FOCUS NOTE

Empowering Small Giants

Inclusive Embedded Finance for Micro-retailers

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TRANSFORM

CGAP

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List of Acronyms

BNPL	Buy Now Pay Later
B2B	Business-to-Business
CICO	Cash-in Cash-Out
EMDE	Emerging and Developed Economies
FMCG	Fast Moving Consumer Goods
FSA	Field Service Agents
MFI	Microfinance Institutions
MNC	Multinational Corporations
MR	Micro-retailers
MSE	Micro and Small Enterprises
RMFB	Regulated Microfinance Banks
RTM	Routes-to-Market

Executive summary

KNOWN BY MANY DIFFERENT NAMES around the world, including *duka, kirana, warung* and *sari-sari,* neighborhood convenience stores or micro retail shops are central to the economic fabric in emerging markets and developing economies (EMDEs). By providing incomes to millions of low-income families, and essential goods and services in neighborhoods across the globe, these shops are crucial for the communities they serve. Despite the proliferation of supermarkets in EMDEs (Monzon 2022), the relevance of these smaller retail stores has only grown. Across nearly all emerging markets, they remain the primary channel for fast-moving consumers good (FMCG) sales (Iver et al. 2022). A consumer survey by Flourish Ventures in Brazil, Egypt, India and Indonesia (https://digitalcornershop.flourishventures.com/) found that 30 percent of customers plan to buy more at their local corner store going forward, and 64 percent plan to continue to buy as much as they do today (Flourish 2022). Unfortunately, despite their importance, these micro-retailers face a variety of economic challenges, with one of the most acute being limited access to finance, especially working capital.

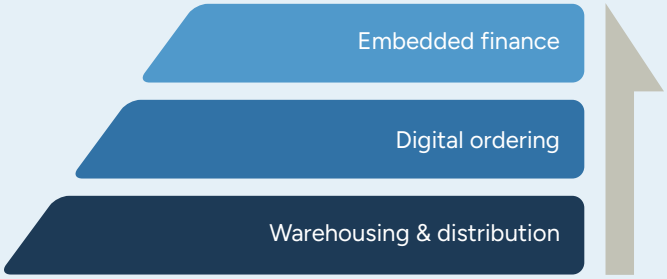
Digitization of the supply chain and B2B e-commerce models have the potential to improve the resilience of micro-retailers

For decades, the financial inclusion community has grappled with the challenges that traditional financial services have faced in reaching the smallest shop owner, particularly in hard-to-reach geographies. In recent times, the digitization of FMCG supply chains coupled with B2B e-commerce companies provides great promise to potentially transform traditional business paradigms offering a new era of efficiency and connectivity throughout the FMCG supply chain. Importantly, the technology-driven business models being used by these companies can generate transactional data and seamlessly provide embedded financial services to various actors in the supply chain, including the last mile micro-retailers, who have traditionally remained financially underserved or excluded. This publication focuses on the various technology-enabled business models that target micro-retailers and will detail embedded finance, specifically within digitized FMCG supply chains, emphasizing in-house and partnership-based models.

A technology-enabled service stack is at the core of these business models

The emerging tech-enabled business models can be characterized as offering a stack of services comprising of warehousing and distribution, digital ordering, and embedded finance. Figure 1 shows that each layer in this stack builds on the foundations of the layer below. Individual companies may provide one, two, or all three layers, depending on their selected model. Hence, technology companies can only digitize ordering where product delivery services are already being provided by them or other third parties. Similarly, digital ordering and the data it generates is a pre-requisite for embedding finance – usually buy now pay later (BNPL). The range of services provided by a

FIGURE 1. **The tech-enabled service stack in the FMCG supply chain**



Source: Authors

technology company are therefore partly dependent on pre-existing market conditions.

There is a large variety of ways in which these business models operate. Broadly speaking, the main two categories of models are asset-light and asset-heavy models, with asset-light companies demonstrating a potentially quicker path to profitability.

As it relates to financial inclusion of the micro-retailers, the most significant innovation is the top layer, where financial services are embedded into these models. Financial services can be provided directly by the platform or could be outsourced to a third-party fintech or finance provider. In the latter instance, the platform shares the transactional data for credit scoring and the fintech or finance provider offers credit to the micro-retailers or wholesalers via the platform. While some companies digitize product ordering with the primary intent of embedding finance, others embed finance as a secondary priority or a 'value-added' service that improves the loyalty of micro-retailers and helps increase order volumes. Financial services are usually provided in the form of BNPL products that target the short-term needs of micro-retailers, complementing traditional finance mechanisms.

While the potential benefits for micro-retailers are significant, sustainability of these models remains challenging

Being part of a digital supply chain and having access to B2B e-commerce provides several benefits for micro-retailers. Primary among these is digital ordering and the ability to stock up their shops from the comfort of their home or business, without needing to take time away from income-generating activities. Another crucial benefit is delivered through embedded financial services to meet their working capital needs, allowing them to stock-up and gradually increase their inventory, and hence build a more resilient and stable business.

Embedded financial services are, by their nature, more inclusive than traditional finance which has eluded smaller micro-retailers for decades. Technology-enabled business models have the potential to not only reach underserved and financially excluded micro-retailers, but also do so at a considerably lower cost (see annex 1). The cost of acquiring and servicing a borrowing customer is reduced dramatically, as the customers have already been onboarded into the e-commerce platform. The use of transactional data removes some of the barriers that have prevented traditional providers from extending credit to this market segment. As the financial product is aligned with a micro-retailer's ordering pattern, delivery is instant, and repayment is aligned with the micro-retailer's cashflow. The small size and brief tenor also reduce the risk of default, and the risk is further mitigated by an incentive to remain connected to the digital supply chain and all its related benefits.

Although these models show great promise to improve financial inclusion, there is a significant

concern around their ability to scale and hence their sustainability. Particularly, against the backdrop of declining valuations and a significantly smaller pool of early-stage investor funds in emerging markets, B2B e-commerce platforms with an uncertain path to profitability are being negatively affected and their survival is under threat. Challenges to scalability include asset-heavy structures and cost pressures due to high-tech, high-touch models. These pressures make it more difficult to achieve profitability while also maintaining inclusivity, particularly in the short-term.

At the time of publication, CGAP has witnessed several B2B e-commerce startups struggling to keep their operations afloat, leading to lay-offs, country retreats, mergers, and closures. Some of the companies that closed or that are currently in administration have received over US$100 million in previous funding rounds. One is also reported to have reached break-even. The changing funding environment has unveiled several weaknesses and the sustainability of building large, scalable businesses in this sector is now being scrutinized more carefully.

An ecosystem approach is needed to support these models to scale and achieve financial sustainability

For these models to deliver on their inclusion promise, there is a need for more patient capital in lieu of the more aggressive venture capital; continued support to document the development impact for micro-retailers and research lessons learned; and deeper engagement from the private sector, who stand to benefit from the digitization of the last-mile micro-retailers. As such, CGAP would encourage deeper and coordinated involvement and collaboration among investors, donors, and the private sector to address common obstacles.

CHAPTER 1

Introduction

MOM AND POP STORE, DUKA, AND Warung are some of the many names that countries have for their neighborhood shops. These micro retail stores, ubiquitous in emerging markets and developing economies (EMDEs), sell fast-moving consumer goods (FMCGs), including commodities such as rice, flour, spices, or cooking oil, alongside consumer brands, such as soft drinks, packaged foods, and toiletries. Micro-retailers provide incomes to millions of families, and essential goods and services in neighborhoods across the globe. These millions of small stores constitute a US$900+ billion global industry and account for most grocery sales in EMDEs (The Business Research Company 2021).

Imagine an owner of one of these mom and pop stores, on the outskirts of Cairo, Caracas, Mumbai, or Jakarta. With three weeks until a major holiday, they are expecting a surge in demand for products, but their shelves are empty, and their financial resources are running low due to unplanned expenses with the family. The income from the shop is critical to cover the children's school expenses and put food on the table. Most shopkeepers in this situation would look for a loan from friends and family to restock the shelves. If this is unavailable, the default option often is to go to the local money lender who can provide credit immediately, but at a high rate of interest and with a very short repayment period. This still compares favorably to taking a loan from a financial cooperative or microfinance institution, which would take too long. Added to this, once the funds become available, the process of securing the goods from wholesalers then starts, which requires time away from the store that could otherwise have been productive and generated income.

Now imagine that the same shopkeeper instead has the option of using an app on their smartphone to order the products they need for the upcoming holiday surge, with next-day delivery to their doorstep. Like Amazon, eBay or Alibaba but tailored to their needs as a small shopkeeper. The app also provides the ability to buy the inventory now and pay once the goods have been sold. The convenience and cost efficiency of such a solution would be invaluable for this shopkeeper, helping smooth their business cycles in the long-term and making them more resilient. Therein is the promise of embedded finance in B2B e-commerce business models and the focus of this paper.

Over the past three years, CGAP has studied several technology-led business models around the world that have been created to meet the inventory needs of micro-retailers. In so doing, they have provided a channel for delivering efficient, affordable, and tailored in-kind working capital loans in the form of buy now pay later (BNPL) lending products described above.

CGAP has spoken with customers, business leaders, investors, and other experts to better understand the potential of these business models in addressing the huge unmet demand for such tailored financial and non-financial services and the potential impact on financial inclusion. If these technology-led business models are able to scale, it is no exaggeration to say

that they would revolutionize the provision of working capital credit to micro-retailers.

But that is a big "if". CGAP has witnessed many new entrants and a variety of approaches to building these models to serve customers. Some have failed, some have changed direction completely, and some have merged or been acquired. There is clearly no single, reliable recipe for success. However, through our research, CGAP has developed a better understanding of the mechanics of how these various models work, the challenges they face, and the strategies they have used to overcome those challenges. The goal of this paper is to share that understanding with the wider community, focused on international development and particularly inclusive finance.

Developing a nuanced understanding of these business models and their potential for delivering inclusive financial services requires a familiarity with several interrelated topics, some of which are highly technical. This paper will take you through each of them in turn. Chapter 2 starts with a more complete and data-based overview of micro-retailers in EMDEs and their financial service needs. Chapter 3 provides an overview of the FMCG value chain, of which micro-retailers are on the front lines, and of how digitization is transforming that value chain.

After that necessary grounding in the basics of micro-retailers and the industry they operate in, Chapter 4 provides a deep dive into the various B2B e-commerce business models that CGAP has studied and suggests a tech-enabled service stack framework for the different service layers that various models offer. The business models highlighted in Chapter 4 provide a sufficient representation of the models operating in this space. However, these are by no means exhaustive. Chapter 5 examines the potential inclusion impact of these new business models as well as their limitations. The final chapter shares CGAP's recommendations on key areas where collaboration is needed by the financial inclusion community to support the sustainable growth of these business models.

For the purposes of this paper, CGAP has used the term "micro-retailer" or "shopkeeper" to represent the individual entrepreneurs, and convenience store or corner shop owners. The terms "shops", "stores" and "retail stores" have been used interchangeably to represent the business entity as distinct from the people who own and operate it.

CHAPTER 2

Micro-retailers and micro retail finance

WHILE THERE HAS BEEN A RECENT proliferation of supermarkets and chain stores in emerging markets, local corner stores or micro retail stores –*kiranas, bodegas* and *sari-saris*– continue to play an outsized role in the economic and social fabric of low-income communities. They provide a source of income and livelihoods to millions of people who own or work with them, and they supply everyday essentials to the communities they operate in. The vast majority of micro retail stores are small, and family-owned, with low capitalization and store management based on intuition. Despite their size, micro-retailers represent a high share of national grocery sales, and these stores are a critical last-mile outlet for household goods and staples.

This chapter will provide insights on micro-retailers, including the reasons for their economic importance, what their common characteristics are, which risks they need to navigate to survive, and finally their current and emerging financing options.

2.1 Why neighborhood retail shops matter

The phenomenon of large supermarkets and chain stores has mostly been restricted to urban centers, targeting shoppers with high levels of disposable income. While supermarkets may also become destinations for low-income urban consumers in their vicinity, micro-retailers remain dominant because they can reach frontier markets like rural communities; serve low-income customers in their neighborhood; and because they enjoy the trust and patronage of their customers who benefit from informal credit arrangements.

A recent Boston Consulting Group report (Ivers et al. 2022) estimates that Africa's more than 2.5 million micro-retailers account for around 70 percent of the FMCG sales on the continent. Similar trends are seen in the Philippines' 1.3 million *sari-sari* stores (Shu 2021), and Indonesia's nearly 3.5 million *warungs* (The Jakarta Globe 2022), both accounting for 60-80 percent of all FMCG sales (TechnoServe 2020). In India alone, the sales from 10-12 million micro-retailers (Goyal 2021), cover over 90 percent of the country's grocery market (Flourish Ventures 2022). Although there is an expected correlation between the growth in incomes in EMDEs, and the growth of modern trade (supermarkets, in particular), infrastructure constraints continue to limit the ability of supermarkets to overtake the market share of local retail shops. These data clearly suggest that, in addition to their pivotal role in local communities, their ability to supply the mainstream consumer makes local retail shops a critical channel for the multinational FMCG companies that seek to sell their products in EMDEs. These companies will hence need to pursue parallel routes-to-market (RTM) that comprise both modern and traditional channels (local convenience stores) for the foreseeable future. Recognizing the importance of the local shop, supermarkets and online stores are increasingly finding ways to work with these stores, using them as last-mile delivery agents or as order collection and return points.

2.2 The challenges faced by micro-retailers

Micro-retailers in EMDEs face economic vulnerabilities and constraints that are characteristic of micro and small enterprises (MSEs) writ large. Specifically, the retail stores they own are small, often subsistence enterprises that are cash-based, and found mostly in the informal sector, outside the purview of laws and regulations related to business registration, taxation and bookkeeping, or employment (Sawhney et al. 2022). The stores are typically owned and operated by the entrepreneur or their family, with few to no employees.

Above all, insufficient access to finance –especially working capital– leads to poor liquidity and limits the ability of the micro-retailer to invest in inventory for their stores or to take advantage of volume discounts. This either adds to the costs associated with frequent top-ups of supplies, or to the costs of distributors who need to make frequent deliveries to their shop (Nieuwoudt 2023). In the long-run, the lack of purchasing power has consequences for the stability and resilience of micro-retailers. Small working capital stocks and the need to use proceeds for family expenses limits the ability of micro-retailers to invest in the growth and expansion of their businesses, reinforcing the subsistence nature of these enterprises and making them particularly vulnerable to economic shocks. Most at risk are smaller stores, those based in rural or harder-to-reach locations, and those owned by women or other vulnerable populations. Although these shop owners often have sharp knowledge about how to run their businesses, they tend to lack the financial or social capital that would provide stability to their businesses and livelihoods.

From the community's perspective, a lack of liquidity for the micro-retailer also means that they are often unable, or unwilling, to take risks on products that will not be sold quickly. For low-income communities, this may limit the supply of new products and innovations, durables, and 'high impact' goods, such as family planning commodities and women's hygiene products.

2.3 The finance problem

Micro retail stores, like most MSEs, are launched with the help of household savings, or borrowing from family, friends, and other social networks, or participation in rotating savings and credit groups (Sawhney et al. 2022). Once established, the capital needs of these stores are not particularly high. However, what they do require, but that is not readily available, is more frequent short-term finance to purchase inventory. As a result, the micro-retailers' most common sources of financing are consumer or personal loans, that are not linked to the business, and are often from informal sources.

The lack of formal short-term business financing options drives the smaller shopkeepers to continue seeking finance from family and friends, peer shopkeepers, local savings and credit groups: sources that are more able and willing to provide flexible finance without requiring documentation or collateral. CGAP research conducted in 2021 indicates that credit supply through informal sources constitutes a significant share of the credit utilized by MSEs. In India, Kenya and Nigeria this is estimated at over 35 percent of total credit, and in Peru at nearly 28 percent. Research for this segment conducted by Flourish Ventures in Indonesia found that out of 200 Indonesian micro-retailers, nearly two thirds relied on informal lenders or could not get access to a formal loan (Flourish 2022). Smaller micro-retailers also distrust formal traditional finance providers, because of their perceived lack of flexibility, inability to provide credit when it is needed, and often-uncompromising collections practices. Conversely, larger micro-retailers tend to have a stronger preference for formal finance, particularly to finance growth, and they have clear expectations on how providers should meet their needs (Sawhney et al. 2022).

Following a series of interviews with regulated microfinance banks (RMFBs) and microfinance institutions (MFIs) in Asia and Sub-Saharan Africa, CGAP learned that, in fact, a large share of their

portfolios consists of loans to micro retail stores. Typically, these stores can access working capital loans of between US$400 and US$1,000 for a tenure of six to twelve months, payable in monthly instalments for individual lending schemes. For group lending, the amounts can be lower. However, two significant challenges exist.

First, the demand for micro retail finance greatly outstrips supply. As a result, to mitigate risk and control operational costs, even RMFBs and MFIs are more likely to only provide finance to the more established, larger, urban micro retail store. This translates to a lack of supply of formal credit for smaller, less sophisticated retail stores (often the ones more in need of credit). Moreover, credit for new shopkeepers looking to set up a store is practically non-existent. These micro-retailers hence remain financially under-served or excluded, and consequently less stable and resilient. CGAP estimates that approximately US$1.6 trillion or 60 percent of the aggregate demand for credit by MSEs in the retail sector remains unmet (Dalberg 2019).

Second, even when formal loan products are available to micro-retailers, they are usually standardized and seldom align well with their specific cashflow needs. These existing formal products, hence, need to be complemented by more innovative ways of credit underwriting, delivery, and collection. Since no single credit product or financial institution can meet the needs of micro-retailers with diverse motivations and journeys, a 'one-size-fits-all' offering is not the best option. That said, the cost of developing tailored solutions for smaller transaction loans is an expensive proposition, particularly for traditional financial service providers. In addition, given the high failure rates of MSEs, the higher risk of serving these micro-retailers with new products cannot be underestimated. A recent publication by the Centre for Financial Regulation and Inclusion (CENFRI) related to microinsurance, estimates that less than 50 percent of MSMEs in developing economies survive beyond the first five years. In Uganda, for example, as many as two-thirds of MSMEs fail within their first year (CENFRI 2021). As a result, the fact remains that the smaller, less sophisticated micro-retailers are unlikely to be served by traditional finance providers and more innovation is needed for this segment.

2.4 Emerging financing options

As highlighted in CGAP's publication on the Promise of Fintech, the technological transformation of the financial sector is addressing some of the most crucial supply-side challenges to MSE finance. Embedded finance is creating a realm of opportunities to provide financial and non-financial services through a single interface. These are particularly relevant for traditional finance providers, fintechs and even real sector companies that have thus far focused solely on the production of good and services. While embedded finance offerings are very diverse and increasingly complex, there are primarily two models for delivering these services:

1. In-house embedded finance: real sector firms that provide both the non-financial and the financial services themselves either on- or off-balance sheet (for example, through special purpose vehicles) or by setting up captive financial institutions; and
2. Partnership-based embedded finance: collaboration between a real sector firm, which provides the non-financial service, and one or more financial institutions (like banks, payments operators, fintechs, others) that offer a more "plug and play" environment such as banking-as-a-service or API providers.

Although still in the early stages, these embedded finance models are demonstrating great promise in addressing the needs of micro-retailers. In Chapter 3, CGAP discusses in greater detail the different technology enabled business models promoting embedded finance within digitized FMCG supply chains, including both in-house and partnership-based models.

Key Takeaways

Micro-retailers, including neighborhood convenience stores and small family-owned shops, play a vital role in supplying everyday essentials and livelihoods for low-income communities. Despite the recent proliferation of supermarkets and chain stores in emerging markets, micro-retailers remain dominant due to their ability to serve frontier markets, low-income customers, and their trusted relationships with their clientele.

However, micro-retailers face numerous challenges, including limited access to finance, which hampers their ability to invest in inventory and adapt to market changes. Formal financing options often fall short of meeting their specific needs, leading many micro-retailers to rely on informal sources of finance. As a result, there is a significant unmet demand for credit among micro-retailers, posing a threat to their stability and resilience.

Emerging financing options, particularly those enabled by technological innovations in the financial sector, hold promise for addressing the needs of micro-retailers. Embedded finance models, whether in-house or partnership-based, offer opportunities for incumbent financial institutions, real sector companies, and fintechs to provide tailored financial services to micro-retailers. While still in early stages, these models have the potential to revolutionize access to finance for micro-retailers and contribute to their economic empowerment.

CHAPTER 3

Micro retail and the digitization of the supply chain

RETAILERS PLAYS A VITAL ROLE IN THE supply chain because they connect the producers with the end customers. As the supply chain digitizes, it is critical that retailers are brought along so that they can be integrated and aligned with the systems and processes of manufacturers, distributors, and wholesalers that work together to supply them with goods and products. The same holds true for any embedded finance opportunity for micro-retailers.

This chapter will describe the traditional FMCG supply chains; the extent to which they are or can be digitized; and the benefits of digitization for the various actors in the supply chain.

3.1 Understanding the FMCG supply chain

The two main routes to market are shown in Figure 2. The most direct is from the manufacturer or supplier via specialist primary and secondary or sub-distributers. The second requires the involvement of a wholesaler as an intermediary (Flourish Ventures 2022).

From a functional perspective (also shown in Figure 2), the manufacturers, in addition to manufacturing the goods, also create consumer demand with the use of advertising, promotions and discounts, and sometimes by working with retailers on effective selling to the end consumer.

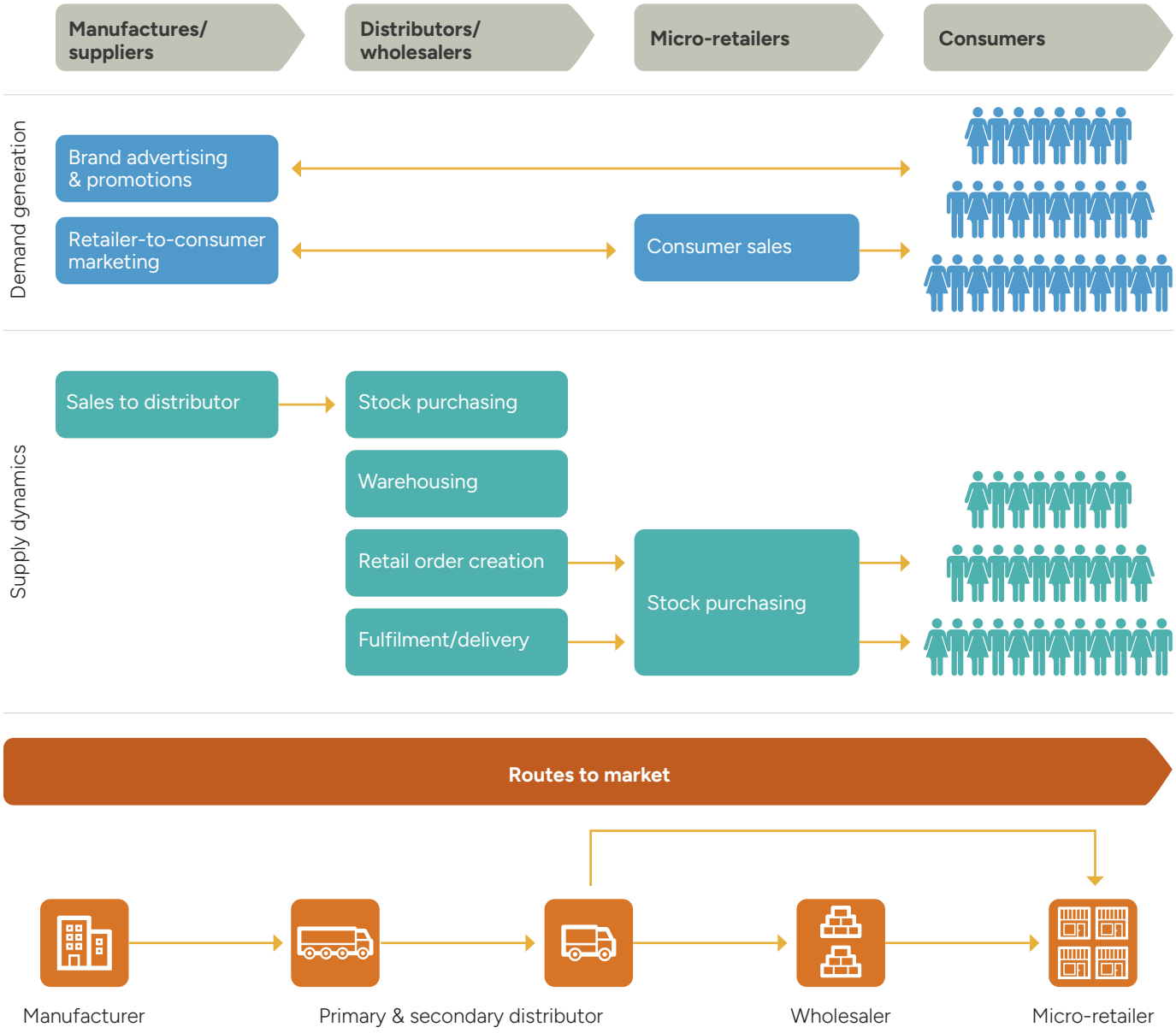
However, in many EMDEs, these marketplaces are fragmented, meaning that even multinational corporations (MNCs) find demand creation difficult. Many low-income consumers have limited access to mass media or price promotions, while store owners may know little about how to market products effectively.

Manufacturers, typically, do not directly distribute to micro-retailers but work through intermediaries. **'Primary'** distributors purchase stock from manufacturers, which they store, transport, and sell. Particularly for rural areas, primary distributors may extend their reach using **'sub-distributers,'** otherwise referred to as secondary distributors.

An example of the two routes to market is provided by Unilever's approach in many urban markets, where it uses third party key (primary) distributors. These key distributors employ field service agents (FSAs), who use a digital sales management system to capture orders, which are then delivered. In the direct route to market, FSAs capture orders from micro-retailers. However, they also deal with **wholesalers**, relying on this more indirect route to market.

Compared to micro-retailers, wholesalers buy products in greater volumes but at lower prices and then add a margin when they sell on to micro-retailers. Wholesalers play an important role in the supply chain. Buying from a range of manufacturers, they are important aggregators and often provide a one-stop

FIGURE 2. **How the FMCG supply chain functions**



Source: Authors

shop for micro-retailer stock top-ups. Top-ups allow micro-retailers to maintain good on-shelf availability without making large investments in stock. However, this efficient use of their working capital comes at the expense of convenience: top-ups may require them to leave their shop during business hours to buy stock, usually at premium prices.

3.2 Trends in the digitization of supply chains

Whilst digitization of businesses and industry has been going on for decades, it has largely been focused on the automation of existing processes within companies. Digitization in today's world requires a fundamental

rethinking of business models, processes, and value creation. It involves the adoption of new technologies, the development of digital skills, and the integration of digital technologies across the entire value chain. Several of the business models that CGAP has studied demonstrate an integration of the entire process from manufacturing, warehousing, and distribution, all the way to customer interactions.

This transition has potential positive impacts in terms of lower costs, improved efficiency, and greater resilience for all sizes of businesses in the supply chain. In developed economies and increasingly in EMDEs, this has entailed investments in technologies including blockchain, artificial intelligence, machine learning, and collaborative platforms (PwC 2024). In addition, an increased use of data analytics now informs supply chain decision-making and predictive analytics help optimize demand forecasting.

The growth of B2B e-commerce has also resulted in increased business digitization in EMDEs. However, unique challenges and opportunities in these markets have resulted **in a different digitization trajectory.** Some of the digital strategies and initiatives employed in EMDEs (Stefanski et al. 2021; Osafo-Kwaako et al. 2018) include:

- **Mobile technology adoption:** companies have tried to leverage the penetration of mobile technology in EMDEs to digitize the supply chain. Mobile apps and SMS-based systems are being increasingly used for order placement, tracking, and communication, which could serve to better reach micro-retailers in more rural and remote areas.
- **Localized digital payment solutions:** manufacturers and distributors are increasingly developing or partnering with local digital payment solution providers to facilitate transactions with micro-retailers. Digital payment solutions and mobile wallets enable smoother transactions, reduce the handling of cash, and offer alternatives to traditional banking channels.
- **Simplified technology interfaces:** new and emerging providers of logistics and financial services are designing user-friendly and simplified technology interfaces considering the potentially lower digital literacy levels among micro-retailers in EMDEs.
- **Last-mile delivery innovations:** in bids to improve speed and reduce costs, approaches such as crowdsourced delivery networks have been tried to overcome logistical challenges.
- **Collaborative platforms:** collaborative platforms, such as Unilever's Digitization of Distributive Trade (DDT) system (see Box 1), improve communications between manufacturers, distributors, and retailers. This leads to more integrated and responsive supply chains and ensures that the benefits of these digitization are felt by all the players.

BOX 1. **Digitization of distributive trade case study from Unilever**

Why DDT (digitization of distributive trade) was developed

Unilever is a leading global consumer goods company with a broad portfolio of products. To help these products reach the end consumer, Unilever has developed a €15 billion turnover distributive trade channel. This services over 25 million retailers such as mom-and-pop shops globally, many in developing countries, through a network of distributors and salespeople.

Over the last 10 years, Unilever has been actively digitizing the distributive trade ecosystem to empower distribution partners. DDT is a cumulation of all the experiences and learnings gathered thus far.

DDT will uplift the retail experience for distributors, shopkeepers, and salespeople by transforming the end-to-end management of orders, from inventory management and invoicing to delivery and collection. This will be delivered through a global technology platform, comprising a distribution management system (DMS), retailer eB2B app, salesperson app, and route optimization.

The benefits of DDT to different players in the supply chain

DDT aims to resolve critical pain points of all players across the value chain, allowing Unilever to deliver better service to the mom-and-pop retailer while driving sustainable and profitable growth.

DMS provides distributors with capabilities to stay relevant and support them in running a profitable and successful business. This includes insights into finances, sales, inventory levels and salespeople efficiency. DMS also drives process efficiencies. As an example, when an order is received, existing distributor stock levels are checked against the ordered quantity. Shortfalls identified would trigger automated resupply by Unilever, with a seamless management of settlements, credit and returns.

In some markets, Unilever has invested in a route optimisation tool, which helps the distributor identify the most sustainable and cost-efficient options for delivery, increasing fuel efficiency and reducing their carbon footprint.

Today, shopkeepers are reliant on a salesperson's visit to place orders for Unilever products. Through Unilever's investment in a retailer eB2B app, shopkeepers can place orders anytime of the day, without relying on a salesperson's visit. The app also provides transparency into available promotions and loyalty programs, and offers personalized product recommendations based on historical sales data and similar products sold by other retailers. This helps the shopkeeper ensure they have a competitive product assortment in the store.

Unilever's salespeople manage millions of retailers of various sizes and formats, such as pharmacies, mom-and-pop stores, and wet market outlets. They often only have 10 minutes per visit to help a retailer place an order for a Unilever catalogue of over 1000 SKUs. The salesperson app allows salespeople to place orders on behalf of retailers, whilst providing over 150M intelligent recommendations per month, from over 450 models, to tailor the right products to the right retailers. To further streamline the ordering journey, Unilever has developed a converged system for both retailers and salespeople. The system allows a salesperson to view items that a retailer may have placed in his cart, allowing the sales visit to begin by building on the existing cart and ultimately completing the order.

By establishing stronger partnerships with distributors and helping to increase the success of their businesses, DDT creates a strategic advantage for Unilever and strengthens its distributive trade ecosystem.

The most significant benefit offered by DDT is the data collected across the value chain, providing visibility into sales and the behaviour of the outlet. This data can inform forecasting and channel strategy, ensuring that product positioning and pricing

BOX 1. **Digitization of distributive trade case study from Unilever** (continued)

remains competitive. As an example, visibility of stock availability when ordering creates peace of mind for a shopkeeper, avoiding potential disappointments later when the order has to be cancelled due to unavailability of stock.

Challenges

Several challenges have been confronted throughout DDT development. Firstly, the nuances and requirements of many diverse markets need to be accommodated. As an example, Indonesia requires a different set of promotional designs and mechanics from the Philippines. The global platform would need to be modular and flexible enough to accommodate both markets.

Secondly, given the nature of margins in developing markets, economic viability of the platform was dependent on achieving sufficient scale across markets while remaining cost efficient. To address this issue, a fine balance was struck between platform components, which were "designed for experience" – critical differentiators with outsized impact on customer experience, vs components that were "designed for cost"– offering more commoditized and non-differentiating features.

Looking ahead

Unilever will continue to empower distribution partners in emerging markets through DDT's technological support, continually evolving the platform to best serve all players in the supply chain, from distributors, to shopkeepers to salespeople.

Only through shared prosperity in the ecosystem and helping the smallest retailer grow his business, can Unilever drive sustainable growth for the long term.

3.3 Value creation for supply chain actors: The digital efficiency opportunity

The growth of B2B e-commerce businesses, particularly in EMDEs is undeniable. According to market intelligence platform Briter Bridges, twenty-eight African B2B e-commerce startups have collectively raised more than US$470 million of mostly equity investments since 2008, with at least 90 percent of this raised between 2021 and 2022. The number of B2B e-commerce businesses are also growing rapidly in South and Southeast Asia. In Indonesia alone, B2B start-ups in the FMCG sector received a combined US$180 million of funding in 2021.

This growth and proliferation of local and global B2B e-commerce platforms reflect a growing acceptance by companies investing in EMDEs of the vast opportunity to leverage technological innovation. Leveraging technology can help these companies drive distribution efficiencies, grow demand for existing products, introduce higher margins and more differentiated products, and extend their geographical reach.

From the perspective of a micro-retailer, becoming part of a digital value chain can improve competitiveness of their business. While embedded credit can provide great value, currently the greatest value appears to be from digital "ordering apps." According to the DFS Lab retail digitization tracker (Kendall and Johnson 2022), traditional (local shops) rather than modern (supermarket) retail channels are driving restock app penetration. In the large African markets of Kenya, Nigeria, Egypt, and South Africa, one in five mom and pop shops report using these types of apps. CGAP's own field visits have witnessed this phenomenon in urbanized areas, where some micro-retailers are using up to five of these applications simultaneously. The DFS Lab digitization tracker also reveals that restocking models can be a vehicle for reducing the need for working capital. Specifically, informal retailers selling

BOX 2. **Value creation – The digital efficiency opportunity**

Digital platform solutions and embedded finance offerings can improve store profitability by 60–100% or more.

- Sourcing and logistics innovations have the potential to reduce cost of goods sold by 10–30%, translating to immediate and tangible time savings and gross margin impact for shopkeepers, while also boosting sales through improved product mix and fewer stock-outs.
- Business management tools could increase merchant productivity by 15–25%, reducing time spent on activities such as purchasing, bookkeeping, and inventory tracking, and thereby reducing operational expenses over time.
- Sales and delivery platforms could increase merchant customer bases and help optimize sales, leading to 10–25% increase in store sales and driving top-line revenue growth.
- By embedding financial services into these platform offerings, cost of credit could decrease by 20–60% or more, reducing debt servicing costs.

TABLE 1. **Use case and benefits of the digitization of data and processes**

Micro-retailer benefits		Supplier benefits (MNC/distributors/wholesalers)
Digitization of data		
Micro-retailers build a digital footprint enabling access to credit thereby reducing the perennial issue of running out of stock. With this digital footprint they might avail of a broader range of services in the future.	**Data analytics**	When micro-retailers can avail of credit, they are likely to purchase more increasing the revenues of their suppliers.
Increased visibility to upstream suppliers leading to improvements in product diversity, and transparency on product pricing from different suppliers.	**Data insights**	Information on where and what SKUs are being delivered can help manage production and supply more efficiently, and it allows effective product placement strategies.
Digitization of process		
Allow the micro-retailers to order from the comfort of their home/ shop; receive doorstep delivery reducing time away from productive activity. Access to B2B marketing and promotional activities from the MCNs and distributors; can increase product diversity, margins and competitiveness.	**Ordering application**	Makes it easier for suppliers to collect bulk orders and schedule distribution, facilitating extension of operations into sparsely populated areas. B2B marketing allows suppliers to increase client loyalty.
Integrated payment option and micro-retailers' digital wallet reduce reliance on cash and hence can provide more security, in part by decreasing the possibility of employee fraud.	**Payments functionality***	Suppliers can instantly reconcile funds which increases back-office efficiency and reduces the risk of theft and employee fraud.

*Risks related to cyber security and data protection are increased.

Source: Authors

from market stalls, with limited storage space, end up using restocking more often.

Recent research by Flourish Ventures (Flourish Ventures 2022) conducted across India, Indonesia, Brazil, and Egypt, estimates the potential value for micro-retailers of digital solutions related to ordering, inventory management, and sales (Flourish Ventures 2022), see box 2 above. In addition, Flourish Ventures identifies that embedding finance within micro-retailers' digital ordering could reduce the cost of credit by 20-60 percent and, by enabling sourcing and logistics innovations, the costs of supply by 10-30 percent.

Successful adaptation of digital solutions along the FMCG supply chain becomes more likely when it comes with apparent benefits for multiple stakeholders in the supply chain. Table 1, above, summarizes the potential benefits derived from the digitization of data and the digitization of processes for different stakeholders.

Key Takeaways

Retailers play a pivotal role in the FMCG supply chain, acting as the final link between producers and end customers. As the supply chain undergoes digitization, it is imperative to integrate and align retailers with the evolving systems and processes of manufacturers, distributors, and wholesalers. This alignment extends to embedded finance opportunities for micro-retailers, ensuring their inclusion in the digital transformation.

Trends in the digitization of supply chains and the emergence of B2B e-commerce platforms in emerging markets present significant opportunities for leveraging technology to enhance distribution efficiency and market reach. For micro-retailers, participation in digital value chains enhances competitiveness, with digital ordering apps and embedded financial solutions offering tangible benefits, such as reduced working capital requirements and improved access to credit.

Further, embedding finance within digital ordering systems presents cost-saving opportunities for both retailers and suppliers. Successful adoption of digital solutions along the FMCG supply chain hinges on their ability to deliver tangible benefits to multiple stakeholders. As such, continued exploration and implementation of digitization strategies hold promise for driving efficiency, resilience, and inclusivity across the supply chain ecosystem.

CHAPTER 4

CGAP's framework: A tech-enabled service stack model

CGAP INTERVIEWED TECHNOLOGY companies across Africa, Asia, and Latin America to better understand their business models and how their services are improving micro-retailer's stability, resilience, and ability to grow. Most interviews were with companies that own digital stock ordering platforms. Central to our interest was the current, or potential, role of embedded finance within their wider value propositions. In addition, CGAP interviewed financial service providers who are supporting these companies by designing BNPL products suitable for small retail shops.

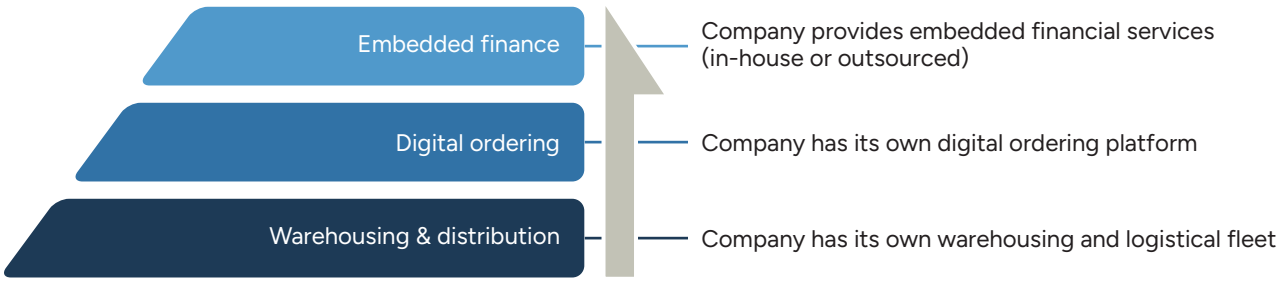
This chapter will focus on the emerging B2B e-commerce business models specific to the FMCG supply chain. It will describe a tech-enabled service stack that includes embedded financial services as a component, as well as the dependencies both within the stack and with non-traditional supply chain actors.

4.1 A tech-enabled service stack model in the FMCG supply chain

To evaluate the currently prevalent business models, CGAP adopted a conceptual framework that organizes the services into a tech-enabled service stack. A financial service layer is positioned at the top of a broader stack of service layers, including digital ordering, warehousing, and distribution. Notably, individual companies may provide one, two, or all three layers.

An important property of this model is that each layer builds on the foundations of the one below. Therefore, technology companies can only digitize ordering where product delivery services were already provided (via the technology company itself, or by a third party), removing the need for the retailer to physically collect products from a distributor or wholesaler. Similarly,

FIGURE 3. **The tech enabled services stack in the FMCG supply chain: service provided at each layer**



Source: Authors

embedding financial products (usually BNPL) is usually preceded by the existence of digital ordering, which generates the data used to determine creditworthiness.

These dependencies mean that the range of services provided by a technology company are partly dependent on pre-existing market conditions. Where distribution is poor, such as in many rural locations, companies need to start by building new distribution channels. Where distribution is already in place, companies can focus solely on developing an ordering platform and embedding finance. Similarly, where existing digital ordering platforms already serve strong distribution channels, companies can integrate with these to offer BNPL-as-a-Service.

The approach to embedding financial services into the platform depends on the business model of the technology company. While some companies digitize product ordering with the primary intent of embedding finance, for others embedding finance is a secondary priority, and considered more as a value-added service that improves the micro-retailer's loyalty and helps increase ordering volumes. However, even where

FIGURE 4. **Examples of business models that activate different layers of the service stack**

		Boost Nigeria provides a digital ordering platform for rural and peri-urban women, with an integrated BNPL product offering.
copia Maisha Rahisi		In urban and peri-urban areas in Kenya, Copia provides the full stack of services in-house: warehousing, delivery, digital ordering and in-house finance.
شاري chari		Chari warehouses and delivers anything ordered over their app to micro-retailers and other merchants in Tunisia and Morrocco. BNPL services are also available.
Fairbanc		Fairbanc integrates with the ordering platforms of FMCG brands and offers BNPL services to the end-users in Indonesia.
mercado libre		Mercado Libre is an on-line commerce and payments ecosystem in Latin America. It warehouses and lets others sell on its platform, it provides delivery services throughout Latin America and the Caribbean (LAC) and offers credit for businesses and consumers.
SympliFi		In several East African countries Symplifi onboards FMCG suppliers on their ordering platform and offers credit to their clients.
WA SO KO		Wasoko provides the complete stack of services in-house: warehousing, delivery, digital ordering, and in-house financing in several East African countries.
&frnds.		&frnds digitizes community-based wholesalers and retailers in the FMCG supply chain connecting them with FMCG brands in Indonesia and the Philippines.

Source: Authors

embedded finance is not the primary concern, digital ordering generates alternative data that can inform credit risk assessments and allow the automation of credit decisions.

4.2 Service layers and business models

While existing market conditions affect company decisions concerning the creation of new ordering or new distribution services, these, in turn, directly impact the design of the business models, their potential to create revenues, and the inherent cost structures, as summarized in Table 2.

SERVICE LAYER 1: WAREHOUSING AND DISTRIBUTION SERVICES

Technology companies that enter the markets to improve the distribution of stock to the micro-retailers most commonly provide in-house warehousing and/or distribution services. This approach, which could be considered more asset-heavy, requires that the company either buys or rents assets and either employs or contracts the staff required for distribution. In addition, these companies require working capital to maintain stock levels that ensure product availability. An example of this is Copia in Kenya (See Box 3).

For micro-retailers, reliable and frequent doorstep delivery reduces their dependency on visiting local wholesalers. However, as many of these tech companies compete in markets where large wholesalers or other technology companies also offer delivery, they must offer lower prices, higher service levels, and/or value-added services. The main challenge for these tech companies to achieve profitability is to generate a margin from selling (usually small orders) to very price-sensitive micro-retailers, while bearing the costs of creating, operating, and maintaining the physical infrastructure required for FMCG distribution. This means it is

TABLE 2. **Insights on the tech-enabled service stack**

	Potential revenue lines	Likely costs centers	Common challenges	Potential risks
Warehousing and distribution	• Delivery fees • Product margin • Profit sharing	• CAPEX: i.e., distribution fleet, warehouses, • OPEX: i.e., field force/ drivers, cost of goods/ inventory	• Capital intensive, requires investors with deep pockets and patient capital.	• Route to break-even can take many years, this can influence investor appetite, business strategy, regulatory and competitive environment; there are many unknowns.
Digital ordering	• Marketplace transaction fees • Promotion / marketing fees	• CAPEX: platform build • OPEX: Deployment of field staff or call centers, onboarding suppliers	• Micro-retailers' reluctance or struggle to digitize.	• Increasing competition affects client loyalty/ platform stickiness.
Embedded finance (BNPL)	• Interest or fees derived from credit offering	• FINANCIAL COSTS: Cost of capital, provisions, and write-offs • OPEX: Collection and recovery costs	• Dependency on the quality and quantity of data that comes from third party ordering platforms.	• Risk of defaults when repayment incentives are eroded through increasing competition.

Source: Authors

imperative that they minimize costs and create additional revenue streams by leveraging their relationship with the micro-retailers (see spotlight 1: Wasoko).

SERVICE LAYER 2: DIGITAL ORDERING

Digital ordering is provided by most companies that CGAP interviewed. For micro-retailers, digital ordering offers convenience, and can increase choice and price transparency. For MNCs and distributors, it improves the efficiency of ordering and fulfilment and generates ordering data which can provide market intelligence. For finance providers, the data generated by digital ordering forms the basis for credit decisions.

Compared to companies that only provide digital ordering, companies that combine digital ordering with distribution may have more power to negotiate product margins with manufacturers, reduce revenue leakages to other players in the value chain, and exert greater control over delivery service levels. Those that provide ordering as a service, forgo these advantages but avoid the capital and operational costs associated with handling physical goods. However, the distribution advantages are not a given. &frnds in Indonesia and the Philippines has demonstrated how a well-designed ordering platform in an asset-light business model can mitigate the distribution advantages, maximize margins and deliver high service levels (see spotlight 2: &frnds).

Businesses running digital ordering can also generate revenues through providing a marketing and promotions channel for suppliers. FMCG suppliers, who have traditionally struggled to push products within the micro-retailer's channel, may pay to test new products, offer discounts, and learn about consumer preferences.

Importantly, for the cost savings from digitization to be realized, there needs to be a significant uptake of independent ordering by customers. However, a lack of digital capabilities or a preference for face-to-face interactions means that the ordering process continues to require a field force and/or call centers, adding to the operational costs (see Box 4).

BOX 3. **Copia – Serving middle and low income African consumers**

Copia is a B2C e-commerce platform providing household goods and financial services to middle and low-income Kenyans. Customers order through the Copia app or by visiting one of 30,000 local Copia agents (80% of whom are women). Orders are delivered by Copia's own delivery service within two days.

With more than two million unique customers across Kenya (75% female), Copia provides last mile consumers with a digital app to shop a wide range of products such as non-perishable food, household items, electronics and farming.

Every day, Copia's twelve fulfilment centers dispatch hundreds of delivery trucks to deliver orders in both peri-urban and hard-to-reach rural areas, with 75% of its deliveries via unpaved roads.

Beyond access to the wide variety of consumer and household products available on its app, Copia is expanding its offering to include embedded financial services. These services include financial products such as Save Now Buy Later, a digital wallet in partnership with Visa, payment processing, remittances, Buy Now Pay Later and insurance.

N.B: At the time of publication, Copia has gone into administration, highlighting the challenges faced by several of these business models.

SERVICE LAYER 3: EMBEDDED FINANCE

The top layer of the stack is comprised of financial services in the form of embedded finance and more specifically, BNPL, which involves relatively small amounts of credit that are aligned with the micro-retailer's ordering cycle of between seven and thirty days. These services are usually provided using historical ordering data to determine both overall

WASOKO is a B2B e-commerce company in Africa (Kenya, Tanzania, Uganda, and Rwanda) that is transforming access to essential goods and services to informal retail stores through its digital ordering platform and proprietary logistics network. Wasoko, meaning "*People of the Market*" in Swahili, has evolved from an asset-light software model to fully integrated operations enabling seamless ordering between offline retailers and suppliers while ensuring reliable delivery.

Technology and data are used to determine procurement, optimize delivery, and implement customer acquisition and engagement strategies. Technology and data also allow for in-house BNPL offerings. Qualifying merchants can obtain BNPL with dynamic credit limits, based on their ordering histories and other information, significantly driving their business growth and revenue.

However, the company faces some challenges including the digital divide due to limited smartphone access, supplier issues in meeting escalating demands, risks related to regulatory changes, and currency fluctuations.

Year of founding
2015

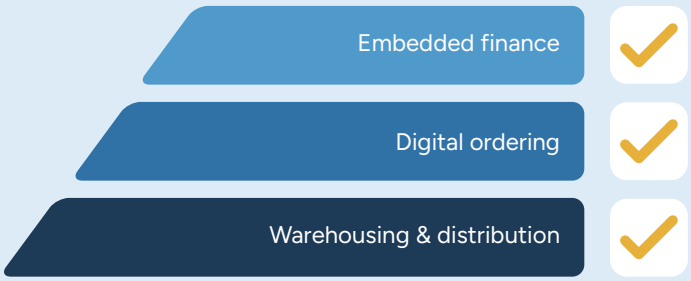
Investment profile
Series B

Active users
40,000+

Women customers
44.3%

Average revenue per user – 3.2x compared to cash only retailers

Wasoko's service stack



Service highlights

- Product sourcing from local and multinational companies
- From source to shelf no intermediaries
- Guaranteed product quality and delivery times
- In-house affordable BNPL services
- Self-ordering and/or assisted ordering

creditworthiness and loan features, such as credit size and duration. And while analogue records from the micro-retailer's suppliers can also be used to obtain purchase history, digital ordering data provides both a direct and scalable stream of underwriting information and may also provide a proxy for cashflow (see Box 5).

CGAP found that the centrality of financial services varied between business models (see figure 5). Some technology companies designed and provided their own in-house BNPL product, while others outsourced BNPL to a fintech. A third, less common, variant was when a fintech directly partnered with the FMCG manufacturers, or MNCs, who owned the transactional data of their value chain. The business model selected by technology companies appeared to depend on factors such as the ability and associated cost of raising the required capital; the possibility of negotiating payment terms with wholesalers and distributors; the institutional capacity for managing the credit cycle (from underwriting to collection); and regulatory requirements and competition.

CGAP research and experience with other credit models suggests that building in-house capability can provide greater control to the service provider, as is the case with companies such as Wasoko (see spotlight 1). Well-run, in-house credit operations can generate profit while boosting the growth of the primary business. Providing finance directly also removes complications related to data sharing and protection, and clears ambiguities related to credit rules, procedures, and fee structures. However, building an efficient, sustainable credit operation is a significant undertaking and can be especially challenging for companies and management teams without experience in financial services. For a B2B e-commerce company, creating a credit team and a credit culture adds to the

BOX 4. **High-tech, high-touch - meeting the MSEs where they are**

Almost all companies interviewed for this research deploy a sales force, or partner with companies that do so, to complement their digital restocking applications. Companies that have more actively pushed for client self-ordering have experienced varied levels of success. Most micro-retailers feel more comfortable with assisted ordering through field staff or over a call center. Field staff presence is beneficial to ensure a continued flow of orders and to minimize churn, specifically considering increasing competition. Further, ground presence will also allow for an easy introduction of new products, promotions, etc.

Behind the scenes, however, in a changing funding environment, there is a growing push from investors to show a clear route to profitability and operational costs are more critically reviewed, whilst the need for scale has not diminished. New ways of incentivizing clients to transition to self-ordering will continue to evolve –for example, Chari's new cash-back scheme in Morocco– or new revenue streams will be introduced. The most common being interest income from a BNPL product.

BOX 5. **Using data to assess risk**

The heart of embedded finance—like all finance—is assessing repayment risk. BNPL by &frnds in Indonesia, Boost in Nigeria, and Symplifi in Kenya uses low-cost tools to assess risk. Their in-house, human-designed approach combines data from the past orders of retailers with a few common-sense rules and simple formulas. Starting with no or small changes in the size, frequency, or content of orders to the best rated, first-time BNPL borrowers, lenders in a digitized supply chain can quickly test how well the things work. For several innovators in this space, the simple, human approach has led to high on-time repayment rates and almost no default. As they learn and as data from the digital platform (and perhaps other sources) accumulate, lenders can experiment with their rules or formulas to nudge orders in the directions that best suit both their retailers and their own needs.

Year of founding
2019

Investment profile
Private Investors; Over $50m

Active users
140,000+

Women customers
85% in Philippines,
over 50% in Indonesia

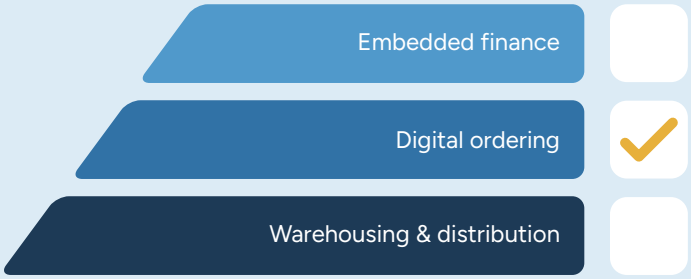
An interest free BNPL product offered by the FMCG manufacturer with no risk – if the SKU is not sold, it can be returned.

&frnds currently operates in Indonesia and the Philippines, and aims to combine technology, data, and a human-touch to provide benefits across the value chain: from the large FMCG players to the small wholesalers (mainly family businesses) all the way down to the micro-retailers. The company has an asset-light business model in which it uses its sales force and a digital ordering platform to complement community-based wholesalers who sell and deliver to micro-retailers in the vicinity.

The micro-retailer consignment services (effectively BNPL) come with zero interest to the micro-retailers and the products can be returned if not sold. This is used by the large FMCG suppliers to introduce new products to the micro-retailers on the platform.

Ensuring benefits for all partners in the value chain is a key success factor for this model, but also creates dependency on network partners, which is an inherent risk. As a result, any influences on the FMCG principals –both positive and negative– will have an impact on &frnds. For this reason, &frnds must diversify its customer base by working with multiple principals across different FMCG segments. Due to the nature of its model, the lack of need for Capex, and its revenue sharing agreements with FMCG partners and wholesalers, &frnds is in a good position to achieve profitability in the short-term.

&frnds's service stack



Service highlights

- Micro-retailers onboarding and ordering through &frnds sales team.
- Community based wholesaler digitized by &frnds.
- 24-hour delivery guaranteed.
- BNPL on consignment, promotions, and discounts through FMCG suppliers.
- Wholesalers access credit through digitized sales records.

pressure and complexity of building and scaling the core business, and many early-stage companies lack the resources to do both simultaneously.

Because of these challenges, B2B e-commerce companies may outsource the BNPL product to a fintech or tech-savvy MFI. Here, the third-party fintech or MFI provides finance as a service that involves the analysis of transactional data, embedding the financial product in the digital platform, and accepting the credit risk. Importantly, the B2B e-commerce company retains ownership of the relationship with the micro-retailers.

Another BNPL partnership approach is where a fintech works directly with the manufacturers to provide the finance, usually through the fintech's integration with the manufacturer's ordering app. The fintech will integrate separately with each manufacturer's ordering system, and design bespoke credit products tailored to the situation of each manufacturer and their customers. The micro-retailer is serviced directly by these FMCG companies and/or their distributors. In this case, customers are often larger, more digitally savvy retailers or wholesalers. However, if structured correctly, this model could also be effective for smaller retailers. Good examples of this model are Fairbanc in Indonesia and Tienda Red in Mexico (see Boxes 6 and 7).

Revenue sharing agreements are critical to business models that involve partnerships, as they ensure that all parties benefit proportionally from this value-added

FIGURE 5. **Embedded finance in B2B e-commerce models**

		Tasks underlying the BNPL product			
		Transactional data	Credit score	Financing of BNPL	Credit cycle management
WASOKO	Company does all financial tasks in-house	●	●	●	●
&frnds.	Company collects transactional data and provides credit score but does not finance or manage the BNPL product. This is done through FMCG partnerships and community-based wholesalers.	●	●	○	○
Fairbanc	Company collects transactional data through FMCG partnerships and is responsible for the whole credit cycle.	○	●	●	●
Tienda Red	For micro-retailers – the company collects transactional data and acts as guarantor for BNPL product from FMCG companies	●	●	◐	●
	For clients of micro-retailers – the company collects transactional data and of micro-retailer's clients and shares this with fintechs that then offer a consumer credit.	●	○	○	○

● eB2B or fintech is responsible ○ Third party is responsible ◐ Shared responsibility

Source: Authors

BOX 6. **Fairbanc: Finance through manufacturer platforms**

Fairbanc Indonesia is an embedded tech platform that provides a BNPL product, integrated directly into the inventory-ordering apps of large retail partners in Indonesia. These include nineteen of the largest global and domestic brands in FMCG, telco, and pharma. Fairbanc works with over 450 distributors, servicing over 200,000 micro-retailers on a weekly basis.

Their platform allows micro-retailers to increase the level of inventory that they purchase and quickly adjust stock to meet their customers' demand. Unlike many other players in the B2B FMCG space, Fairbanc focuses on digital integration into existing routes to market from partnering with principals (i.e., Unilever, Coca Cola, etc.) to capture transaction data, provide inventory financing and payment options to merchants. It does not engage with logistics or own any inventory or assets. Fairbanc charges no fees to the manufacturers or their distributors but takes over distributor terms of payment obligations, freeing up their working capital. Fees are paid by the micro-retailers (automatically added to the invoice) and the distributors have a profit-sharing agreement in place with Fairbanc.

Fairbanc's users typically purchase between US$50 to US$300 of each brand's products every week. Since starting operations, Fairbanc estimates that merchants have increased their sales by an average of 35% resulting in an average increase of monthly income of US$216. FMCG companies also reported sales increases attributable to Fairbanc: Coca Cola 51%; Unilever 35%; Danone 17%.

service for the customer. In addition, clear contractual agreements help mitigate disagreements or disputes regarding responsibilities in relation to client data protection, and the implementation and compliance with responsible finance principles.

AYE [आय]

SwitchPe

Year of founding
Aye Finance: 2014
SwitchPe: 2022

Investment profile
Private Investors

Active users
2,100+ (SwitchPe)

Women customers
5.8% (SwitchPe)

Service highlights

- Micro-retailer's underwriting automized through cluster scoring.
- Micro-retailer receives BNPL option with wholesaler.
- Wholesaler receives payment from AYE Finance.
- Micro-retailer has interest free payment period of 30 days

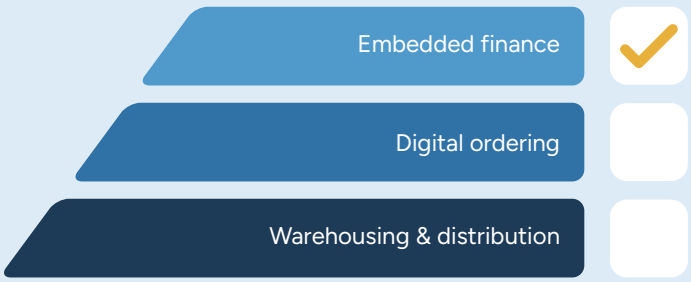
AYE FINANCE is a fintech based in India providing MSMEs with access to credit. Aye Finance's proprietary underwriting process has been tailored to specific industry segments and, today, helps nearly 800,000 micro-enterprises in twenty-two states across India. *"Aye"* ¬–which means income in Hindi, and yes in English– reiterates their core solution of saying "yes" to financial inclusion for all!

Retailers in India's intricate web of traditional FMCG markets find distributors reluctant to provide them with credit. To address this gap, Aye Finance launched SwitchPe in October 2022. SwitchPe is a digital solution that improves supply efficiency by providing retailers with on-tap credit, secure payments, digital bookkeeping, and access to hyper-local marketplaces.

SwitchPe works as a digital finance solution for the supply chain between micro-retailers and their FMCG distributors. It uses Aye Finance's cluster-based underwriting algorithms to assign a suitable credit limit for the micro-retailers who can use this to pay for orders from distributors. The non-collateralized credit, ranging from INR 20,000 (approx. US$250) to INR 2,00,000 (approx. US$2,500) has an interest-free repayment period of around thirty days. The benefit for distributors is that they receive payment within twenty-four hours of the retailer's purchase. This digital credit model also allows for collections, minimizes fraud and theft, and frees up liquidity to reinvest in on-demand product lines or even the business itself. Beyond financial solutions, SwitchPe enhances visibility for distributors by allowing them to list business details, display stocked brands, and advertise time-sensitive offers.

Despite these innovations, the widespread adoption of SwitchPe remains a challenge. Particularly in Tier-2 and Tier-3 cities, there is a continuing need to increase awareness and understanding of the benefits of these types of programs.

Aye Finance's service stack



Key Takeaways

CGAP's investigation into technology companies across Africa, Asia, and Latin America sheds light on how these firms are enhancing the stability, resilience, and growth potential of micro-retailers through innovative business models. Most notably, the focus has been on digital stock ordering platforms, with embedded finance in the form of BNPL emerging as a central element within their broader value propositions, tailored for small retail shops.

CGAP's conceptual framework of a tech-enabled service stack categorizes services into layers, emphasizing the dependency of each service layer on the previous layer, and the progression from warehousing and distribution to ordering and financial services. The prevalence of certain business models is influenced by existing market conditions, with companies adapting their strategies accordingly. The first service layer focuses on digitizing warehousing and distribution services, and the second layer on digital ordering. Companies that combine digital ordering with distribution may have additional advantages in negotiating margins and controlling delivery service levels.

The third service layer is most relevant from a financial inclusion perspective and encompasses digital financial services, particularly BNPL products tailored to micro-retailers' ordering cycles. The centrality of financial services varies among business models, with some companies designing in-house BNPL products while others opt for partnerships with fintechs or FMCG manufacturers. Each approach has its complexities and challenges. Ultimately, embedded finance complements other forms of formal and informal credit, offering micro-retailers with opportunities to build their credit histories and integrate further into the formal financial system. As the landscape of B2B e-commerce continues to evolve, successful adaptation of these business models hinges on their ability to deliver tangible benefits to micro-retailers while navigating the complexities of the digital economy and supply chain dynamics.

As traditional financial service providers become more digitally savvy, they are also likely to create partnerships with real sector companies and/or use non-traditional data to service micro-retailers. An excellent example is AYE Finance's BNPL product in India (see spotlight 3: SwitchPe powered by Aye Finance). Although embedded finance is unlikely to replace all other forms of formal and informal credit for micro-retailers, it can be a strong complement to longer term loans from banks and MFIs used for bulk purchases, buying fixed assets, or making other major business investments. Importantly, successful use of this form of embedded finance also allows micro-retailers with little or no credit history to build a credit file that can allow further integration into the formal financial system.

CHAPTER 5

Outreach versus scale: A familiar dilemma

THE FINANCIAL INCLUSION POTENTIAL of the various business models discussed in the preceding chapter depends on the embedded financial services they offer to micro-retailers. This potential can only be fully realized if embedded finance is incorporated into sustainable and profitable business models, ensuring accessibility for underserved micro-retailers, even in challenging market conditions.

This chapter summarizes the potential benefits of embedded finance (service layer 3 in the stack) for micro-retailers, and examines two related issues. First, embedded finance models need to be economically viable, either on a standalone basis or as part of revenue-sharing partnership models for B2B e-commerce companies and other value chain actors. Second, and central to CGAP's research, from an inclusion perspective, there is a need to ensure that profitability intersects with equity of access, especially for vulnerable micro-retailers such as women, those in rural areas, and those lacking access to digital technology.

5.1 Benefits of embedded finance in digitized value chains

Well-functioning digital FMCG value chains provide benefits to actors across the entire value chain: micro-retailers, wholesalers, distributors as well as large corporations. As outlined in Table 1 of chapter 3, B2B e-commerce provides many benefits for the micro-retailer, including access to financial services and the ability to develop a larger and more diverse product range from the comfort of the business premises. For upstream players, including FMCG manufactures and distributors, digitization provides a transparency of distribution that allows them to optimize their sales and operations.

Embedded finance has the potential to be inclusive, particularly for smaller micro-retailers who struggle to access traditional financial services. Compared to traditional financial models, the tech-enabled models explored in this paper demonstrate the ability to reach smaller micro-retailers at lower costs (see annex 1). Once a platform is established in a geography, the platform can easily onboard additional micro-retailers, incurring only incremental costs where micro-retailers are situated along existing distribution routes. In addition, from a credit assessment perspective, the size and nature of the micro-retailer is less relevant than the transactional data used to determine creditworthiness. As the financial product is aligned with a micro-retailer's ordering pattern, the delivery is instant, and repayment is aligned with the micro-retailer's cashflow. The small size and brief tenor also reduce the risk of default, and the risk is further mitigated by the incentive to remain connected to, and benefit from, the digital supply chain.

One innovative feature that some models such as Tienda Red Mexico (see Box 7) provide for the micro-

BOX 7. **Tienda Red: Leveraging multiple partnerships**

Tienda Red is a free, multifunctional, digital software as a service (SaaS) platform designed specifically for micro-retailers in Mexico, operational in 174 municipalities across thirty-one states. With Tienda Red, micro-retailers can manage their inventory, order from suppliers online, and reach customers through various digital channels, all from one user-friendly platform. What sets Tienda Red apart is its deep integration within the micro-retailer's ecosystem. It has built strong connections with fintechs, consumer goods manufacturers, Visa and Mastercard payment gateways, and telecommunications providers.

Onboarding micro-retailers involves a quick setup so the platform can collect transactional data and then the micro-retailers must complete several training modules. Upon completion, they can access Tienda Red's BNPL product. Micro-retailers can order goods on credit from the FMCG distributors in the Tienda Red network, starting with up to US$500 for seven interest-free days. Their limit can grow to US$2,000 for thirty interest-free days. After the initial interest free days, interest rates are comparable to locally available credit cards.

Tienda Red also provides finance to customers of micro-retailers. Tienda Red has partnered with various fintech companies to offer consumer loans ranging from US$25 to US$200, payable in five bi-weekly instalments. Customers can apply in minutes by scanning a QR code, entering their details, and getting approved almost instantly. This customer financing increases the sales for the micro-retailer and lowers their financial risk compared to the traditional store credit they often extended directly. The models are continuously being trained, and currently six out of ten customer applications are approved, boosting sales up to 20%.

retailers is the extension of a loan to end-customers for the purchase of goods from the store. Clients of the micro-retailers have a simple process of filling in a digital form and sharing their ID photo before qualifying for the service, after which they go through a simple credit approval process. Other examples of these pay later features can be found in Indonesia, where platforms like GoPay, Dana LinkAja and Ovo have introduced similar features for consumers. These products can be very beneficial in helping the micro-retailer manage their cash flows as the liquidity shortfalls from offering store credit to their regular customers can be a significant drain on their business. In Bangladesh for example, two thirds of shopkeeper sales are through a store credit instead of cash or digital payments, limiting the shopkeeper's liquidity and their ability to keep their inventory sufficiently stocked (UNCDF 2019).

Some e-commerce platforms use BNPL primarily to increase their platform's customer stickiness, and others for its revenue potential through an increased basket size by retailers and shopkeepers. Whatever the primary goal of the providers, the micro-retailer benefits from a seamless credit product which will allow them to stock-up and gradually increase their inventory, hence building greater resilience and the potential to grow the business over time.

5.2 The economic viability of embedded finance

While the benefits for micro-retailers are evident, these platforms and e-commerce companies face some significant challenges which inhibit the ability of many of these models to scale. Importantly, the main concern does not lie in the embedded financial product itself, rather in the sustainability of the underlying e-commerce platform which serves the micro-retailer. The sometimes complicated

partnerships needed within digitized FMCG supply chains can add to this complexity.

The survival of the B2B e commerce companies and fintechs depends on their ability to scale and become commercially viable. The route to commercial viability involves ensuring that costs remain under control, which is particularly challenging for asset-heavy models that need significant capital expenditures. The other significant cost category, that most models have thus far been unable to control, are the staff costs associated with high-touch, feet-on-the-street teams that are required to facilitate digital ordering (see Box 4).

Other challenges, including funding constraints and changing market dynamics, also pose significant hurdles to sustainability and inclusivity. While asset-light models have the potential to break even faster, these models can only function appropriately in environments where there is a suitable infrastructure for warehousing and logistics that enable reliable and quality services to the last-mile micro-retailer.

Finally, Many of the B2B e-commerce platforms that emerged five to ten years ago enjoyed access to readily available capital and attracted high valuations. The current investment climate, however, has been adversely affected by high inflation and rising interest rates. Companies, faced with tumbling valuations and investor pressure to drive bottom-line profitability rather than top-line growth, are prioritizing achieving positive unit economics quickly. Hence, many of these companies are under significant pressure, as is the case with several of the B2B e-commerce models in Africa and other emerging markets.

5.3 Equity of access within business models

In an environment where platforms are coming under pressure, this increases the need to cut costs and focus on densely populated urban areas with many micro-retailers. For BNPL, this may lead to a preference for customers who request larger loan sizes, make more consistent orders, and can transition from agent-assisted ordering to independent digital ordering. To reduce the staff costs associated with feet-on-the-street teams, companies are pushing for a hastier move from agent-assisted ordering to independent digital ordering. This increases reliance on the digital access and digital skills of micro-retailers. It also creates biases whereby the more educated, digitally savvy, and wealthier micro-retailers become the main beneficiaries of the digitization and increased financial services. If inclusivity is not as much of a focus of these emerging B2B e-commerce platforms as profitability, the digital and financial divide will likely increase, eroding the development impact of these new innovations.

5.3.1 GENDER INCLUSIVITY

In many EMDEs, women tend to concentrate on service, retail, and hospitality sectors. In the retail sector, women micro-retailers are more likely to be home-based or home-adjacent, operating flexibly to accommodate demands on time from their families (Sheedy 2020). As many female entrepreneurs will also carry significant domestic responsibilities, they will have less time to manage their store, which can result in patchy product availability in their stores.

The use of embedded finance in FMCG value chains has the potential to disproportionately benefit women, offering them safer transaction environments and better access to formal financial services. These platforms create prompt, shared records of transactions and agreements and facilitate transactions without in-person contact – especially important during the COVID pandemic (Sawhney et al. 2022). While there is need for further research on the relative benefits for men and women of this type of finance, anecdotally, several of the companies that CGAP interviewed during this research indicated that their platforms served more women customers than men. For example, 80 percent of Copia's rural agents are women. Boost in Nigeria supports a Unilever program which specifically focuses

BOX 8. **Boost Nigeria – Generating opportunities for women entrepreneurs**

Boost is the digital partner for the Unilever Shakti program, supporting their inclusion efforts for female entrepreneurs in rural areas. Partnering with a non-profit empowerment organization, this program recruits and trains women in rural Nigeria, equipping them with the relevant skills to become micro-retailers. Through this, the program strengthens women's entrepreneurship by providing access to (start-up) credit, strengthening financial management tools and financial literacy. They also enable women to pursue their entrepreneurial ambitions, hence supporting improved resilience for their households. With the use of a digitized field team and WhatsApp as an ordering platform, the program has onboarded over 13,000 women micro-retailers, on their digital ordering platform, allowing them to increase their supply and access to fast-moving consumer goods. Once on-boarded to the Boost e-commerce platform, the female micro-retailers also receive access to a digital Unilever catalogue. As part of the program, Boost has extended credit to female retailers and implemented a BNPL product (Stock Boost), allowing the micro retailers to receive up to 150% of their previous purchase on credit. The program enables female entrepreneurs, with differing abilities and ambitions, to sell FMCG products as a side hustle or as full-time occupation, from their residence, door-to-door or from local stalls, with some women eventually opening their own stores.

on generating employment opportunities for women and helping improve their household resilience. (See Box 8)

While the potential is clear, several issues continue to inhibit the uptake of these services by women. These include gender biases in digital credit provision; the gender digital divide; educational differences; cultural norms; women's attitudes to risk and finance; the predominant use of male field staff; and potential biases introduced by the algorithms, which discriminate against part time and smaller scale businesses (see Box 9). For instance, in Kenya, digital credit providers are rarely perceived as a source of business capital by women, since loan amounts are usually small, and providers do not actively target women customers (Sawhney et al. 2022). Providers that actively focus on growing their reach to women need to design their products for impact (Carranza et al. 2018) and develop a gender-intentional approach to address the negative perceptions held by women borrowers.

BOX 9. **Aye Finance: A gender-intentional approach**

Aye Finance is a financial service provider in India that uses a proprietary analytics-powered Cluster-based credit assessment methodology that has allowed the lender to solve the credit challenges of over 800,000 micro enterprises. This methodology draws insights from the cluster data points and corroborates it with risk scorecards to lend to segments that have historically been denied credit due to non-availability of business documentation.

Understanding the need for a holistic approach to increase AYE Finance's potential to reach underserved women micro enterprises, Aye Finance partnered with CGAP to develop a product specifically targeting women microentrepreneurs. This involved revamping the end-to-end customer journey for these women MSEs, building on the findings of extensive market research and focus groups. The key factors considered when developing the product were the way in which women perceive credit, which is radically different from their male counterparts, and the different constraints faced by women. These include lack of or limited awareness of loan products; lack of relevant or sufficient documentation or collateral; limited autonomy in making financial decisions; lower financial-digital literacy; lower smartphone ownership-access; time poverty and mobility constraints.

Aye Finance has made changes to their loan application process to ensure that women micro -entrepreneurs are at the heart of the model. Some of the changes include:

- **A longer lead time** for the women borrowers to gather evidence supporting the benefits of loans from their peers, friend or family members.
- **Adjusted visit times,** building in the customer's preference to allow for day-care and household responsibilities.
- **Reduced frequency of visits by loan officers** to address any taboos related to credit and men visiting women.

In addition, Aye Finance loan advisors (agents) undergo gender sensitization training to empower them to apply a stronger gender lens during their communications with women customers.

Key Takeaways

The financial inclusion potential of the various business models included in CGAP's research for this paper hinges on whether the embedded finance is incorporated into sustainable and profitable business models, ensuring accessibility for underserved micro-retailers. Embedded finance can have significant benefits for the micro-retailers and for upstream stakeholders within the supply chain.

While the benefits for micro-retailers are evident, the economic viability of embedded finance models poses challenges for platforms and e-commerce companies. Funding constraints, changing market dynamics, and the need to achieve positive unit economics in a competitive landscape necessitate a focus on cost reduction and revenue optimization. It is these very factors that threaten equity of access within these business models, especially for vulnerable micro-retailers such as women and those in rural areas. While embedded finance holds promise for enhancing financial inclusion and empowering micro-retailers, realizing this potential requires a concerted effort to build sustainable and inclusive business models that prioritize accessibility, equity, and resilience for all stakeholders in the value chain.

CHAPTER 6

Conclusion: A coordinated ecosystem approach

DESPITE THEIR SMALL SIZE, CORNER shops play a critical role in their communities as the primary source of essential provisions, and by providing employment and livelihoods. These corner shops and the people that run them need stable sources of finance that are tailored to their business needs, enabling their resilience and growth. However, traditional sources of finance are unable to meet the needs of many of these retailers.

6.1 The potential of emerging business models for financial inclusion

As CGAP's research has illustrated, emerging B2B e-commerce business models hold immense potential for the financial inclusion of currently excluded and underserved micro-retailers, and consequently for the livelihoods of their communities. These business models come in various forms, shapes, and sizes and there is no clear signal today that any one model is superior to others in all circumstances. Through its tech-enabled service stack framework, CGAP has provided a means of understanding the various combinations of services that these business models can offer, namely warehousing and distribution, digital ordering and embedded finance.

Of particular relevance to the financial inclusion agenda is the embedded finance service layer —especially BNPL inventory financing— which has the potential to revolutionize the provision of financial services to micro-retailers. These B2B e-commerce business models provide the micro-retailer with the power to order goods from the comfort of their home or shop; to have the goods delivered to their doorstep; and the option to purchase additional inventory on reasonable credit terms, which can be paid after the micro-retailer sells their goods. For embedded finance providers, the risk of these unsecured loans is mitigated through ordering data-enabled credit scores and through the small amounts and short tenors (aligned to the micro-retailer's capacity and cash flows), while origination and servicing costs are minimized through automation. These embedded finance models create the potential for deeper penetration into the micro-retailer segment compared to traditional financial service providers.

6.2 Persistent barriers to sustainability and growth of these business models

The financial inclusion potential of embedded finance for micro-retailers hinges on whether the underlying business model into which the finance is embedded

are themselves sustainable and profitable. During the course of this research, CGAP has witnessed first-hand how nascent these B2B e-commerce models still are. While some companies have demonstrated growth and expansion into new areas, several others have struggled and failed or merged with bigger players. There have been considerable sector-wide lay-offs and country exits. Although it is yet unclear which companies and related business models will ultimately be successful, considering the benefits these models can bring throughout the FMCG supply chain, we believe that the innovations these companies are pioneering will continue to manifest themselves.

This sustainability challenge cannot be understated and has become more salient in the current investment environment which has significantly scaled back funding opportunities for early-stage companies, challenging the economic viability of these models. Funding constraints, changing market dynamics, and the need to achieve positive unit economics in a competitive landscape necessitate a focus on cost reduction and revenue optimization. It is these very factors that threaten equity of access within these business models, especially for vulnerable micro-retailers such as women and those in rural areas. While embedded finance has the potential to be inclusive, achieving this requires deliberate efforts to mitigate barriers such as low digital literacy, high customer acquisition costs, and gender biases in credit provision.

6.3 A coordinated approach to support scale and sustainability of these business models

Achieving financial sustainability and scale for these models requires a concerted effort by multiple stakeholders in the ecosystem. Donors, investors, and private sector companies –especially those in the FMCG space– have the greatest potential to positively influence growth, sustainability, and inclusiveness of these platforms. From a donor and impact investor perspective, prioritizing embedded finance in B2B e-commerce aligns with the financial inclusion community's mandate to expand access to financial services and promote inclusive economic development globally. Private companies engaged in the FMCG space can benefit from better visibility of demand allowing for efficiency in production and supply planning. Commercially viable B2B e-commerce platforms also provide marketing and product placement opportunities for these companies, while the embedded finance component frees up liquidity for the micro-retailer, which can lead to increased order sizes.

Below is an overview of the main areas where these key stakeholders will be instrumental in helping these business models realize their inclusive potential.

6.3.1 RESEARCH

Stakeholders should focus on supporting research that explores how these platforms can reach scale while both serving otherwise excluded and underserved MRs with customer-centric products and working towards positive unit economics. A better understanding of the relationship between scale, social outreach and financial sustainability will empower these emerging companies to develop the operational and financial projections necessary for their sustainability and help secure the long-term investments they require to prove their models. CGAP's research has been a step in the right direction, but further research should also focus on quantifying the balance between scaling the model in ways that are both sustainable and inclusive. On the demand side, an important intervention is the development of technical assistance programs focused on promoting digital and financial literacy for micro-retailers, as well as pilots to make digital ordering applications more customer centric, to support a faster move towards a digital transition helping reduce costs of these models.

6.3.2 FUNDING

The road to success for these B2B e-commerce companies is long and hard. Most of these platforms start with limited capital and require continuous funding, including both patient foundational capital in the form of long-term equity and venture debt instruments, as well as growth capital through diversified instruments. To minimize the burden and related costs of continuous fundraising, smaller amounts of debt should be available at early growth stages. A succession of relatively small debt tranches could be released in an automated manner according to certain milestones. Equity investors need to be willing and able to provide strategic guidance, mentorship, and support to management teams of investee companies by sharing industry expertise, providing access to networks and resources, and offering guidance on business strategy, market positioning, and operational efficiency, that can complement the vision and talent of the company's management and employees.

6.3.3 PILOTING INNOVATIONS

Due to their existing relationships with traditional distributors, private sector companies, especially those situated more upstream in the FMCG supply chain, might hesitate to actively promote digitization through additional third parties. Often, integration with newly established tech-driven platforms, which are outside of existing value chains, can be perceived as an unnecessary and even harmful disruption. However, considering the potential advantages for FMCG manufacturers and suppliers, it would be wise to promote a culture of digitization and data analytics throughout their companies and that of their direct off-takers. Such companies should start with pilots engaging with one or even multiple new digital ordering platforms to test the concept and then explore how these can be integrated within existing operations.

Underpinning all of the above is the need for robust monitoring and evaluation systems that can assess the effectiveness, scalability, and sustainability of interventions, and identify lessons learned and best practices for future replication and scale-up. To ensure that these models can reach scale without compromising on their social objectives, all stakeholders must work with providers to ensure that inclusivity of marginalized populations and responsible finance practices and ethical standards are adhered to and measured.

Importantly, any efforts by these stakeholder groups—donors, investors, private sector companies and others in the financial inclusion community—need to be well coordinated and delivered through partnerships that leverage their independent strengths. By pooling resources, sharing risks, and leveraging complementary expertise, these stakeholders can amplify their impact and drive collective action towards common goals.

ANNEX 1

The costs of embedded finance within the business models

CREDIT PRODUCTS PROFIT FROM THE 'spread' they make between their lending and borrowing rates, after costs to serve the loan and broader loan book are met. Components that, together, determine the cost-base of credit products for micro-retailers are origination, underwriting, financing, provision, and finally repayment or recovery costs.

By embedding finance in the FMCG supply chain, fintechs can reduce operational costs related to origination, underwriting, contracting, disbursement, and repayment to a fraction of the costs of more traditional credit operations such as MFI, cooperatives or Savings and Credit Co-operatives (SACCOs). Further, because these BNPL credit products

FIGURE 6. **Operating cost implications of embedded finance**

	Cost effect negative	Cost effect positive			Cost effect unknown
Key operational cost categories	**Cost of capital**	**Cost of origination (customer acquisition costs)**	**Cost of underwriting**	**Cost of contracting, disbursement and collection**	**Cost of provisions, recovery & write-offs**
Effect of embedding finance in B2B e-commerce platforms	The cost of and access to capital required to on-lend to micro-retailerss seems to be an obstacle for many B2B e-commerce platforms, and hence many different partnership models are being explored.	Origination is enabled through the existing ordering platform users, so the option for BNPL is a matter of digitally informing existing customer when he/she is eligible, keeping costs low.	Underwriting costs are lower because the digital BNPL is automated through credit decisioning models that mine transactional data.	Mainly BNPL products require electronic consent rather than paper contracts, the disbursement is in kind and repayment digitally (best case scenario) - substantially lowering the operational costs for the provider as well as the user.	There is no reason yet to believe that these costs are or will be lower. However, other platform effects, and satisfied platform users not wanting to risk exclusion from the platform can have a positive impact on repayment patterns.

Source: Authors

piggyback on existing FMCG ordering and distribution networks, lending to micro-retailers becomes more of an incremental cost.

The effects of embedding finance in FMCG platforms on the costs related to provisioning, recovery and write-off is still an area of contention. On one hand, by digitizing inventory management, novel data channels provide insights into a micro-retailer's purchase cadence and cashflow and help determine the micro-retailer's capacity to repay. But it is not clear whether these new models provide better and more reliable data than traditional underwriting methods for lending to micro-retailers, for example through MFIs or supplier credit. Like traditional lending practices, repayment histories remain the single most important data source in estimating credit risk. Hence, from a credit underwriting perspective, new clients remain "risky clients". This credit risk is somewhat mitigated by the smaller size and shorter tenure and its link to the purchase of inventory. Micro-retailers are incentivized to make on-time repayments to continue getting access to credit that allows them to grow their inventory.

The cost of capital, a major component of the cost of lending, is, at best, the same for B2B e-commerce platforms providing embedded finance, as for traditional loans. However, in many cases, fintechs offering BNPL face a higher cost of capital than deposit-taking institutions. Moreover, new technology companies themselves face higher costs, as the capital markets view them as high-risk enterprises.

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About CGAP

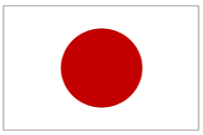
CGAP is a global partnership of more than 35 leading development organizations that works to advance the lives of poor people, especially women, through financial inclusion. We work at the frontier of inclusive finance to test solutions, spark innovation, generate evidence, and share insights. Our knowledge enables public and private stakeholders to scale solutions that make financial ecosystems meet the needs of poor, vulnerable, and underserved people and of micro and small enterprises (MSEs), including through advancing women's economic empowerment. By doing so, we hope to advance broader development goals and enable a green, resilient, and equitable world for all.

About Transform

TRANSFORM is an impact accelerator that unites corporates, donors, investors and academics to support visionary enterprises. Together, we test and scale new solutions that support low-income households by tackling environmental challenges, improving health and wellbeing, and building inclusive economies. We combine grant funding, business insight, practical experience, resources and networks. Our tailored approach creates evidence that we share widely to help leaders across the world solve global challenges.

TRANSFORM is based on a desire to address urgent issues by learning from each other. Established in 2015 and led by Unilever, the UK's Foreign Commonwealth and Development Office and EY, we have a proven model and an ambition to increase our impact across Africa, Asia and beyond. We TRANSFORM lives by tackling global challenges through life-changing enterprise.

CGAP Members



CGAP members and strategic partners as of June 2024

CGAP Members (continued)

MetLife Foundation

Ministry of Foreign Affairs and International Cooperation

Ministry of Foreign Affairs of the Netherlands

Norad

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Schweizerische Eidgenossenschaft
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