



WHITE PAPER
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Scaling digital wallets: unlocking a sustainable path to profitability



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Opening wallets up



Douglas Feagin
President of Ant International

The rise of digital wallets has transformed the way we pay, shop, and travel. Over the past 20 years, Alipay, PayPay, GCash, Kakaopay, Dana and their peers have empowered millions of people with digital payments.

These new customers in turn have created massive new growth opportunities for merchants globally, especially in the world's fastest growing markets. With many wallets already achieving nation-wide market penetration, what comes next?

As a technology connector in the global fintech ecosystem, Ant International believes that with new explorations in super interoperability and new technologies for the future-ready super app, the industry stands at the dawn of a new era of growth for the digital wallet industry.

Over the past few years, Alipay+ and our global wallet partners set out on an adventure to expand the horizon of growth through new patterns of connectivity across borders and barriers. By unifying hundreds of QR code standards from diverse markets into one single, interoperable solution that can be accessed worldwide, and working with national payment schemes as well as local acquiring partners, Alipay+ enables wallets to pay beyond borders and help merchants of every size to accept payments from wallets globally with just one integration. Today, through the support of Alipay+, 100 million merchants in over 100 markets can transact with 40 mobile payment apps with 1.8 billion user accounts, building international possibilities for communities large and small.

The experiment is going far beyond the wallet community. New layers of interoperability are flourishing as wallets, cards, banks and payment systems embrace open, collaborative innovation with like-minded industry leaders like Mastercard. Today Alipay+ wallet users may pay by a simple tap at all Mastercard POS terminals through our joint initiative for NFC payments. In addition, banks can provide seamless bank-to-wallet remittance services to their customers with support from Swift, leveraging the ISO 20022 financial messaging standard.

Another trend to watch is how wallets embrace new AI tools to quicken their evolution into next-gen SuperApps. In the travel sector, Alipay+ Voyager is accelerating the convergence between digital wallets, AI and global travel ecosystems. Embedded within wallet apps, Voyager connects leading travel service providers — including online travel agencies, airlines, hotel groups, and mobility operators — directly to wallet users across markets. This integration coupled with an AI travel agent enables seamless and personalized end-to-end journeys, while supporting both user engagement and ecosystem expansion on a global scale. Through new marketing tools, remittance corridors, and digital services, wallets work with partners to go beyond payments and create new ways to connect with consumers. These opportunities, as this report highlights, will be key to diversifying revenue streams and ensuring the long-term viability of wallet providers.

The findings of this paper reinforce what we see every day — the wallet industry is embracing a new wave of technological innovation, where interoperability, cross-border flows, and digital ecosystems converge to shape the future of commerce. Alipay+ and Ant International strive to be a "super connector" for wallets and other industry leaders like Mastercard who are collectively shaping this quiet revolution. The commitment to openness, collaboration and cross-sector innovation that inspires this whitepaper is surely the most critical foundation on which we build this more connected and prosperous digital future.



Unfolding innovation



Gaurang Shah
Executive Vice President, Global Acceptance and Merchant Solutions Core Payments, Mastercard

Fifteen years ago, digital wallets in emerging markets were far more limited in their scope – often only used to store prepaid value and send small payments. Today, wallets are gateways to the digital economy, lifelines for the unbanked, and launchpads for broader financial services.

Recent years have seen wallets expand into multi-service platforms which drive customer engagement, retention, and offer providers routes to new revenue streams.

This has been driven by increased smartphone penetration alongside declining cash usage, with wallets fast becoming the preferred payment method across regions like Latin America and the Caribbean, Asia-Pacific, Eastern Europe, the Middle East, and Africa.

But while growth has been rapid – supported by this consumer demand, increased innovation, and more relaxed regulation – most wallets in emerging markets are still working towards profitability.

Our research with global research and strategy consulting firm, Kaiser Associates, has revealed that wallets in emerging markets have already moved from closed-loop, stored-value wallets, to more open ecosystems with wider use cases and additional services.

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This next wave of innovation is characterized by a shift towards 'one-stop shop' solutions.

5.8b

Total number of people expected to use digital wallets in 2029

\$17.4t

Projected total spend using digital wallets

11.6%

Compound annual growth rate (CAGR) ¹





The future now lies in becoming 'SuperApps', and this next wave of innovation is characterized by a shift towards 'one-stop shop' solutions. In the drive to meet consumer demands for convenience, providers are exploring everything from merchant acceptance and cross-border payments to credit cards, insurance, investment products, and in-app marketplaces.

With so many routes available to wallet providers, identifying a sustainable path to profitability is the key challenge they face.

Our research shows card payments and increasing merchant acceptance services will continue to be key drivers of sustainable revenue and growth, supported by strategic partnerships - such as those with global payment networks - which will unlock scale and flexibility.

Alongside this, diversifying revenue streams into financial services such as cross-border payments and remittances presents a significant opportunity to achieve stable, low risk, profit margins.

Digital wallets in emerging markets have come a long way already. But the next chapter will be defined not just by scale, but by sustainability.

At Mastercard we partner with digital wallets to help them achieve both of these - offering a range of solutions which provide value to wallet providers, merchants and consumers alike.

As providers race toward SuperApp status, the most successful wallets will be those that create collaborative, interoperable ecosystems - delivering trust, scale, and convenience. This is what will determine the future profitability, and ultimately longevity, of digital wallets in emerging markets.

Despite the historic dominance of International Money Transfer Operators (IMTOs) and exchange houses, global remittance capabilities are emerging as a key opportunity for wallets to capture, particularly in these markets which have high levels of migration. We're also seeing wallet providers broadening their offering to include other financial products such as microlending and embedded finance but as the research suggests, this comes with higher risk, especially given emerging markets tend to cater to lower socio-economic groups.

While several revenue opportunities exist, wallet providers must find a way to unlock the most sustainable path.

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As providers race toward SuperApp status, the most successful wallets will be those that create collaborative, interoperable ecosystems - delivering trust, scale, and convenience.

Introduction

In this section:

- Context and introduction to digital wallets
- Introducing the research and methodology
- Drivers of growth

Digital payments are evolving fast, with global cash use down 20% since 2019 and falling 4% annually.²

Accelerated by the COVID-19 pandemic, digital wallets now connect people, merchants, and economies - reshaping how people shop, work, and live. Brands like PayPal, Apple, and Google quickly saw that embedding payments into digital ecosystems drives loyalty and scale. Apple Pay alone had 744 million users in 2024, projected to hit 1 billion by 2030.³

This transformation is even more apparent in emerging markets, where digital wallets are often the primary access point to financial services.



Asia-Pacific leads the way in terms of digital wallet adoption, driving more than 50% of global non-cash transaction volumes thanks to SuperApp ecosystems and QR-based adoption.



EEMEA has experienced a similar trend, with the Middle East and Africa seeing wallets surpass a 20%⁴ share in terms of consumer spend in 2024, while Eastern Europe is experiencing CAGR of 16.8% for digital payments⁵.



Latin America is expected to see digital payments revenue reach \$300 billion in 2027 as mobile-first strategies and QR payment schemes gain traction⁶.

In developing and emerging markets, digital wallets are increasingly playing the role of a bank account - even for those previously unbanked - and capturing the majority of consumers and businesses. While digital wallets can promote financial inclusion by delivering simple, convenient and affordable services, there's far greater potential to be tapped into - for the mutual benefit of wallet providers, merchants and consumers.

This paper is an objective review of digital wallets' progression, exploring the challenges and opportunities and offering insights and trends across emerging markets. Informed by independent research from Kaiser Associates, the study maps the current state of wallet adoption and examines the growth approaches (and their current challenges) to identify a sustainable path to profitability.

To arrive at a universally accepted metric, for the purposes of this paper, we have chosen to focus on the "break-even" revenue point. The findings of the research have been extrapolated to reflect revenue contribution by product area as percentage of costs (indexed to 100) up to the break-even point.

Research methodology

To understand the landscape of wallets in emerging markets and unpack the different journeys to sustainable profit, Mastercard commissioned Kaiser Associates — a global research and strategy consulting firm — to facilitate a qualitative study with wallets across three global regions: Latin America and the Caribbean ("LAC"), Eastern Europe, Middle East and Africa ("EEMEA") and Asia-Pacific ("AP").

In-depth, 60-minute interviews ("IDIs") were carried out with key stakeholders at almost 30 different wallets with operations across 35+ markets and ranging from larger, established players to smaller "challenger" wallets, each with its own unique experiences and insights to draw from. Whilst the structure of the IDIs was dynamic to maximize "net new" insights with each additional conversation, the foundational objectives for these engagements were:



Understand each wallet's **current state**, including previous product launches, associated strategies and drivers/barriers to profitability



Build consensus around the **future priorities** for emerging wallets over the next 12-24 months and the thinking behind these opportunity areas



Quantify the **benefits and trade-offs of different models** based on a range of real-world experiences



This information, coupled with extensive desk research, was then collated and analyzed to perform a bottom-up assessment of typical product roadmaps (both in the past and moving forward) and the most common drivers of success.

Relevant colleagues within Mastercard's Emerging Markets and Global teams were also interviewed to capture internal insight and hypothesis. The resulting research was supplemented with comprehensive desk research of existing literature as well as Kaiser's proprietary research.

The key markets considered within this study include:



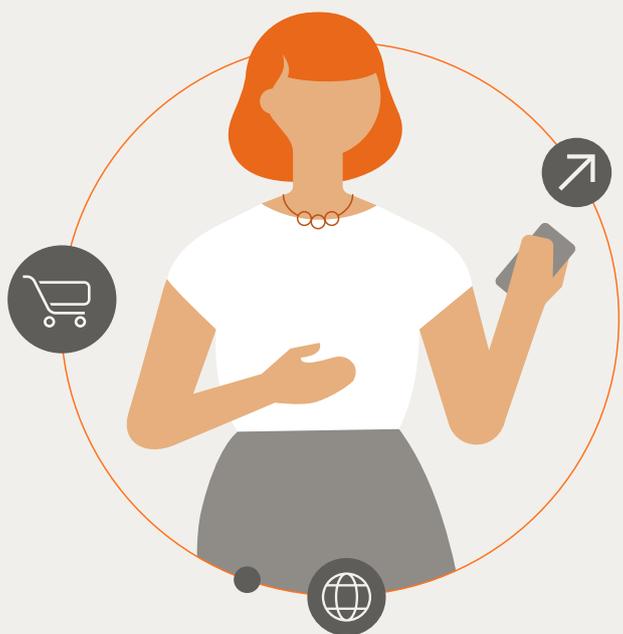
Latin America and Caribbean: Mexico, Brazil, Colombia, Argentina, Chile, Peru, Uruguay



Eastern Europe, Middle East, and Africa: Poland, Pakistan, Saudi Arabia, Egypt, Nigeria, Kenya, Ghana, Sierra Leone, South Sudan



Asia Pacific: Indonesia, Philippines, India, Bangladesh, Sri Lanka, Vietnam, Thailand, China / Hong Kong



Stored vs staged

- A **stored wallet** holds preloaded funds that a customer deposits in advance and can spend directly with the wallet provider or its approved merchant network. They typically operate in a closed-loop system, meaning funds can only be used within a defined set of merchants, services or platforms.
- A **staged wallet** does not require preloaded funds as it links to a bank account, card or other funding source, enabling customers to transact directly while the wallet "stages" or facilitates the payment in real time. These wallets often operate in open-loop networks, allowing payments at a wider range of merchants.

Open vs closed

- An **open-loop wallet** is typically linked to a card network. This allows them to transact with any merchant who receives payments from the network, regardless of whether they are part of the wallet ecosystem.
- A **closed-loop wallet** is a digital wallet whose funds can only be used within a specific network controlled by the wallet provider, limiting transactions to the provider's ecosystem or a set of affiliated merchants. These wallets are often prepaid or preloaded (described above as a stored wallet).

Both closed and open options allow stored, staged and pass-through models within them. Pass-through wallets rely on global card networks to securely transmit tokenized digital versions of card holder credentials directly to the merchant via the merchant's bank to complete the payment instructions.

The evolution from closed-loop to open-loop wallets across emerging markets is relatively established, despite regional differences in pace and product diversification.



Drivers of growth

As cash declines and digital transactions surge, wallet adoption is accelerating worldwide — especially in emerging markets — creating major revenue opportunities for providers who capitalize on this demand.

Originally, wallets in emerging markets focused on bringing domestic cash transactions into the digital world through closed-loop, stored-value wallet models.

However, we're now seeing increased levels of innovation from wallet providers as they open up their ecosystems to provide greater interoperability with other providers and a wider range of use cases.

Growth in innovation and usage is being driven by a number of factors, including:

Consumer demand for centralization

As technology and infrastructure develops, consumers increasingly expect to be able to perform all their digital interactions in one place, so we're now seeing wallets responding accordingly to satisfy consumers while improving retention.



LAC: 70% of consumers in Mexico say they would be willing to use a SuperApp, while ~71% of e-commerce in the broader LAC region already flows through mobile commerce⁷, making a single mobile app/wallet a natural hub for everyday transactions.⁸



EEMEA: Over half of consumers in the Middle East prefer consolidated apps, with 78% of consumers in the UAE saying they would use an all-in-one app⁹; growing internet penetration in the region (currently at ~70%) will continue to drive this behavior¹⁰.

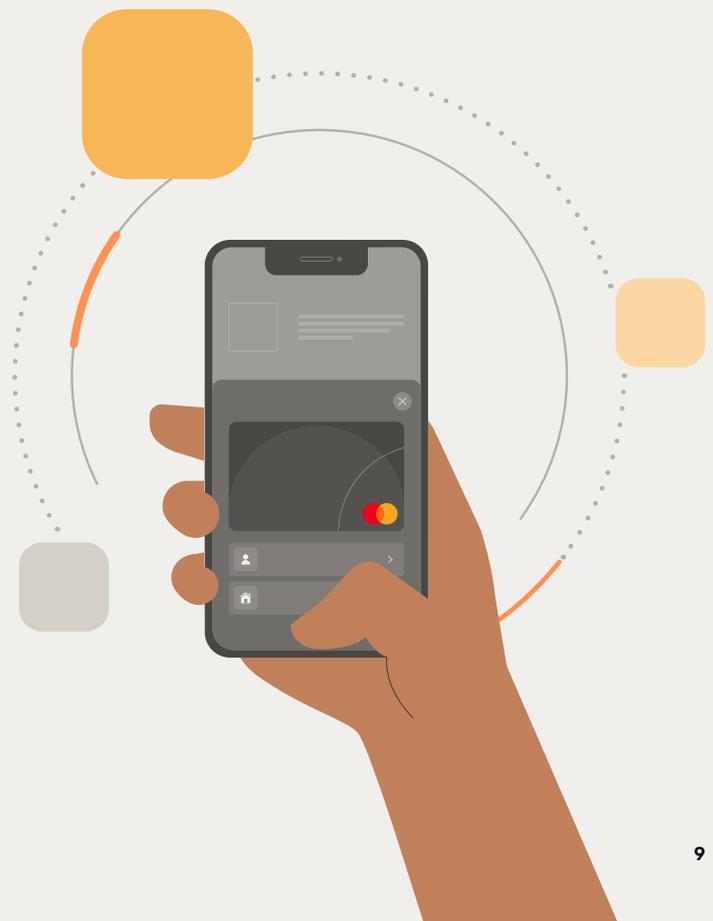


AP: In Asia, intent to use an "everything app" is exceptionally high, with Indonesia (88%), India (70%), Singapore (73%) all far above the global average of 50%, underscoring demand to centralize daily interactions in a single app.¹¹

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Given our ambition to be the wallet of choice in the market, consumer preference has led to us looking at rolling out SuperApps, which will enable introduction of new services and partnerships with other players.

Global Acceptance Manager
EEMEA wallet



Commoditization of domestic remittances

Government-led Centralized Payment Infrastructure (CPI) is reshaping retail finance in emerging markets by enabling low-cost, real-time P2P transactions at scale — advancing financial inclusion through solutions such as QR payments which reduce reliance on cash and cards and improve access for the unbanked.

For example, Brazil's Pix processed more than \$4.6 trillion in 2024¹² in 2024 and supports P2P, person-to-merchant (P2M), subscription, and cross-border payments. Meanwhile, as of July 2025, Thailand's PromptPay had 81.67 million registrations, and was facilitating 2.22 billion monthly transactions. In the Gulf, Saudi Arabia's SARIE and Mada support ~79% of electronic retail transactions, with SARIE handling 10.8 billion instant payments in 2024¹³.

CPI developments mean that profit from stored wallet use cases is being eroded. As basic Cash-In-Cash-Out services become commoditized, digital wallets must innovate and diversify their revenue streams as a means of enhancing customer loyalty to keep users in their own systems.



Governments across the region are relaxing licensing regulations to make it easier for digital payments. Digitalizing the economy is a massive priority for governments in the region.

Head of Growth
AP wallet

Liberalization of licensing and regulations

Emerging economies' push to attract investment, enable global transactions, and embrace digital transformation has seen governments easing previously stringent regulations - lowering barriers to entry across a range of use cases.

This is helping drive:



Financial inclusion: Wallets can onboard the unbanked / underbanked quickly with lighter Know Your Customer (KYC) assessments for low-value accounts.



Cross-border flows: Governments want cheaper, digital-first remittance channels to reduce reliance on cash and costly legacy networks.



Digitization agendas: Many central banks (for example in Saudi Arabia, Pakistan, and Brazil) explicitly tie licensing reform to national digital economy strategies.

The result of these regulatory shifts is accelerated digital wallet adoption and innovation. For example, Saudi Arabia's central bank has introduced licensing exemptions for cross-border payments¹⁴, aligning with the "Vision 2030" goal of a cashless society. Meanwhile Nigeria is easing rules for International Money Transfer Operators (IMTOs) to support its \$20 billion+ remittance flows, enabling cheaper, digital-first options¹⁵. And Mexico and Brazil are advancing open finance frameworks that promote data sharing and interoperability, expanding wallet capabilities.¹⁶

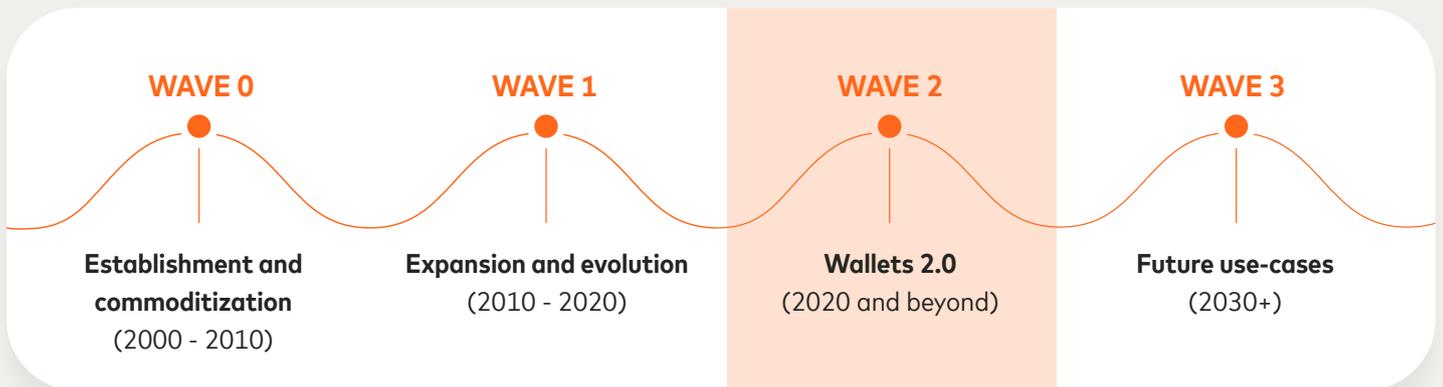
Key takeaways

- Rapid expansion is being driven by mobile first strategies, QR-based payment infrastructure, strategic alliances and liberalization of licensing and regulations.
- Despite strong growth, profit from stored wallet use cases is under pressure, pushing digital wallets to innovate and expand their revenue streams as a means of enhancing stickiness of relationships and keeping consumers within their own systems.
- Digital wallets - especially in emerging markets - are evolving from simple payment tools into comprehensive platforms that integrate financial services, e-commerce, and lifestyle features driven by consumer demand for centralized, all-in-one digital experiences.



Where are we now?

The waves of innovation



To paint a broad picture (and timeline) of where emerging markets are in terms of the evolution of wallets (and what's expected to come), we've presented the findings of this study in terms of waves of innovation.

WAVE 0

Establishment and commoditization (2000 - 2010)

Wave 0 saw the establishment of a closed-loop network to digitize everyday transaction needs, enabling stored funds to be used to make person-to-person (P2P) and person-to-merchant (P2M) transfers within a wallet's ecosystem.

It played a vital role in promoting financial inclusion by enabling people outside of the formal financial system to have access to basic banking services. This helped drive financial inclusion for regions where identity documents are not readily available, such as Sub-Saharan Africa.

While this wave represented a lifeline for certain customers, revenue potential for wallet providers was constrained (accounting for approximately 10% of revenue contribution as a percentage of costs) as it relied primarily on small commissions from bill payments.

Government-led interoperability through CPI saw the commoditization of domestic remittances, which in turn reduced the profitability of domestic use-cases and increased the need for wallets to innovate.

Other examples:

- **GCash** in the Philippines and **MoMo** in Vietnam have become equally integral to the payments landscape, offering interoperability with everything from remittances and e-commerce to government disbursement and RTPs.
- India's **PhonePe** and **Paytm** act as gateways to the Unified Payments Interface (UPI) system - a global benchmark for openness and interoperability - enabling transfers and payments for users who might not have traditional banking access. By January 2025, PhonePe's market share for India's UPI transactions was approximately 48.4% and it processes more than 310 million online transactions daily with coverage in 99% of Indian districts¹⁷.

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Closed loop is only a better system when you're a market leader and have competitive advantage.

Head of Operations
AP Wallet



WAVE 1

Expansion and evolution (2010 - 2020)

This wave saw wallets expand to begin issuing (virtual and physical) prepaid and debit cards, allowing consumers to transact at card-accepting merchants, which helped increase customer stickiness.

We also saw wallets integrate with card network rails, enabling consumers to conduct global e-commerce transactions from their home country. This drives more profitable transactions, as global transactions come with the potential to include Foreign Exchange (FX) mark-ups – a small fee per each transaction and a low-effort way to generate revenue – and typically higher ticket sizes.

This wave laid the foundations for the universal acceptance of wallets as an instrument for both domestic transactions and international commerce, while integrating with global network systems helped enhance security protocols.

Additionally, in certain markets, wallet revenues could be materially increased by rebates and incentives offered by card networks if wallets can reach certain volume targets.

Our analysis across wallets suggests that prepaid and debit issuing offers around 20 – 30% of the revenue required for profitability, though this varies due to differing interchange rates across markets and between various card products. Interchange rates are small fees paid by merchants to card issuers when a customer makes a purchase, and for digital wallets, they're a steady source of revenue from cards or tokens issued for payment.

For certain wallet providers, this revenue could be increased by an additional 30-40 percentage points depending on the type of card they issue.

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We're given 40bps cash incentive on international transactions, which totaled \$100 million last year.

VP Sales and Business Development
EEMEA wallet

Challenger wallets can achieve significant additional revenue from card issuance; however, our research suggests this requires certain conditions to be met that generally require scale:

- **Avoid blanket rewards:** Rewards can significantly reduce profitability unless anchored to everyday solutions to drive usage
- **Focus on increasing adoption rates:** Offering a broad service, all in one app, to drive high usage and help maximize the revenue from transactions
- **Favorable interchange:** Negotiating successfully with partners will enable a significant portion of interchange fees to land with the wallets
- **Material cost reduction:** Renegotiating with vendors as card numbers grow will reduce cost per unit
- **Float monetization:** Where possible, float interest can be a supplementary profit driver

According to Mastercard's New Payments Index 2022, in Asia Pacific, 69% of consumers increased their usage of digital payments in the last year, with digital wallets being a significant contributor, and in the Middle East and North Africa, this figure is 64%.¹⁸

While many wallets are not currently leveraging card issuance to reach breakeven, there is scope for them to materially enhance this revenue stream and make a meaningful step towards profitability. Enhancing both card issuance and merchant acceptance enables a more complete ecosystem that provides more rounded coverage and provision.

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In my opinion, card issuance alone can potentially support break-even economics, but only under a very specific set of conditions.

Chief Digital Officer
AP wallet



WAVE 2

Wallets 2.0 (2020 and beyond)

Wave 2 represents the present, where many wallet providers are working towards becoming "one stop" financial payment platforms by bringing in a suite of additional services to progress their path to profitability.

For example, PicPay in Brazil combines payments, social network, e-commerce, credit and crypto services in one platform. In China, Alipay and WeChatPay have become full-scale financial and commercial ecosystems, offering embedded shopping, cross-border payments from international travelers to local merchants, car-hailing and food delivery - among other services.

In 2021, RecargaPay embedded Buy Now Pay Later (BNPL) functionality into its app, enabling users to pay utility bills over 3-12 monthly installments. In 2023, it reported more than 10 million, users while raising >\$100 million in funding¹⁹, for which it cites the addition of BNPL services as a growth lever. Instalment-based consumer credit is deeply embedded in LAC, with almost 60% of all retail purchases in markets like Argentina now financed via instalments.²⁰

Broadly speaking, the research identifies five key areas of focus for wallets in this current wave – with varying levels of priority.



Immediate considerations

1 Merchant acceptance services

- QR acceptance evolution
- Pay by Link
- Software Point of Sale (SoftPoS)

2 Cross-border payments and remittances

- International Remittance
- Pass-Through Tokenization
- Multi-Currency Accounts

3 Financial services

- Embedded Finance
- Microlending
- Credit Cards
- Investment Products
- Insurance

Longer term considerations

4 Platform integration

- Freelancer Payments
- In-app Marketplaces

5 Additional features

- Open Data
- Corporate Wallets





WAVE 3

Future use cases (2030+)

We're expecting the next wave to include more niche and emerging financial use cases. While it's too early to predict where the scale will be, we expect it to be characterized by the wallet's journeys towards SuperApps in emerging markets.

This is likely to involve the incremental addition of remaining use cases. Technological advances will also enable more innovative features such as stablecoins, and more widespread AI supported functionality – something certain providers are already beginning to explore in wave 2.

Key takeaways

- Challenger wallets can achieve significant additional revenue from card issuance when certain conditions are met, such as avoiding blanket rewards, high adoption rates, favorable interchange, successful negotiating with partners, reduced material costs and float monetization.
- Technologies like NFC payments, QR codes and SoftPoS, along with global partnerships and card integrations, are enabling wallets to scale merchant acceptance, expand reach, and support cross-border payments with lower infrastructure costs.
- Wallets must navigate operational complexity and risk as they diversify revenue streams, leveraging cards and payment to become Super Apps, offering consumers a convenient platform to facilitate day to day shopping and spending.



A sustainable path to profitability: the emerging opportunities

In this section:

- Merchant acceptance as a significant area of growth
- Financial services, including embedded finance and microlending as new use cases
- Cross-border payments and remittances as an opportunity

For wallet providers in wave 2, evolving to become multi-service platforms, there are several potentially attractive routes for scale. Our research has identified the following as most viable in terms of sustainable growth and potential for profit.

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The average deposit size of a merchant is 5x that of a consumer, which really makes a difference for our float revenue. We have a big focus on getting more merchants onboarded in the next 12 months.

Director
EEMEA wallet

1. Merchant acceptance

Merchant acceptance is key to digital wallet growth in emerging markets, and to unlock scale providers must rapidly expand so that wallets are available wherever consumers shop. At present acceptance is uneven, with ecommerce transactions made by digital wallets accounting for 70% in AP in 2023, 19% in EEMEA and 16% in LAC²¹.

Adding merchants to the wallet ecosystem allows wallets to generate higher transaction volumes and enable greater float monetization.

Over the next two years, we're expecting to see wallet providers prioritize Software Point of Sale technology (SoftPoS), Pay by Link and QR code acceptance to onboard merchants looking for convenient payment options that require much less investment and ongoing servicing costs than physical PoS terminals.





In this country, only 5,000 to 8,000 have PoS terminals, but over 200,000 are accepting with apps.

Head of Fintech Ops
EEMEA wallet

This allows wallets to maximize their revenue by processing card payments from consumers outside of their ecosystem. By capturing the acquirer mark-up from the Merchant Discount Rate (MDR) — the fee that businesses pay to payment processors for handling transactions — wallets can monetize a greater volume of transactions.

Wallets can also enable merchants to accept payments from tourists through localized payment functionality, including national QR rails, boosting transaction volume and average value due to addition of FX mark-ups.

For example, Mastercard's Pay Local is a global service that enables digital wallet providers to process card payments from more than three billion Mastercard cardholders. It makes it easy for international travelers to make card payments using local digital wallets at more than 35 million merchants across Asia Pacific.

In addition, for transactions where both the consumer and merchant are part of the wallet ecosystem, the wallet can generate fees from both the acquiring and issuing sides.



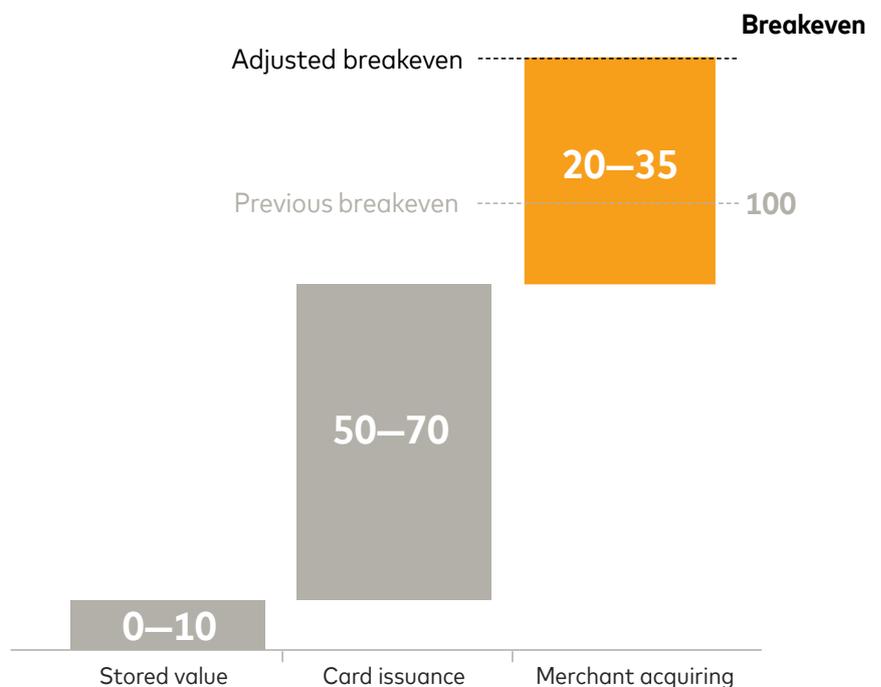
Merchant acquiring has enabled us to monetize transactions from other wallet and card users outside our ecosystem, so we're involved in far more transactions.

Strategy Manager, AP wallet

Progress to profitability

For digital wallets looking to break even and push into profitability, the research estimates the potential contribution of each product area as a proportion of its breakeven revenue (equal to total costs) in wave 0, indexed to 100. For example, if adding a product area offsets 30% of the wallet's total cost base in wave 0, it is given an index of 30.

This also applies to changes in cost base, as if adding a new product area (in this case merchant acquiring) increases the initial cost base of the wallet by 15%, the new cost base is given an index of 115.



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Acquiring fees have pushed our payments revenue to 50% of our cost base.

Strategy Manager
AP wallet

Wallets which have successfully implemented merchant acquiring services report an estimated 10-20% increase in revenue per capita to the business. Analysis across wallets suggests that the addition of merchant acquiring can bring them up to the revenue required for profitability, if certain conditions are met.

Demonstrating the benefits to merchants - including more advanced analytics, faster settlement and customer retention - will be key to increasing merchant onboarding.

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Small and medium merchants will accept QR, as it is more costly to accept payments through a PoS terminal, which for them is a cost of 1, 2 or 3 percent of the sale. QR payments [from us] have no cost, so they're incentivized to use it.

Vice President
EEMEA wallet



QR Code acceptance

Merchant displays a QR code that the customer scans with their banking or wallet app to initiate payment.

QR code acceptance has become a familiar and trusted method of payment for consumers. It also requires very little investment in hardware, and transactions are easily processed by Central Payments Infrastructure.

Pay by link

Merchant generates a secure payment link (via SMS/email/QR code) which customers can click and pay using card, wallet, or bank transfer.

Pay by Link solutions, such as Mastercard Pay by Link, are easy to set up and cost-effective solutions for smaller, less sophisticated merchants who lack access to traditional PoS infrastructure. These carry invoice-style payments when the customer is not present and gives the customer a choice of payment options (e.g., card, wallet or bank transfer).

SoftPOS (Software Point of Sale)

Turns a smartphone or tablet into a Point of Sale (PoS) terminal without extra hardware.

SoftPoS offers a fast, cost-effective alternative to traditional PoS hardware, especially in emerging markets where device penetration is low but smartphone adoption is rising. By removing the need for extra equipment, it simplifies setup and lowers costs for small merchants.

However, while greater merchant acceptance is an established route to profitability for wallets, its overall impact is being hindered by adoption of CPIs, such as Pix in Brazil, which is capping monetization opportunities by enabling zero-fee merchant payments that bypass wallet revenue streams.

And while smartphone penetration is increasing, the rate of increase is currently not even across emerging markets so availability, feasibility and coverage may not be equal.



2. Financial services

Over the course of the next two years, we're expecting to see more wallets focus on financial products which carry a higher margin, such as embedded finance and microlending.

Digital wallets are emerging as major consumer lenders across LAC, AP, and EEMEA by embedding installment financing, micro-loans and partner-enabled credit directly into their ecosystems. Major wallet providers including Alipay and GrabPay have shown a 40% uptick in user stickiness after launching micro-lending.²²



We introduced credit products in 2023 and they now account for 30% of our revenue.

Strategy manager
AP wallet

Microlending (12-24 month focus area)

The provision of small-ticket loans through wallets, often instant and unsecured.

Lending services have shown potential to provide sufficient revenue to bridge the gap to profitability, enabling higher margins than payment transactions, particularly when extended to merchants.

Sentiment across wallets indicates a belief that credit and lending products bring higher margins than payments, due to typical net interest margin of 3%-5%²³, exceeding the 0.5-1.5% of transaction fees.

Embedded finance (12-24 month focus area)

Integration of third-party financial products (e.g. BNPL) directly into the wallet ecosystem.

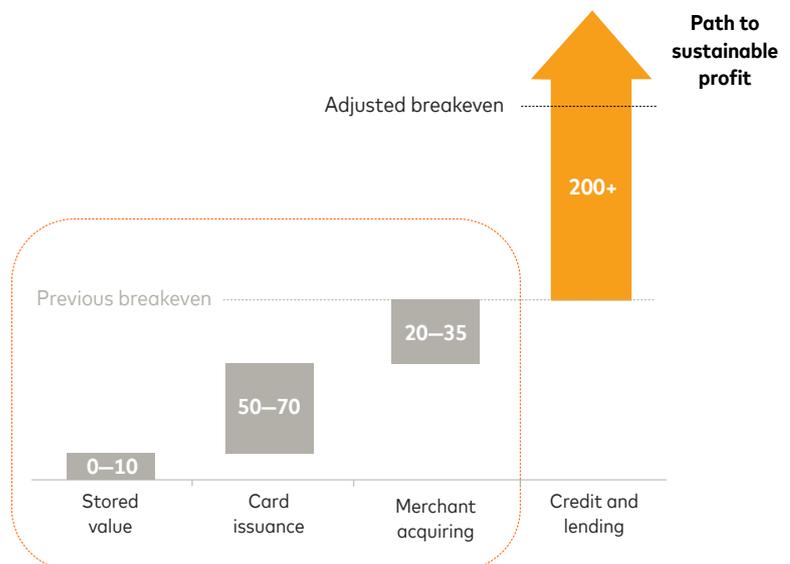
Consumers are increasingly expecting to be able to access additional financial products seamlessly through their wallets, which in turn increases stickiness and Average Revenue Per User (ARPU) for the wallet provider.

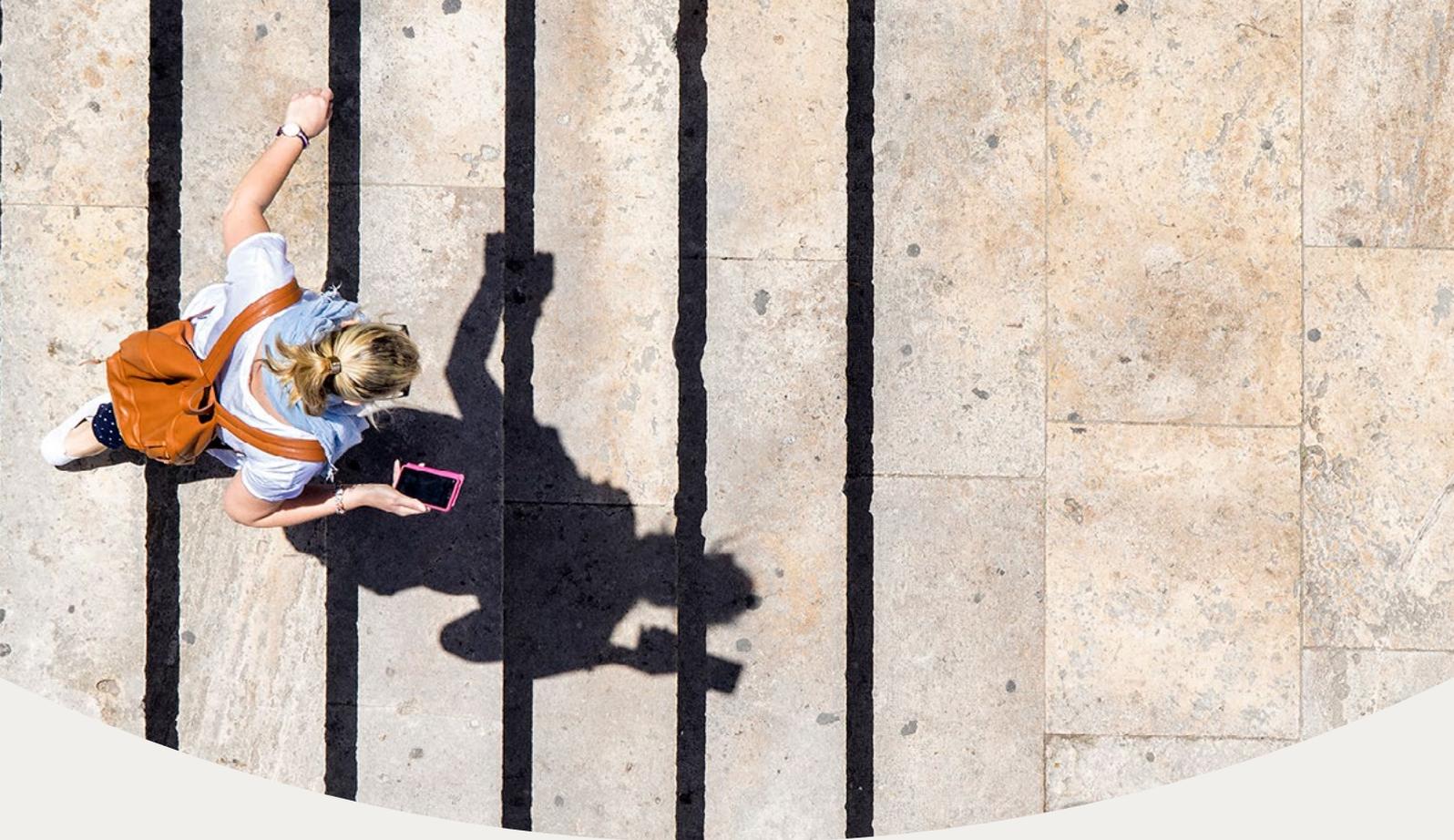
Embedded options like Buy Now, Pay Later (BNPL) products enables further involvement in high-frequency, high-volume transactions — but still has a regulatory burden with.

KYC checks and a reliance on third-party partners for underwriting and technology.

Progress to profitability

For digital wallets in emerging markets looking to break even and push into profitability, the research estimates the potential contribution of each product area as proportion of total wave 0 costs, indexed to 100 e.g. if a revenue stream offsets 30% of the wallet's wave 0 cost base, it is given an index of 30.





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Unless already owned by a bank, wallets will need to partner with a lender for around three years, so won't get the full benefit of higher margins until they've learned to do it on their own.

Managing Director
Payments Ecosystem Player

However, wallets will usually begin offering credit as an intermediary on behalf of an existing lender, during which period the margins will be slimmer as the partner takes most of the interest revenue.

JazzCash's 'ReadyCash' in Pakistan offers instant microloans (\$10–\$100) via mobile, using user data for underwriting and repayment through app or USSD. This drives platform engagement and future loan eligibility, and its lending volumes now surpass Pakistan's largest banks monthly.

However, lending remains risky for wallets, especially before profits have been achieved. Wallets often only have access to limited data to assess the creditworthiness of applicants, while self-developed engines are complex to build, and low-income customer segments present a high risk of defaults.

Regulatory barriers, like mandatory separation from bank credit, add further challenges. JazzCash and EasyPaisa, for instance, had to acquire banks before offering loans.

Profit from credit products varies widely across wallets and markets due to high default rates and unpredictable adoption.

↑ 50-70%

With greater risk and operational costs, wallets offering credit must generate 50–70% of total revenue from lending alone.

↓ 30%

while payment revenue may drop to just 30% of the cost base - leaving little room for error. Licensing hurdles add further complexity, especially in certain markets.

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When lending was first introduced, we lost a lot of money through default rates and had to change the way we collected and analyzed data.

Chief Digital Officer
EEMEA wallet



3. Cross-border payments and remittances

Money sent from one country to another, typically by someone working abroad to support family back home.

International remittances and cross-border payments represent a significant - less risky - value pool for wallets, especially those that are working towards becoming profitable.

While IMTOs and corridor-focused exchange houses are the dominant players when it comes to provision, globally, they are the fastest-growing use case for wallet providers.

The estimated size of the remittances market across emerging markets is \$620 billion²⁴, with AP being the dominant region²⁵. Driven by increasing global migration and rising incomes, the market is expected to grow with a CAGR of 10% until 2030²⁶. FX mark-up also drives greater unit profitability when compared to payments.

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In Saudi, remittances are the key revenue contributor and most profitable business for wallets. All wallets prioritize remittances.

Head of Digital Payments
EEMEA wallet

Use cases are predominantly inbound remittances, as wallets look to capitalize on the large and growing remittance routes between affluent economies and emerging markets - for example, for migrants based in foreign countries to send money home.

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International remittance has driven us to profitability in the six years since our inception.

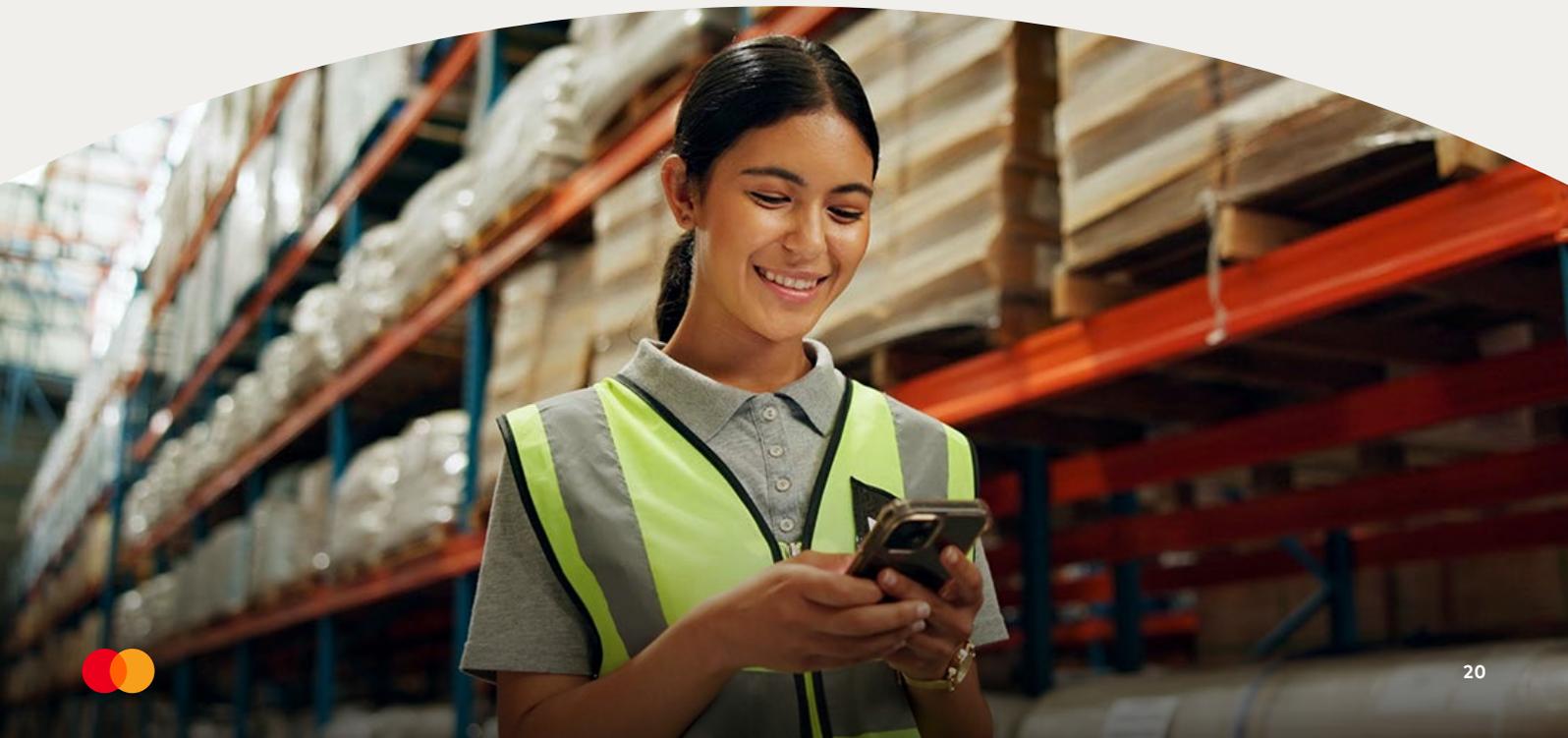
Vice President, Sales and Business Development
EEMEA wallet

The combination of transfer commission and FX mark-ups makes international remittance a higher margin proposition and helps bridge the gap to breakeven revenue — especially as FX mark-ups are often higher in emerging markets with fewer options for uncommon currencies.

↑ 40b

We're also seeing some countries in the EEMEA region experiencing significant outbound remittances from expatriates, with the Saudi Arabia market estimated to be at \$40 billion²⁷.

Revenue per wallet is relatively easy to predict thanks to the stable, regular nature of remittance transactions. While added infrastructure and partnerships slightly raise breakeven costs, the impact is far lower than credit products due to plug-and-play solutions. For example, Mastercard Move, connects wallets to pay-out endpoints through Application Programming Interfaces (APIs), and which can significantly increase transaction flows, offsetting the cost of the partnership.



To capture this opportunity, which has the potential to be more profitable than payments while being less risky than credit and lending, digital wallets must either partner with existing players or ensure they have a differentiated proposition against traditional remittances options, such as instant global transfers.

Partnering with a global card network makes this feasible while offering flexible currency services, reduced settlement time and consumer trust through brand familiarity. They may have to split revenue if partnering but as they achieve higher remittances volumes, wallets can retain more of the revenue.



When sending money from Kenya to Nigeria, there is no direct currency pair through the primary players. However, our partnership with Mastercard ensures we are able to send money to wallets with whom we do not have direct connectivity.

Vice President, Payouts and Country Director
EEMEA wallet

However, unfamiliarity and low digital literacy are barriers to digital wallet take up. Currently, digital channels account for ~25% of remittances to emerging markets, with the remaining 75% being taken up by established IMTOs and banks²⁸.

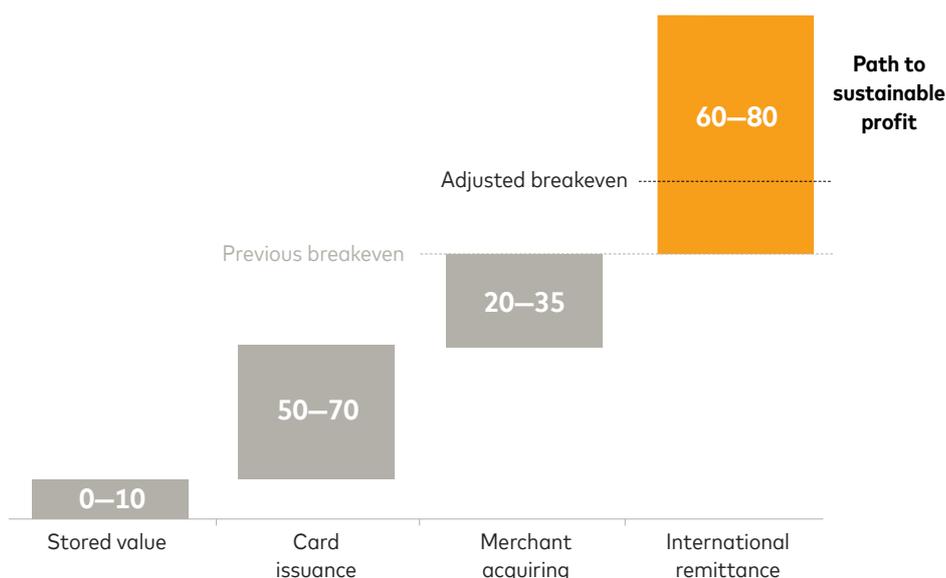


Lower-income migrant workers, often in labor-focused jobs with limited education, prefer simple exchange house channels.

Head of Growth
AP wallet

Progress to profitability

For digital wallets in emerging markets looking to break even and push into profitability, the research estimates the potential contribution of each product area as proportion of total wave 0 costs, indexed to 100 e.g. if a revenue stream offsets 30% of the wallet's wave 0 cost base, it is given an index of 30.





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We are not permitted to conduct outbound transactions, with regulators only allowing tightly monitored pilots capped at 5,000 users, while inbound remittances into mobile wallets remain permitted.

Head of Growth, AP wallet

Additionally, in some regions, governments have imposed regulatory restrictions on digital transactions, particularly around outbound remittances, to ensure a balance with inflows.

Capturing remittance market share depends heavily on the infrastructure of recipient markets. Without fast cash-out options, or easy wallet spending, growth of international remittance revenues can be slow.

Key takeaways

- As digital wallets in emerging markets evolve into multi-service platforms, we are seeing the main routes to sustainable profitability being: widening merchant acceptance; expanding financial services to include embedded finance and microlending; and cross-border payments and international remittances.
- Merchant acceptance and partnerships with global networks are key growth levers, supported by low-cost technologies like QR codes, Pay by Link, and SoftPoS that enable broader reach and reduce infrastructure barriers.
- Wallets must balance high-margin opportunities like financial services and remittances with operational risks and costs, using a mix of innovation, partnerships, and diversified revenue models to achieve sustainable profitability.



Paving the way to profitability

As wallets in emerging markets continue to explore and embrace the opportunities offered by open-loop ecosystems, we expect to see new use cases come onboard as providers diversify revenue streams leveraging open-loop cards and payment in the pursuit of sustainable profit.

Based on the findings of our study, coupled with Mastercard's global expertise, we believe the most prosperous path to sustainable profitability will include:

Diversify revenue streams leveraging cards and payment

In the race to become profitable SuperApps, many wallets are targeting high-yield revenue streams with an immediate focus on credit and microlending. While the yields can be high, so can the risks. For fledgling wallets that are working towards profitability, this may not be the most sustainable option. Embedded finance solutions can also be cumbersome and heavily reliant on third parties that incur additional costs to implement.

Lending may be a lucrative avenue to pursue but wallets would benefit from exhausting other less risky avenues first as they build the business.

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When lending was first introduced, we took a beating in high default rates and had to tweak it to make it profitable, first monitoring user behavior and starting with nano-loans.

Head of Marketing
AP wallet

The findings of our study point to remittances as a relatively untapped opportunity for wallets to unlock greater returns in addition to payments, with a fraction of the risk of lending. Given increasing economic migration and smartphone ownership, coupled with the convenience and cost-saving benefits for users, we believe this is the strongest solution to pave the path to sustainable profitability.

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One of our key strategic moves was the provision of remittance services.

Head of Growth Marketing
EEMEA wallet



Innovate to increase merchant acceptance

One area that is being universally prioritized by wallets is acquiring services, which has the potential to drive revenue towards the value required to break even.

Innovation is key to tapping into this opportunity, especially in emerging markets where smaller merchants lack physical PoS technology. Wallets which can provide a suite of low-cost, low-maintenance, flexible and convenient acceptance services to merchants (e.g. QR code acceptance, Pay by Link and SoftPoS) have a greater chance of success.

Smartphone penetration in emerging markets is increasing, presenting additional opportunities for acceptance services and "one stop shop" payment ecosystems in time.

Eventual expansion into SuperApp platforms will also help increase customer retention, enabling deeper engagement levels and opportunities to connect them to additional services, driving sustainable growth.

Leverage strategic partnerships

As wallets diversify revenue streams to become multi-service financial ecosystems, collaboration enables providers to scale faster, manage risk and access capabilities they may struggle to build alone.

For example, for wallets that are set on credit and lending as an expanded use case, a safer path is through partnership with a bank or financial services provider. In this model, the partner supplies the financing while the wallet acts as an intermediary, disbursing funds and managing the customer interface. This approach allows wallets to build experience, refine processes, and strengthen risk management without carrying lending risk on their own balance sheet. Over time, some wallets may choose to expand their role in credit, while others may continue to collaborate with banks and financial providers as the primary source of funding.

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Integration with global networks provides a professional and modern image, which helps build user trust.

Head of Telco and Distribution Business
EEMEA wallet

Collaborating with trusted brands like global card networks enhances interoperability, security, fraud prevention and protection, and risk monitoring.

These partnerships also offer consultancy such as product design advice, benchmarking and go-to-market strategy support. And they often come with auxiliary benefits such as marketing support, co-branding, and sponsorships, boosting consumer trust and merchant adoption. Additionally, they help wallet providers connect with key demographics like millennials and Gen Z, who value innovation and seamless digital experiences - driving growth and long-term customer retention.

By leveraging the benefits of these partnerships, wallets can potentially increase ARPU, deepen customer engagement and pave the way to sustainable profitability.

Digital wallets will continue to evolve into comprehensive platforms, integrating payments and partnerships to create new and essential ways for people to navigate their daily lives. The leaders will be those who create intuitive, interoperable ecosystems.

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We leverage the advanced technology of Mastercard, as well as their consulting, especially in product development and system security.

Head Fintech Commercial Operations
EEMEA wallet



How Mastercard is supporting wallet providers

Mastercard has developed a comprehensive ecosystem of digital wallet solutions aimed at making payments faster, safer and more seamless for consumers and merchants worldwide - covering 200+ countries and more than 150+ currencies.

Partnering with Mastercard enables digital wallets to scale wider, launch faster, and deliver greater value to merchants and consumers. Our trusted infrastructure and global payments network exist to support wallets as they grow.

Our offerings include checkout tools, virtual cards, innovative payment methods and partnerships with local wallet providers, such as Mastercard Pay Local in Asia, that enables consumers to pay local merchants, via digital wallets. Mastercard Move for Wallets enables cross-border money movement covering more than 200 countries.

Our Tap on Phone technology turns any device into a payment acceptance terminal and is already democratizing acceptance for merchants - from solopreneurs to larger retailers, reducing the need for complex checkout infrastructure. It is available to partners across all continents in 100+ markets globally.

Digital wallets will continue to evolve into comprehensive platforms, integrating payments and partnerships that co-create solutions and accelerate large-scale innovation. The leaders will be those who create intuitive, interoperable ecosystems.

Network of wallets

Mastercard Wallet Pay	Mastercard Pay Local	Mastercard Move for Wallets	Mastercard Wallet Services	Mastercard Wallet Express	Mastercard Acceptance for Wallets
Tokenizes wallet accounts, enabling seamless tap-to-pay experiences at more than 150 million merchants who accept Mastercard globally.	Lets international travelers and locals link their Mastercard to local digital wallets for easy, card-based payments.	Enables fast money transfers between cards, wallets or accounts across more than 200 countries and 150 currencies.	Provides a secure, scalable way for wallets to offer contactless and e-commerce payments without needing to build their own infrastructure.	Offers the security of tokenization and direct issuer connectivity for streamlined, secure payments.	Allows merchants to accept contactless and e-commerce payments from cards and wallets, tapping into the power of more than 3.5 billion Mastercard credentials worldwide and delivering greater flexibility, convenience and security, in-store or online.



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About Kaiser Associates

Kaiser Associates is a strategy consulting firm that works extensively on issues of growth and innovation with payments leaders globally. Founded in 1981, the firm specializes in using custom primary research to provide fact-based decision-making support (on global best practices, markets, customers, competitors, suppliers, partners, etc.) to clients. Kaiser's payments work covers the full suite of traditional and emerging products including consumer credit, debit, commercial, prepaid, acquiring, processing, e-commerce, mobile, and P2P payments. Based in Washington DC, and with offices worldwide, Kaiser provides payments strategy support to clients in over 35 country markets.

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