Report

Building Electronic Payment Acceptance at the Base of the Pyramid to Advance Financial Inclusion

mastercard
Mastercard has been a key driver in advancing financial inclusion to the more than 2 billion adults around the world who don’t have a way to safely send and receive money, pay for the things they need, or invest in their futures.

Through our products and partnerships, we have made significant progress against the ambitious goals we set. We have committed to reach 500 million people previously excluded from financial services by 2020, including connecting 40 million micro and small merchants to our payments network. To date, we’ve reached more than 300 million individuals.

We have been working with central and local governments for more than 10 years across 60+ countries to enable people to become financially included on a massive scale. Working with public and non-profit partners, Mastercard has also empowered more than 2.5 million vulnerable people – the vast majority of them refugees and internally displaced people across Africa, Asia and Europe – with faster, safer and more efficient aid distribution.

Despite this progress, we know that there are systemic barriers to financial inclusion and economic growth that must be addressed. Conventional approaches are not enough to overcome inequality and exclusion.

That is why we remain committed to advancing inclusive growth, with an ever greater focus on driving electronic payment acceptance among people and businesses at the base of the pyramid.

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While there is a popular saying asserting that "Cash is King", whoever coined that phrase wasn’t aware of all the costs of managing and moving cash around. Sure, cash is tangible and immediate, but it can be hard to keep track of, and it’s vulnerable. Most of the world’s smaller firms do most of their business in cash. It works, but it may be one of the major factors holding back their growth.

For bankers and other financiers, SMEs have always been a difficult market because of the large cash element of their businesses. Finding out what’s really going on, and then keeping abreast of changes, requires physically going out and checking on the entrepreneur – expensive, and a deal breaker for many considering financing. So much would be easier if that SME would do more business electronically. For some time, the technology has existed to make this possible, and recent innovations in mobile phone transactions have opened up new, promising opportunities.

Yet, even in the “poster child” environments of mobile cash transfers, such as Kenya and East Africa, while SMEs, particularly small merchants, may play key roles in taking in and paying out cash for one-time transfers, these same entrepreneurs still do almost 100 percent of their day-to-day buying and selling in cash. Their customers receiving money transfers rarely leave any funds in their wallets, and make all their purchases in cash. Why is this the case? Well, it’s clear that there’s a lot more to getting merchant acceptance going than merely having new technology in place.

Which is why it’s so important to have work like this, which examines all the dimensions of the merchants’ situations, assessing both the opportunities and the problems. This report discusses the total ecosystem that must be created to make it more sensible for both merchants and consumers to opt for electronic payments, and the changes necessary to put such an ecosystem into place. It’s particularly encouraging that a company like Mastercard (which I should declare is an SME Finance Forum member) is so open in this work about even those necessary changes which may challenge prevailing customs and practices in the card and electronic payments industry.

As the authors note, this is not a short-term profit play. Making this happen requires a long-term investment and commitment – but the long-term returns to both business and society will far outweigh these investments.

Matt Gamser
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This report addresses the role of merchant acceptance by small and microbusinesses (SMBs) for advancing financial inclusion.

While the important role payments play in financial inclusion is increasingly recognized, this report moves the conversation forward by uncovering insights into how to advance electronic payment acceptance at the base of the pyramid. While some payment use cases have gained traction, namely P2P and bill payment, there is a considerable opportunity to drive progress with others. In fact, consumer behavior indicates robust opportunities with merchant acceptance (P2M). Expanding the digital acceptance footprint to achieve a critical mass of small merchants at the base of the pyramid will expand the utility of payments and drive corresponding increases in digital liquidity.

The report identifies four critical barriers to the expansion of electronic payment acceptance that need to be overcome. These include:

- **Economic factors** such as the cost of acceptance and value provided to merchants;
- **Risk** such as the financial and process risks associated with the onboarding of merchants;
- **Distribution challenges** of driving acceptance with base of the pyramid populations; and
- **Friction**, stemming from the merchant payment acceptance experience and the infrastructure available to support payments.

It then details effective ways to address the challenges of building the ecosystem for payment acceptance among SMBs at the base of the pyramid:

- **Make useful additions** to product propositions to make electronic payment solutions attractive and relevant to SMBs;
- **Design new business models** to reduce costs and increase the viability of business models serving SMBs. These models can focus on driving collaboration among payment service providers (PSPs) as well as deploying new partnership models; and
- **Invest in market development initiatives** through collaboration with the public and private sectors in order to overcome structural barriers to acceptance and to incent market participation and innovation.

Building acceptance for the base of the pyramid will not generate immediate returns. In fact, there is a need to invest ahead of the curve to build scale in middle- and low-income markets. The challenge is to find ways to stay committed to the longer-term investment horizon by involving those who stand to benefit. New approaches and business models as well as partnerships for collaboration are all important considerations. In the end, the business and social dividends of enabling SMBs to accept electronic payments can outperform the investment.
**Introduction**

Why Is It Important That Merchants at the Base of the Pyramid (BoP) in Developing Countries Accept Electronic Payments to Further Financial Inclusion, and What Lessons Can We Draw Upon to Make That Happen?

Financial inclusion provides the unbanked with an opportunity to break free from the vicious cycle of poverty by giving them access to tools that allow them to securely pay, save, borrow and insulate themselves from financial shocks. In addition to important benefits at the individual level, financial inclusion also creates a number of macro-economic benefits. As a result of the growing public sector focus on financial inclusion across the globe, coupled with increasing provider interest in servicing the unbanked, more and more people are becoming “financially included”.

While increasing access to financial services is making a difference in peoples’ lives, there are still opportunities to drive additional adoption and usage. In fact, dormancy in newly opened accounts is low-hanging fruit that can be addressed to further inclusion. Importantly, among accounts that are active, the use cases seeing some of the most meaningful adoption and growth are P2P (person to person) and bill pay services (P2B). Subsequently, true digital liquidity\(^1\) is still somewhat elusive, and as a result, many stakeholders across the board are not reaping the full benefits of financial inclusion\(^2\).

Figure 1: Focus of this report

Accordingly, we believe that enabling more of the merchants operating at the base of the pyramid, serving low-income populations in developing countries, to accept electronic payments\(^3\) for their customers’ purchases of everyday goods and services can vastly broaden financial inclusion. Doing so will go a long way towards achieving digital liquidity and reduce reliance on cash as well as often costly, inconvenient or unavailable cash-in and cash-out services. In other words, if people are confident in their ability to spend their

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1 Digital liquidity refers to the ability to use electronic money at a critical number of locations, the economic utility provided to consumers from these options and hence, the resulting incentive to maintain balances in electronic form.


3 Electronic payments acceptance is used to denote the acceptance by merchants of non-cash means through multiple types of acceptance devices; digital payments are treated as a subset of electronic payments.
Why is it important that Merchants at the Base of the Pyramid (BoP) in developing countries accept electronic payments to further financial inclusion, and what lessons can we draw upon to make that happen?

Electronically held money on a critical mass of everyday financial needs, they will be much more willing to hold money in electronic form rather than cash.

In developing countries, particularly in low-income communities, food and other “everyday spend” purchases are primarily made from SMBs (small and microbusinesses) serving the base of the pyramid. These SMBs act as vital economic touch points, and enabling more of them to accept electronic payments will make electronic money much more useful and go a long way towards achieving digital liquidity. Given the trust that SMBs enjoy among their customers, they make ideal entry points for first-time electronic payment users, who feel safe to try out the new service. Finally, given the proprietary nature of many SMBs, as consumers, many are themselves excluded from the financial system.

Unfortunately, several barriers exist, particularly in emerging markets, that deter SMBs from accepting electronic payments. These include: economics, risk, distribution challenges as well as friction. The report explains these barriers and provides actionable recommendations for designing effective electronic payments solutions and related approaches that could help expand electronic payments acceptance among SMBs, and eventually incent these entities to adopt electronic payments as their preferred payment method.

4 Electronic money is used to describe funds held in electronic forms such as mobile wallets, transaction accounts, etc.

5 The report acknowledges the importance of winning consumers in scaling merchant acceptance among SMBs. However, challenges to winning consumers are different from that of merchants and require a different set of strategies to overcome the challenges, and it is not the focus of this report.
The Financial Inclusion Journey (So Far)
Access to Formal Financial Services Is Growing

Financial inclusion provides the world’s unbanked with a path out of poverty. The indomitable spirit to escape the cycle of poverty is the common denominator among everyone across the developing world. The unbanked are vigilant in their daily struggle, looking for stable employment, new business opportunities or new income streams. However, more often than not, it is the lack of a fair opportunity to save the extra income earned, borrow funds at competitive rates or protect themselves against calamities and unplanned shocks, which traps them in the vicious cycle they strive to escape. One of the most fundamental ways to alleviate poverty is to advance access to an array of financial tools to help the unbanked save what little they have, borrow when they need to, and insulate themselves against unforeseen shocks. Payments are at the heart of efficiently and securely delivering financial services at affordable prices and can serve as an on-ramp to financial inclusion. A growing body of evidence suggests that financially included households are better able to enjoy improved living standards such as access to health care and the ability to provide education to their children.

Financial inclusion also provides broader macro-economic benefits. Studies have found that financial inclusion has a positive impact on Total Factor Productivity, as increased access to finance helps entrepreneurs grow their business effectively. Other studies have observed that financial inclusion can also have a positive impact on GDP, inequality and welfare, provided constraints such as participation costs, borrowing costs and monitoring costs are minimized.

Additionally, financial inclusion also helps to reduce the level of cash circulation in the economy, leading to quantifiable economic benefits. These benefits include enabling new forms of commerce, greater personal safety, reduced cash handling costs, and lower levels of theft from merchants, among others.

In recent years, financial inclusion has emerged as a key area of policy focus for a growing number of governments, a positive force in growing access to financial services in middle- and low-income countries. The number of financial regulators and policy-making institutions committing to the Maya Declaration has increased from 17 in 2011 to 58 in 2016. In addition, governments have started to invest heavily to move the needle on financial inclusion by implementing policies and national programs.

11 The Maya Declaration is an initiative to unlock the economic and social potential of the 2 billion unbanked population through greater financial inclusion. It represents the world’s first commitment platform, which enables financial regulators and policy making institutions to make concrete financial inclusion targets, implement in-country policy changes, and regularly share progress updates.
Access to formal financial services is growing

For example, in August 2014, the Government of India launched a financial inclusion program called “Jan Dhan Yojana” with a goal of providing every household in the country with a “basic-banking account”. As of March 2017, the program had opened 280 million new zero-balance bank. Furthermore, recent government efforts in India have led to a significant expansion in the number of merchants accepting electronic payments.

**New market entrants such as FinTech companies and mobile money operators are also trying to solve the financial inclusion challenge.** This, in turn, is driving market incumbents, particularly banks, to expand their target segments. Growing access to mobile phones, both feature and smartphones, as well as internet connectivity, among the world’s unbanked is creating opportunities for FinTech companies and mobile money operators to reach out to this segment and address their financial needs via appropriate products and services. As a result, the unbanked are increasingly an attractive and addressable market for technology-enabled financial services providers. Today, more and more players are entering the market. According to GSMA’s 2016 State of the Industry Report, the total number of mobile money deployments across the world increased from 116 in 2011 to 255 in 2015, and 100 million new mobile money accounts were opened in 2015 alone. As these new entrants start to demonstrate a positive business case in addressing the financial needs of unbanked populations, more banks are embarking on the journey towards universal financial inclusion. In Latin America, mainstream banks are providing greater access to underserved populations by leveraging technology and “agent-banking” models. In Brazil, there are approximately 10 bank agents for every 10,000 customers. In fact, agents are performing the highest number of payment transactions when compared to all distribution channels for banking services.12

**As a result, globally, more and more people are becoming “financially included”**. According to the World Bank’s Global Findex data, between 2011 and 2014, the number of people with an account at a formal financial institution increased by 700 million. This translates to 62% of the world’s adult population being financially included in 2014 as opposed to 51% in 2011.13

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Improving Access Has Not Resulted in Increased Usage

As noted above, while an increasing number of the unbanked across the globe are getting account access at formal financial institutions, many are not using them with sufficient frequency and are instead continuing to rely on cash. In 2014, 15% of adults globally with access to an account at a formal financial institution, equating to approximately 460 million people, did not make a transaction with their account. GSMA reports that as of December 2015, out of the 411 million registered mobile money accounts, only one-third (134 million accounts) were active. The various factors behind this are discussed in more detail later in this report.

Importantly, among accounts that are active, the use cases seeing meaningful adoption and growth are P2P and bill payments. These particular services are tapping the strong need to send money home and to pay for utilities, school bills, etc. These two electronic payments use cases provide a clear advantage over cash since sending cash home through informal mechanisms is risky, time consuming and expensive. Similarly, paying bills via cash is inconvenient and time consuming as it entails making trips to a bill payment center or to a service provider and queuing. In 2015, an average active mobile money user made roughly two P2P transactions per month and one bill payment every two months.

There is emerging traction in other use cases, which include business to person (B2P) payments, business to business (B2B) payments, and in particular, merchant payments (P2M). Unlike use cases such as P2P or bill payment, customers have an everyday necessity to make purchases and pay for these purchases. However, the 2014 Findex data indicates that while 40.1% of global adults own a debit card, only 23.2% of them have used their card to make merchant payments. Similarly, in 2015, an average active mobile money user made only one merchant payment in the entire year. Merchant payments generally tend to be high-frequency payments. A conservative estimate suggests that there may be 16 merchant payments for every P2P transaction conducted. However, the challenge in realizing this potential is the absence of robust merchant acceptance aligned to the financially excluded. Tapping merchant payments is an essential step towards driving usage in customer accounts and creating the economic utility for consumers that will drive the creation of digital liquidity.

Figure 2: Electronic payments use cases

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<thead>
<tr>
<th>Gov’t</th>
<th>P2G</th>
<th>M2G</th>
<th>B2G</th>
<th>G2G</th>
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<tbody>
<tr>
<td>Merchant</td>
<td>P2M</td>
<td>M2M</td>
<td>B2M</td>
<td>G2M</td>
</tr>
<tr>
<td>Person</td>
<td>P2P</td>
<td>M2P</td>
<td>B2P</td>
<td>G2P</td>
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</tbody>
</table>

Source: Mastercard Acceptance Team

14 Ibid.  
15 At least one transaction in every 90 days.  
16 A use case refers to various uses that customers could potentially derive from a product or a service.  
18 We use the term merchant payments to refer to the flow of funds from individuals to merchants for retail purchases, also referred to as P2M.  
Improving access has not resulted in increased usage

When consumers cannot use electronic payments for their day-to-day needs, they transact via cash, which is more expensive and less safe. As noted, it is increasingly accepted that broad merchant acceptance of electronic payments will help achieve digital liquidity by enabling unbanked consumers to spend their funds electronically or maintain these funds as electronic money, in digital wallets or bank accounts, eliminating or reducing the need to incur cash-out costs. The unbanked do not generally have the luxury of keeping idle balances in their accounts, and since electronic payments are not widely accepted as a method of payment in their ecosystem, they are forced to pay relatively expensive cash-out fees in order to consummate their “everyday spend” purchases with cash. In 2014, a majority of mobile money services (76.5%) earned most of their revenues from customer fees such as cash-out fees, as opposed to business fees from merchant payments, bulk disbursements, etc.21 A study conducted by MicroSave in Uganda found that 75% of the respondents who saved in cash had lost some of their savings during the previous year.22 In addition, as both customers and merchants become more comfortable with holding and using their money in electronic form, they accrue a range of other potential benefits, including one of the most essential needs of the unbanked—better access to credit.

Another important point to consider in enabling merchant acceptance is the higher unit costs financial service providers incur when infrastructure is not utilized to capacity. Put differently, there is an opportunity to lower the cost of electronic payments to unbanked individuals if more transactions (e.g., people buying from merchants) flow through systems that are characterized by high fixed costs. Most core banking and mobile wallet platforms are capable of handling a meaningful number of transactions in any given time period. However, when consumers do not fully utilize their accounts (e.g., not paying merchants for everyday purchases), the infrastructure is under-utilized and as a result, per-unit costs for providers go up. Furthermore, not all consumers have a regular need to send money or pay bills, leaving providers bearing the cost of maintaining accounts generating minimal revenue. In a more developed state, as customers use their accounts more intensively and for multiple-use cases, the cost of provider infrastructure is spread across more transactions, which, in turn, drives unit costs down. To make a point, it is important to drive transactions through the system so that economies of scale are fully realized, and fixed and step-wise linear costs such as organizational support, staffing, and marketing programs are amortized across a greater number of transactions.

When incumbents fail to demonstrate promising revenue potential from serving unbanked segments of the population, the market could fail to attract new entrants. In 2015, only one-third of mobile money deployments contributed more than 5% of the total revenues earned by their parent mobile network operator.23 In 2015, the Reserve Bank of India handed out 11 “Payment Bank”24 licenses. One year later, three recipients decided to return their licenses, with some citing business model issues as the reason. Of the remaining licensees, three have launched operations as of March 2017. When the market fails to attract new entrants it not only dampens competition, which keeps costs high, but can also deter investment and innovation.

24 Payments banks are a newly recognized type of financial institution in India. The designation granted by the Reserve Bank of India (RBI), restricts their activity to the mobilization of deposits from customers, they are unable to provide liability products such as loans and credit cards.
Why Electronic Payments and SMBs?

Electronic Payments at SMBs is the Next Lever for Driving Account Usage

Enabling SMBs to accept electronic payments is a critical step to drive account usage. SMBs act as vital economic touch points, and enabling more of them to accept electronic payments by overcoming the barriers to acceptance through new solutions and business models as well as through market development efforts will certainly make them much more useful and "daily relevant". In addition, enabling SMBs, which transact with the unbanked on a frequent basis, can help overcome the often important barrier of getting people to try, and subsequently use, electronic payments on an ongoing basis.

Figure 3: Food spending around the world
Food at home as percentage of household expenditures, 2014

There are over 180 million SMBs globally, which, in turn, transact with 25 customers on an average day. Enabling a significant portion of these 4.5 billion annual transactions to be made via electronic payments should create a “network effect” for merchant payment acceptance, helping acceptance growth to gain momentum. As more and more merchants accept electronic payments, consumers will realize more value and it will put pressure on remaining cash-only merchants to do so as well; if they do not accept they then risk losing business to electronic payment-accepting competitors. Furthermore, given the trust that SMBs enjoy with their customers, they make ideal entry points for first-time users of electronic payments to feel safe and try out the new service.

Targeting merchants selling food should be considered a high-priority vertical, especially when in the early stages of building a critical mass of merchants accepting electronic payments. Studies have found that in developed markets such as the U.S., an average consumer makes 1.6 trips to the supermarket per week. In developing markets, the unbanked tend to make a higher number of trips to the village grocer, as most earn and spend their wages on a daily basis. In addition, 30-40% of the annual household income in developing countries is spent on food. In these countries, particularly in low-income communities, food items and other “everyday spend” purchases are primarily made from SMBs, including individual merchants selling goods in a marketplace or from a cart, small village grocery shops, and medium-sized retail outlets. Consumers, therefore, have an ongoing, frequent, and highly concentrated transactional relationship with SMBs.

Critical Barriers to Acceptance of Electronic Payments Among SMBs

Several providers have tried to enable acceptance of electronic payments among SMBs, but many have had limited success to date. In 2015, only 57 out of a total 107 operational mobile money deployments had a merchant payment solution. Even with over half of mobile money deployments having some sort of merchant offering, merchant payments accounted for less than 2% of the total number of transactions processed by all mobile money deployments across the globe. Card-based merchant acceptance networks continue to advance their extensive merchant acceptance networks, but still face some challenges in expanding acceptance. In India, historic debit card usage at the POS was 3.7% of the total debit card spend. The tendency toward low debit card usage at the POS is a common trend across developing countries. These elements, electronification of value and usage, are part of the two-sided market challenge.

Barriers to the acceptance of electronic payments at the base of the pyramid (BoP) can be grouped under four major categories, these include: economics, risks, distribution and friction. The challenge to overcoming these barriers is crafting value proposition that both incent merchant adoption of electronic payments and drive provider efforts to develop acceptance within this segment. The table below summarizes these major categories of acceptance barriers, the specific barriers within each of these categories and the entities within the ecosystem facing the barrier.

Figure 4: Barriers facing Merchants and Payment Service Providers

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<thead>
<tr>
<th>Barriers</th>
<th>Entity Experiencing the Issue</th>
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<tr>
<td></td>
<td>Merchant</td>
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<tr>
<td>Economics</td>
<td>Cost of Acceptance</td>
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<td></td>
<td>Lack of Compelling Product Value Proposition</td>
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<td></td>
<td>Cost of Merchant Sales and Service</td>
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<td></td>
<td>Regulatory Overhead</td>
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<td></td>
<td>Tax Liability</td>
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<td>Risk</td>
<td>Financial Risk</td>
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<td></td>
<td>Process Risk</td>
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<td></td>
<td>Regulatory Ambiguity and Inconsistency</td>
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<tr>
<td>Distribution</td>
<td>Disengaged MSPs</td>
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<tr>
<td></td>
<td>Misaligned Distribution Model</td>
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<tr>
<td>Friction</td>
<td>Cultural Affinity to Cash</td>
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<td></td>
<td>Lack of Relevant Rules</td>
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<td></td>
<td>Poor Infrastructure</td>
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31 Payment Service Providers (PSPs) are entities working across the payments acceptance value chain to enable the provision of electronic payments services.
**Barrier: Economics**

**Cost of Acceptance – Many merchants are resistant to both the upfront and ongoing costs of accepting electronic payments.** Merchants do not have to make any upfront investment to accept cash from their customers. Hence, they feel that cash has no cost and may even save them money through a lower tax bill, while a move to electronic payment could open up merchants to a tax liability. Furthermore, in card-based payment systems, merchants have to invest either up front or on a monthly basis for point-of-sale terminals or smartphones with EMV peripherals. Terminals can require a significant monetary outlay for SMBs. In addition, merchants have to pay a merchant discount fee in virtually all cases, irrespective of the technology employed. The introduction of mPOS readers in recent years has reduced the cost of card acceptance. In addition, technology-led innovation such as mobile-based credit push payments and Quick Response (QR) code-based payments have further reduced the cost of merchant acceptance devices. That said, we believe that, to the extent the market can deliver a suite of payments-related benefits that provide incremental revenue, credit, or other value, this and other barriers can be mitigated.
Barrier: Economics

Lack of a Compelling Value Proposition – It is not clear to most merchants selling low-ticket items that they will attract new customers or sell more goods to existing customers by accepting electronic payments. Unlike the case in many developed economies, consumers are not yet obtaining credit lines from electronic payments products, thus making it harder to link merchant acceptance with incremental sales. Furthermore, in the early stages of payment system development, there simply aren’t enough merchants accepting electronic payments to warrant concern of lost sales to competitors who do accept them. In addition, remote commerce – online or mobile commerce models – where electronic payments have a clear advantage over cash, are not yet popular in low-income markets. For these reasons, the promise of incremental revenues from this newly enabled channel is not demonstrable yet.

Cost of Merchant Sales and Service – Merchant sales and service operations are activities requiring significant investment to reach and solicit large numbers of often low-volume merchants to accept electronic payments. Particularly in low-income markets where SMBs are prevalent, merchant sales and service become challenging as providers – often more than one in a given area – have to invest in creating a sales force footprint in those geographies. In addition to merchant solicitation, interested merchants need to be onboarded with the new service, and trained, as well as serviced on a continuous basis to answer questions and concerns and troubleshoot issues with the new electronic payments system. Exacerbating the situation, SMBs being introduced to electronic payments for the first time are likely to be confounded by issues related to technology, equipment, funding, and settlement, to name a few. Essentially, sales and servicing of SMBs, particularly for unbanked populations, can be an expensive and time-consuming process for providers.

Regulatory Overhead – Regulatory requirements in terms of Know Your Customer (KYC) and other documents needed for authorizing a new merchant to accept electronic payments can be particularly cumbersome and expensive for SMBs since many may lack proper identity proofs, or may not be registered businesses. Leveraging technologies to make use of existing national infrastructures such as national ID programs and creating solutions for remote and easy validation of merchants can help to bring down the regulatory overhead. Working with regulatory agencies to implement proportional risk-based KYC policies will also help to overcome regulatory barriers. In addition, payment service providers will likely have to bear the burden of helping the merchants register for the requisite tax identifiers, business licenses, etc.

Tax Liability – While governments and regulators do not like that cash is anonymous and untraceable, for many merchants, this attribute is one of the top reasons for preferring cash to electronic payments. It is widely acknowledged that many small merchants hesitate to transact via electronic payments because it would make it easier for authorities to scrutinize their business and make them more accountable to pay taxes. Since there is direct conflict between the problem that governments are trying to address and the solution proposed for the same, the issue of electronic payments and its implication on tax administration is complicated and needs careful examination. Various governments have created incentive mechanisms for both consumers and merchants to address the issue of tax liability arising from electronic payments. For example, India, South Korea, and Uruguay dealt with the tax issues in creative ways, including mandatory use of bank accounts or electronic money instruments for payment of payroll, social benefits, retirement plans and pensions, thus forcing many businesses and income "into the light". Uruguay introduced tax incentives for POS terminals. South Korea provided tax breaks (VAT, income tax) for transactions conducted electronically. These and other examples are well documented and are recommended reading.32, 33

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Barrier: Risk

Financial and Process Risks – Bringing merchants into an electronic payments system exposes payment service providers to financial and process risks, both in pull and push payment systems. In general, payment scheme rules, and often, formal regulatory requirements, place the burden of merchant fraud and other merchant-related losses onto the payment service provider who signed up the merchant. This is especially true within systems where scheme rules provide the consumer with recourse in various situations, such as when goods are not delivered as promised, bankruptcy, etc. Even where scheme rules do not allow for recourse, merchants are still critical to maintain the integrity and reputation of the system. Furthermore, acquirers and payment service providers might also be subject to losses from operational and regulatory problems such as not complying with KYC and other regulatory requirements.

Regulatory Ambiguity and Inconsistency – There are a number of instances where the lack of clear regulatory direction impedes the goal of creating an attractive and financially viable ecosystem. Payment ecosystems must provide participants the opportunity to earn a sufficient return on capital and provide clarity in other areas (e.g., rights of participants) required to spur necessary ecosystem investments (e.g., sales, service, transaction processing, etc.). In several instances, regulations fail to provide clear direction (e.g., allowable activities, how various functions are regulated, etc.) to providers to incent building an SMB acceptance network. In some instances, regulators introduce legislation, albeit with good intention, that actually diminishes the incentive for providers to target SMBs. For example, merchant discount rate (MDR) caps introduced in countries such as India could dampen providers’ interest in serving SMBs because the ability to viably serve this population has been negatively impacted. Further, regulations are often created that do not recognize the unique nature and economics of SMBs, adversely affecting these merchants.

Barrier: Inadequate Distribution

Disengaged Merchant Service Providers – In many markets, there is a lack of commitment among providers to enable acceptance for lower volume SMBs, particularly in rural areas. As a result, providers tend to cluster in urban areas serving the middle class and higher-income consumers, leaving out low-income segments. Secondly, most incumbent providers appear to be more interested in maintaining their “walled” gardens rather than collaborating. In a non-collaborative setting, each provider invests in developing their own merchant acceptance network. This increases unit costs, again deterring providers from building distribution networks for payment acceptance by SMBs.

Misaligned Distribution Model – In developed markets, a merchant sales force typically belongs to a bank or a specialized merchant servicing agency working on behalf of a bank. A similar, multi-party distribution model may not be viable in low-income markets due to the challenge of building a cost-effective merchant sales and servicing network from scratch in these often hard-to-reach, low-volume. Therefore, the traditional distribution channel model for merchant sales and service may not be an effective way to acquire SMBs in low-income markets. Accordingly, acquiring SMBs calls for building innovative distribution models through partnerships with market participants already reaching the target segment.

34 The merchant discount rate is the fee charged by acquirers on a merchant’s acquired payment volumes.
Barrier: Friction

Cultural Affinity to Cash – In many markets, cash has greater familiarity and trust among consumers and merchants than electronic payments. In fact, some communities attach deep cultural and religious affinity to coins and currencies. Furthermore, merchants have used cash as a payment method for centuries. To gain traction, the electronic payments experience needs to be just as good as cash. These attachments and experiences with cash are deeply rooted, incenting merchants to continue using cash at the expense of adopting and promoting electronic payments. As discussed later in this study, to help merchants successfully adopt electronic payments, in addition to mimicking the positive attributes of cash, solutions should bring a critical mass of consumer and merchant incentives – credit, loyalty programs, and other value-added services (VAS).

Relevance of Rules – The rules of electronic payment systems were not written with SMBs in mind. It is clear that a “one size fits all” approach, treating large vs. small, urban vs. rural, etc. will not work as quickly or effectively as a more segmented approach. More specifically, the types of rules that are not tailored for SMBs relate to finality of payments and instant availability of funds. In addition, enabling expanded distribution by enabling new distribution partners such as payment facilitators or master merchant models, along with associated rules, may help to create a path forward for bootstrapping a merchant acceptance ecosystem.

Finality of Payment – When a merchant receives cash in return for goods and services sold, the transaction becomes final, right then and there. In a cash-based transaction, the merchant has the final word on issues related to returns, exchanges or other complaints customers may have about goods or services purchased. Whereas if a transaction is made using a pull-based payment system, there could be reversals over which the merchant has little or no control. Even in push-based systems such as M-Pesa in Kenya, consumers can dispute a face-to-face transaction for several reasons, resulting in money being taken back from the merchant. For merchants accepting electronic payments for the first time, it may be a daunting task to understand the complex issue of reversals. Additionally, without a proper understanding of how reversals work, the first occurrence of a reversal could destroy a merchant’s confidence in electronic payments and cause them to revert to cash, once and for all.

Instant Availability of Funds – Given that SMBs rarely have sufficient working capital, it is important they have instant access to funds. These merchants typically use funds from today’s sales to buy stock for “tomorrow’s business”. Under these circumstances, expecting merchants to wait for more than one day to access their sale proceeds can prove to be unviable for merchants at the BoP. Real-time, push payment-based solutions better ensure finality of payment and instant availability of funds to merchants. With such payment capabilities becoming more common, particularly in developing countries such as Jordan, Peru, and India, there is an opportunity for providers to make use of these capabilities to tailor electronic payment solutions for SMBs.

Infrastructure – Gaps in infrastructure in developing countries, particularly in rural areas where SMBs can be concentrated, pose several unique challenges in developing an acceptance network. Poor road infrastructure could create barriers to merchant sales and service efforts, while unreliable communication and power infrastructure could affect the payment experience. These infrastructural deficiencies need to be taken into account when developing electronic solutions for SMBs in such countries.
Creating a Compelling Business Case for Merchant Electronic Payments

In our experience, augmented by research undertaken by a number of NGOs, industry associations, and others, there are a number of value propositions, mitigating actions, and policies that can be brought to bear to help bootstrap a robust and inclusive merchant ecosystem. These approaches tend to fall into three broad categories, discussed in more detail below. It is important to note that while some approaches will resonate more than others, there is no single “silver bullet” that will, in itself, compel merchants to embrace electronic payments. Rather, there will likely be a combination of approaches that will vary by merchant and market characteristics, necessary to create the requisite incentives to adopt and promote electronic payments.

**NEW PRODUCTS & SERVICES:** This approach encompasses the creation of new products and services, focuses on bringing enhanced value propositions, including new Value-Added Services (VAS), to merchants, such as better access to credit and business management tools, that help overcome the barriers discussed above. Furthermore, this approach addresses the opportunity to improve the user product experience through better design.

**NEW BUSINESS MODELS:** Creating new business models involves pursuing innovative approaches to business as well as bringing a broader range of market participants (incumbents, new entrants, non-traditional financial service providers, etc.) together. Such models help to reduce merchant acceptance barriers by providing new ways to cost-effectively expand the merchant ecosystem.

**Figure 5: Summary of approaches and levers to drive electronic payments**

<table>
<thead>
<tr>
<th>APPROACH</th>
<th>OBJECTIVE</th>
<th>POTENTIAL LEVERS</th>
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</thead>
<tbody>
<tr>
<td><strong>New Products &amp; Services</strong></td>
<td>Deploy new products and services to:</td>
<td>Provide Enhanced Value Propositions</td>
</tr>
<tr>
<td></td>
<td>Provide enhanced value proposition</td>
<td>i. Credit</td>
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<td></td>
<td>Improve product experience</td>
<td>ii. Productivity Solutions</td>
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<tr>
<td></td>
<td></td>
<td>iii. Revenue Generating Services</td>
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<td></td>
<td></td>
<td>iv. Loyalty Programs</td>
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<tr>
<td><strong>New Business Models</strong></td>
<td>Pursue innovative business model approaches to:</td>
<td>Improve the Product Experience</td>
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<tr>
<td></td>
<td>Increase collaboration and cooperation among providers</td>
<td>i. Digital ID Solutions</td>
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<tr>
<td></td>
<td>Overcome various acceptance barriers</td>
<td>ii. Smartphone App-Based Solutions</td>
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<td></td>
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<td>iii. Real-time, Push-Payments</td>
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<td></td>
<td></td>
<td>iv. Improved and Robust Transaction Processing</td>
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<tr>
<td></td>
<td></td>
<td>v. Streamlined, Variable, Risk Management Practices</td>
</tr>
<tr>
<td></td>
<td></td>
<td>vi. Technical Interoperability in Products and Services</td>
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<tr>
<td><strong>Market Development Initiatives</strong></td>
<td>Pursue initiatives and partnerships to:</td>
<td>Collaboration and Cooperation Among Payment Service Providers</td>
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<td></td>
<td>Overcome structural barriers to acceptance</td>
<td>i. Grow Both Sides of the Market Simultaneously</td>
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<td></td>
<td>Incent market participation and innovation</td>
<td>ii. Resolve the “Last-Mile” Distribution Challenge</td>
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<td>iii. Enable Interoperability</td>
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<td></td>
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<td>iv. Share Resources with Utility Characteristics</td>
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<tr>
<td></td>
<td></td>
<td><strong>New Partnership Models</strong></td>
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<tr>
<td></td>
<td></td>
<td>i. Cross Subsidize Acceptance Costs</td>
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<td>ii. Digitize Supply Chains</td>
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<td></td>
<td></td>
<td><strong>Overcome Structural Barriers</strong></td>
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<td></td>
<td></td>
<td>i. Establish an Enabling Policy and Regulatory Environment</td>
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<td>ii. Enable Coordination &amp; Alignment Amongst Ecosystem Participants</td>
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<td></td>
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<td>iii. Investments in Payments Enabling Public Goods</td>
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<td></td>
<td></td>
<td><strong>Incent Market Participation and Innovation</strong></td>
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<tr>
<td></td>
<td></td>
<td>i. Establish Collaborative Facilities to Mitigate Business Risk</td>
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<td></td>
<td></td>
<td>ii. Market Enablement of New Ecosystem Participants</td>
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</tbody>
</table>
Creating a compelling business case for merchant electronic payments

Market Development Initiatives: These initiatives involve arrangements, such as public-private partnerships, that are necessary to help create the critical foundational elements for a thriving acceptance ecosystem. Some of the more critical elements include: infrastructure, standards, and education. Additionally, market development requires initiatives that go beyond the enabling environment, and focus on incenting market participation and innovation.

New Products and Services

Provide Enhanced Value Propositions – Enhanced value propositions as well as value-added services (VAS) that are tightly coupled with electronic payment solutions could help mitigate barriers such as economics and friction. These value propositions, coupled with initiatives that meaningfully improve the product and user experience, are each discussed below.

Credit – Assessing the credit worthiness of SMBs on the basis of their electronic payment transaction data is already being used successfully in a number of markets, increasing the likelihood that an informal and or unbanked merchant can receive valuable working capital to expand their business. This is also referred to as "alternative credit decisioning" (ACD). In fact, many studies have indicated that providing even relatively small lines of credit to merchants is one of the most highly valued features of electronic payment acceptance. Furthermore, it is also attractive to lenders because of their ability to leverage the settlement stream to potentially offset their risk exposure.

Figure 6: Summary of data used in global SMB digital lending programs

<table>
<thead>
<tr>
<th>Lenders</th>
<th>Air-time top-up</th>
<th>E-Money Tans</th>
<th>Phone data</th>
<th>Social Media</th>
<th>Psychometrics</th>
<th>Savings</th>
<th>Repayment and other traditional data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Financial Group</td>
<td>X</td>
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<td>Branch</td>
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<td>Commercial Bank of Africa CBA</td>
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<td>Greenshoe Capital</td>
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<td>Inventure</td>
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<tr>
<td>Kenya Commercial Bank (KCB)</td>
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<td>LendingKart</td>
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<tr>
<td>L-Pesa</td>
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<tr>
<td>Decision Platform</td>
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In the absence of traditional decisioning and ACD, informal and often unbanked SMBs face difficulty in accessing working capital loans from formal financial institutions and are often forced to borrow from informal sources at higher interest rates. If credit, linked to the payments stream, could be made available to SMBs at a competitive market rate,
it could be a huge incentive for them to accept electronic payments. As shown in Figure 6 above, a number of digital lending programs are already using electronic payment transaction data and history to aid in the credit decisioning process and expand the scope of their lending.

Productivity Solutions – Solutions that enable merchants to focus on running their businesses and to open up new distribution opportunities. These solutions could strengthen the electronic payments value proposition for merchants, and potentially mitigate the cost of acceptance. For example, smaller retailers may see meaningful benefits in using an order management solution, as such solutions can help increase revenue as well as their customer base by expanding their range of product offerings. The solution could also help small retailers to increase their supplier options, potentially leading to more competitive prices and terms.

While inventory management may not be as directly relevant for micro-entrepreneurs, medium-sized businesses could see meaningful value in such solutions. Inventory management solutions could help retailers manage their inventory efficiently, automate stock replenishments to avoid stock-outs as well as associated lost sales, and finally, better monitor inventory against theft. The cost savings from accessing competitive supplier rates and the efficiency gains from managing inventory could justify for SMBs the perceived cost of accepting electronic payments.

Revenue Generating Services – The ability of SMBs to generate additional revenue streams from services for which they are well positioned to provide is another potential component of a more robust acceptance value proposition. Some of the services that could be bundled with electronic payments include: airtime sales, bill payment, catalog sales (e.g., online ordering and in-store pickup), cash-in and cash-out services, and ticket booking services for travel and entertainment, among others.

Loyalty Programs – Providing merchants with relatively simple, turnkey loyalty programs tied to electronic payments to offer their customers could help them to acquire new customers as well as drive additional visits and incremental sales from existing customers.

Spotlight #1
Square Capital – Leveraging Payments Data to Facilitate Merchant Lending

Square Capital provides loan access to merchants in the U.S., leveraging insights enabled by transaction data processed through Square’s payment service. Square Capital loans are made available within 24 hours and funds are deposited in the merchant’s bank account. Repayment occurs as a fixed percentage of the merchant’s daily card sales. Square Capital’s banking partner, Celtic Bank, issues the loans. Several key eligibility factors are evaluated for a loan through Square Capital:

- Processing volume: In general, businesses that have processed at least $10,000 or more in a year;
- History with Square: Merchant’s history with Square is used to spot trends and understand how the merchant might grow in the future;
- Activity: The number and frequency of payments processed through the merchant’s account with Square;
- Customer diversity: The mix of new and returning customers is used as an indication of the type of growth being experienced by the merchant’s business;
- Business condition: Healthy, and growing merchants.

As on November 2016, Square Capital has lent $1 billion through cash advances and loans to more than 100,000 businesses. Just recently, Square applied for a banking license to further its ability to lend.

Source: Square Capital
New products and services

**Spotlight #2**

**Eeziklik Global**

Eeziklik Global is an ordering and communication platform for small retailers that also offers exclusive promotions on products ordered via the platform. The promotions are available in the form of Kliks, which is the Eeziklik rewards scheme. Kliks earned can be redeemed for cash. Further, Eeziklik offers a loyalty scheme for placing orders using their app, which allows retailers to earn Kliks.

*Source: Eeziklik.*

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**Improving the Product Experience**

Improving the product experience through better product design helps to make electronic payment solutions more cost-efficient, improves the value proposition, reduces regulatory overhead, and helps ensure that appropriate rules are implemented.

**Digital ID Solutions** – Leveraging digital identity solutions already in market or planned can help streamline and simplify merchant validation procedures, making it easier, faster, and more efficient. Regulatory bodies are also advocating the use of digital identity verification for merchants. For example, the 4th AML Directive from the European Union encourages electronic verification of KYC documents for consumers and merchants to comply with AML and CFT norms. In addition, a growing number of countries are investing in national identity systems that often include biometric enablement, which magnify the benefits mentioned above.

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**Info box #2**

To counter the decline in Slovakia’s revenue from value-added taxes (VAT), the government launched a lottery program to incentivize citizens to collect receipts for merchant purchases. As Slovaks register their receipts for the lottery, they will be able to verify if the merchant has issued a receipt with a fake tax identification number, and they can report suspected fraud. Issuing a receipt will register the merchant’s transaction with the government, creating a paper trail for transactions and forcing merchants to pay the sales taxes they owe.

*Source: New York Times*

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**Info box #3**

With the aim of incentivizing digital payments, the Government of India launched a digital lottery scheme called “Lucky Grahak Yojana” for consumers and “Digi Dhan Vyapar Yojana” for merchants. Consumers and merchants are eligible to enter the lottery scheme if they make electronic payment transactions using select government-sponsored payment services. Winners from the customer pool will be selected daily, while the lottery for merchants will be conducted weekly.

**Info box #4**

- **INDIA**: India is on the verge of completing the issuance of its highly successful national biometric ID to all its 1.3 billion residents. The ID system, known as Aadhaar, offers eKYC verification service, a paperless Know Your Customer (KYC) process wherein the identity and address of an individual can be verified electronically.

- **NIGERIA**: The Central Bank of Nigeria, through the Banker Committee and in collaboration with all banks, launched a centralized biometric identification system for the banking industry called Bank Verification Number (BVN). BVN provides a unique identity that can be verified across the Nigerian banking industry.

- **PAKISTAN**: Pakistan’s National Database and Registration Authority (NADRA) issues a Smart National Identity Card (SNIC), a national electronic identity card, which can be used for both offline and online identification.

**Smartphone App-Based Solutions** – Increasing smartphone penetration and advancements in smartphone technology present an opportunity to offer a high-quality user experience. Smartphone and packet data prices are falling, which is already placing more and more Internet-connected devices into the hands of both consumers (to initiate payments) and merchants (to accept multiple forms and brands of electronic payment) in developing countries. Increasing smartphone penetration provides a significant opportunity to design easy-to-understand-and-use payment applications, which can significantly improve user adoption, security, and experience. Mobile POS solutions such as iZettle and Square, which enable merchants to accept card payments using a portable card reader that can be attached to a smartphone, bring down the upfront cost of accepting electronic payments. Such solutions have dramatically changed the way payments are accepted by SMBs in developed and developing countries alike.
Real-time Push Payments – Electronic payment solution providers should consider focusing on developing “push” payment-based merchant acceptance solutions in order to help bring down the upfront hardware cost, ensure finality of payments, minimize disputes and exception items, as well as provide instant or near real-time availability of funds. Mobile phone-based “push” payment systems can support electronic payment transactions entirely on a mobile phone without the need for a traditional POS terminal at the point of interaction (POI). Further, QR code-based “push” payment solutions could further bring down upfront costs, since the merchant only needs a static QR code to accept electronic payments. The risk of insufficient funds and reversals are reduced in “push” payment systems. Finally, most “push” payment systems offer instant availability of funds, further reinforcing the suitable of this approach for SMBs.

Spotlight #4
Unified Payment Interface, India

In India, Unified Payment Interface (UPI), a mobile “push” and request-to-pay (partial “pull”) payment service, allows users to assign a customized “virtual payment address” that can be used for exchanging P2P and P2M payments. Mobile numbers and national ID numbers can also be used as payment addresses for making payments. One of the main goals of UPI is to make accepting electronic payments easier for SMBs. Customers can make UPI payments using smartphones as well as feature phones. Merchants need a cell phone only to receive payment notifications.

Spotlight #3
Masterpass QR

Masterpass QR is a quick response (QR) code-based payment solution that allows customers to pay for goods and services from their smartphone by scanning a merchant’s unique QR code. Both the merchant and the consumer get instant notification of the payment transaction. The service allows merchants to accept electronic payment without having to install a POS terminal. As of August 2017, Masterpass QR was live in a number of markets in the Middle East, Africa and Asia.

- In Pakistan, United Bank Limited launched Masterpass, allowing consumers to use their mobile banking app to pay for goods and services.
- Masterpass was launched in Nigeria through a partnership with the Ecobank Trans International Group. The partnership was later extended, and Masterpass QR was rolled out in 33 countries across Africa in conjunction with the launch of the financial institution’s new mobile banking app.
- United Bank for Africa (UBA) introduced a merchant-focused app in Africa aimed at creating a SMART (secure, mobile, accessible, reliable, transparent) network of 100,000 micro-merchants in Nigeria, using Masterpass QR to drive efficiency and a secure method to accept payments.
- Masterpass QR was launched in Kenya together with a commitment to empower 150,000 MSMEs in 2017 by giving them access to the solution.
- The solution has since been rolled out to a number of markets across the region, most notably in Rwanda, Tanzania, Uganda and Ghana.
- Initially launched in India with RBL Bank, the solution has been augmented to allow for the acceptance of payments from other payment marks (e.g., RuPay, Visa).

QR code-based systems require consumers to have a smartphone to read QR codes and may not be suitable for markets with low penetration of smartphones. In such markets, electronic payment solutions could explore various “payment addressing” approaches as an option. With payment addressing, customers and merchants can transact using simple payment handles such as mobile numbers, national ID numbers or virtual IDs (e.g., “sam@mybank”) without having to exchange complicated account numbers or merchant TIL (“till”) numbers.

35 Point of Interaction is an umbrella term for a range of acceptance devices used to enable electronic payments. POS is the traditional acceptance device, but technological innovation is driving the introduction of new POIs such as mPOS and QR codes.
Creating a compelling business case for merchant electronic payments

**Improving the product experience**

**Improved and Robust Transaction Processing** – The electronic payment solution should ensure robust transaction processing performance that includes fast transaction processing time as well as low connection timeout and failure rates. While transactions are of low value on average, many SMBs handle high volumes of low-value transactions during peak business hours. Therefore, simplicity, efficiency and robustness in getting paid will be a key deciding factor in choosing a payment method. One point of comparison could be the average time for an SMB cash transaction. Other design considerations include high connection uptime and success rates, even in environments with spotty connections. For example, one way to improve transaction reliability is to build solutions that have an optimum balance between online and offline processes as a fallback. Particularly in emerging markets with underdeveloped or unreliable communication infrastructure, offline authorization and authentication should be pursued as an important go-to-market feature to lower transaction processing time and connection timeout rates.

**Streamlined, Variable Risk Management Practices** – Investing in streamlined, flexible risk management practices as well as bundling merchant protection and insurance programs can further help in addressing the issue of payments finality. As noted above, SMBs do not usually have the financial wherewithal to withstand the risk of non-payment due to insufficient funds, fraud, funding delays, or processing errors. Therefore, providers can increase the chances for merchant adoption by investing in risk management practices that ensure “good funds” authorizations. Particularly in solutions that operate in offline environments, there could be heightened risk of non-payment due to insufficient funds. Secondly, reversals as a result of fraud, stolen payment credentials or customer disputes could have a lasting impact on the merchant’s trust of electronic payment solutions. Therefore, solutions should give consideration to building such protections and safeguards into the scheme’s rules, system architecture and supporting infrastructure, as well as bundling merchant protection programs or insurance schemes to cover such losses as applicable.

**Technical Interoperability in Products and Services** – Merchants just want to sell their goods and services and accept any cost-effective payment scheme their customers want to use. As such, merchants should not be put in the position of having to pick one or two “winners” in a competitive marketplace, and optimally, should not be required to invest in scheme-specific hardware to accept multiple payment types that their customers may want to use.36

In several markets, however, competing electronic payment systems do not interoperate and in such cases, it is expensive for merchants to accept multiple electronic payment schemes. Merchants need to invest not only in the hardware to support multiple electronic payment schemes, but also time and resources in learning how to use these systems, training customer-facing employees, and reconciling payments received from different systems. A recent study by CGAP showed that 10 out of 20 countries examined did not demonstrate a clear pattern of interoperability in their electronic payment systems.37 This lack of interoperability can lead SMBs to view electronic payments as unattractive and unviable.

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36 In the United States and other developed markets, Mastercard and Visa are not interoperable at the scheme level, but from a merchant’s perspective, are interoperable since the same POS device accommodates both payment types.

From a merchant's perspective, interoperability should be an essential feature of electronic payment systems, and ensuring technical interoperability is one of the essential steps. Technical interoperability can be supported in a number of different ways, the suitability of each depending on market-specific situations and can include: interoperability at the device level, issuing companion cards, establishing technical standards for interoperability, or creating open-access, market-wide merchant-side infrastructure.

Issuing a "companion" card\(^\text{38}\) to a mobile money account has worked effectively as a workaround for interoperability in markets where there is already an adequate penetration of POS terminals. Instead of having to sign up merchants to accept mobile money, by issuing a "companion" card to mobile money accounts, customers can access funds in their mobile money accounts at card-enabled merchants. However this strategy may not be ideal for signing up new SMBs, as it would require them to invest in a POS terminal. That said, physical cards can be made "virtual" by means of QR codes, such that the companion "card" can be used at merchants equipped with a smartphone, thereby enabling them to cost-effectively enter the payments system.

As noted, establishing industry standards to be followed by participating providers can also facilitate enabling technical interoperability of electronic payment systems.

That said, creating open-access, market-wide payment infrastructure whose development is orchestrated by the government or a central agency takes a long-term perspective on electronic payment interoperability. Importantly, several countries such as Egypt, India, Peru, and Jordan are building interoperable payment infrastructure that is open for various types of financial service providers to participate.

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\(^{38}\) A "companion" card is a payment card that is linked to a mobile money account, which can be used for making card purchases at card accepting establishments or for ATM transactions, such as withdrawals. A "companion" card is usually cobranded with a domestic or an international card network.
New Business Models

The traditional four-party merchant acceptance business model can be revisited and customized to serve SMBs. One opportunity is collaboration and cooperation among payment service providers for non-strategic functions and activities, that do not provide competitive differentiation, yet can drive a range of ecosystem benefits. In addition, new partnership models could allow for the inclusion of non-traditional actors in the payment acceptance value chain.

Growing Both Sides of the Market Simultaneously – Several studies have pointed out that merchants lack enthusiasm for electronic payments because consumer demand is perceived to be low. Simultaneously, customers are less likely to use electronic payment solutions (or in some situations, keep idle balances in their transaction accounts) in a market with only few accepting merchants. Therefore, it is critical to grow the two sides of the market simultaneously to ensure critical mass on both sides. Development of the acceptance side of the market must be aligned to issuance.

Spotlight #5
South African Social Security Agency Partnership with Mastercard

The South African Social Security Agency (SASSA) provides comprehensive social security services to South African citizens who are vulnerable or living in poverty. Due to the reliance on cash and the manual nature of payment disbursements, SASSA’s system for paying out government grants was historically rife with corruption and fraud. To combat corruption and improve efficiency, SASSA partnered with private-industry players including Net1, Grindrod Bank, and Mastercard to develop a UEPS/EMV debit Mastercard that can also hold biometric identification, in order to authenticate cardholder identity and authorize spending. Social Security payments are disbursed directly onto the card electronically, while the card can be used only by the authorized beneficiary.

In order for the program to be embraced by consumers, an expanded acceptance footprint was critical. To expand the merchant network, Mastercard developed new relationships with financial and non-traditional partners that offered new acceptance opportunities. One particular Mastercard-driven initiative was to increase acceptance at 22,000 relevant merchants located primarily in rural and near-urban locations.

The project is an important example for demonstrating that payments is a two-sided business. Not only is it important to create electronic payment capabilities among consumers, but it is also necessary to create an acceptance network where consumers conduct their day-to-day transactions. Finally, both sides of the business need focused attention with coordinated timing.

Resolve the “Last Mile” Distribution Challenge – Cooperation among service providers to divide up the task of signing up merchants could be an effective way to resolve the “last mile” challenge. Particularly in markets where electronic payments are interoperable, a strategy of cooperation among service providers could prove effective in lowering the cost of serving SMBs. Through cooperation, some service providers could focus on signing up merchants, while others focus on driving customer adoption. By specializing, providers would gain from economies of scale and the ability to cost-effectively expand acceptance.

39 A four-party business model is a common arrangement for enabling debit and credit card acceptance, which consists of consumers, retailers, issuers and acquirers with a card scheme in the middle enabling interaction among the four parties.

Creating a Compelling Business Case for Merchant Electronic Payments

New business models

Enabling Interoperability – As noted above, interoperability of electronic payment solutions is a critical factor for ensuring the ubiquity of acceptance, and success in interoperability is more likely to be attained through collaborative efforts than through a purely technological approach.

Interoperability of electronic payment solutions is often mistaken as a purely technological problem. But several studies have pointed out that interoperability is much more than a technological challenge.41 In fact, experience from markets where interoperability exists suggests that collaboration and cooperation among electronic payment providers has been a critical factor. By balancing cooperation and competition, providers can create an interoperable ecosystem for electronic payments whereby merchants and customers are able to exchange electronic payments regardless of their service provider, resulting in greater overall volumes versus go-it-alone approaches.

Share Resources with Utility Characteristics – In addition to acquiring merchants and customers, several functions in the merchant acceptance value chain, which do not necessarily have to be developed and delivered separately by every electronic payments solution provider in the market. Through collaboration and cooperation, functions such as scheme-level marketing, merchant training, risk and dispute management services, certain value-added services (i.e., those not offering opportunities to provide strategic differentiation), and technology infrastructure can be shared among market participants to reduce costs. Such collaborative initiatives not only result in efficiency gains, but can also improve speed to market and bring down the overall cost for providers, which, in turn, can lead to cost reductions for SMBs and improved penetration (see Fig. 7). Note that in some cases, open-loop card schemes are doing much of this (e.g., shared risk management functions such as the Terminated Merchant File). In addition, it is important to note that there are likely opportunities for non-traditional financial institutions such as microfinance institutions, technology providers, as well as SMB product and service providers (to name a few) to provide functions along the acceptance value chain.

Info box #6
In competing mobile money services – M-Pesa, Airtel Money, Tigo Cash and Ezy Pesa – formed a partnership to offer interoperable P2P payment services. More recently, interoperability has been expanded to include some banks. While several conducive factors led to the formation of an interoperable ecosystem, collaboration and cooperation among the competing service providers was the key enabler. CGAP credits the process led by the industry as the top reason for successful establishment of interoperability in Tanzania. It must be noted, however, that this interoperability has been achieved through bilateral agreements. The opportunity going forward is to drive more cost-effective approaches to interoperability, providing value to consumers through a more inclusive and lower-cost ecosystem.

Spotlight #6
BIM, Peru

In Peru, over 35 financial service providers came together to create a common mobile money brand called BIM. BIM is not only a common brand but also a common interoperable mobile money platform that shares resources and functions to issue mobile money services. For instance, all the participating financial service providers issued wallets using a common technology platform. BIM also enables a common experience for consumers across providers through a common user interface/USSD screens for all BIM wallets.

Figure 7: Traditional Merchant-acquiring Value Chain


New Partnership Models

New ways of thinking about payments and the models necessary to drive acceptance with SMBs are critical to ensure robust ecosystem development for financial inclusion. One example is merchant value propositions that subsidize the cost of acceptance. In addition, new approaches to distribution and channel partners will help to enable the reach necessary for solving the “last mile” problem.

Cross-subsidize Acceptance Costs – There could be opportunities to create partnerships with non-financial entities that could also benefit from digitizing SMBs. For example, FMCG (fast-moving consumer goods) firms could be willing to subsidize the cost of acceptance in order to gain visibility into valuable consumer behavior and other marketing data. ECommerce and catalog companies might be interested in leveraging SMBs to serve as a point for order and delivery of consumer purchases. For SMBs, acting as an agent of an eCommerce company can generate additional revenue from the agency business as well as increase customer footfall, likely leading to increased sales. Electronic payment providers could collaborate with these players to design promotional programs incorporating these offerings into their value propositions.

Digitize Supply Chains – Collaboration with procurement and supplier networks to digitize supply chains will further increase the relevance of electronic payments for merchants. Merchants that accept electronic payments still have to convert electronic money into cash to pay their suppliers and, therefore, discourage customers from making electronic payments. Digitizing supply chains by collaborating with FMCG companies and other large suppliers will incentivize merchants to accept electronic payments from their consumers. In addition to FMCGs, there are other opportunities to work with entities already serving the target population to drive distribution of merchant acceptance capabilities. Such arrangements will generate positive network effects and help spur the adoption of electronic payments.

Spotlight #7
Mastercard-Unilever Partnership, Kenya

Mastercard has partnered with Unilever to pursue their common goal of empowering SME entrepreneurs in emerging markets. In Kenya, the partners are working together with a local bank to digitize the route to market by offering an interest-free credit solution to small stores. While providing a tangible benefit to shopkeepers, this linkage of credit to electronic payments expands the acceptance footprint:

• Short-term interest-free credit is offered for purchases of Unilever products through a digital Mastercard commercial payment solution;
• Accompanied by a tailored education program, shopkeepers understand their credit lines increase in line with records on sales history and electronic acceptance;
• Repayment of credit is possible in cash through the local bank agency network but also digitally, and shopkeepers understand electronic payments acceptance makes it easier to repay their credit;
• Mastercard facilitates payments acceptance through the simultaneous launch of Mastercard QR, a digital payment proposition for consumers.

This program encourages shopkeepers to digitize payment flows as a means of growing their business. Unilever benefits from becoming a preferred supplier, while the bank acquires new customers and minimizes risk. Mastercard is able to expand the acceptance footprint supporting financial inclusion.
Market Development Initiatives

Market development initiatives are fundamental to ensuring the critical elements of the ecosystem are in place so merchant acceptance can progress. In some cases, the private sector can play the role of catalyst and drive efforts forward to a critical mass or tipping point. At this juncture, it is important for governments and multilateral organizations to step in and continue progress through additional investments. Two principal types of market development initiatives are summarized. Those aimed at overcoming structural barriers are touched on first, then those focused on incenting market participation and innovation are addressed.

Establish an Enabling Policy and Regulatory Environment – Government can play a critical role in advancing the adoption of merchant acceptance at the base of the pyramid (BoP) by establishing an enabling policy and regulatory environment. The rationale for government participation is two-fold: first, enabling policy interventions improve the overall public good; and second, governments are the largest beneficiaries of savings stemming from the adoption of electronic payments. Two principles that can guide policymakers in the establishment of this enabling environment are highlighted. First, focus on creating a competitive environment by establishing a level playing field. In such an environment, proper signals can guide actors, and economic incentives are not distorted. This can be further supported by a clear delineation of roles and responsibilities. The second principle is to ensure optimal prices, as proper pricing provides the necessary incentives to drive innovation and adoption. Furthermore, governments should allow market forces to determine the optimal prices.

Four constituents of the payments ecosystem need to be considered in crafting policies that promote an enabling policy environment and the growth of payments. Payment Service Providers, to ensure the supply of payments capabilities. Merchants and Consumers, to ensure merchant adoption of value propositions and corresponding consumer usage, which further enhances the value of acceptance; and finally, governments themselves, to compel the electronification of payments flows (e.g., salaries, pension and social disbursements) and drive critical mass in the ecosystem.
Market development initiatives

A level playing field can help enable the incentives and signals necessary to drive innovation, and thereby facilitate the emergence of a competitive environment. One example is policies allowing for the entrance of new, non-traditional players into markets. In the last decade, several countries in Asia and Africa have allowed mobile network operators to offer payment services. India, for example, has created the designation of "payments banks", which allows players from diverse backgrounds to participate in the payments industry. Another policy approach is to foster collaboration and reward players that do so in a market-building, financially inclusive manner. For example, regulators in various countries have tried to mandate interoperability in the past, which has not worked very well. Instead of mandating collaboration, government could implement policies that encourage providers to work together. Finally, the delineation of responsibilities between regulator and operator can foster a competitive environment. With role clarity, incentives are clear and ecosystem participants can undertake the necessary investments to build out capabilities because of greater certainty on the return from investments.

Optimal pricing ensures a market return on investment, incenting participation by key actors. Such pricing is best achieved through market forces. A recent report, for example, notes the importance of a market-determined merchant discount rate (MDR) to the sustained growth of the payment industry, because it incentivizes: (a) banks to issue cards and promote their usage; (b) card schemes to manage and grow their card network; and (c) banks and non-banks to acquire merchants. In this case, regular dialog between the regulator and industry was also identified as a vital factor to ensure optimum pricing. Setting or mandating artificial ceilings would stymie market development as key participants are dis-incented to participate because of insufficient returns. To illustrate the importance of market pricing, look to the experience of interest-rate ceilings imposed on credit in many developing countries to improve access for base of the pyramid populations. These ceilings ended up rolling back progress in deepening financial systems, and consolidated credit in the hands of wealthy, politically connected individuals.

Policies focused on payment service providers should address barriers to innovation, promote the adoption of new technology and ensure consistency of purpose. Removing barriers to innovation allows PSPs to develop and deploy new approaches. For example, by collaborating with relevant financial regulators, proportional risk-based merchant validation processes could be implemented. Proportional risk-based validation could allow exemptions from a regular, more intensive merchant validation process for SMBs falling under predetermined "low-risk" categories, such as merchants with business turnover below a certain threshold. In some cases, incentives can be offered for the adoption of new low-cost technology by merchants, but may result in lower revenues for providers. In such cases, government policy should aim for provider revenue neutrality and address lost MDR. Finally, policy interventions impacting service providers need to be made within a robust framework, to ensure consistency of policy and desired impact. For example, taxes and duties levied on the import of acceptance technology such as POS devices are at odds with efforts to promote the expansion of acceptance. Robust frameworks would help to ensure that inconsistencies do not minimize the effectiveness of policy in realizing its objective.

Policy aimed at driving merchant adoption should focus on two themes: 1) providing incentives for adoption; and 2) minimizing the economic advantages of informality. Incentives for the introduction of innovative technology should address cost. Such incentives help to offset the initial friction in the move to electronic payments as well as addressing the ease of using cash. The implementation of cost-effective technologies, such as quick response (QR) code acceptance, is one example. Government policy, however, should not favor a specific technology. Instead, there should be a push for “technology neutrality”, requiring that regulation be outcome based and not mandate the adoption of a particular type of technology, so as not to hinder innovation and efficiency.

Secondly, there is a need for policy to address the economic benefits to merchants that accrues from informality and their ability to avoid taxes by using cash. For example, electronic payment providers and governments can collaborate to develop tax programs and perhaps offer tax rebates that incentivize SMBs to accept electronic payments despite having their revenues becoming more visible (e.g., tax waiver/amnesty periods). In addition, governments can also offer volume-based tax rebates or tax credits for transactions exceeding a certain percentage of total turnover.

Financial literacy, a structural barrier to the adoption of financial products, needs to be addressed by policy to support consumer adoption. Consumer literacy is important because many micro-enterprises are sole proprietorships. Literacy ensures consumers are familiar with the various facets of financial products and are able to leverage these products to improve their well-being and maximize the potential benefits of financial inclusion. Hence, initiatives to extend and deepen financial inclusion by electronifying payments and expanding acceptance alone are not sufficient. As a public good, however, efforts to promote financial literacy must go beyond enabling policies and require investments. This is addressed in a subsequent section.

In addition to supporting an enabling policy environment, government can play a role in creating a critical mass of acceptance. First, by adopting policies to incent the electronification of flows reaching consumers from various agencies; second by...
subsidizing acceptance to drive its initial uptake. Electronification of government flows to individuals includes payment of salaries, pensions and government benefits to individuals as well as the receipt of payments from individuals. Electronification of these often substantial flows can help to create the critical mass that supports the growth of merchant acceptance.

Subsidizing the cost of acceptance, particularly during the early stages of development, can help drive the attainment of critical mass. More and more governments and donor agencies are committing meaningful levels of resources to the cause of financial inclusion. For example, in 2016, when the Indian government demonetized a majority of its currency, the government provided two point-of-sale machines for free to each village with a population over 8,000. In addition, the government also capped MDRs for low value transactions for a limited period to spur electronic payment adoption. For transactions up to Rs 1,000 (~USD 15) MDR was capped at 0.25% of the transaction value, and for transactions between Rs 1,000 (~USD 15), and Rs 2,000 (~USD 30), MDR was capped at 0.5% of the transaction value.

Enable Coordination & Alignment Amongst Ecosystem Participants – Regulators or other central authorities could take a leading role to enable coordination and alignment among payment ecosystem participants, with the goal of building and growing an acceptance network of SMBs. This is the role the payment schemes have played in developing industry standards. In some cases, however, governments might be better placed to take the lead in implementing initiatives that will compel competing players to align on a mission and to collaborate accordingly. For example, the National Payments Corporation of India, which manages most of the retail payment systems in that country, took the lead to bring together competing card brands such as Mastercard, Visa, RuPay, and American Express and laid out an interoperable QR code-based standard to launch Bharat QR, an interoperable QR code-based payment service. A central authority could also create simple collaborative opportunities that help competing players to come together and align on common goals such as expanding acceptance among SMBs, to share ideas to achieve the goal and provide a platform to germinate partnerships.

Investments in Payments Enabling Public Goods – There is a need for public sector stakeholders as well as international development agencies to invest in financial literacy. Financial literacy is a structural barrier that creates friction to the adoption of payments and needs to be addressed as a market development initiative. Literacy ensures consumers and potential customers are familiar with financial products, understand product options as well as their legal rights and are able to leverage these products to manage their financial well-being, thereby maximizing the potential benefits of financial inclusion. Investments in programs and tools to familiarize consumers with electronic payments and address any prejudices can help to advance the market. While payment providers have recognized this, and in some cases undertaken efforts to improve literacy and will continue to do so, literacy is a public good. As a public good, governments and multilateral institutions need to support literacy efforts around initiatives, recognizing that payment providers are not equipped to sufficiently address them.

Beyond financial literacy, a base level of public infrastructure is essential for electronic payments to grow. Public goods such as reliable telecommunication and power infrastructure, a basic banking network, and law and order to ensure safety and security are essential to create a conducive ecosystem for electronic payments to reach SMBs.
In developing markets, it is not viable for providers to expand the acceptance network
to low-income markets when some of above mentioned public infrastructure is
unavailable or unreliable. Public-private partnership is a useful framework to effectively
address gaps in payments enabling public goods.

Incent Market Participation and Innovation

In a number of instances, the private sector can play the role of catalyst and drive
efforts to a critical mass or tipping point. When efforts reach a critical mass, other
private sector actors may enter the market.

Establish Collaborative Facilities to Mitigate Business Risk – Collaborating with
relevant stakeholders to share risks and risk-mitigation best practices can help
accelerate electronic payment acceptance among SMBs. There could be opportunities,
for example, to create partnerships with relevant stakeholders and donor agencies
interested in enabling a merchant acceptance network among SMBs, to share or
underwrite some risks, particularly in the early stages of new payment systems (i.e., as
participants in the new system come up the learning curve). Such efforts would provide
a demonstration effect and potentially incent the entrance of new players into the
market.

Market Enablement of New Ecosystem Participants – Creating the right conditions
to enable new innovative players to enter and participate in the payments ecosystem
is a critical element of market development. Such players bring new perspectives,
approaches and technologies to addressing the challenges of the market, whether it
is new solutions and associated technologies or new business models for serving the
population. Payments networks have played a positive role in promoting the entrance
of new players into the ecosystems in a manner that does not introduce additional risk.
For example, new rules have been introduced to leverage the low-cost onboarding and
servicing capabilities of payment facilitators. Within market environments, supported
by enabling government policy outlined earlier, traditional players such as payment
networks will continue to work with new players to drive the innovative approaches
necessary to enable viable merchant acceptance at scale, the net effect being to
continue improving the commercial viability of serving the base of the pyramid.

Spotlight #10
Mastercard-IFC Partnership

Mastercard and IFC entered into a partnership, aimed at expanding payment issuance
in emerging markets. This partnership was expanded through the creation of a second
facility, aimed to encourage acquirers and other distribution partners (e.g., payment
facilitators) to enter into or expand operations in the SMB segment in emerging
-market countries.

Assistance from the partnership will focus on three areas:

1. Strengthening the ability of program participants to take additional, but acceptable, risks
   on acceptance activity related to SME merchants;
2. Strengthening the ability of program participants to offer working capital facilities
   (including cash advances, business credit cards, overdrafts, loans) to SME merchants;
3. Exploring the establishment of new PFs focused on onboarding and servicing smaller
   merchants for acceptance programs.
Incent Market Participation and Innovation

Info box #8
Given their success in developing global acceptance networks, there are a number of learnings from card schemes that can be helpful considerations as developing markets build out acceptance networks.

• Merchants just want to be merchants and not have to be payments experts, “pick winners”, or otherwise have to choose between or make investments (time, money, etc.) in multiple payments schemes. They just want to accept whatever their customers want to use (as long as it’s relatively easy and cost-effective). This argues strongly for scheme interoperability, at least from the merchant hardware and software perspectives.

• Payments are a two-sided business. Accordingly, merchants need not only a strong merchant-centric value proposition, but also a critical mass of customers that want to use that system. Consumers also need a strong value proposition (which is often and need not be the same as the merchant value proposition) as well as a critical mass of merchants that accept the payment type. Accordingly, both sides of the market need focused attention with coordinated timing.

• Merchants will gladly pay for new customers, more visits from existing customers, and customers buying more and higher-margin goods and services. In card-based systems, this has been achieved via associated credit lines, loyalty and affinity programs, low-friction transactions, etc.

• Merchants will pay for payment solutions that lower their cost of doing business (e.g., reduce employee theft, reduce the number of trips to the bank to deposit cash, etc.).

• SMBs’ need for even modest amounts of credit is universal. Tying that credit to a merchant’s payment provider creates a number of benefits, including the ability to make better credit decisions based on the SMB’s payment history as well as the ability to tap into the settlement stream for loan repayment.

• Offering consumers credit, either directly by the merchant or a third party, will provide a sales lift. In many markets, providing consumers with more spending power translates into new and higher sales.

• Security matters – a lot. Strong accuracy, security, safety and access to funds are “table stakes” – not a feature.

• Third-party and non-financial providers (e.g., FinTech firms, outsourcing firms) can play a critical role in building merchant ecosystems. For example, by aggregating volume across value-chain participants, they can provide scale economies in cost structures to a wide range of merchant service providers.

• Payment facilitators and aggregators are an extremely cost-effective and expedient approach to enrolling, underwriting, and managing smaller merchants.

• Common standards allow FIs, FinTech firms, and others to more easily connect to the payment systems and help facilitate reaching scale more quickly and cost effectively as well as foster innovation.
The Way Forward
Growing an electronic payment acceptance network among the SMBs serving the base of the pyramid is a necessary step in the financial inclusion journey. SMBs help to bridge the gap between consumers having access to financial services and using the services in a meaningful way.

When consumers have a critical mass of merchants that accept electronic payments for their “everyday spend”, they will have a reason to leave balances in their electronic wallets or accounts versus “cashing out”, driving utility from payments and the creation of digital liquidity. And importantly, there is no question that merchants would willingly accept electronic payments if consumers actively demanded it, so as to keep their customers happy and to avoid losing business to competitors who are acceptors. To the extent that electronic payments bring them better access to credit, new customers, more visits from existing customers, and higher spending per visit, merchants see an even more compelling value proposition and corresponding willingness to pay for the service.

Furthermore, when suppliers do not accept electronic payments, SMBs need meaningful levels of cash on hand to pay them, which dissuades them from accepting electronic money. Therefore, in addition to making consumer and merchant-centric electronic payment solutions available in the market, a concerted effort by all relevant stakeholders – including providers, public and private sector participants – is required to create a thriving ecosystem. To the extent that more flows are addressed by the ecosystem, there will be a corresponding increase in the value of digital liquidity.

In summary, some of the effective ways to address the challenges of building the ecosystem for payment acceptance among SMBs at the base of the pyramid include:

- **Make useful additions to product propositions to make electronic payment solutions attractive and relevant to SMBs;**
- **Design new business models to reduce costs and increase the viability of business models serving SMBs;**
- **Invest in market development initiatives through collaboration with the public and private sectors in order to overcome structural barriers to acceptance and to incent market participation and innovation.**

It is important for providers to realize that building an acceptance network among SMBs may not result in immediate returns. Players have to invest ahead of the curve to drive scale in middle- and low-income markets. One of the ways to remain committed to a long-term investment horizon is by involving a variety of players that all stand to benefit from an electronic payment acceptance network, in building the ecosystem and sharing the cost of waiting. Therefore, developing business models and leveraging collaborations to expand acceptance should be given more importance and attention.

Finally, expanding electronic payment acceptance among SMBs is a complex task. However, business and societal dividends of enabling SMBs to accept electronic payments can outperform the investment. In addition to customers improving their financial lives, financial service providers and other value-chain participants will profitably grow, while governments and international agencies are better able to achieve universal financial inclusion goals.