, 2009. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1427627.

Demirgüç-Kunt, A., & Klapper, L. F. (April 2012). Measuring financial inclusion: the Global Findex Database. *SSRN*. Working paper posted online April 20, 2016, and written April 1, 2012. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2043012

Demirgüç-Kunt, A., & Klapper, L. F. (June 2012). Financial inclusion in Africa: an overview. *SSRN*. Working paper posted online April 20, 2016, and written June 1, 2012. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2084599

McKinsey & Co. (2019). *Twenty-five years of digitization: Ten insights into how to play it right*. Retrieved from https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/twenty-five-years-of-digitization-ten-insights-into-how-to-play-it-right

McKinsey & Co. (2023). *Reimagining Economic Growth in Africa: Turning Diversity into Opportunity*. Retrieved from

https://www.mckinsey.com/~/media/mckinsey/mckinsey%20global%20institute/our%20research/re imagining%20economic%20growth%20in%20africa%20turning%20diversity%20into%20opportunity/reimagining-economic-growth-in-africa-v6.pdf

Meager, R. (2019). Understanding the average impact of microcredit expansions: a Bayesian hierarchical analysis of seven randomized experiments. *American Economic Journal: Applied Economics*. 2019;11(1):57–91. Retrieved from https://www.aeaweb.org/articles?id=10.1257/app.20170299

VoxDevLit. (2023). *Microfinance*. Retrieved from https://voxdev.org/sites/default/files/2023-09/Microfinance_Issue_2.pdf

Cai, S. (2022). Microcredit and informal risk sharing: experimental evidence from the Village Banking Program in China. *SSRN*. Working paper posted online June 4, 2021, and revised September 27, 2022. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3859868

Morduch, J. (1998). Does microfinance really help the poor? New evidence from flagship programs in Bangladesh. *Princeton University*. Working paper posted online June 27, 1998. Retrieved from https://rpds.princeton.edu/sites/g/files/toruqf1956/files/media/morduch_microfinance_poor_0.pdf

Ujjivan Financial Services. (2011–12). *Financial information: Annual reports*. Retrieved from https://www.ujjivan.com/annual-reports

OECD. (2020). *Blended finance guidance & principles*. Retrieved from https://www.oecd.org/dac/financing-sustainable-development/blended-finance-principles/guidance-and-principles/

Putman et al. (2021). *Competition Authority of Kenya Digital Credit Market Inquiry*. Retrieved from https://poverty-action.org/publication/competition-authority-kenya-digital-credit-market-inquiry

Reserve Bank of India. (n.d.). Reserve Bank of India: India's Central Bank. Retrieved from rbi.org.in

Riley, E. (2022). Resisting social pressure in the household using mobile money: experimental evidence on microenterprise investment in Uganda. *Oxford University*. Working paper posted online September 6, 2022. Retrieved from https://ora.ox.ac.uk/objects/uuid:b7ed6a67-88a9-4714-a419-b4c43decc7e8

Rodrik, D., and Stiglitz, J. E. (2024). *A New Growth Strategy for Developing Nations*. Retrieved from https://drodrik.scholar.harvard.edu/sites/scholar.harvard.edu/files/danirodrik/files/a_new_growth_strategy_for_developing_nations.pdf

Sahay et al. (2015). *Rethinking Financial Deepening: Stability and Growth in Emerging Markets*. Retrieved from https://www.imf.org/external/pubs/ft/sdn/2015/sdn1508.pdf

Shams et al. (2010). Integration of the ultra poor into mainstream development: how effective is the CFPR program? *ResearchGate*. Working paper not posted online, but a copy may be requested directly from the authors at

https://www.researchgate.net/publication/265422249_Integration_of_the_Ultra_Poor_into_Mainst ream_Development_How_Effective_is_CFPR

Samaranayake et al. (2021). *The State of Bihar's Approach to Economic Inclusion: JEEViKA and the SJY Program*. Retrieved from https://www.peiglobal.org/sites/pei/files/2021-01/Case%20Study%202.pdf

Suri et al. (2021). Fintech and household resilience to shocks: evidence from digital loans in Kenya. *Journal of Development Economics*. 2021;153:102697. Retrieved from https://www.sciencedirect.com/science/article/abs/pii/S0304387821000742 The World Bank. (1961–2022). *Domestic credit to private sector by banks (% of GDP)—Kenya*. Retrieved from https://data.worldbank.org/indicator/FD.AST.PRVT.GD.ZS?locations=KE

The World Bank. (June 2019). Financing women entrepreneurs in Ethiopia: The Women Entrepreneurship Development Project (WEDP). Retrieved from https://www.worldbank.org/en/results/2016/07/21/financing-women-entrepreneurs-in-ethiopia-the-women-entrepreneurship-development-project-wedp

The World Bank. (March 2019). *Profiting from Parity: Unlocking the Potential of Women's Business in Africa*. Retrieved from

https://documents1.worldbank.org/curated/en/501971553025918098/pdf/Main-Report.pdf

The World Bank. (1960–2022). *Domestic credit to private sector by banks (% of GDP)—All countries and economies*. Retrieved from https://data.worldbank.org/indicator/FD.AST.PRVT.GD.ZS

Uganda Bureau of Statistics. (2019). *Uganda Bureau of Statistics*. Retrieved from https://www.ubos.org/?s=2019

Ujjivan Small Finance Bank. (2021–2022). *Annual Report 2021–22: Persistance, Passion, Progress*. Retrieved from https://www.ujjivansfb.in/static/annual-reports/pdf/USFB%20AR%202021-22.pdf

Vidal, M. F., & Salman, A. (2023). *Global Landscape: Data Trails of Digitally Included Poor (DIP) People*. Retrieved from

https://www.cgap.org/sites/default/files/publications/slidedeck/Landscaping-Data-Trails_final.pdf

Watkins, T. A. (2020). Microfinance industry concentration and the role of large-scale and profitable MFIs. In: Watkins et al., eds. *The Future of Microfinance*. Brookings Institution Press; 2020:77–102. Retrieved from https://www.jstor.org/stable/10.7864/j.ctvbnm3hx