worldpay

THE GLOBAL PAYMENTS REPORT

How consumer choice is changing commerce

9th Edition



INTRODUCTION

THE ERA OF PEOPLE AND PAYMENTS

The global payments landscape has throughout history been shaped most decisively by the technologies of the day. Cash in all its forms ruled for millennia and through the industrial age. Analog electronics arrived in the 20th century to support the reign of cards. The emergence of the internet and e-commerce ushered in the arrival of alternative payment methods in the late 1990s. Today, digital innovations generate an ever-expanding array of payment types. **Consumers have more payment options than ever.**

We're entering an era defined not by technology, but by people. We're entering an era where choice is the main driver of the payment landscape. Consumers and their collective choices are the new center of payments gravity, a living force that's pushing merchants to optimize payment choices. Today's choice era is one of limitless possibilities for consumers, merchants and the payments industry that connects them.

The era where people drive payments sees disruption as the engine of opportunity.

This new era is one where the payment industry is reinventing itself, looking to a future where they must satisfy a tapestry of need crafted by distinctly local intersection of choices. The era when people drive payments is a true synthesis of what came before, with cards and cash taking on new – and still essential – roles both in their traditional and newly reimagined digital forms.

And we're only scratching the surface. Join us as we explore the limitless possibilities in this new era of people driving payments.



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EXECUTIVE SUMMARY

In 2024, the Global Payments Report continues its mission to document consumer payment behavior at checkout online and in-store. The following are key insights from our ninth edition of the GPR.



Digital wallets are the people's payment choice

In 2023, wallets accounted for 50% of global e-com spend (> \$3.1T) and 30% of global POS spend (> \$10.8T). Still the fastest growing payment method, by 2027 wallets are projected to account for more than \$25 trillion in global transaction value (49%) across e-commerce and POS.



Cards show strength inside and outside digital wallets

Consumer attraction to digital wallets isn't a turn away from cards. In card-dominated markets, card spend is simply shifting to digital wallets like Apple Pay, Google Pay and PayPal. Viewed in total, card transaction values are at an all-time high and continue to rise.



A2A remains challenged in card-heavy markets

Account-to-account (A2A) payments are becoming dominant from Brazil to India. A2A payments have found less success to date in card-saturated markets such as the UK and USA. Merchants crave A2A's lower cost of payment acceptance. Can consumers be enticed to break their card habits?



Consumer demand for BNPL is steady against headwinds

Buy Now Pay Later companies faced welldocumented headwinds in 2023 including rising interest rates, looming regulation and souring investor sentiment. Consumers countered those headwinds by choosing BNPL more than ever. Banks, fintechs, big techs and platforms are stepping in to satisfy consumer demand and capture their spend.



Global e-com growth outpaces POS by > 2-1

Global e-commerce surpassed \$6.1 trillion in 2023 and is growing at more than twice the rate of global POS value. E-com growth is projected for 9% CAGR (versus 4% for POS) through 2027. E-com as a percentage of all commerce reached 14.4% globally in 2023 and forecast to exceed 17% by 2027.



Cash remains relevant amid economic uncertainty

Globally, cash fell -8% in 2023, and is expected to decline at -6% CAGR through 2027. Yet cash remains a vital payments tool for billions of consumers. In 2023, cash accounted for 16% (\$6 trillion) of global transaction value, including double-digit share in thirty of forty markets in this report.

Prepaid cards to surpass \$1 trillion in 2024

In 2024, prepaid cards will exceed \$1 trillion in global transaction value. Versatility drives prepaid cards' success: as gift cards, reloadable stored value cards, for payroll, business-toconsumer payments and as government benefits. Prepaid cards support financial inclusion by serving underbanked consumers.



Increasing financial inclusion signals sunset of post-pay

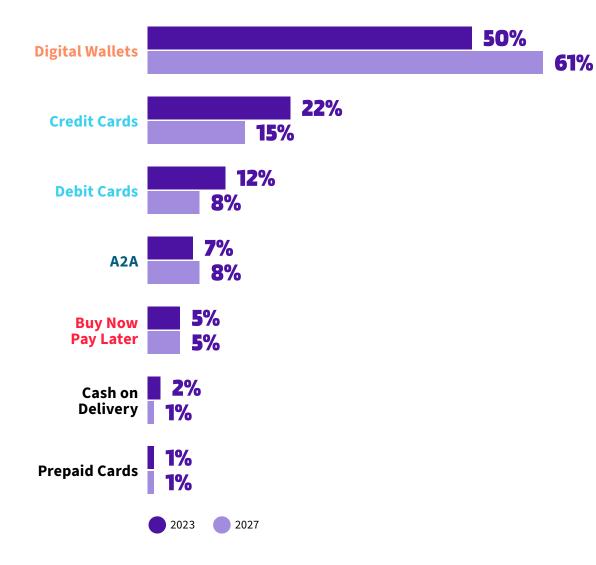
Post-pay is a voucher-based payment that allows consumers to shop online and pay at an affiliated store or ATM. Post-pay remains popular in cash-heavy LATAM and Japan, where in each it accounted for 4% and 5% of 2023 e-com transaction value, respectively. While still relevant in these markets, an upturn in financial inclusion and overall shift away from cash is signaling post-pay's sunset.





GLOBAL E-COM PAYMENT METHODS

Transaction value % 2023-2027



Digital wallets retain global supremacy in e-commerce, reaching 50% of global transaction value in 2023. Wallets are the fastest growing e-commerce payment method with a projected 15% CAGR through 2027.

Credit and debit cards share of e-commerce transaction value as a direct payment method **are projected to decline slightly** through the forecast period to 2027. However, much of this "decline" is card spend shifting to use within digital wallets.

Account-to-account (A2A) payments continue to

flourish in select markets such as Brazil, India and Poland, compensating for slower growth in large card-dominated markets such as the UK and USA. Global A2A transaction values are forecast to rise at 14% CAGR through 2027, gaining 1% global share during that time.

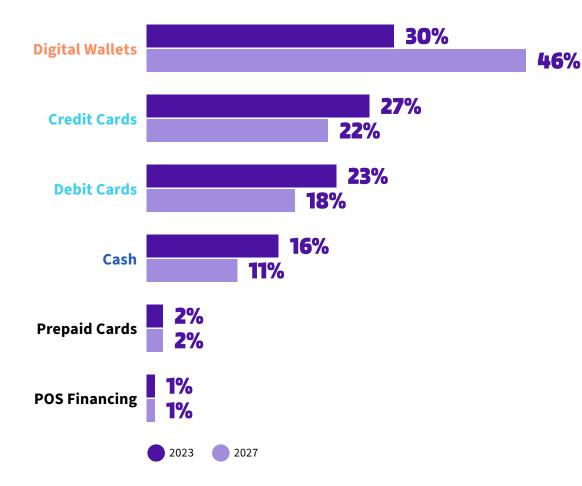
Buy Now Pay Later (BNPL) global transaction values

grew 18% in 2022-23 to reach 5% share of global e-com spend, or over \$316 billion. We project growth in the forecast period to 2027 of 9% CAGR, equal to that of global e-com growth as a whole and therefore retaining 5% global share through 2027.

Cryptocurrencies (0.2%, ~\$11 billion), **post-pay** (0.3%, ~\$20 billion) and **pre-pay** (0.3%, ~\$17.5 billion) each registered less than 0.5% of global e-commerce transaction value in 2023.

GLOBAL POS PAYMENT METHODS

Transaction value % 2023-2027



Digital wallets extended their lead in global POS payments in 2023. Wallets accounted for approximately 30% of global POS transaction value, or more than \$10.8 trillion. Digital wallets are also the fastest growing POS payment method with 16% CAGR forecast to 2027, when wallets are projected to account for approximately \$19.6 trillion in POS spending.

Credit and debit cards continue to do the heavy lifting at the point of sale around the world, combined accounting for approximately half of all POS transaction value. In 2023, credit cards were responsible for 27% of global POS spend (over \$10 trillion), while debit cards accounted for 23% (over \$8.3 trillion).

Cash use continued to drop in 2023, accounting for 16% of global POS spend – approximately \$6 trillion – a transaction value decline of 8% versus 2022. Cash is forecast to fall by -6% CAGR through 2027 when it is projected to account for 11% of global POS spending (over \$4.6 trillion).

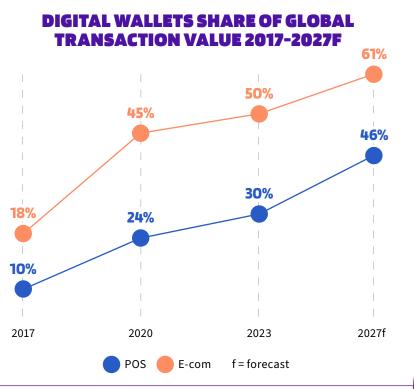
INSIGHTS

DIGITAL WALLETS ARE THE PEOPLE'S PAYMENT CHOICE

Digital wallets remained the people's choice for payments in 2023, accounting across channels for a combined \$14 trillion in consumer spending.

Wallets are the leading e-com payment method in APAC, Europe and North America today, and are projected to lead e-com payments in all global regions by 2027.

At POS, APAC remains an outlier with wallets representing 50% of spend, highest of any region. Digital wallets are projected to become the leading POS payment method in LATAM and MEA by 2027, markets that haven't had a legacy of card dominance. Wallets are catching up fast in the historically card-dominated markets with projected CAGRs of 24% in Europe and 23% in North America through 2027.



Wallets are the leading e-com payment method in APAC, Europe and North America today, and are projected to lead e-com payments in all global regions by 2027.





INSIGHTS

KEY GLOBAL DIGITAL WALLET STATS

2023 Transaction Value

E-com:	\$3.1 trillion
POS:	\$10.8 trillion
Total:	\$14 trillion

2023-2027 Growth Forecast

E-com: **15% CAGR** POS: **16% CAGR**

2027 Transaction Value Forecast

E-com:	\$5.4 trillion
POS:	\$19.6 trillion
Total:	\$25 trillion

WINNERS IN THE WALLET RACE SPAN MULTIPLE INDUSTRIES

Competition for share of the nearly \$14 trillion global digital wallet market attracts major brands from multiple industries including smartphone manufacturers, e-commerce marketplaces, bank networks and global fintechs.



Smartphone manufacturers and

operating system providers have an inside track with consumers by providing preloaded native digital wallet applications on mobile consumer devices. Leading global smartphone manufacturers including **Apple**, **Google** and **Samsung** are also among the world's leading digital wallet providers.



¹⁴ worldpay

INSIGHTS



Leading global e-commerce

platforms have successfully deployed their own wallet solutions for use not just on their own platforms, but on third-party sites as well. **Mercado Pago** from Mercado Libre (LATAM), **Amazon Pay** from Amazon (Global), **Rakuten Pay** from Rakuten (Global), and **ShopeePay** from Shopee (APAC) are all among the leaders in the markets in which they operate.



Fintechs and super apps are among the world's most successful brands in digital wallets. <u>Alipay</u> and <u>WeChat Pay</u> dominate by far the world's largest and most influential wallet market in China. <u>Paytm</u> is among the leaders in India's fast growing digital payment market, while US-based <u>PayPal</u> is one of the exceptionally few wallets that has a truly global footprint.



Banks and bank networks seek to retain their influence in consumer payments with their own wallets. MobilePay by Danske Bank is a leading wallet in Denmark and Finland; BKM Express provides wallets services for a consortium of thirteen Turkish banks; and MODO is known as "the wallet of the banks" in Argentina. Following the success of its P2P app, Zelle, major US banks are expected to launch the P2C payment app Paze in 2024.





WeChat Pav



Paytm



OR CODES AND INTEROPERABILITY ARE DRIVING WALLET USE

QR codes see significant use in countries outside of North America and Europe, particularly in Southeast Asia where payment system interoperability is fueling wallet adoption.

Juniper Research <u>forecast QR code payments to grow</u> <u>over 590%</u> in Southeast Asia Market by 2028.

The success of **Alipay** and **WeChat Pay** in China decisively established that QR codes could drive mass consumer adoption of digital payments. The two payment methods combined <u>process an estimated</u> <u>90%</u> of more than \$7.5 trillion in 2023 digital wallet transaction value in China.

QR code payments have become ubiquitous across Southeast Asia due to their simplicity, standardization, inexpensive operation for merchants and support for underlying infrastructure from central banks. QR code-based payments are cost-effective for merchants as they require no special equipment such as POS terminals. <u>Standardization of QR codes</u> means merchants only need one QR code to accept payments from multiple wallets. Real-time payment rails from central banks and bank associations – such as **BI-FAST** in Indonesia, **UPI** in India, **DuitNow** in Malaysia, **BancNet** in The Philippines, **PayNow** in Singapore and **PromptPay** in Thailand – provide the underlying infrastructure for the use of QR codes, helping to modernize payment systems, reduce reliance on cash and boost financial inclusion. Cooperation among Southeast Asian central banks via the Association of Southeast Asian Nations (ASEAN) is helping to promote crossborder interoperability in an effort to boost regional economic integration and growth. Efforts from the private sector – such as that recently initiated <u>by Alipay+</u> – are also boosting regional wallet interoperability.



INSIGHTS

CARDS SHOW STRENGTH AS SHARE SHIFTS TO DIGITAL WALLETS

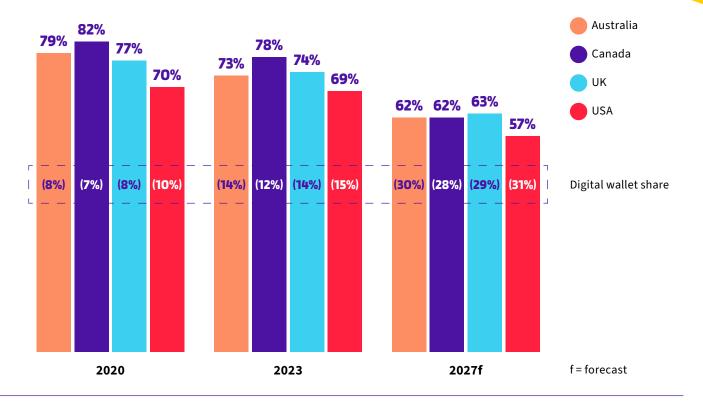
Credit and debit cards have ceded payment share to digital wallets, but they're far from losing relevance.

Cards as a direct payment tool are indeed losing share globally, even in historically strong card markets. Despite rising absolute transaction values, between 2020 and 2023 credit and debit cards combined lost share of POS payments in Australia, Canada, the UK and the USA.

A reasonable and frequently asked question arises: are cards losing share to digital wallets? The answer is yes, cards are losing share to wallets as the direct payment mechanism at the point of sale. Are cards therefore losing relevance? The answer to that is a decisive "no."

CREDIT & DEBIT CARD COMBINED SHARE OF POS TRANSACTION VALUE 2020-2027F

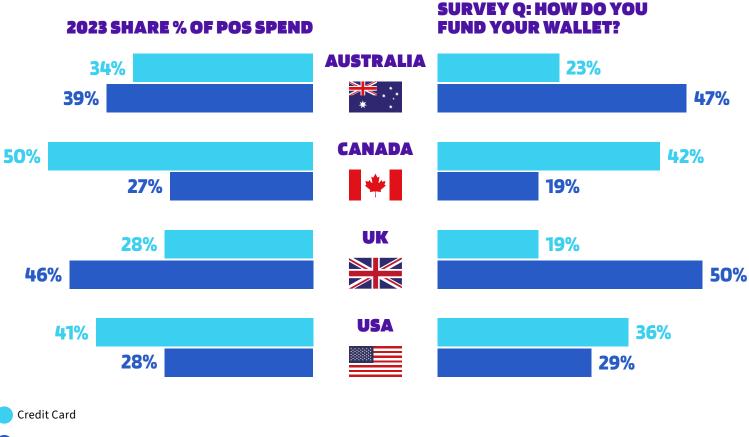
(+ Digital wallet share)



CARD SPEND IN WALLETS REFLECTS CARD SPEND IN EACH MARKET

Especially in historically carddominated payment markets, the spend being "lost" is simply shifting to being used from within "pass-through" and "staged" digital wallets like **Apple Pay**, **Google Pay**/ **Google Wallet** and **PayPal**.

In our survey we asked consumers "how do you typically fund your mobile wallet?" Their answers consistently approximated the relative mix of credit and debit card spending inside wallets that takes place with physical cards outside wallets.



Debit Card

¹⁸ worldpay

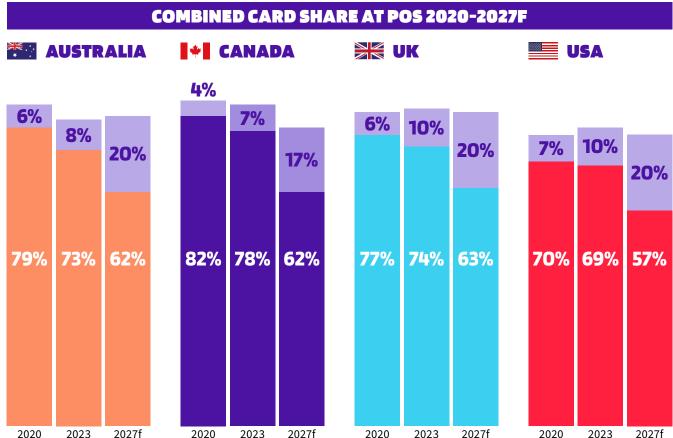
INSIGHTS



Physical Cards

Including an estimated spend taking place from within wallets based on our survey results, cards project to maintain effectively flat shares through 2027. In these carddominated markets, that translates to nearly 80% of POS transaction value in 2027.

Wallets are changing the way consumers present cards in card-dominated markets but based on our survey data they're not fundamentally altering the underlying transaction shares. That may well change in the future as methods like A2A and BNPL account for bigger share of wallet funding, but cards look to retain relevance – and in many markets, dominance – for many years to come.



f = forecast

AZAIS THRIVING IN MARKETS WITH STRONG GOVERNMENTAND BANK SUPPORT

Account-to-account (A2A) payments continue to thrive in markets around the world.

In 2023, A2A was the leading e-commerce payment method in Finland, Malaysia, The Netherlands, Nigeria, Norway, Poland, Sweden and Thailand. A2A payments built on real-time payment rails are revolutionizing payment landscapes in major emerging economies such as Brazil and India.

A2A schemes are succeeding in emerging markets where they receive strong government support as a means to achieve financial inclusion and promote digital payments. In advanced markets, collaborative initiatives between banks promote the use of A2A schemes.

A2A IS THRIVING IN MARKETS WITH STRONG GOVERNMENT AND BANK SUPPORT



- Central bank sponsored, launched in November 2020
- Subsidized consumer
 discounts to incentivize use
- E-com + POS, seeks to eventually replace cash and cards
- Projected to account for 50% of e-com payment value by 2027



- Central bank sponsored, launched in 2016
- Works with commercial digital wallets including Google Pay, Paytm, PhonePe, MobiKwik, and Amazon Pay
- E-com + POS, seeks to replace cash
- Wallets account for > 50%
 POS + e-com value



- Privately operated, <u>owned</u> by six Polish banks + Mastercard
- Launched in 2015, had over 14 million active users as of Q2 2023
- A2A payments accounted for 68% of Poland's e-com transaction value in 2023, and is projected to reach 73% by 2027



- Purchased by European Payments Initiative (EPI)

 itself owned by 16 large
 European banks – in
 October 2023
- Launched in 2005 by four major banks for use by all Dutch banks
- A2A accounted for **64%** of Dutch e-commerce transaction value in 2023

...YET AZA REMAINS CHALLENGED IN CARD-DOMINATED MARKETS

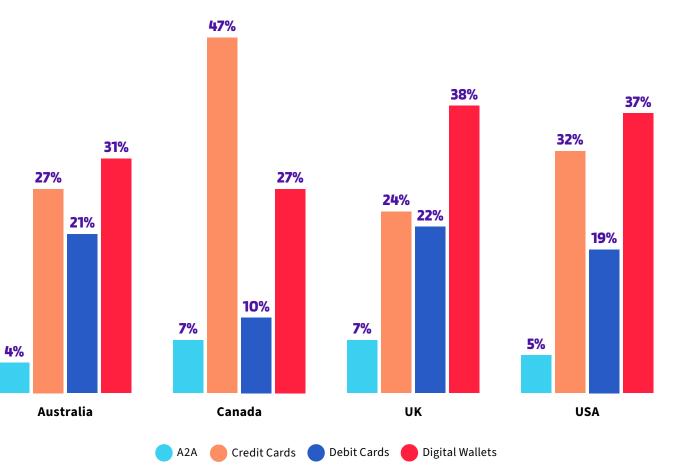
A2A growth has been considerably slower in established card markets such as Australia, Canada, the UK and the USA. Merchant incentives are clear – they crave A2A's lower cost of payment acceptance.

However, incentives for consumers to adopt A2A payments are less obvious. Cards work for consumers, as evidenced by the more than \$20 trillion in global credit card and debit card spending in 2023.

The success of payment cards relies in large part on two factors consumers increasingly demand: purchase protections and loyalty rewards.

A2A payment schemes will need to solve these trust and reward puzzles to meaningfully influence consumer behavior in card-dominated markets. Loyalty and fraud prevention are currently services provided by intermediaries – card networks, financial institutions and payment service providers. These services are ultimately funded from interchange fees paid by

2023 A2A, CARD AND WALLET SHARE OF GOM TRANSACTION VALUE, SELECT MARKETS



merchants. By design, A2A schemes have few or no intermediaries and thus have no structural chargeback mechanism so central to card schemes. Who, if anyone, will offer consumers fraud protection? Why should consumers give up their rewards?

Regulatory initiatives to promote open banking and new real-time payment systems coming online seek to change that equation in large consumer markets with high card penetration. To date, success has proved elusive.

In Australia, <u>RBA Governor Michele Bullock</u> <u>articulated her frustration</u> with the delays in adoption of the <u>New Payments Platform (NPP)</u> and its push payment service for consumer to business purchases, <u>PayTo</u>. Higher costs and poor user experience have <u>raised concerns among</u> <u>legacy payment system providers about the</u> utility of A2A payments. 2023 estimates reflect a downward revision to 5% of e-com transaction value for A2A while modest 9% CAGR to 2027 projects incremental A2A adoption and is subject to additional revision.

In Canada, implementation of <u>Payment Canada's</u> <u>Real Time Rail (RTR)</u> instant payment system was delayed again in 2023. The year concluded with <u>no specific timetable for release</u>. While further studies are being pursued. Previous estimates and forecasts for A2A payment values in Canada have been revised downward.

In the US, <u>FedNow</u> adoption has been <u>comparably minimal</u> in its first year of operation. Meanwhile it appears that the presence of FedNow <u>spurred an increase in adoption</u> of RTP services from <u>The Clearing House</u>, FedNow's private competitor. With few compelling consumer to business use case deployments on the horizon, A2A payment estimates and forecasts have been revised downward.

Similarly, the UK government commissioned <u>a 2023 report</u> on how to improve payments in general and Open Banking in particular in the UK. Adoption of A2A in the UK remains low and to date has posed no threat to card dominance. If the UK Government initiative succeeds, share of A2A value in the UK could grow to 8-10% of e-commerce spending by 2027.

In September 2023, <u>The European Payments</u> <u>Initiative (EPI) launched wero</u>, a new pan-European digital wallet aimed at promoting realtime account-to-account payments in Europe. In October 2023 EPI announced the acquisition of the Dutch payment solution **iDEAL** and the Luxembourg A2A payment provider **Payconiq**. The ambitious <u>Nordic Project P27</u> was <u>cut short</u> in April 2023 after member countries withdrew their support and declined to go forward with the project.

A2A growth in Europe will in large measure depend on the success of the <u>new proposals</u> by the European Commission, published in October 2023, aimed at unlocking Open Banking. These include a new explicit obligation for banks to provide an API-based open banking interface and payment status information to thirdparty providers.

CONSUMERS GRAVITATE TO BNPL DESPITE HEADWINDS

Buy Now Pay Later (BNPL) companies continued to be challenged in 2023 by high interest rates, looming regulation, lowered valuations, and BNPL GLOBAL E-COM TRANSACTION VALUE 2019-2027F (\$ BILLIONS)

\$316

The challenges BNPL companies face from a business model perspective are not the result of declining popularity of the payment method by consumers. Indeed, in 2023 consumer demand for BNPL reached an all-time high.

While many BNPL firms struggled through these headwinds, banks, fintechs, big techs and e-commerce platforms continue to add BNPL to serve persistent consumer demand.

\$452

Banks, big tech, retailers and regulators bring BNPL into the credit mainstream. Global BNPL transaction values grew 18% YoY from 2022-23 despite well-publicized headwinds. Our forecast for BNPL is 9% CAGR in global e-com through 2027, equal to that of e-com growth overall.

worldpav 24

f = forecast

\$61

2019

HEADWINDS SEPARATING BNPL WINNERS AND LOSERS

Though the plight of pure-play BNPL companies may be challenged in the near term due to high interest rates and a flight from fintech, banks, big techs, e-commerce platforms and super apps continue to add BNPL as part of their overall credit offerings to serve persistent consumer demand for the payment method.

The winners in the BNPL race are increasingly those for whom BNPL is not the primary business model. Major BNPL providers include fintechs (PayPal Pay in 4), Big Techs (Apple Pay Later), banks (My Chase Plan, NAB Pay Later) and card networks (Visa Installments, Mastercard Installments). In December 2023, Google announced their intention to partner with **Affirm** and **Zip** to provide BNPL services via its **Google Pay** wallet. Even the largest and best known global BNPL brands have diversified, pivoting from pure-play BNPL to become shopping platforms (Klarna) and to offering a wider range of traditional credit services (Afterpay, Affirm, Zip).

Whether the model of "pure play" BNPL providers will succeed is unclear, even given the most favorable macroeconomic and sector dynamic conditions. Headwinds in 2023 saw at least a dozen BNPL firms discontinue operations entirely, including **Openpay** and **Latitude Pay** in Australia, **Laterpay** in Germany, **myIOU** in Malaysia, **Zest** in India and **Pace** in Singapore.

Although some players, such as **Zip** and **Clearpay** (Afterpay's European brand), are pulling services from the European market, others, like Klarna, seized the opportunity to expand and grab more market share as demand for BNPL services continue unabated. Klarna offered positive news by reporting a quarterly profit in Q3 2023.

BNPL LEADERS: BIG TECHS, BANKS, FINTECHS



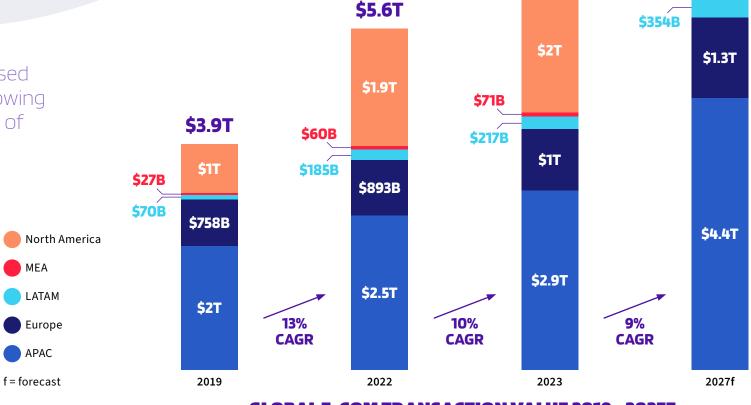
SAMPLE OF BNPL COMPANIES CEASED OPERATIONS IN 2023



GLOBAL E-COM GROWTH SLOWS YET REMAINS ROBUST

Global e-commerce surpassed \$6.1 trillion in 2023 and is growing at more than twice the rate of global POS.

E-com growth is projected for 9% CAGR (versus 4% for POS) through 2027. E-com as a percentage of all commerce therefore continues to rise, reaching 14.4% globally in 2023 and forecast to exceed 17% by 2027. High single-digit e-commerce growth is forecast for Europe (8%) and North America (7%), with double-digit growth in APAC (11%), LATAM (12%) and MEA (14%).



GLOBAL E-COM TRANSACTION VALUE 2019 - 2027F, US\$ BILLIONS + GLOBAL CAGR

\$6.1T

\$8.8T

\$2.7T

\$119B

INSIGHTS

GLOBAL E-COM GROW Η UTPACES POS BY > 2-1

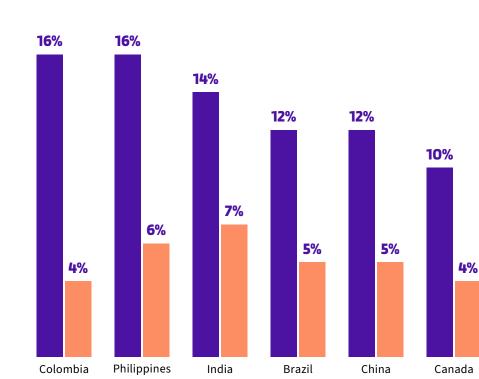
The global e-commerce pie expanded by 10% – a half a trillion US\$ – in 2023 over 2022 to reach \$6.1 trillion in transaction value.

POS

E-com

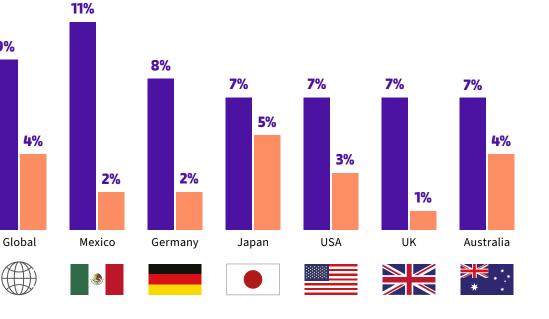
Global e-com growth is forecast at 9% CAGR through 2027 (versus 4% for POS), when e-com transaction value is projected to be nearly \$8.8 trillion.

High single-digit growth is forecast for Europe and North America, with higher growth rates in the teens for APAC, LATAM and MEA.



FORECAST CAGR % 2023-2027, SELECT MARKETS

9%



CASHREMAINS RELEVANTAMID ECONOMIC UNCERTAINTY

Globally, **cash fell -8% YoY** from \$6.7 trillion in 2022 to \$6.1 trillion in 2023.

We project global cash transaction values will see a **continued decline of -6% CAGR** through 2027 when cash will account for an estimated \$4.7 trillion, or 11% of global POS transaction value.

> Share (Transaction Value (f = forecast

GLOBAL CASH TRANSACTION VALUE 2017 – 2027F \$US trillions (share % of POS)



²⁸ worldpay

CASH'S CHANGING, DIVERSE AND ESSENTIAL ROLE

In 2023, **cash was the leading payment method at POS transaction in 12 of the 40 markets** covered in this report: Argentina, Colombia, Japan, Malaysia, Mexico, Nigeria, the Philippines,

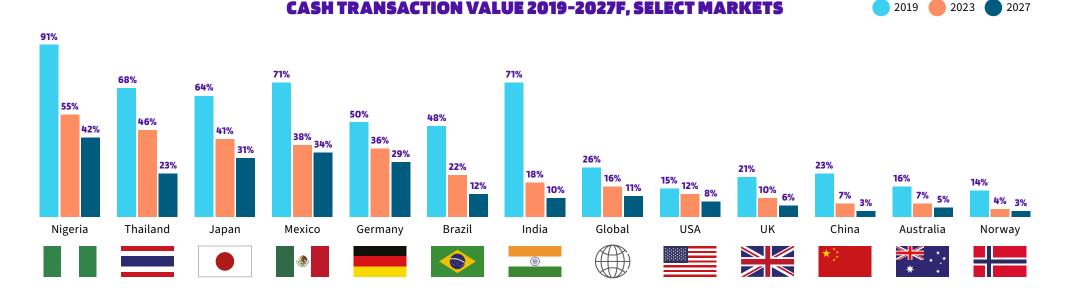
By 2027, we project that **cash will remain the leading payment method in just five markets:** Colombia, Mexico, Nigeria, Peru and Spain.

Peru, Poland, Spain, Thailand and Vietnam.

Even in long cash-heavy Germany, in 2023 debit cards (38%) surpassed cash (36%) to become the leading payment method among German consumers at POS. Cash use ranged from low of 4% of transaction value in Norway to a high of 55% in Nigeria.

Yet cash remains a vital payments tool for billions of consumers worldwide. In many markets cash is used disproportionately by lower income consumers, those that are unbanked and underbanked. Consumers of many income strata turn to cash as a budgetary tool during high inflation and the cost of living crisis. This has led to campaigning and lobbying by consumer groups to protect access to cash. In 2023, **cash accounted for less than 10% of POS transaction value in one-in-four markets** covered in this report: Australia, Canada, China, Denmark, Finland, Hong Kong, Netherlands, New Zealand, Norway and Sweden.

By 2027, we project **five additional countries will fall below the 10%** transaction value threshold for cash: France, Singapore, South Korea, the UK and the USA.



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PREPAID CARD VALUE TO EXCEED \$1 TRILLION IN 2024

Prepaid cards serve an important role in the global payment ecosystem and are projected to exceed \$1 trillion in global transaction value across all channels in 2024.

Prepaid cards are thriving today because they offer a wide range of use cases: as private-label gift cards, general purpose reloadable cards, direct deposit payroll and for government benefit distribution. Prepaid cards offer utility to merchants, businesses, fintechs, banks, and card networks.

Above all, prepaid cards are extremely useful to consumers. Prepaid cards support financial inclusion by providing a convenient electronic payment tool to unbanked and underbanked consumers. Prepaid cards offer discretion to privacy-focused consumers and those concerned about personal information being exposed in data leaks. Prepaid cards are useful as gifts, for consumers who want to control their spending, for tourists, those traveling for business and for migrant workers.

PREPAID CARD GLOBAL TRANSACTION VALUE 2022-2027F (\$ BILLIONS)



INSIGHTS

E-com Prepaid Card Share

POS Prepaid Card Share



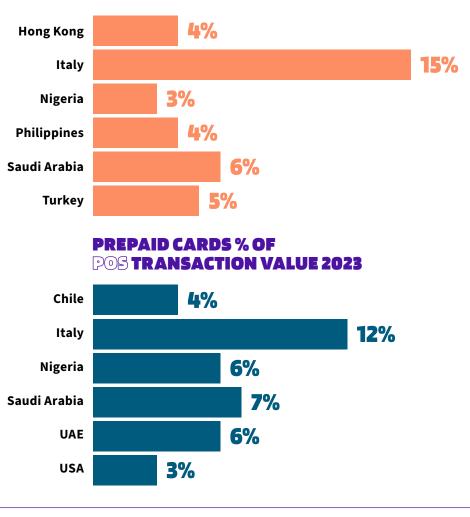
Prepaid cards have long been popular among privacyconscious Italian consumers. <u>Poste Italiane</u> (the Italian post office) offers **Postepay**, a popular reloadable prepaid card co-branded with Visa or Mastercard. Postepay can be used in stores, online and at ATMs both domestically and abroad. Postepay is an anchor in the Italian payment landscape, propelling prepaid cards in Italy to have the highest share of transaction value of any market in our report, both online and in-store.

In the Philippines, **GrabPay** offers **GrabPay Card**: a Mastercard-branded digital prepaid card that can be used to make online purchases and pay for digital subscriptions. Card holders also receive Grab Rewards points for purchases.

In Hong Kong, **Octopus** collaborated with Mastercard to launch a virtual prepaid card called **Octopus Wallet**. The card is linked to an Octopus digital wallet payment account and enables card holders to shop globally online at any merchants that accept Mastercard.

In Turkey, prepaid cards are growing among the unbanked population. Major banks offer prepaid cards with the aim of providing access to financial services. For instance, **Garanti BBVA's Bonus Piu** card can be used for cash withdrawals as well as in-store and online purchases.

PREPAID CARDS % OF E-COM TRANSACTION VALUE 2023



INCREASING FINANCIAL INCLUSION SIGNALS A SUNSET OF POST-PAY

For many years, post-pay methods helped consumers shop online and pay for their purchases in full post-order at an affiliated physical store or an ATM using an issued bar code, QR code or unique PIN.

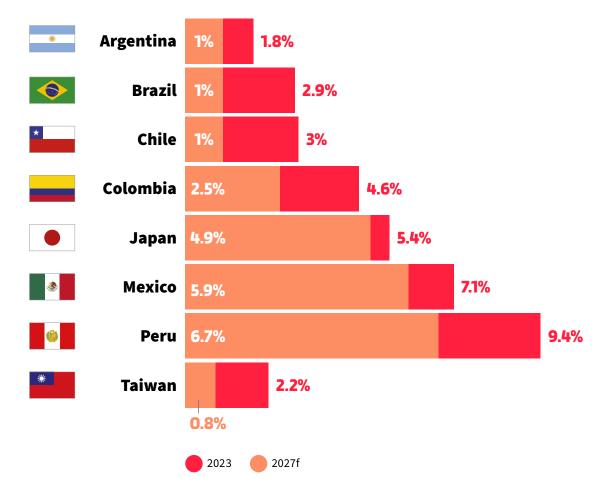
The vast majority of post-pay orders are paid for in cash, although other in-store payment methods can be made available.

While post-pay accounted for only 0.3% of e-com transaction value globally in 2023, post-pay is still heavily used in Latin America where it accounted for approximately 4% of the region's e-com transaction value in 2023 thanks to popular brands like **PagoEfectivo** in Peru, **OXXO** in Mexico, **Efecty** in Colombia, **Boleto Bancário** in Brazil, and **Pago Facil** and **Rapipago** in Argentina.

However, this trend has reached a plateau and we have seen a gradual decline of post-pay in the last few years, decreasing at -13% CAGR between 2019-2023. The biggest decline was observed in Argentina (CAGR -45% 19-23) and -35% in Brazil. This decline follows the same trajectory as cash, which halved its share of POS transactions in the last five years (down from 58% share in 2019 to 28% share in 2023 at the regional level).

We have seen a gradual decline of post-pay in the last few years, decreasing at -13% CAGR between 2019-2023.

POST-PAY % OF E=COM TRANSACTION VALUE 2023-2027F





INSIGHTS

The decline in post-pay use coincides with the adoption of digital payment methods, a decreased reliance on cash, and a regional improvement in financial inclusion. Post-pay payment methods traditionally cater to unbanked and underbanked consumers. Efforts to increase access to financial services have significantly improved financial inclusion across LATAM. According to the World Bank, the unbanked population of Argentina was reduced from 67% in 2011 to 28%; in 2021 Brazil was reduced from 70% in 2011 to 40% in 2021. That trend is expected to continue, further lessening demand for post-pay.

Outside of LATAM, post-pay use is negligible except for Japan, where post-pay remains viable due to the continued popularity of cash. Payments are typically made at the <u>over 55,000</u> Konbini convenience stores in Japan. But post-pay continues to decline. Post-pay in Japan accounted for 5% of e-commerce spend in 2023, down from 16% in 2019. This trend correlates with the fall in cash use in Japan, which dropped from 64% of POS transaction value in 2019 to 41% in 2023.

A VERTICAL VIEW

Payments are being reshaped by the ever-present power of choice.

³⁴ worldpay

A VERTICAL VIEW





Payments are now more personal than ever, with how consumers pay varying by geography, by personal economic conditions, and nuanced by what they're purchasing.

As powerful as they are, consumer preferences are just one force among many driving greater fragmentation across the global payment ecosystem. Advances in technology, macroeconomic conditions, political context and the nature of regulatory schemes all exert significant influence in how payment landscapes evolve. Further, these forces can result in dramatically different payment landscapes from one vertical to another.

Here, Worldpay's payments experts explore key trends across five vertical sectors.

GET ON BOARD WITH MORE PAYMENT OPTIONS FOR TRAVEL

Credit card usage remains high in the Travel and Entertainment sectors. The share of transaction value accounted for by credit and debit cards as a direct payment method is projected to decline slightly. However, much of this "decline" is due to card spending shifting to digital wallets. In travel, we're seeing strong card spend both inside and outside wallets.

The <u>Airline Reporting Corporation (ARC)</u> reported that **over 90% of all flight tickets purchased in the US between January and November 2023 were made with a credit or debit card.** This is not surprising, considering this industry pioneered card payments. <u>UATP (Universal Air Travel Plan)</u>, the airlines' proprietary credit card scheme, was <u>launched in 1936</u> and is still in use today.

A VERTICAL VIEW: AIRLINES & TRAVEL

The reasons behind the popularity of credit cards are multifaceted. Consumers are drawn to **incentives offered by issuing banks** such as frequent flyer miles, cash-back offers, or travel insurance. The value of **chargeback protection** that comes with cards was highlighted during the travel chaos at the beginning of the pandemic. Cards protect consumers against non-delivery of purchased services and so are ideal for purchases, like airline tickets, that are subject to cancelation for myriad reasons. Corporate travelers take additional advantage of itinerary data that is passed on with card transactions, which facilitates travel expense reporting and reconciliation.

Cards can support high transaction values. The two-step payment process – authorization and capture – allows travel providers to obtain authorization at one point in time, create the itinerary and issue the ticket in a second step, and only submit the transaction for settlement once successfully completed. Transaction corrections such as cancellation, full or partial refunds, or incremental authorizations are all supported and are commonly needed in the travel industry. Other payment methods struggle to replicate these features.

The unique requirements of the travel industry can make it **challenging for travel merchants to implement new payment methods** in their complex distribution systems. However, it can be worth it as many alternative payment methods are cheaper than traditional card payments, some promise faster settlement times or reduced fraud, and some even offer merchants payment guarantees. By offering additional payment methods, merchants can set themselves apart from competitors. This can also allow them to target new customer segments, particularly those who don't have access to traditional cards. Many may prefer the convenience of using digital wallets like **Apple Pay** or **Alipay**, or have the option to split payments across a longer period, such as with **Klarna** or **Fly Now Pay Later**. In 2023, digital wallets accounted for 50% and BNPL accounted for an additional 5% of global e-commerce transaction value, making them important considerations when designing checkout flows.

To summarize, although traditional card payments are still dominating the travel industry, offering alternative payment methods can help travel merchants expand their market reach, reduce costs, and improve customer experiences.

Credit cards continue to be the preferred mode of payment for travel, but the potential for alternative payment methods cannot be ignored. Despite challenges in implementation, the travel and entertainment industries have the opportunity to mirror growth seen in other verticals.

CHOICE TOPS THE SHOPPING LIST FOR TODAY'S RETAIL CONSUMER

As retail continues to evolve, payments become more exciting with every passing year. The pandemic accelerated digital transformation, producing shoppers more **accustomed to next-generation payments experiences**.

Today, retail payments need to be fast, secure and easy for starters. But that alone is no longer sufficient. Consumers are increasingly creatures of choice when it comes to how they pay, and so retailers need to work harder to satisfy this increasing demand.

Knowing your retail customers provides the

foundation to be prepared for every choice point on their purchase journey. That's especially true in discretionary retail, where removing all roadblocks to purchase is vital to convert sales. Payments are highly situational – each individual transaction involves a multitude of factors that may result in different payment methods being chosen.

Serving customer choice in retail means offering the most popular payment methods. For many,

that starts with cards. While cards are dominant in many markets, they accounted for just over a third of global e-commerce value in 2023 (22% for credit cards, 12% for debit cards an 1% for prepaid cards). It's digital wallets that dominate online with a majority of 50% of global e-com value in 2023. Rounding out a checkout with account-to-account and BNPL offerings cover an additional 7% and 5% of global e-com value respectively.

Consumers are even being attracted to retailers based on the payment methods on offer, making payments a prominent part of winning and keeping customers. Data from the Baymard Institute suggests that in 2023, 11% of US online shoppers abandoned an online order because they weren't offered their preferred payment method. We have long known this in e-commerce, where the payments user experience is paramount to making a sale and even to increasing basket size. But this can also be said for in-store, where alternative payment methods like BNPL are gaining popularity. BNPL has certainly become normalized for retail right across the gamut of sectors and price points. In a recent Worldpay survey¹, 21% of retail shoppers indicated they used BNPL at least once in the last year, including 30% of 27–35-year-olds.

An omnichannel approach is also becoming vital to satisfy consumer choice. Consumers, on average, are purchasing through <u>three or more</u> <u>channels</u>, and joining up their journeys provides a better user-experience, as well as enhanced sales and rewards scheme opportunities. In fact, 68% of shoppers told us they believe a seamless omnichannel experience will be important in the future¹, underlining the need to be fully connected with consumers right across physical and digital worlds.

With shoppers becoming more careful and considered in their spending habits, retailers will want to assess the choices they offer in all areas of the customer journey, as well as ensure that every interaction provides a chance to **deepen loyalty, introduce new products, and create upsell opportunities.** Today, shoppers expect flexibility at their fingertips. Offering choice is no longer a nice-to-have – it's essential to keeping savvy shoppers happy and loyal.

¹ Worldpay Shopper Trends 2024

DIGITAL WALLETS ARE THE LEADING CHOICE FOR DIGITAL CONTENT

Digital content continues to blur boundaries between physical and digital, delighting consumers with increasingly immersive entertainment experiences. Anything less than the most seamless payment journey can jolt consumers out of their experiential bubble. **Today's digital content consumer demands that payments are perfect – every time.** From streaming services and software platforms to digital media and video games, consumers expect payments to be fast, safe and easy. They also have seemingly infinite choice in digital content, making on-demand access a must. Payments need to be instant and seamless. **Digital wallets allow consumers to stay immersed in their content** with the convenience of fast, secure, one-click payments.

Digital wallets are ideal for subscription-based digital content models. Subscription services require recurring payments that digital wallets can seamlessly facilitate. This convenience is further enhanced by card-on-file tokenization, which ensures continuous revenue streams for providers while enhancing overall user experience. Cards are the biggest source of funding for wallets in markets such as the UK and US.

Content providers were subscription pioneers,

paving the way for adoption by other digital services because of the ability to reduce customer churn, deepen customer awareness, increase engagement, boost loyalty and drive new revenue.

As well as being convenient, **digital wallets can help build trust** with security-conscious digital content consumers. They offer robust security through encryption, tokenization and multifactor authentication measures that instill confidence among consumers and merchants alike.

Wallets are the majority payment method online, commanding 50% of global e-com transaction value in 2023. Wallets are in many markets achieving dominance in digital content: a single digital wallet brand outpaced all other payment methods among digital content users surveyed in China (**Alipay** with 31%), Denmark (**MobilePay**, 20%), Germany (**PayPal**, 36%) and Italy (**PayPal**, 25%).

Digital wallets will remain a focus for innovation in the realm of digital content, the native payment method for a generation of commerce. We expect that wallet providers will continue to innovate and evolve new ways to satisfy consumer payment choice. GPR 2024 estimates that digital wallets will continue to be the fastest growing payment method globally both online (15% CAGR from 2023-2027) and at POS (16% CAGR from 2023-2027). The wallet of the future – and more accurately the present – is not a physical item at all. Digital wallets make payments more seamless, convenient and secure, and there is no industry more primed to capitalize on this than the digital content industry.



A PERFECT PAYMENTS STORMFOR FINANCIAL SERVICES PROVIDERS

Exciting innovation is underway in financial services payments.

Innovation is being driven by consumers demanding payment choice, regulators requiring transparency, and investors demanding returns. The financial services sector has traditionally been slow to innovate, facing dual headwinds of needing to maintain interoperability with existing technology and to limit customer disruption. Even in the most advanced financial markets, it's still commonplace for consumers to pay for financial services by paper checks or by leveraging antiquated payment rails where transactions take days to clear.

Yet technology is becoming nimbler, opening doors to innovation.

As the speed of innovation and cost of maintaining IT infrastructure rises, in-house solutions are being supplanted by superior third-party platforms. Having both "build" and "buy" options makes change easier.

All this innovation is coming just in time, as **consumers demand the same flawless experiences when paying for financial services** as when paying for a coffee or booking a car online. Financial services companies must evolve their checkout flows not just to match the experiences of other industry competitors. Financial services payments need to be flawless experiences that rival what consumers have grown accustomed to across all of their digital journeys.

So, what will change first? Unlike retail purchases dominated by card payments, financial service transactions have traditionally been bank transfers. Far from a frictionless experience, legacy **bank transfers will be supplanted by more innovative systems like account-to-account (A2A) payments,** leveraging both open banking as well as emerging real-time payment rails. A2A payments accounted for an estimated 7% of global e-commerce transaction value in 2023 and are projected to grow to 8% by 2027. A2A solutions often mimic the benefits of card payments – such as variable recurring payments – while offering merchants instant settlement and, critically, lower transaction fees. **Digital wallets' enhanced security is ideal for financial services payments.** That's especially true in retail trading. With built-in twofactor authentication and tokenization, wallets offer more secure transactions and peace of mind for consumers when dealing with personal financial information. Wallets are win-wins for financial service consumers and firms alike when it comes to speed, security, and convenience, and regardless of the underlying payment method used.

Financial services firms need to innovate to keep pace with

consumers who are reshaping payments. Offering A2A and digital wallet options is just a start. The customer experience in financial services payments must rise to meet a new, higher standard. Incentives such as rewards can also help move the needle on consumer behavior while boosting brand loyalty.

Software is becoming more interoperable and integrated, governments are driving favorable regulation, and more product innovations are on the market. Financial service providers need to react to rising consumer demand for flawless digital payment experiences.

AZA BROADENS CHOICE FOR GAMING PAYMENTS

Gaming consumers have abundant

choice around where they play, and increasingly want as much choice about how they pay. For gaming consumers, the speed, security and ease of getting money in and out of gaming systems can help define a brand.

For gaming operators, payments can no longer be an afterthought – they must be perfect, around the clock. A choice-driven approach to payments can become a strategic pillar for considerable customer retention, loyalty and growth.

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A VERTICAL VIEW: GAMING

Gaming is pioneering the use of payments to improve acquisition and loyalty as well as using payments to optimize their P&L. Looking at account-to-account payments to improve both the top and bottom line will be critical, with the infrastructure only set to improve and demand to grow. With all the change in the industry, increased focus and interest around real-time money movement is guaranteed.

Gaming consumers are accustomed to great userexperiences. This extends to expecting seamless and even personalized payment experiences to meet a range of preferences. <u>Cards still dominate for gaming</u> <u>payments</u> (35% debit and credit card share maintained year-over-year in US gaming), and digital wallets also have considerable market share. However, the breadth of alternative payment methods being embraced by gaming customers – including A2A – means **choice should be the name of the game.**

A2A payments offer merchants lower payment costs, near-instant settlement, and higher authorization rates. With 70% of players saying <u>speed of a payout</u> is important, and 44% re-using winnings to place a new bet, the growing availability of real-time payment systems with irrevocable instant payment is **appealing** to gaming consumers and operators alike.

A2A broadens payment choice for consumers who are accustomed to having meaningful choices in nearly everything they do. Worldpay research found that <u>27% of players</u> would drop out of the action if their preferred payment method was not available. **Payments have the power to boost top and bottomline revenue** whilst driving loyalty, giving operators who innovate their payment journeys along with their gaming experiences **a true competitive advantage.** And there has never been a better time to innovate. Fewer markets are regulating, and for those already regulated, organic growth is slowing. Competition is fierce, making market share hotly contested. Profits have never been under more scrutiny from executives, analysts and shareholders.

Having options is paramount in gaming. A2A payments are undoubtedly here to stay and likely to increase in popularity. Bringing clear benefits, operators should be ready to embrace A2A payments as part of their payment portfolio, as well as ensuring their whole payments strategy remains diverse, innovative and customer centered.

ASIA-PACIFIC

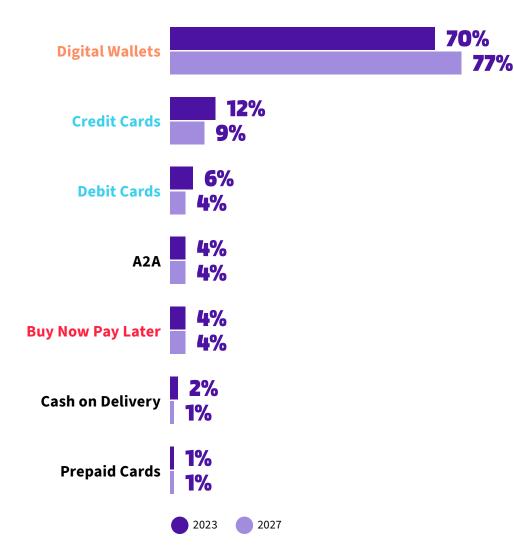
PAYMENT METHODS AND MARKET GUIDES

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THE GLOBAL PAYMENTS REPORT 2024 4

APAC E-COM PAYMENT METHODS

Transaction value % 2023-2027



In 2023 APAC consumers continued to lead the world in digital wallet use online. Consumers in APAC used **digital wallets for 70% of e-com transaction value** in 2023. Wallets accounted for over \$2 trillion in e-commerce transaction value in 2023, which represented over 64% of global online digital wallet spend.

In 2023 digital wallets were the leading e-com payment method in five of fourteen APAC markets:

China, India, Indonesia, The Philippines and Vietnam. By 2027 our forecasts indicate they'll be joined by Hong Kong, New Zealand, Singapore, South Korea and Taiwan.

Credit cards were the people's choice for online payments in seven of fourteen APAC markets:

Australia, Hong Kong, Japan, New Zealand, Singapore, South Korea and Taiwan. Direct credit card spend outside of digital wallets accounted for 12% of APAC's e-commerce transaction value in 2023.

Consumer demand for Buy Now Pay Later (BNPL) remained strong in 2023, with BNPL accounting for 4% of regional online spend, over \$120 billion in transaction value. BNPL forecast of 16% CAGR projects modest (less than 1%) growth in share in the forecast period to 2027.

APAC E-COM PAYMENT METHODS

APAC MARKET GUIDES

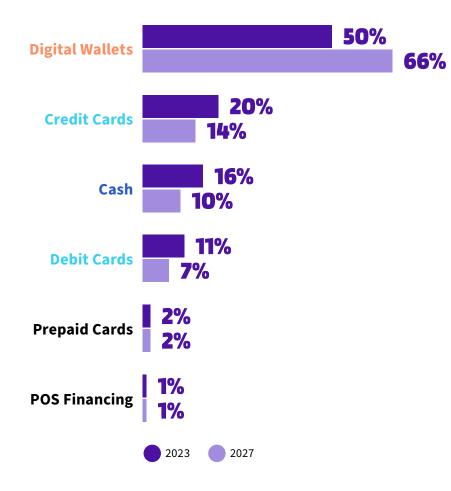
		Digital Wallets	Credit Cards	Debit Cards + Prepaid Cards	Account to Account (A2A)	Buy Now Pay Later	Cash on Delivery	Others
* *	Australia	31%	27%	22%	4%	15% ★	1%	<1%
*1	China	82% ★	5%	5%	2%	4%	1%	1%
5	Hong Kong	32%	41%	7%	15%	1%	3%	1%
	India	56%	15%	9%	12 %	3%	3%	1%
	Indonesia	40%	10%	8%	28%	3%	11%	1%
	Japan	20%	57% ★	5%	6%	3%	2%	6%
	Malaysia	24%	16%	12%	39%	4%	3%	2%
*	New Zealand	24%	28%	23% ★	12%	11%	<1%	<1%
	Philippines	34%	19%	16%	16%	1%	14%	<1%
C	Singapore	37%	42%	8%	8%	3%	1%	1%
	South Korea	27%	56%	8%	5%	1%	1%	2%
*	Taiwan	26%	47 %	5%	9%	1%	9%	3%
	Thailand	27%	12%	7%	44% ★	1%	8%	1%
\star	Vietnam	36%	17%	9%	20%	1%	17% ★	1%

Country leading payment method

★ Regional high

APAC POS PAYMENT METHODS

Transaction value % 2023-2027



Digital wallets achieved another significant milestone in 2023, surpassing 50% of POS spend across APAC. Wallets represented more than \$7.8 trillion in POS transaction value in 2023, nearly 72% of the \$10.8 trillion global POS digital wallet market.

Wallets were the leading payment method at POS in only China and India in 2023; by 2027 our forecasts indicate wallets will lead in all APAC markets except Australia, Hong Kong and New Zealand. Driven by increasingly ubiquitous interoperable QR codes, wallets are projected to grow at 13% CAGR to 2027, rising to represent nearly two-thirds (66%) of APAC POS spend in 2027 (~\$12.7 trillion in transaction value).

The use of cash continues to drop rapidly across APAC as consumers, merchants and governments pivot to digital payments. The use of cash across APAC fell 12% year-over-year in 2023, falling from 19% to 16% of regional POS transaction value. Cash was the leading POS payment method in six of fourteen APAC markets in 2023. Accounting for more than \$2.5 trillion in 2023 transaction value, regional cash use is forecast to contract by -8% CAGR from 2023 to 2027.

Cards are the consumer's choice for in-person payments in six APAC markets. Physical credit cards are the people's choice in Hong Kong,

New Zealand, Singapore, South Korea and Taiwan, while physical debit cards are the in-person preference in Australia.

APAC POS PAYMENT METHODS

	Cash		Credit Cards	Debit Cards	Prepaid Cards	Digital Wallets	POS Financing
* *	Australia	7%	34%	39% ★	1%	15%	4% ★
*1	China	7%	13%	11%	2%	66% ★	1%
5	Hong Kong	9%	52 %	5%	4%	27 %	2%
6	India	18%	18%	10%	1%	51%	2%
	Indonesia	38%	11%	15%	2%	32%	2%
	Japan	41%	34%	3%	3%	17%	2%
(*	Malaysia	32%	21%	14%	4% ★	24%	4%
*	New Zealand	6%	44%	34%	2%	11%	2%
	Philippines	44%	17%	15%	1%	20%	2%
C	Singapore	15%	37%	20%	4% ★	22%	2%
	South Korea	10%	58% ★	12%	2%	15%	2%
*	Taiwan	25%	47 %	6%	2%	18%	2%
	Thailand	46% ★	13%	9%	2%	28%	2%
\star	Vietnam	38%	19%	9%	1%	31%	2%

Country leading payment method 🛛 🛧 Regional high

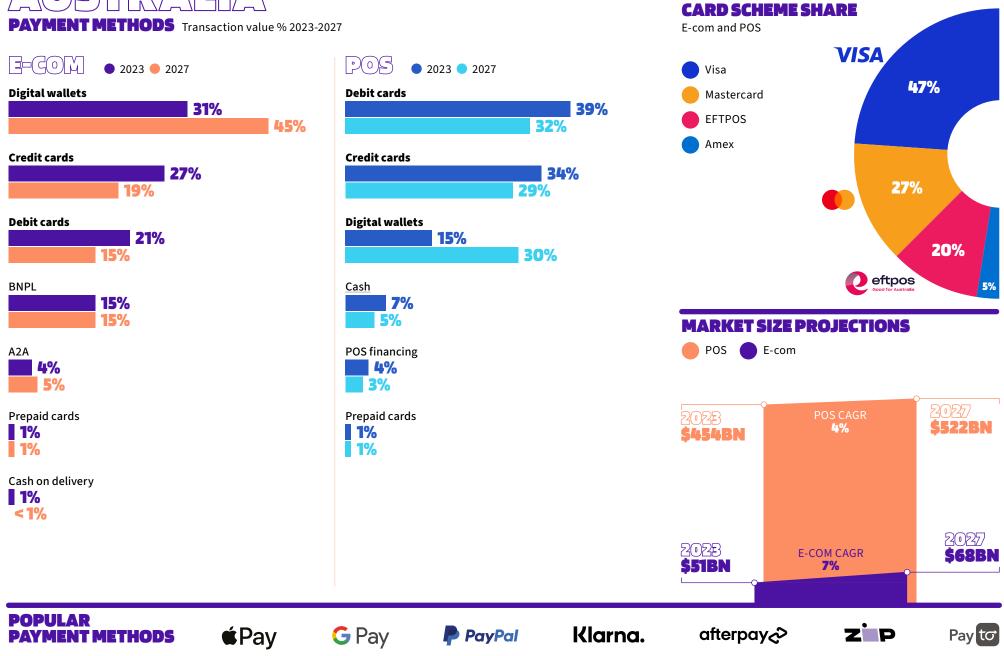
Totals may not equal 100% due to rounding.

- In 2023, Australia's once soaring Buy Now Pay Later (BNPL) market showed signs of stress. Zip retreated from ten international markets, while six domestic BNPL firms discontinued operations including <u>Bundll</u>, <u>Fupay, Genoapay, Latitude Pay</u> and <u>Openpay</u>. Yet Australian consumers continue to choose BNPL, <u>especially younger shoppers</u>. BNPL is projected to maintain 15% share and to eclipse \$10.4 billion in e-com transaction value by 2027.
- Led by global brands Apple Pay and Google Pay, digital wallet POS transaction value is projected to double from 15% in 2023 to 30% in 2027. Wallets are the leading e-commerce payment method with 31% of 2023 transaction value, with Aussie consumers preferring PayPal when shopping online.
- The Australian Government asserted regulatory authority over BNPL and digital wallets in 2023. In October, the Reserve Bank of Australia (RBA) presented draft legislation that would regulate wallet providers under the 1998 Payment Systems Act. BNPL would be regulated as credit cards. Regulations were delayed until 2024 due to administrative bottlenecks in legislation drafting.
- A2A payment transaction value estimates and forecasts have been revised downward given the slow adoption to date of NPP's accountto-account (A2A) push payments service, <u>PayTo</u>. In December 2023, <u>Reserve Bank of</u> <u>Australia (RBA) Governor Michele Bullock</u> <u>cited ongoing concerns</u> that Australia's major banks had been slow, inefficient and costly in their implementation of <u>New</u> <u>Payments Platform (NPP)</u>.





\$51 billion



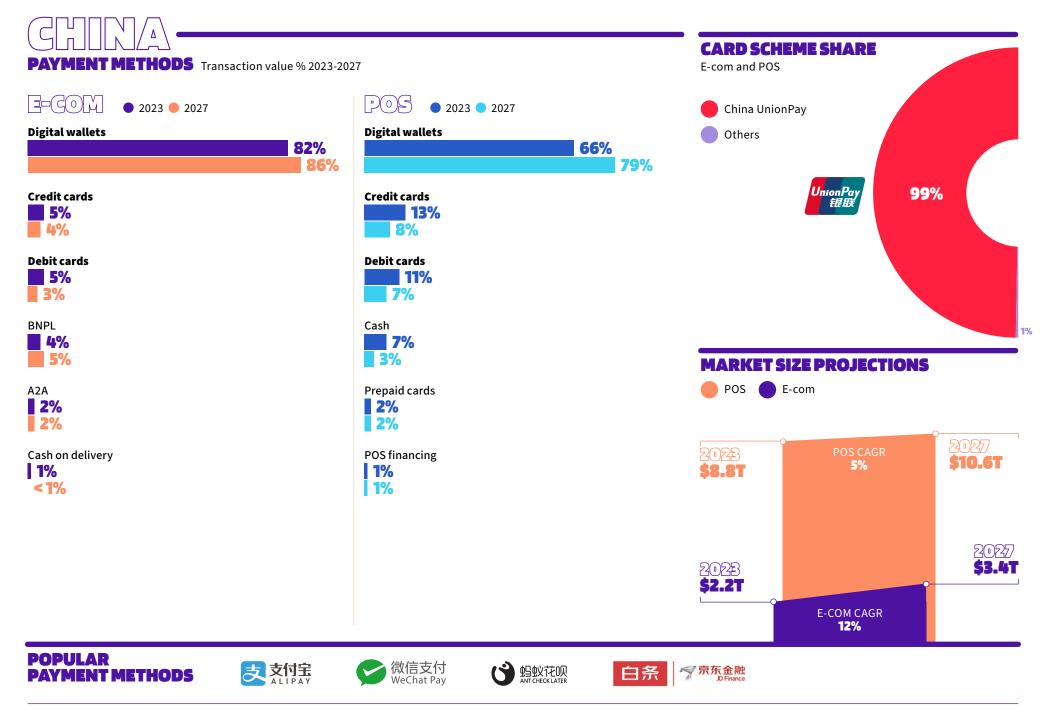
2023 = estimate; 2027 = forecast. Totals may not equal 100% due to rounding. *Card scheme shares are for the most recently available data (2022).

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- China continues to lead all global markets in digital wallet adoption across shopping channels. Wallets represented an estimated 82% of e-com transaction value in 2023 or nearly \$1.8 trillion. Only slightly less dominant at POS, digital wallets accounted for nearly two-thirds (66%) of POS spend in 2023, or nearly \$5.8 trillion.
- Notable given their current dominance, digital wallets are the fastest growing payment method in e-commerce and at POS. Wallets are forecast to grow at 13% CAGR from 2023-27, when they are projected to account for 86% of e-com spend. At POS, wallets are projected to grow at 10% CAGR to 2027, when we estimate wallets will represent 79% of POS transaction value.
- China's payment market is overwhelmingly led by three ubiquitous payment brands: the digital wallets Alipay and WeChat Pay, and the card network UnionPay. Alipay and WeChat Pay combined control an estimated 90%+ of the world's largest digital wallet market, while UnionPay has an effective monopoly with 99% of card payment value.
- State-owned UnionPay has historically transacted nearly all domestic card volume, but that's beginning to change. In July 2023, wallet giants Alipay and WeChat Pay separately announced they'd each allow visitors to link their Diners Club, Discover, JCB, Mastercard and **Visa** cards to use wherever Alipay and WeChat Pay are accepted. Then in November 2023, The People's Bank of China (PBC) issued <u>a bank card clearing license</u> to Mastercard for issuing and processing in China.



Rankings are out of 40 GPR markets

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2023 = estimate; 2027 = forecast. Totals may not equal 100% due to rounding. *Card scheme shares are for the most recently available data (2022).

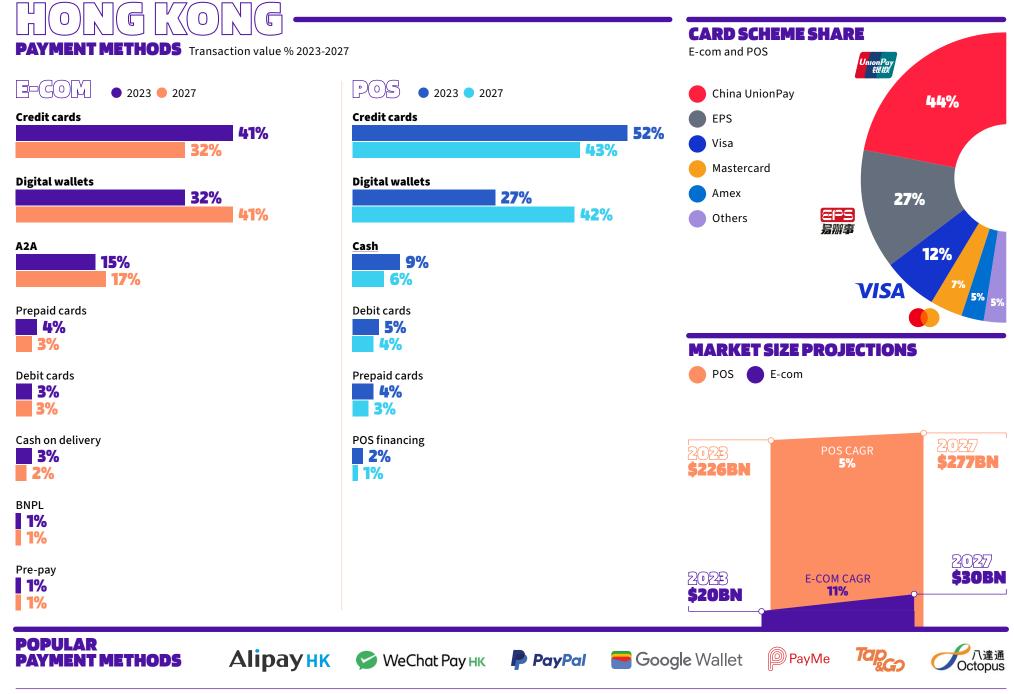
- Credit cards are the dominant payment method in Hong Kong both online and at POS. In 2023 credit cards accounted for 41% of e-com spend and more than half (52%) of POS value. Debit cards account for less than 10% of credit card value across channels. As in all credit-card dominant markets, <u>rewards</u> are a major driver of credit card popularity.
- Credit card spend is shifting to wallets. Digital wallets are on pace to eclipse credit cards in direct e-commerce spend by 2027. Credit card dominance at POS is forecast to persist, with 2027 projected share for credit cards (43%) marginally outpacing digital wallets (42%). 47% of Hong Kong consumers cited credit cards as their primary payment method within wallets.
- Prepaid cards play a critical role in Hong Kong's payment market. Octopus is a prepaid card used by <u>an estimated 98%</u> of Hong Kong consumers. Prepaid card transaction values <u>saw an estimated 40% boost</u> in 2023 due to their use as a conduit for distribution of benefits under the government's <u>Consumption Voucher Scheme</u>.
- In 2023 prepaid cards accounted for 4% of spend across both e-commerce and at POS in Hong Kong. While prepaid card share is projected to decline slightly to 2027, as is the case with credit and debit cards, prepaid card spend is shifting to use within wallets. New CEO <u>Tim Ying Tien Chi stated in October</u> 2023 Octopus's goal to be "on every phone in every pocket."



Population



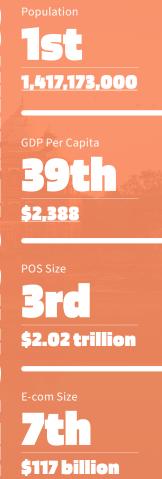
Rankings are out of 40 GPR markets



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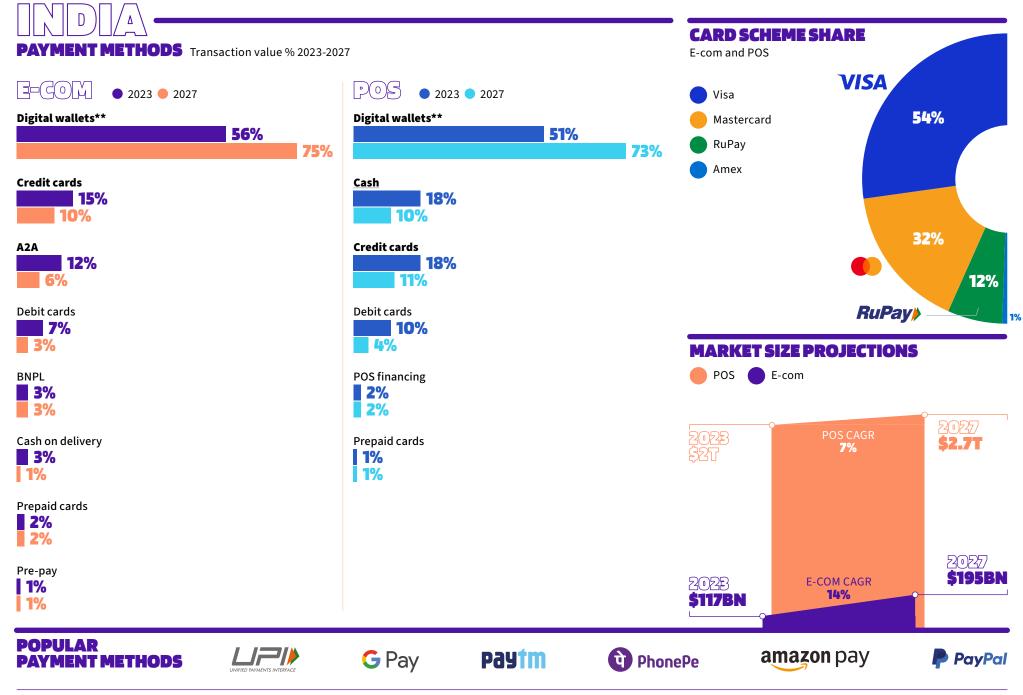


- India's innovative leadership continues to transform the payment landscape in the world's most populous market. The Unified Payment Interface (UPI) instant payment system is breaking records at home as it looks to go global including possible expansion to Japan. <u>A PwC report</u> estimated that UPI would see one billion transactions per day by 2027.
- UPI popularity is driving dramatic growth in digital wallet value. An estimated 95% of all UPI transactions are initiated from just three digital wallets: <u>Google Pay, Paytm</u> and <u>PhonePe</u>. Digital wallet spending accounted for 56% of e-com value in 2023. Wallet growth spiked 59% year-over-year to claim 51% of POS spend as wallets are used in conjunction with QR codes. Wallets are on pace to dominate with 75% of e-com and 73% of POS spending by 2027.
- UPI is rapidly displacing cash. Prior to the covid-19 pandemic, cash was the overwhelming leading in-person payment method with 71% share of POS value. By 2023 that had fallen to just 18%. This move away from cash is <u>by design</u> of the <u>Digital India</u> program. Cash use is projected to further fall by -8% CAGR from 2023-2027.
- Credit cards transaction values have increased both online and in store. In 2023, credit cards claimed 15% of e-com and 18% of POS transaction value. 2023 brought increasing opportunities to link credit cards for use within UPI. We expect use of cards directly to decline online and in-store as card-based transactions increasingly take place within wallets.



Rankings are out of 40 GPR markets

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2023 = estimate; 2027 = forecast. Totals may not equal 100% due to rounding. **Digital wallets include UPI transactions *Card scheme shares are for the most recently available data (2022).

- Digital wallets are the leading payment **method** among Indonesian consumers shopping online, commanding 40% of e-com spend in 2023. Wallet use is also growing fast at the point of sale, driven by the popularity of Quick Response Code Indonesia Standard (QRIS). Wallets accounted for 34% of POS spend in 2023 and are projected to reach 49% by 2027. Leading wallets include **DANA**, **GoPay**, **Lazada** Wallet, LinkAja!, OVO and ShopeePay.
- Account-to-account (A2A) payments are popular in Indonesia, accounting for 28% of 2023 e-com transaction value. Bank Indonesia's launch of the instant payment service **BI-FAST** in 2021 is driving new A2A adoption. In March 2023, BI-FAST reported 94% of the national retail payment system participation.

worldpa

- Buy now, pay later (BNPL) has found a niche **in Indonesia**, filling a financial inclusion gap among a population reported to be 48% unbanked. Credit demand is being met via BNPL by banks, fintechs (**Kredivo**), super apps (GoPayLater) and eCom platforms (Traveloka PayLater, SPayLater). In October 2023 the Indonesia Financial Services Authority (OJK) suspended domestic firm Akulaku from providing BNPL. Our BNPL forecast is for CAGR 10% between 2023-2027
- Credit card and debit card use is comparably low among Indonesia's consumers. Cards are far from niche, however: credit and debit cards combined accounted for 25% of consumer spend across all shopping channels in 2023.

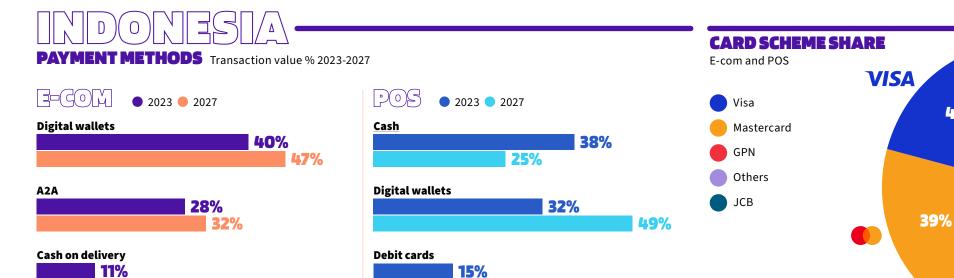
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V. Population 275,501,000 **GDP** Per Capita \$4,788 POS Size \$636 billion E-com Size

SIN IS

Rankings are out of 40 GPR markets

\$45 billion



12%

11% 10%

Credit cards

POS financing

2% 2%



7%









Pre-pay 1% <1%

PAYMENT METHODS



OVO

GPN

42%

13%

BI Fast

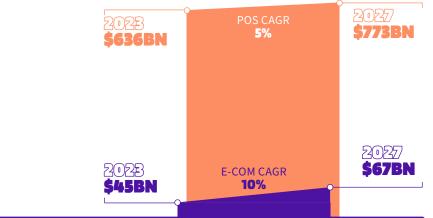


E-com

POS

ShopeePay

gopay



2023 = estimate; 2027 = forecast. Totals may not equal 100% due to rounding. *Card scheme shares are for the most recently available data (2022).

DANA

S gopaylater

⁶² worldpay

- Japanese consumers continue to choose cash which accounted for 41% of POS transaction value in 2023. Cash use is declining slowly, with forecast -2% CAGR through 2027 when we project cash will represent 31% of POS spend.
- Cash plays an important role in e-commerce via codes paid for at Konbini (convenience) stores. Konbini cash payments continue to be displaced by cards and digital payments – post-pay accounted for an estimated 20% of e-com transaction value as recently as 2018. Yet post-pay services are more than niche, accounting for 5% of online spend in 2023.
- **Digital payments in Japan are gaining steam.** Digital wallets accounted for 20% of e-com spend in 2023. Wallets remain the fastest growing payment method online, projected at 16% CAGR through 2027. Digital wallet use is

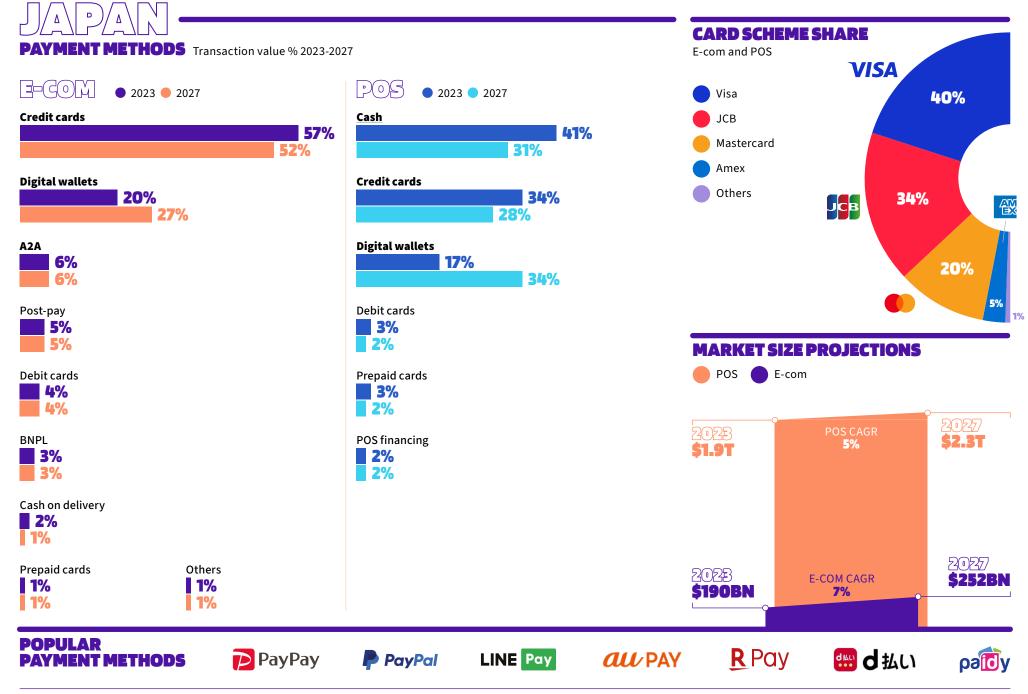
accelerating even faster at POS. Wallets held 17% share in 2023; with 24% CAGR forecast from 2023-27, wallets share is projected to double to 34% by 2027.

- Credit cards accounted an outright majority 57% of e-com transaction value and 34% of POS spend in 2023, combined more than \$820 billion. Credit card issuers offer consumers opportunity to split revolving debt into installments, seeking to retain that spend versus BNPL offerings.
- Prepaid cards availability was suspended in August 2023. Sales of the ubiquitous prepaid cards <u>Suica</u> and <u>Pasmo</u> were <u>indefinitely</u> <u>suspended</u> due to the global semiconductor shortage. Prepaid cards were nevertheless on track to represent 1% of online and 3% of POS transaction value in 2023.

Population 125,124,000 **GDP** Per Capita \$33.815 (o D **POS Size** ST VV R \$1.9 trillion E-com Size ЪЦ

> Rankings are out of 40 GPR markets

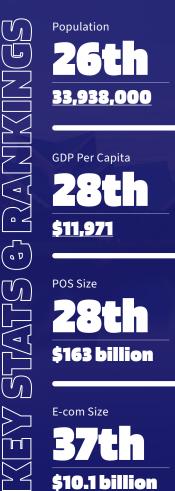
\$190 billion



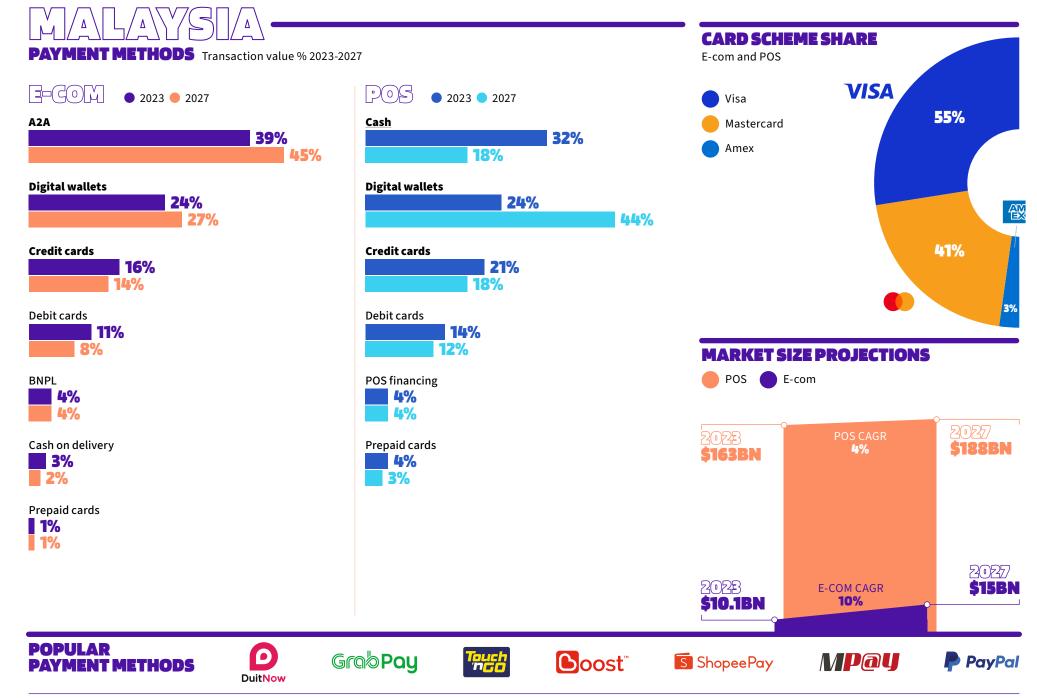
2023 = estimate; 2027 = forecast. Totals may not equal 100% due to rounding. *Card scheme shares are for the most recently available data (2022).

FIGULIGUES C. FIGULIGUES C.

- Malaysian consumers prefer account-toaccount (A2A) payments when shopping online. Malaysia has made considerable strides in financial inclusion, reducing its percentage of <u>unbanked consumers from 34%</u> in 2011 to 12% in 2021. Consumers can make e-commerce payments using the <u>Financial</u> <u>Process Exchange (FPX)</u> and <u>DuitNow</u>, which are used from within the consumer's banking app. A2A comprised 39% of Malaysia's e-com spend in 2023.
- Digital wallets are second choice among Malaysian consumers both online and at POS.
 Popular wallets in Malaysia include <u>Touch 'n</u> <u>Go eWallet</u>, <u>GrabPay</u>, <u>Boost</u> and <u>ShopeePay</u>.
 Wallets are poised for explosive growth of 21% CAGR at POS on a pace to account for 44% of POS transaction value by 2027.
- Malaysia continues to make progress toward its goal to <u>become a cashless</u> <u>society</u>. Malaysia's government seeks to achieve a cashless society by 2030 as part of the 2021 <u>Malaysia Digital Economy Blueprint</u>. Early indicators are positive, with cash use being slashed by half from 64% in 2019 to 32% in 2023. While cashless by 2030 may prove elusive, cash use is projected to fall at a dramatic -11% CAGR from 2023-2027.
- Malaysia is among four Southeast Asia markets to connect their real time payment systems. Consumers in Indonesia, Malaysia, Singapore and Thailand can now pay in local currencies in any of the ASEAN countries using interoperable QR codes, with the Philippines to follow.



Rankings are out of 40 GPR markets



2023 = estimate; 2027 = forecast. Totals may not equal 100% due to rounding. *Card scheme shares are for the most recently available data (2022).

worldpay

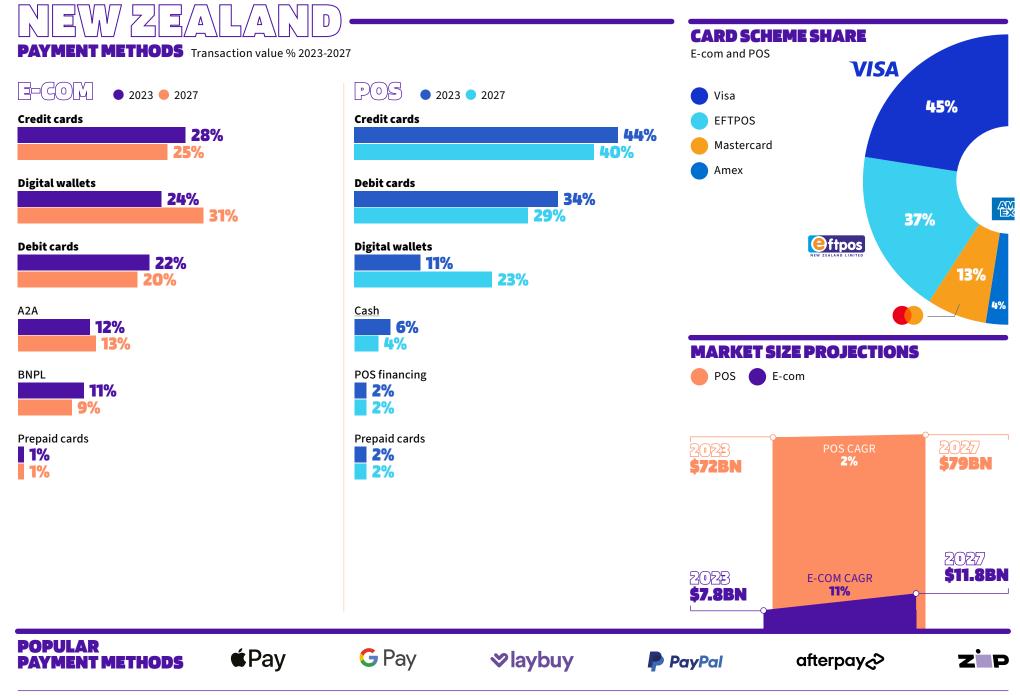
- Kiwi consumers are strongly attached to credit and debit cards. Cards comprised half of all e-com spend, with credit cards (28%) outpacing debit cards (22%). Card preference is even more pronounced in store as cards dominate with 80% of all POS spending (44% credit, 34% debit, 2% prepaid). Once dominant, debit cards and the **EFTPOS** network have ceded share to credit cards with increasingly more consumers choosing credit card payments for their rewards programs.
- Digital wallet use is growing fast, driven by global brands like Apple Pay, Google Pay and PayPal. Digital wallets accounted for 24% of online and 11% of POS transaction value in 2023, with 19% CAGR forecast online and 22% CAGR at POS from 2023-2027 forecast.
- New Zealand financial conduct authorities are seeking to regulate Buy Now Pay Later. An amendment to the Credit Contract and Consumer Finance Act (CCCFA) declares BNPL contracts to be consumer credit contracts and subject to that regulation. BNPL accounted for 11% of e-commerce transaction value in 2023, approximately \$845 million. Our forecast sees BNPL share declining slightly to 9% of e-com transaction value in 2027.
- In May 2023, New Zealand banks began processing payments seven day a week.
 Payments NZ implemented the change as "next step in modernising the country's payments system" that would among other benefits boost cash flow for small businesses.
 New Zealand lacks a domestic real-time payments system.



Population

Rankings are out of 40 GPR markets

\$7.8 billion



2023 = estimate; 2027 = forecast. Totals may not equal 100% due to rounding. *Card scheme shares are for the most recently available data (2022).

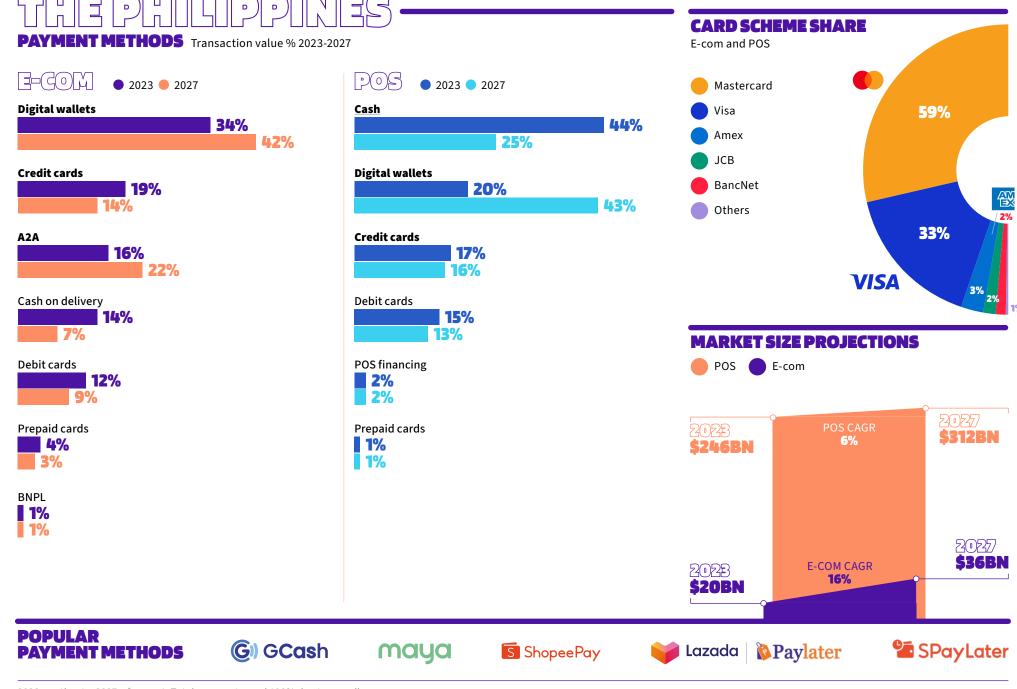
- **Cash remains the people's choice** for consumers when paying at the point of sale. Though not as dominant as before the pandemic, cash accounted for 44% of POS spend in 2023. Cash displacement in favor of digital wallet use with <u>interoperable QR</u> <u>codes</u> will continue with cash use projected to contract at -8% CAGR from 2023-20027.
- Filipino consumers' attachment to cash extends to e-commerce. Cash on delivery accounted for 14% of online spending in 2023, among the highest rates in the world. Many <u>consumers prefer paying by cash</u> due to trust issues, wanting to inspect goods for defects and authenticity prior to payment.
- Digital wallet use continues to grow rapidly online and in-store. Wallets accounted for 34% of e-commerce and 20% of POS spend in 2023 for a combined transaction value of nearly \$57 billion. <u>GCash</u> is the wallet of

choice among Filipino consumers, selected as their main wallet by 89% of those surveyed.

- Wallet use is boosted by shopping platform giants <u>Shopee</u> and <u>Lazada</u> which offer their own digital payment solutions. <u>ShopeePay</u> and <u>Lazada Wallet</u> offer consumers benefits such as cash back and free shipping when making payments using the solutions on their respective platforms.
- In December 2023, the <u>central bank of The</u> <u>Philippines (BSP) extended a moratorium</u> on fee hikes by users of the <u>InstaPay</u> and <u>PESONet</u> instant payment systems. The freeze sought to force the payments industry to implement zero fees for small value digital wallet transactions. The BSP indicated such efforts were to support its <u>financial inclusion</u> <u>mandate</u>. Many banks <u>waived such fees entirely</u> during the 2023 holiday season.



Rankings are out of 40 GPR markets



2023 = estimate; 2027 = forecast. Totals may not equal 100% due to rounding. *Card scheme shares are for the most recently available data (2022).

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- Digital payments at POS have been fueled by the Singapore Quick Response Code (SGOR), the world's first unified payment QR code. In 2023, the Monetary Authority of Singapore (MAS) introduced an upgrade to the system, SGQR+, that will allow merchants to accept 23 payment methods by signing up with just one financial institution.
- We project digital payments will double their share of POS payments by 2027.

Wallets grew 32% in 2023 year over year to account for 22% of POS transaction value. The successes to date of SGQR, the increasing interoperability of regional payment systems informs a strong growth forecast for wallets at POS of 22% CAGR between 2023-2027 that will propel wallets to 44% share by 2027.

- Singapore and Indonesia introduced crossborder payments via interoperable QR codes. The program officially launched in November 2023 and aims to create seamless payments connectivity between consumers across member states under the ASEAN Payments Policy Framework. The enhancements are expected to create frictionless payment experiences for tourists and online consumers, expand audiences for merchants and stimulate regional economic growth.
- A constant through Singapore's changing payment landscape are cards that combined accounted for a majority of consumer spend online and in store. Credit cards were the consumer's choice as the leading payment method by transaction value in e-commerce (42%) and at POS (37%) in 2023, while debit cards represented 7% of online and 20% of POS spend.

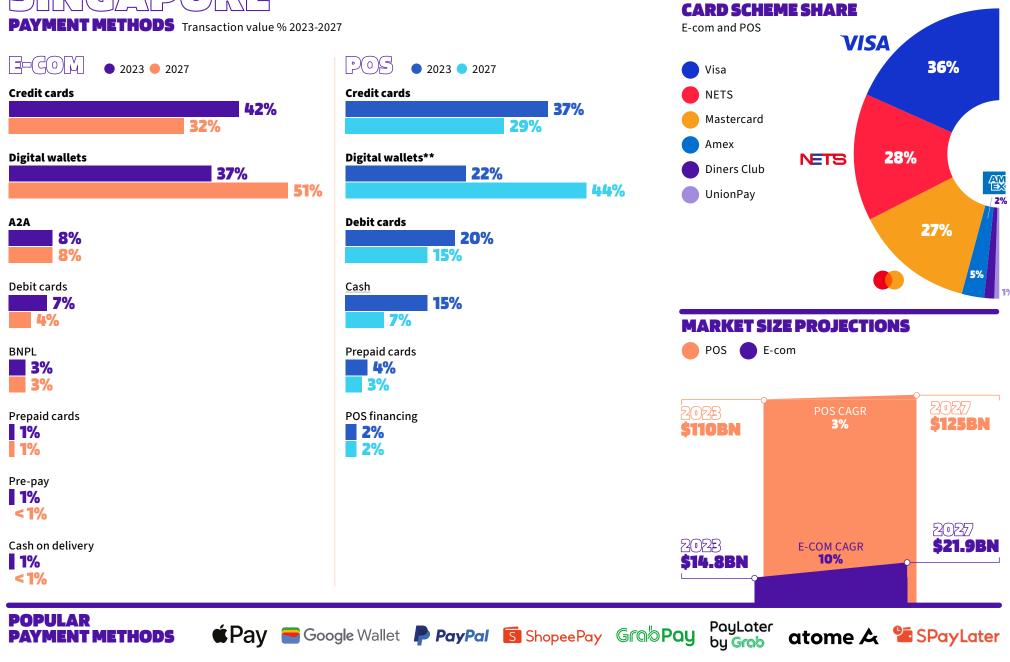


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ST/_TS

\$14.8 billion

Rankings are out of 40 GPR markets SINGAPORE



2023 = estimate; 2027 = forecast. Totals may not equal 100% due to rounding. **Digital wallets at POS include PayNow QR code payments. *Card scheme shares are for the most recently available data (2022).

- South Korean consumers use credit cards at POS at the highest rate in this report. Credit cards registered 58% of POS spend in 2023, nearly \$338 billion. Credit card dominance extends online where it accounted for 56% of e-com transaction value in 2023. This dominance isn't surprising given government incentives such as tax rebates to encourage for consumer to use credit cards.
- Digital payments are drawing that card spend to use within wallets. Wallets are expected to surpass credit cards in share by 2027 online and in-store. However, among South Korean consumers surveyed, 46% indicated cards as the main way they fund their digital wallets, showing the continued strong future for cards.
- South Korea has a straightforward online payment market structure. In 2023, cards and digital wallets combined accounted for 90% of e-commerce transaction value. Merchants can connect with South Korean consumers with a targeted and streamlined set of popular card and wallet brands.
- Apple Pay made its <u>long-awaited South</u> <u>Korea launch in March 2023</u>. Apple Pay will compete for share of this growing digital wallet market with leading domestic wallets <u>Kakao Pay, Naver Pay, Samsung Pay</u>. Digital wallets accounted for 27% of e-commerce and 15% of POS spend in 2023 and are projected to grow at 21% CAGR online and 31% CAGR at POS 2023-2027.



GDP Per Capita **215t** \$32,245

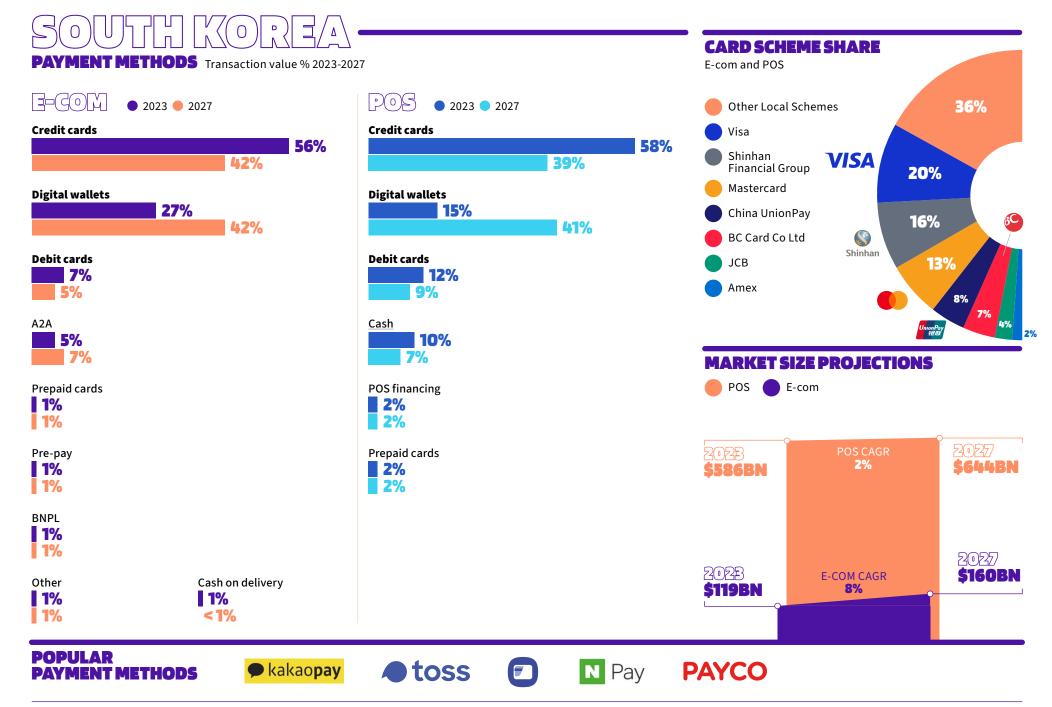
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POS Size **14th** \$586 billion

E-com Size

Rankings are out of 40 GPR markets

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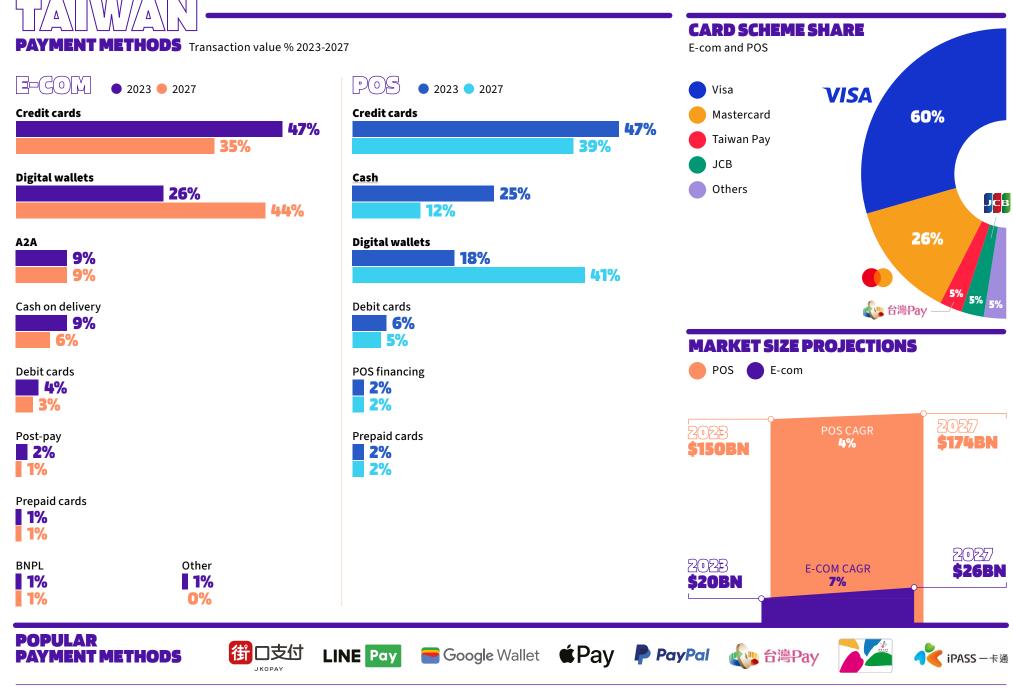
- Credit cards were the leading payment method both online and at POS in 2023, accounting for 47% of spend in both shopping channels. Consumers are increasingly shifting use of credit cards to card-linked wallets, which are projected to
 - card-linked wallets, which are projected to eclipse credit cards as the leading payment method online and at POS by 2027.
- Prepaid cards fill an important payment niche in Taiwan, accounting for 2% of POS transaction value in 2023. Two prepaid cards dominate the market: <u>EasyCard</u> and <u>iPass</u>. Originally designed for use in public transportation, today these stored value cards are accepted at a wide range of retail stores and are popular among both residents and tourists.
- Digital wallets are gaining significant traction at POS. In 2023, wallets accounted for 18% of POS transaction value, up from 16% in 2022. In August 2023, <u>Apple launched Tap to Pay in</u> <u>Taiwan</u>, allowing merchants to accept payments using just an iPhone. The increasing popularity of the <u>Taiwan Pay QR Code</u> is also driving wallet use. Digital wallets are projected to grow at 27% CAGR through 2027 when they will command an estimated 41% of POS transaction value.
- The use of cash continues to fall as consumers shift to digital payment methods. Cash use has fallen by nearly half since before the pandemic, from 48% of POS transaction value in 2019 to 25% in 2023. We expect this trend to continue, with cash's share dropping by half again and falling to 12% of POS value by 2027.

Population 28th 23,570,000 GDP Per Capita 19th \$33,907

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29th \$150 billion

E-com Size **27th** \$20 billion



- Cash is still king in Thailand, but its reign is coming to an end. Thai consumers have the highest rate of cash use in APAC, with cash accounting for 46% of transaction value in 2023. Thailand's government is seeking to reduce the amount of cash in circulation in half by 2026, largely by promoting the use wallet-based payments using interoperable QR codes. Our projection is for cash use to decline at -12% CAGR through 2027 when we expect cash will fall to 23% of POS spending.
- The use of digital wallets is accelerating due to rapid adoption of QR code payments. QR codes utilizing Thailand's <u>PromptPay</u> instant payment rail are driving digital wallet growth at POS of 22% CAGR from 2023-2027. Our projections see digital wallets overtaking cash and accounting for more than half (53%) of all POS payment value by 2027.
- Account-to-account (A2A) payments are the leading online payment method in Thailand. <u>PromptPay</u> allows consumers to pay for goods and services online directly from within their banking app. A2A accounted for 44% of e-com transaction value in 2023 and is projected to grow at 17% CAGR from 2023-2027.
- Digital wallets have emerged as a vehicle for distributing government aid. A digital wallet program is set to commence in May 2024. All eligible Thai citizens will receive the funds (10,000 baht, or approximately \$280) in the state-owned <u>Krungthai Bank</u> super app <u>Paotang</u>. Paotang has a "g-wallet" feature to distribute government funds.

Population **13th** 71,697,000

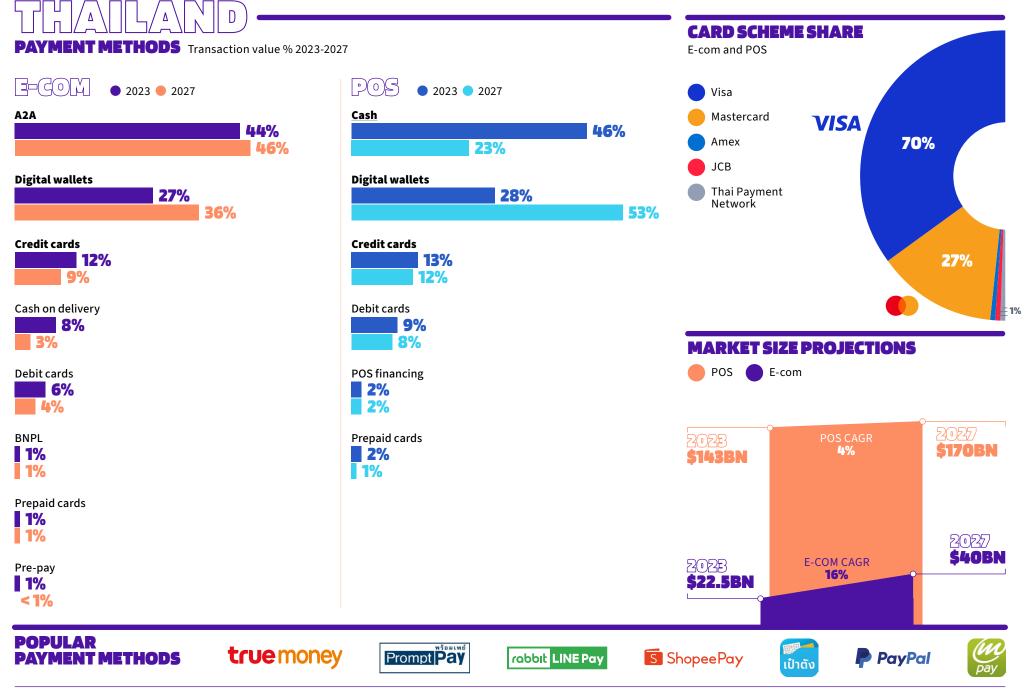
GDP Per Capita
BBC

POS Size **32nd** \$143 billion

E-com Size

Rankings are out of 40 GPR markets

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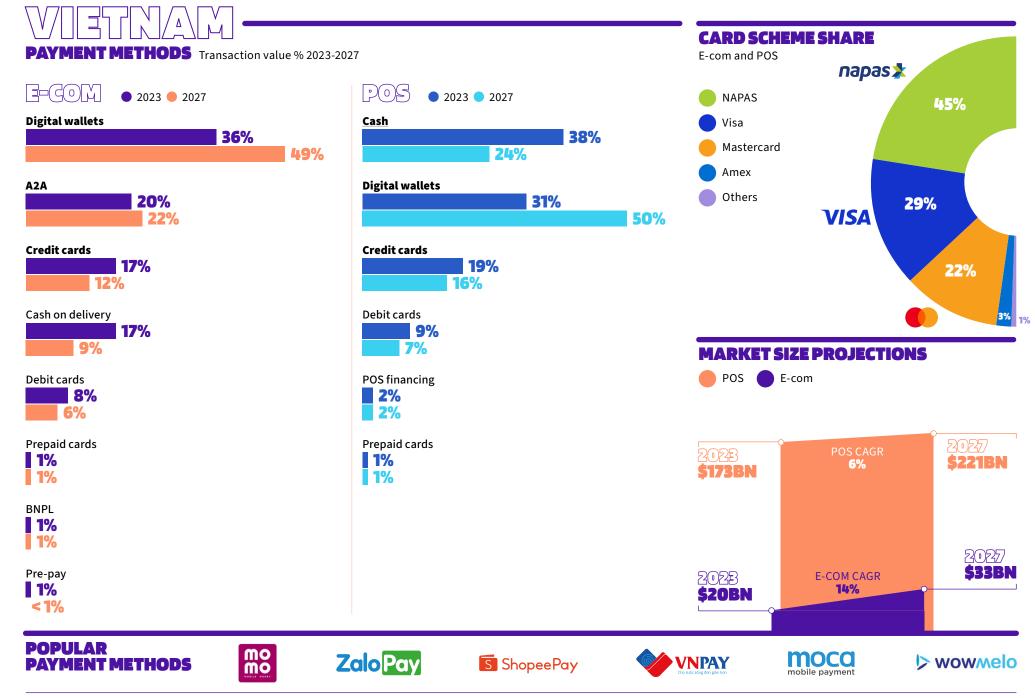


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- **Digital payments are soaring** in Vietnam. Wallets accounted for 31% of POS transaction value in 2023, second only to cash. The rapid adoption of QR code based payments fuels our projection of 20% CAGR for 2023-2027; wallets are expected to attain 50% of POS value by 2027. Wallets were the leading payment method online in 2023 with 36% of e-com transaction value; wallets are projected to grow at 24% CAGR to 2027 when they'll account for an estimated 49% of e-com value.
- The digital payment market in Vietnam is dominated by domestic fintech providers. The digital wallet market is led by the popular super app <u>MoMo</u>, with smaller shares by Vietnamese wallets <u>Moca</u>, <u>VNPAY</u> and <u>ZaloPay</u>, In addition to international brands like PayPal, Samsung Pay (since 2017) and Google Wallet (since 2022).
- Vietnamese consumers are comparatively heavy users of cash. Cash remained the leading payment method at POS in 2023 with an estimated 38% of transaction value. Yet that's less than half the 85% of in-person payment value cash represented in 2019. The Vietnamese Government and the State Bank of Vietnam have promoted digital payments in remote and rural areas where cash use remains high. We project cash will fall to 24% of POS transaction value by 2027.
- Vietnam has the highest rate of Cash on Delivery among the 40 markets in this report, with COD accounting for 17% of transaction value in 2023. Cash on Delivery is following the same trajectory of cash overall

 falling by nearly half since 2019 when COD represented 29% of e-com payment value.





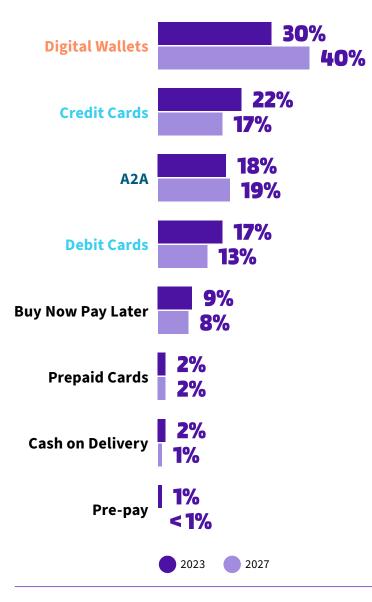
PAYMENT METHODS AND MARKET GUIDES

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EUROPE E-COM PAYMENT METHODS

Transaction value % 2023-2027



Europe's e-commerce payment landscape is remarkably diverse

given the common regulatory umbrella of the European Union. Credit cards, debit cards, account-to-account and digital wallets led in at least two European markets covered in this report. This diversity reflects the critical importance of local histories, politics, cultures and economics in the evolution of payment markets. Payment innovations will likely continue to be decentralized with varied payment methods finding success while resisting winner-takeall scenarios.

Digital wallets are Europe's leading payment e-commerce payment method overall and in five markets (Denmark, Germany, Italy, Spain and the UK). Accounting for 30% of e-com transaction value in 2023, wallets are projected to grow at 17% CAGR to 2027 when they'll account for an estimated 40% of e-com value. Global wallet brands **Amazon Pay, Apple Pay, Google Wallet** and **PayPal** are major players in Europe, with homegrown wallets influential in Denmark (**MobilePay**), Finland (**Pivo**), Norway (**Vipps**) and Turkey (**BKM Express, Maximum Mobil**).

In 2023, account-to-account (A2A) payments were the leading online payment method in Finland, The Netherlands, Norway, Poland and Sweden. A2A is especially dominant in The Netherlands and Poland, where <u>iDEAL</u> and <u>BLIK</u> are the overwhelming choice for online payments among Dutch and Polish consumers, respectively. A2A accounted for 18% of Europe's e-com transaction value in 2023. Our forecast of modest growth (to 19% by 2027) is based on slow adoption of Open Banking protocols to date (and, like all of our forecasts, is subject to reevaluation and revision).

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EUROPE MARKET GUIDES

EUROPE Ň **PAYMENT METHODS**

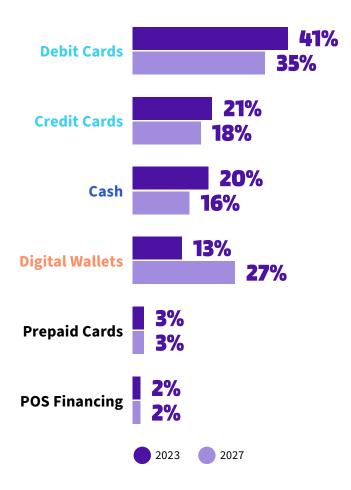
		Digital Wallets	Credit Cards	Debit Cards + Prepaid Cards	Account to Account (A2A)	Buy Now Pay Later	Cash on Delivery	Others		
	Belgium	18%	15%	31% ★	19%	13%	2%	2%		
	Denmark	31%	21%	27%	7%	12%	1%	<1%		
	Finland	26%	12%	14%	33%	13%	2%	1%		
	France	28%	25%	25%	13%	5%	2%	1%		
	Germany	32%	11%	6%	24%	21% ★	4%	2%		
	Ireland	30%	20%	31% ★	11%	3%	3%	2%		
	Italy	35%	21%	25%	9%	6%	3%	2%		
	Netherlands	10%	10%	3%	64%	11%	1%	1%		
	Norway	14%	21%	20%	27 %	15%	1%	2%		
	Poland	15%	6%	8%	68% ★	3%	1%	<1%		
(Š)	Spain	33%	26%	14%	20%	2%	2%	1%		
-	Sweden	15%	16%	15%	30%	21% ★	1%	1%		
C *	Turkey	16%	48% ★	14%	14%	1%	5% ★	2%		
	UK	38% ★	24%	23%	7%	7%	1%	<1%		

Totals may not equal 100% due to rounding.

Country leading payment method 🛛 🛧 Regional high

EUROPE POS PAYMENT METHODS

Transaction value % 2023-2027



Debit cards are overwhelmingly preferred by European consumers shopping in person. Debit cards accounted for 41% of POS transaction value across Europe in 2023 – more than \$2.7 trillion – nearly double the share of credit cards (21%). Credit card <u>rewards are less lucrative in</u> <u>Europe compared to markets like the US given more restrictive caps on</u> <u>interchange fees that fund rewards, while credit scoring systems don't</u> <u>incentivize credit card use</u> in most European markets.

Digital wallet adoption is growing at POS in Europe. Europe has a primarily card-based payment system that has functioned well for decades and has thus been resistant to change. Wallet uptake is accelerating, however, as increasing merchant acceptance and rising consumer comfort meet to move the needle on digital payments. Digital wallet use at POS is projected to rise at 24% CAGR to 2027, more than doubling share from 13% of regional POS transaction value in 2023 to 27% in 2027.

Cash use across Europe has dropped by half since prior to the

pandemic. Cash accounted for approximately 20% of POS transaction value across the 14 European markets covered, half of the 40% in 2019. Cash use still varies significantly across Europe, from low single digit percentages in the Nordics to more than a quarter of transaction value in Germany, Italy, Poland, Spain and Turkey. Yet cash use continues to fall across all markets, with -4% CAGR projected to 2027 when we estimate cash will account for 16% of POS transaction value.

EUROPE MARKET GUIDES

EUROPE POS PAYMENT METHODS

	Cash		Credit Cards	Debit Cards	Prepaid Cards	Digital Wallets	POS Financing				
	Belgium	16%	19%	50%	2%	10%	2%				
-	Denmark	8%	13%	62%	1%	13%	2%				
	Finland	7%	19%	60%	1%	12%	2%				
	France	12%	29%	46%	2%	9%	2%				
	Germany	36%	8%	38%	3%	13%	3%				
	Ireland	18%	14%	51%	1%	14%	1%				
	Italy	25%	10%	35%	12% 🛨	15%	2%				
	Netherlands	7%	10%	60%	2%	18%	2%				
	Norway	4%	11%	70% ★	2%	12%	2%				
	Poland	32%	9%	35%	3%	20% ★	1%				
	Spain	38% ★	27%	21%	2%	10%	2%				
_	Sweden	5%	20%	48%	2%	20% 🛨	5% ★				
C *	Turkey	33%	42% ★	11%	3%	11%	1%				
	UK	10%	28%	46%	2%	14%	1%				
🔵 Country leading payment method 🛛 ★ Regional high											

Totals may not equal 100% due to rounding. This page was updated on 3 April 2024.

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- Debit cards are the leading payment method among Belgian consumers both online and in store. <u>Bancontact</u> is the leading domestic debit card network, transacting an estimated 83% of card volume. Debit cards accounted for 30% of e-com and 50% of POS transaction value in 2023. Debit cards are projected to cede the lead in e-com payments by 2027 as card spend shifts to wallets, while maintaining payment supremacy in store through 2027.
- Digital wallets are ascendant, especially online as consumers gravitate to their speed, simplicity and security. Global wallet brands. <u>Apple Pay, Google Wallet, and PayPal</u> are the leading brands among wallets that accounted for 18% of e-com and 10% of POS transaction value in 2023. Wallets are projected to see share of e-com rise to 33% and at POS rise to 26% by 2027.
- Account-to-account (A2A) payments have a strong presence in Belgium, led by the Luxembourg-based Payconiq payment app. In 2023, Payconiq (along with Netherlands-based iDEAL) was purchased by the European Payments Initiative (EPI). EPI seeks to create a pan-European A2A payment infrastructure. A2A payments accounted for 19% of Belgium's e-com value in 2023, a share that is projected to rise to 22% by 2027.
- Buy Now Pay Later (BNPL) continues to attract Belgian consumers. BNPL accounted for 13% of e-com transaction value in 2023, while contributing to 2% share for POS financing options, shares that are projected to be maintained through 2027. Popular BNPL brands in Belgium include Klarna, Riverty (the rebranded name for the European AfterPay, Paigo and Arvato Financial Solutions) and Alma.

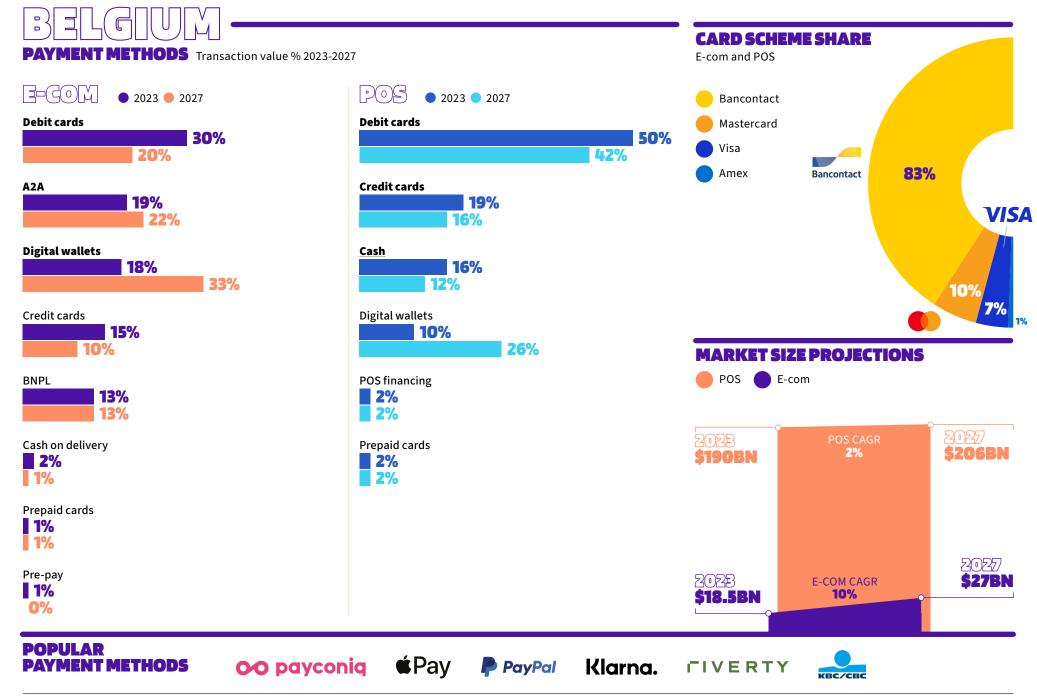
Population **315t 11,669,000**

GDP Per Capita **12th** \$49,926

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POS Size **25th** \$190 billion

E-com Size **30th** \$18.5 billion



- Danish consumers have a strong attachment to debit cards. Debit cards account for an outright majority (62%) of spending at POS, versus just 13% for credit cards. Debit cards are less dominant in e-com accounting for 27% of e-com spend in 2023, versus 21% for credit cards. Debit cards dominate due to a <u>100% banked population</u> and low interchange fees on the <u>Dankort</u> debit scheme which drives ubiguitous merchant acceptance.
- Denmark has among the lowest rates of cash use in the world. Cash accounted for just 8% of transaction value in 2023. For the first time ever in 2022 Denmark <u>did not have a single</u> <u>bank robbery</u>, as less cash was needed to hold as reserves. Cash use is projected to fall even further to 6% of POS value by 2027.
- Digital wallets are the leading online payment method in Denmark. Wallets accounted for 31% of e-com transaction value in 2023, up from 29% in 2022. <u>MobilePay</u> is the leading domestic wallet and competes with global brands **Apple Pay, Google Pay** and **PayPal**. MobilePay <u>merged with Norwegian</u> wallet Vipps in 2022 and is expected to release a unified platform in 2024.
- Digital wallets accounted for just 13% of POS transaction value in 2023 as a highly functional and ubiquitous card system. However, adoption of mobile payments in store is growing rapidly at a projected 22% CAGR through 2027. Wallets are therefore expected to more than double their share of POS value by 2027 to 28%.



\$66.983

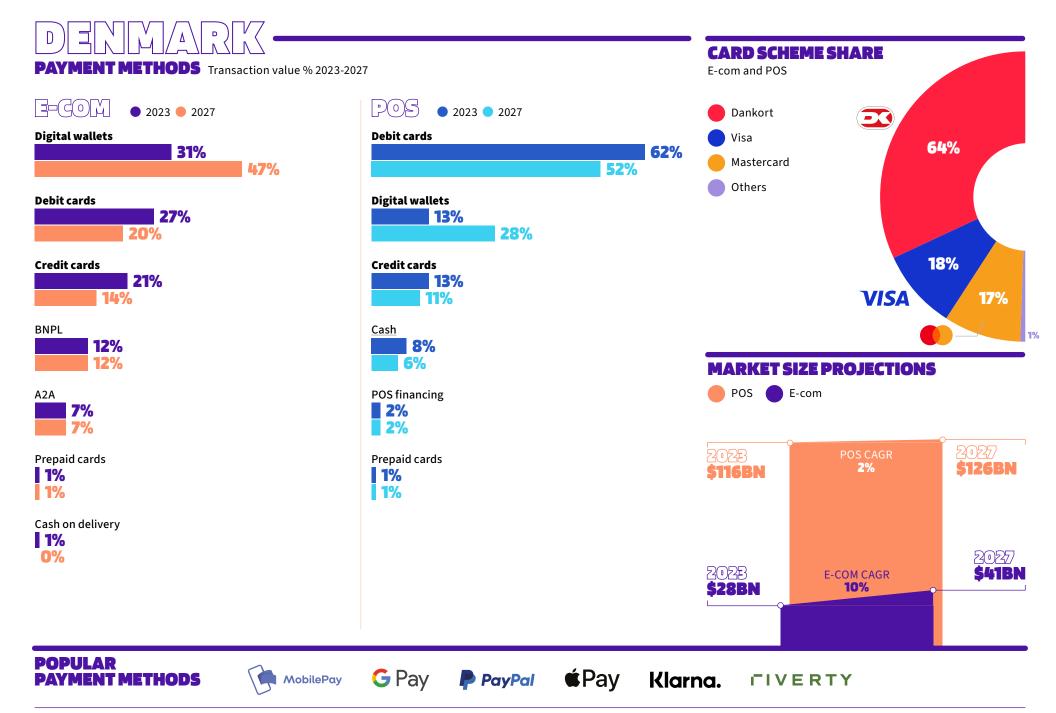
POS Size

E-com Size **2200 \$28 billion**

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\$116 billion

Rankings are out of 40 GPR markets



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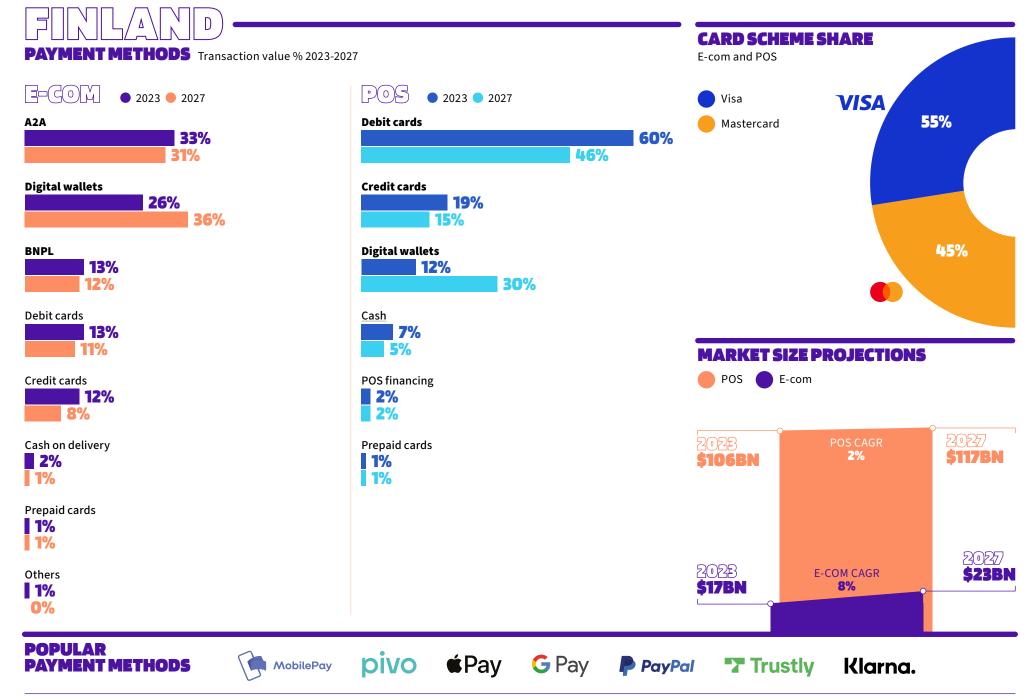
- Finnish consumers prefer to use accountto-account (A2A) payments when shopping **online** using the Online Banking Finland (a.k.a. Finnish e-Banking) system. A2A payments represented 33% of e-com transaction value in 2023. A2A payments are projected to cede minimal share over the forecast period and represent 31% of e-com value by 2027.
- Digital wallets are growing fast both online and in store. Wallets accounted for 26% of e-com value in 2023. Wallets are projected to grow at 18% CAGR to 2027 when we expect they'll be the leading e-com payment method with 36% value share. Wallets represented 12% of POS value in 2023 but are projected to more than double to 30% of POS spend by 2027. Popular wallets include Apple Pay, Google Pay, MobilePay, PayPal and Pivo.
- Cards dominate in-person payments, especially debit cards. Cards represented 79% of transaction value in 2023 with debit cards (60%) outpacing credit cards (19%) more than 3-1. Cards are projected to cede share to wallets, with debit cards representing 46% and credit cards 15% of POS transaction value by 2027.
- Finnish consumers use cash at among the world's lowest rates. Cash accounted for an estimated 7% of POS transaction value in 2023. Cash use is expected to drop further, to 5% of in-store spend by 2027. However, a truly cashless society doesn't seem imminent, and cash is expected to be available to achieve financial inclusion among consumers who don't use cards or digital payments.

THE R. P. LEWIS CO., NAME OF TAXABLE PARTY.





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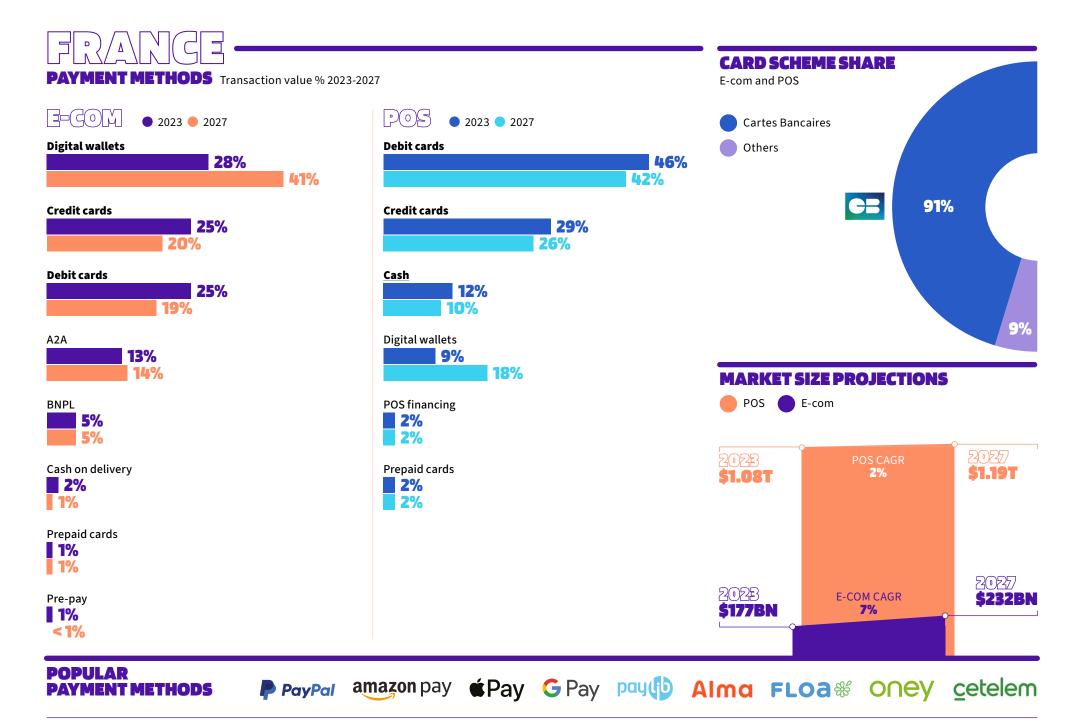


- Debit cards play a key role in France's payment ecosystem, especially when **shopping in person.** Led by the dominant national card scheme Cartes Bancaires (CB), debit cards are overwhelming the choice of French consumer when paying in stores, accounting for 46% of POS transaction value in 2023. Debit cards are expected to remain the leading POS payment method through 2027.
- Account-to-account (A2A) payment adoption in France may soon see a boost from the European Payment Initiative (EPI). EPI has announced a new pan-European A2A app, named wero. France will be among the first countries to test e-commerce and POS payments with wero, currently scheduled for 2025. A2A payments accounted for approximately 13% of e-com transaction value in 2023.
- Digital wallets are the fastest growing payment method both online and in store. Wallets are France's leading online payment method, accounting for 28% of e-com transaction value in 2023. Wallet adoption has been slower at POS to date, with 9% of value in 2023; a projected 21% CAGR from 2023-2027 would see wallet share of POS double to 18% in 2027.
- France has a strong roster of domestic Buy Now Pay Later (BNPL) providers. French BNPL companies Alma, Cetelem (from BNP Paribas), Floa, and Oney (from Groupe BPCE) compete with global BNPL leaders Klarna and **PayPal**. BNPL accounted for 5% of France's e-com transaction value in 2023, a share that is projected to maintain through 2027.



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Rankings are out of 40 GPR markets



- German consumers use a variety of payment methods when shopping online. Four payment methods account for nearly 90% of transaction value (digital wallets, accountto-account, Buy Now Pay Later and credit cards), while debit cards, cash on delivery and prepaid cards are also relevant. Configuring online checkouts to reach German consumers must account for this breadth of choices.
- Cash continues to play an integral role among German consumers paying at POS. But cash is no longer king – debit cards surpassed cash to become the leading POS payment method by transaction value in 2022. Cash accounted for 36% of POS value in 2023, the second highest rate in Europe to Spain's 38%. Cash is projected to remain relevant and account for 29% of POS value in 2027.

- Digital wallets are the fastest growing payment method online and at POS. Driven largely by the popularity of <u>PayPal</u>, wallets accounted for 32% of e-com transaction value in 2023 and growing at a projected 17% CAGR will reach 45% of online spend by 2027. Growing at an estimated 22% CAGR at POS, wallets are projected to double the 13% of transaction value in 2023 to 26% by 2027.
- Buy Now Pay Later (BNPL) is a popular alternative to credit cards among German consumers. BNPL offers installment payment options without interest when paid on time, providing <u>historically debt-averse</u> German consumers a flexible payment option. BNPL accounted for 21% of Germany's e-commerce transaction value in 2023, tied for the highest rate in the world alongside Sweden.



CARD SCHEME SHARE PAYMENT METHODS Transaction value % 2023-2027 E-com and POS 205 • 2023 • 2027 • 2023 • 2027 Girocard **Digital wallets Debit cards** Visa 32% 38% girocard 76% Mastercard 45% 33% Amex Cash A2A 24% 36% 29% 19% **Digital wallets** BNPL 21% 13% 12% 19% 26% VISA Credit cards Credit cards 11% 8% 7% 8% **MARKET SIZE PROJECTIONS POS financing** POS E-com Debit cards 5% 3% 5% 3% 2027 2023 Cash on delivery Prepaid cards \$1.17T 2% \$1.08T 4% 3% 2% 2%

G Pay

Prepaid cards
1%
1%

Others
1%
1%

POPULAR PAYMENT METHODS

 🗳 Pay 🛛 Ҏ PayPal

/ Klarna.

2023

\$117BN

2023 = estimate; 2027 = forecast. Totals may not equal 100% due to rounding. *Card scheme shares are for the most recently available data (2022). E-COM CAGR

8%

2027

\$158**B**N

- Irish consumers show a strong preference to debit cards whether shopping online or in store. Debit cards accounted for an outright majority (51%) of POS transaction value in 2023, with a significant percentage of those payments being contactless. Debit cards co-led e-commerce payments with digital wallets (30% each in 2023). VISA accounts for an estimated 90% of card transaction value.
- Digital wallets are the co-leading payment method online and the fastest growing in store. Wallets are projected to surpass debit cards to lead e-commerce payments with 33% of transaction value in 2024. Wallets are increasingly used in store, accounting for 14% of 2023 POS value. Digital wallets are projected to grow at 24% CAGR to 2027, more than doubling share of POS value to 29%.
- An effort to develop a domestic mobile payment wallet was abandoned in 2023. A group of Irish banks including <u>AIB</u>, <u>Bank of</u> <u>Ireland</u>, and <u>Permanent TSB</u> had sought to create an account-to-account (A2A) payment app, named **Yippay**, to compete with digital wallets and neobanks. The initiative was cancelled due to <u>concerns about potential</u> <u>regulatory approvals</u>.
- Cash use continues to decline, though a cashless future isn't imminent. Cash accounted for 18% of POS transaction value in 2023, below the European average of 20%. Ireland's <u>Competition and Consumer</u> <u>Protection Commission</u> mandated that stores accept cash <u>unless it is made clear</u> they only accept other ways to pay. Cash is projected to fall to 13% of POS transaction value by 2027.



GDP Per Capita
2006
5104,038

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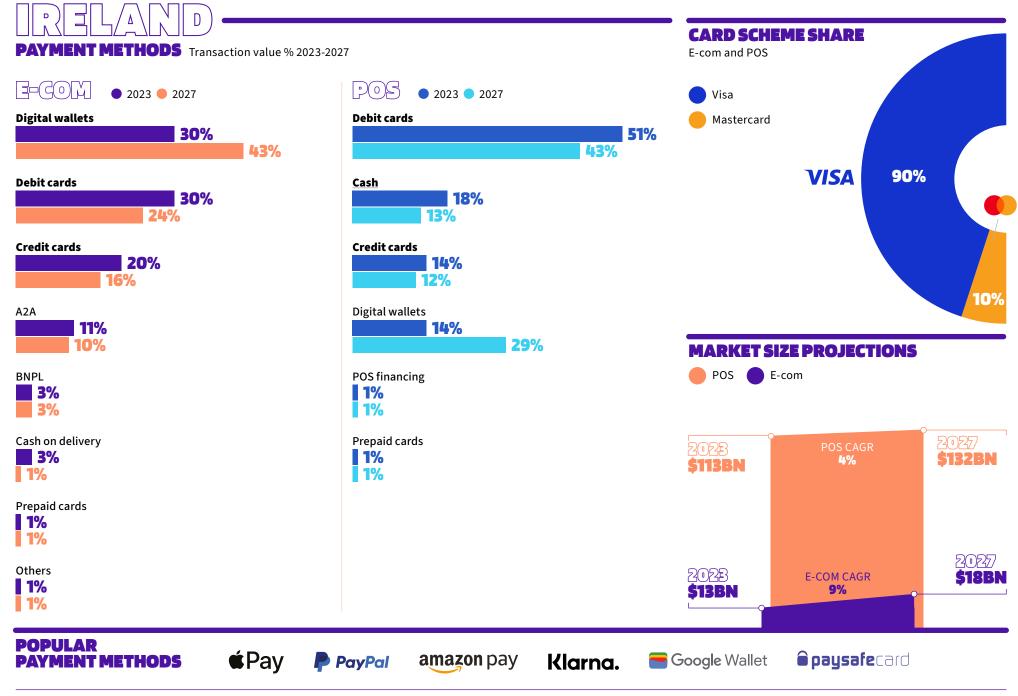
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POS Size **37th** \$113 billion

E-com Size **35th** \$13 billion

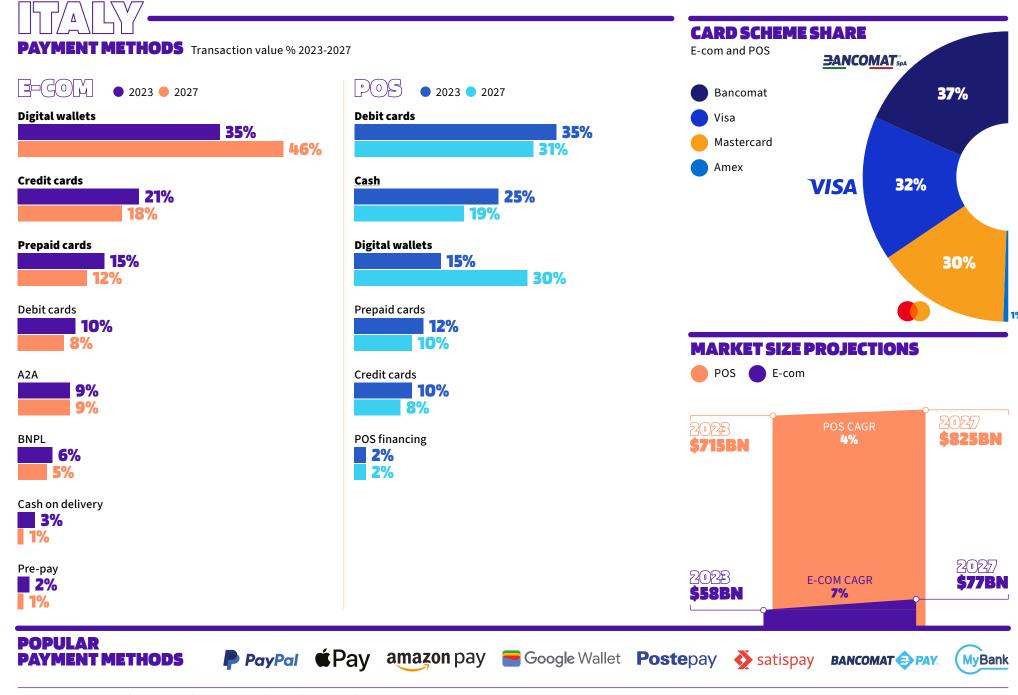
Rankings are out of 40 GPR markets

worldpay



- Digital wallets are increasingly popular among Italian consumers. Digital wallets accounted for more than a third (35%) of online transaction value. In 2023, wallet adoption at POS has been slower, registering 15% of POS payment value. Wallet use at POS is projected to grow at 24% CAGR through 2027, doubling wallet share to 30%.
- Account-to-account (A2A) payments have gained traction in Italy, accounting for 9% of e-com payment value in 2023. Italy has three leading domestic A2A providers, <u>BANCOMAT</u>
 Pay (from interbank network <u>BANKOMAT</u>), <u>MyBank</u> (integrated with over 200 banks and payment service providers) and <u>Satispay</u>, a fintech startup. In 2023, BANKOMAT announced that it had joined with Spain's <u>Bizum</u> and Portugal's <u>SIBS</u> to create a pan-European A2A network.
- Cash continues to play a vital role in Italy's payment market. After <u>contentious debate</u> about raising the limit, in 2023 the limit for cash transactions was <u>settled at €5,000</u>. Cash accounted for 25% of POS transaction value in 2023. The use of cash is projected to decrease further to 19% of POS value by 2027, although cash use is likely to persist in Italy for the foreseeable future.
- Italy has the world's highest rate of prepaid card use, accounting for 15% of e-commerce and 12% of POS transaction value in 2023. Prepaid card popularity is largely due to low levels of trust with banks among Italian consumers, combined with being low risk for issuers.
 Prepaid cards called "account cards" have IBANs (International Bank Account Numbers) that allow them to perform credit transfers, ATM withdraws, payroll receipt and bill pay.





- The Netherlands is a global leader in online account-to-account (A2A) payments due to the overwhelming popularity of the domestic A2A scheme <u>iDEAL</u>. iDEAL is <u>ubiquitous</u> in the Netherlands, used by nearly 100% of Dutch consumers making over one billion transactions per year among more than 210,000 merchants.
- Debit cards are the leading payment method at the POS, having gradually displaced cash over the past decade. Debit cards accounted for 60% of POS transaction value in 2023. The use of debit cards as a direct payment method is declining at a projected -4% CAGR through 2027 when we expect it will represent 48% of POS spend. Debit share is expected to shift to wallets (inclusive of A2A apps).
- Digital wallets will nearly double share of POS payment value between 2023 and 2027. Wallets accounted for 16% of POS transaction value in 2023 which is projected to nearly double to 35% of POS value in 2027. Domestic A2A payment apps iDEAL and <u>Tikkie</u> (considered wallets in our POS analysis) compete with global brands <u>Apple</u> <u>Pay</u> and <u>Google Wallet</u> for POS wallet share.
- The Netherlands has among the lowest rates of cash use in the world. Cash accounted for 7% of POS transaction value in 2023. Ubiquitous card acceptance (including increasing contactless debit card use) and rising mobile payments among a 100% banked population will drive cash use down further, to a projected 5% of POS transaction value by 2027.

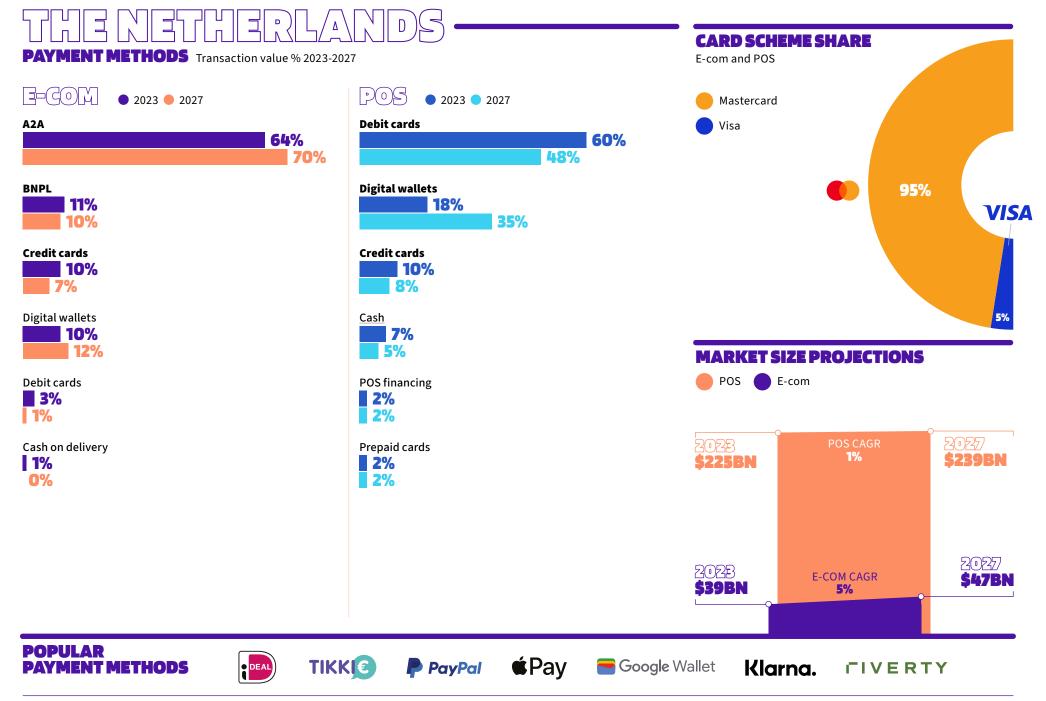
30th 17,703,000 GDP Per Capita **7th** \$55,985 POS Size **21St**

Population

П

E-com Size **16th** \$39 billion

\$225 billion



Norway's payment landscape is highly fragmented in e-com and equally unfragmented at POS. Satisfying Norwegian consumers shopping online requires offering account-to-account (A2A), credit cards, debit cards, BNPL and digital wallets, all of which have at least 14% share. In contrast, 95% of POS transaction value is made via cards and

digital wallets.

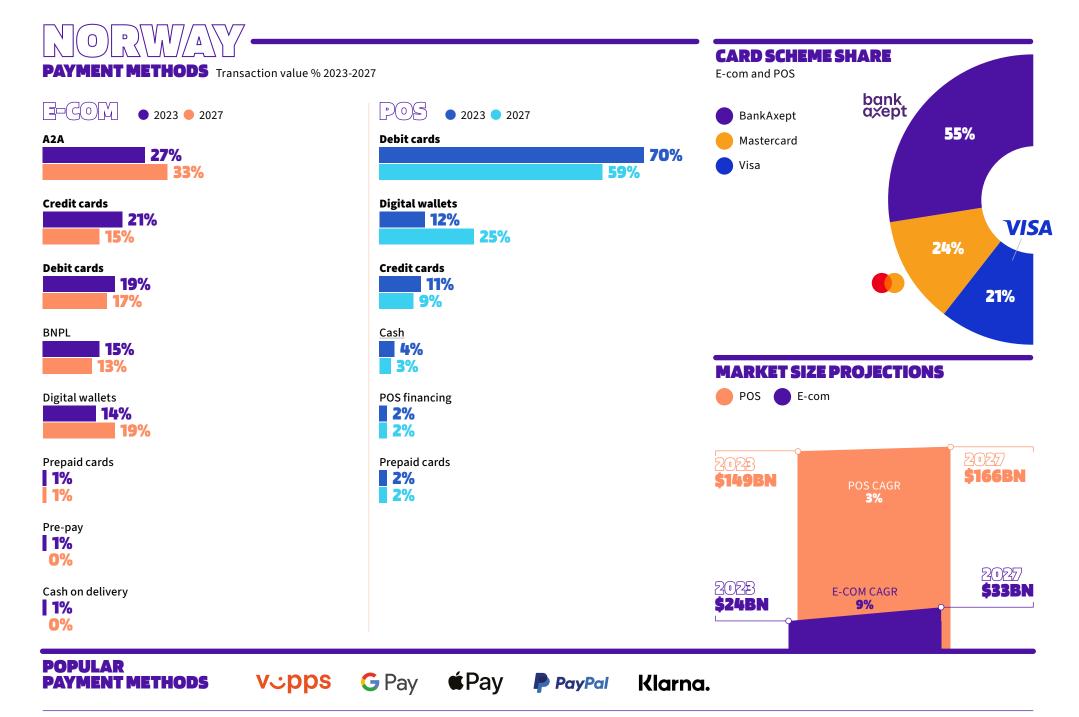
• A2A is Norway's leading online payment **method.** A2A payments take place directly via bank transfers from within banking apps including the popular **<u>Vipps</u>**. A2A payments accounted for 27% of e-com transaction value in 2023, a figure that is expected to rise to 33% by 2027. A2A payment have <u>vet to</u> penetrate POS where cards still dominate.

- Debit cards dominate Norway's in-person **payment market.** Debit cards accounted for 70% of POS transaction value in 2023, the highest rate of debit card use at POS among the 40 markets covered in this report. The majority of domestic debit card transaction value is handled by **BankAxept**, Norway's national payment system. Projected to lose share to digital wallets, debit cards are nevertheless expected to remain the leading in-person payment method through 2027.
- Norway has the lowest rate of cash use in our survey. Cash accounted for just 4% of POS transaction value in 2023. A slight decline to 3% of POS value is projected to 2027, although that's likely to be a floor of long-term use. Norway's government has taken measures to ensure that consumers have a right to pay with cash.





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- Payments in Poland are dominated by the account-to-account (A2A) app, <u>BLIK</u>. A2A payments represent more than two-thirds (68%) of e-commerce spend in 2023, a figure that is projected to rise to 73% by 2027. At POS (where we document BLIK as a digital wallet), wallets rose to 20% of POS transaction value in 2023. Wallets are projected to see POS share double to 40% by 2027.
- BLIK seeks to export its model across Europe. In April 2023, <u>BLIK announced it was expanding</u> to Romania and Slovakia, while seeking to <u>expand throughout the EU</u>. BLIK's effort to build a pan-European A2A is one of several such efforts, joining the <u>European Payment Initiative</u>, and <u>the coalition among</u> Spain's <u>Bizum</u>, Italy's <u>BANCOMAT Pay</u> and Portugal's <u>SIBS</u>.
- **Cash is no longer the king of Poland payments.** Long the dominant in-person payment method, debit cards surpassed cash in 2023. Cash accounted for 32% of 2023 POS transaction value. While still highly relevant, consumers are replacing cash with digital payments; cash is expected to decline at -9% CAGR through 2027 when cash is projected to account for 18% of POS value.
- Poland's government scrapped plans to limit the size of cash payments in 2023. In July 2022, Poland's government announced plans to limit cash payments from consumers to businesses to under 20,000 zloty (roughly \$5,000) beginning in 2024. Those plans were scuttled in June 2023. The head of Poland's Central Bank has sought to make paying by cash a legally guaranteed right.

23rd 37,561,000 GDP Per Capita 244th \$18,321 POS Size 17th \$280 billion

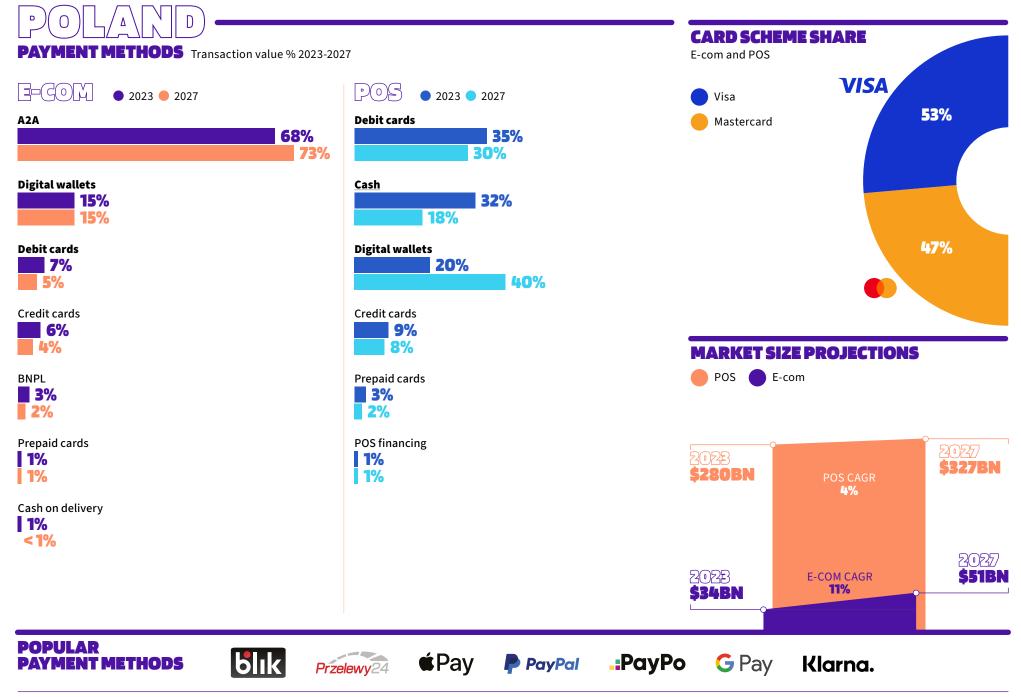
Population

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E-com Size **18th** \$34 billion



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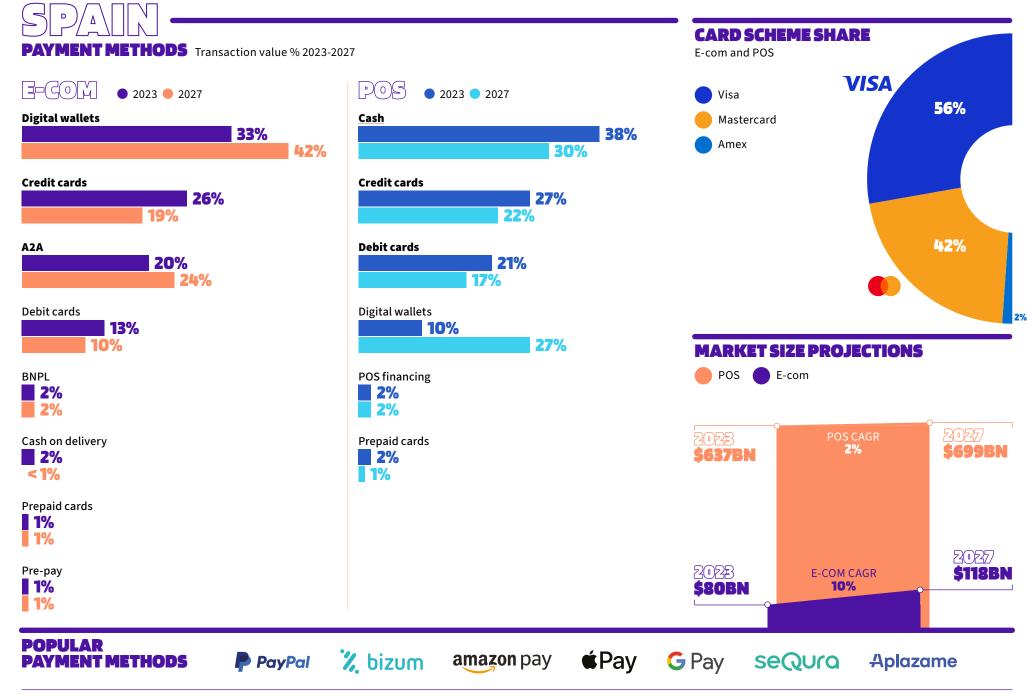
- Account-to-account (A2A) payments have gained traction in Spain, accounting for 20% of e-com payment value in 2023. Leading Spain's A2A sector is **Bizum**, a real-time payment network offered by a collaboration of leading Spanish banks. In 2023, Bizum announced that it had joined forces with Italy's **BANCOMAT Pay** and Portugal's **SIBS** seeking to create a pan-European A2A network.
- Cash is still the leading payment method in Spain. Cash accounted for 38% of POS transaction value in 2023, highest among the 14 European markets covered in this report. While cash use is in steady decline – projected at -3% CAGR from 2023-2027 - cash is projected to remain the leading in-person payment method with 30% of transaction value through 2027.
- Credit, debit and prepaid cards are foundations of Spain's payment landscape, combined accounting for nearly half (48.5%) of total consumer spend across all channels. Credit cards outpaced debit cards by transaction value – by 2-1 in e-com – with more Spanish consumers paying by credit to manage budgetary stress due to high inflation and cost of living.
- Digital wallets are Spain's leading payment method online by transaction value. Global brands are most popular including Amazon Pay, Apple Pay, Google Pay and PayPal; these pass-through and staged wallet models offer Spanish consumers continuity with familiar card-based payments. Wallets accounted for 33% of Spain's e-com transaction value in 2023 and are projected to reach 42% by 2027.

Population
20th
47,615,000 Population GDP Per Capita **23rd** \$29.350 POS Size \$637 billion

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E-com Size **\$80** billion



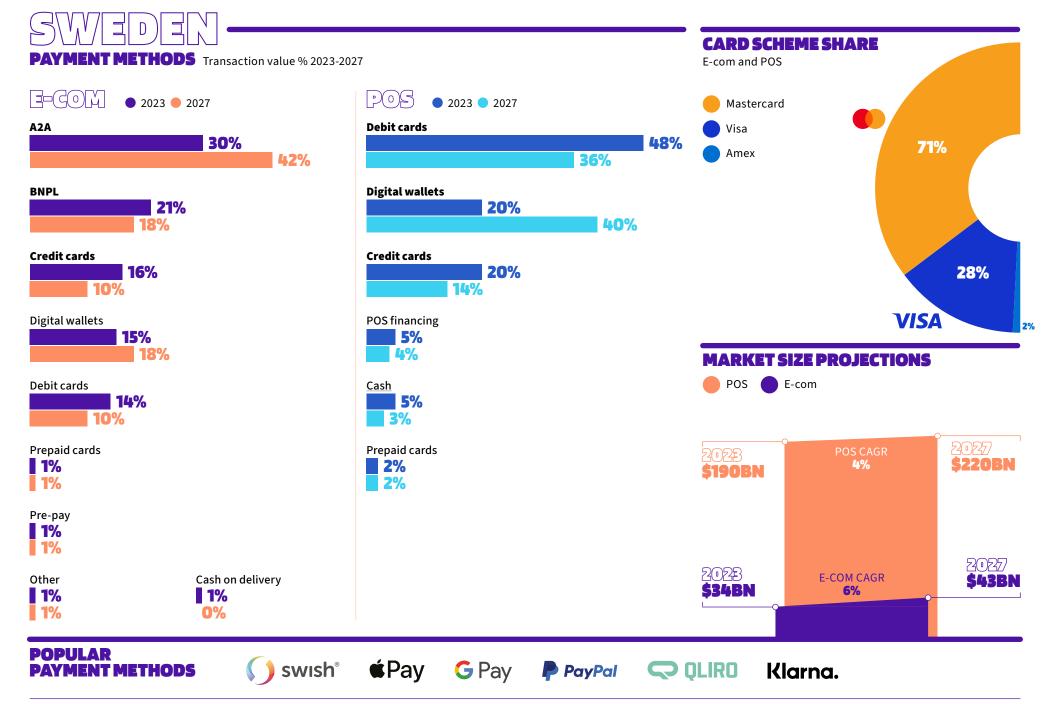
worldpay

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- Swedish consumers are global leaders in digital payment adoption. Buoyed by the domestic bank service Swish, account-toaccount (A2A) led online payments in 2023 with 30% of e-com transaction value. Swish is fast <u>replacing cash at POS</u>, with digital wallets accounting for 20% of POS value in 2023; we project digital wallets will double share of inperson payment value to 40% by 2027.
- Sweden has among the lowest rates of cash use globally, accounting for an estimated 6% of POS transaction value in 2023. Yet cash continues to play an important role among older generations and during times of crisis. We project cash will decline to 3% of POS spend by 2027 and stabilize at that level until such time that Sweden's central bank implements digital cash, the <u>e-krona</u>.
- Payment cards still play a vital role in Sweden's payment landscape. Debit cards were the leading payment method at POS in 2023 with 48% of transaction value, with credit cards representing 20% and prepaid cards adding 2%. Cards are projected to decline in share across both e-com and POS as consumers shift to A2A and digital wallets.
- Buy Now Pay Later (BNPL) is very popular among Swedish consumers. The home of global BNPL leader Klarna, Sweden had the world's highest rate of BNPL use in 2023 (tied with Germany) at 21% of e-commerce transaction value. Installment payments are also popular in store, with POS financing options representing 5% of POS transaction value in 2023.



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- Credit cards are the leading payment method among Turkish consumers both online and in store. Beyond their popularity due to reward programs, credit cards <u>are especially important</u> to consumers in times of runaway inflation. In 2023, credit cards accounted for 48% of e-com and 42% of POS spend. Credit cards are projected to remain the leading overall payment method through 2027.
- Cash still plays an essential role in Turkey's payment landscape. Cash accounted for 33% of POS transaction value in 2023, the third highest rate in Europe behind Germany and Spain. The use of cash was down -15% in 2023 over 2022 as consumers gravitated to digital and credit-based payments.
- Turkish consumers are gravitating to wallets online and in person. Digital wallet adoption has lagged to date, with wallets accounting for 16% of e-com and 11% of POS transaction value in 2023. <u>Central bank</u> regulations on personal data processing result in a de facto domestic monopoly on wallet providers, including <u>BKM Express</u>, <u>Maximum Mobil</u>, <u>Papara</u> and <u>Paycell</u>.
- Buy Now Pay Later (BNPL) has slowly gained a foothold in Turkey's e-commerce payment market. For the first time in our report, BNPL accounted for 1% of e-com transaction value in 2023 or roughly \$159 million. Turkey's BNPL market is served by domestic providers such as <u>Colendi,</u> <u>GarantiPay, Haso</u> and <u>Kredim</u>.

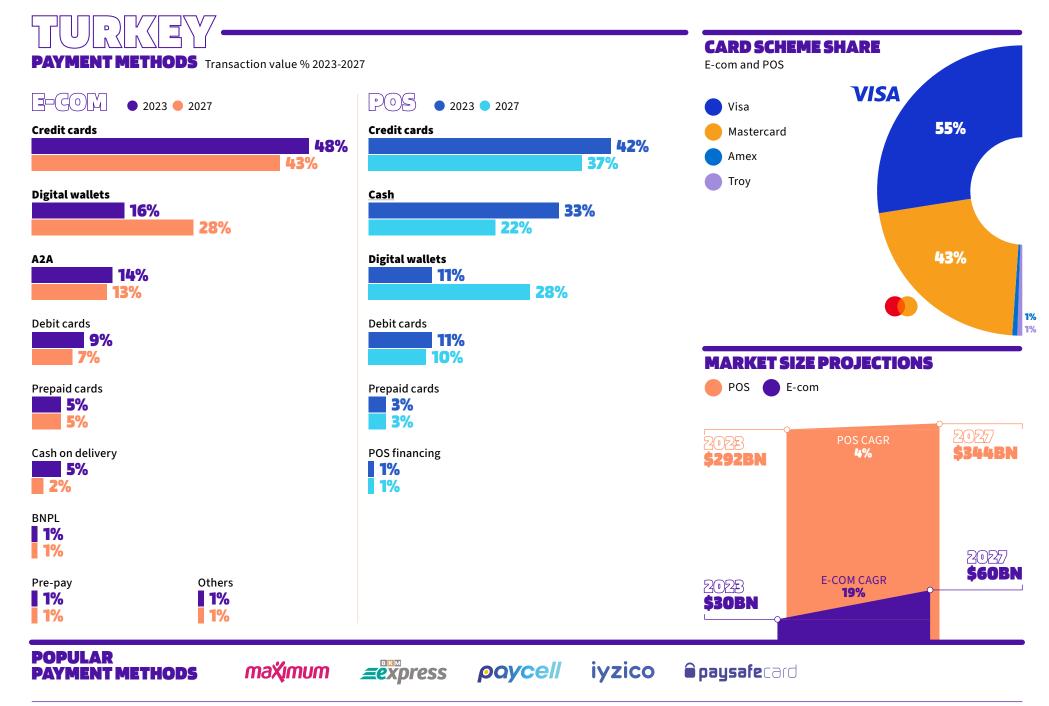
11th 85,341,000 GDP Per Capita **30th** \$10,616

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\$292 billion E-com Size **19th**

530 billion

Rankings are out of 40 GPR markets



- Cards dominate POS payments in the UK. Debit cards led all POS payment methods in 2023 with 46% of POS transaction value, with credit cards a strong second (28%) and prepaid cards filling an important niche with 2%. Despite rapid adoption of digital wallets, we project debit cards will continue to be the leading POS payment method through 2027.
- UK consumers are rapidly adopting digital wallets at POS, driven by global brands
 <u>Apple Pay</u>, <u>Google Pay</u> and <u>PayPal</u>. There are an estimated <u>14 million proximity mobile</u> <u>payment users</u> in the UK, while all UK bankissued payment terminals have been <u>capable</u> of accepting contactless payments since January 2020. Wallets – primarily of the passthrough variety, facilitating card transactions – are projected to more than double POS share from 14% in 2023 to 29% by 2027.
- Account-to-account (A2A) payments have lagged in the UK, with A2A payments accounting for 7% of e-com transaction value in 2023. In November 2023, <u>HM Treasury</u> published the <u>Future of Payments Review</u>, an outline of a future world class payment system for the UK. Among the recommendations was to leverage Open Banking and QR codes to advance A2A payments.
- UK consumers continue to gravitate to Buy Now Pay Later (BNPL) which accounted for 7% of e-com transaction value in 2023. BNPL use cases have <u>expanded to verticals like</u> <u>grocery</u> in response to the cost of living crisis. Leading BNPL providers include <u>Clearpay</u>, <u>Klarna</u> and <u>PayPal Pay in 3</u>; UK banks such as <u>HSBC</u>, <u>Natwest</u> and <u>Monzo have also joined</u> <u>the fray</u>. We project BNPL to grow at 4% CAGR to 2027, maintaining ~7% of e-com value.

Population **15th** 66,971,000

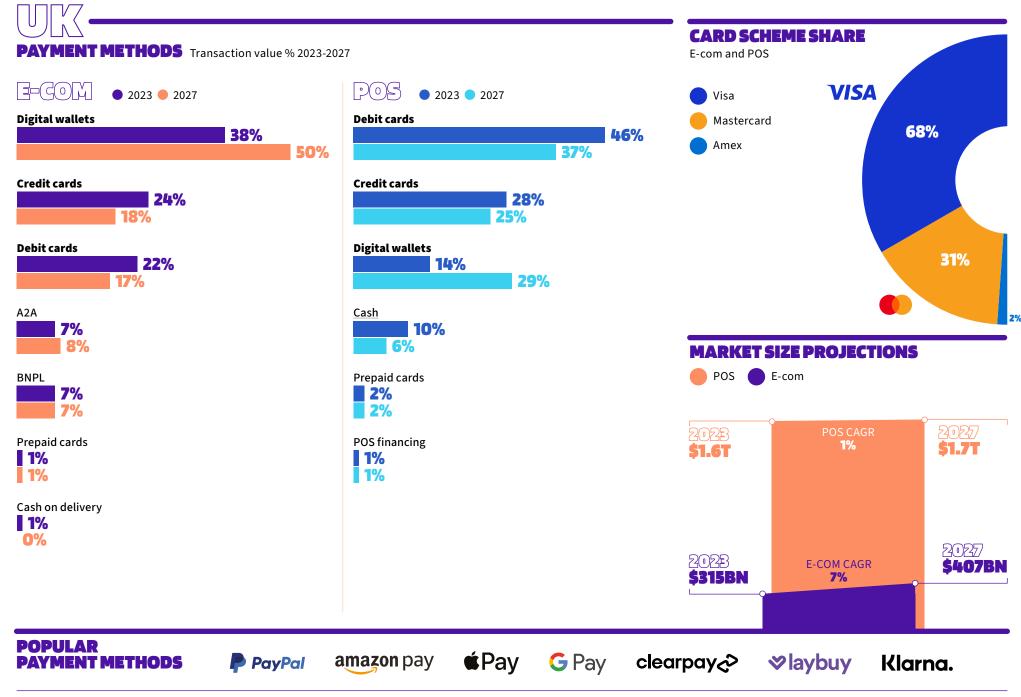
GDP Per Capita **16th** \$45,850

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POS Size
500
51.6 trillion

E-com Size
Brd
\$315 billion

Rankings are out of 40 GPR markets



LATIN A MERICA

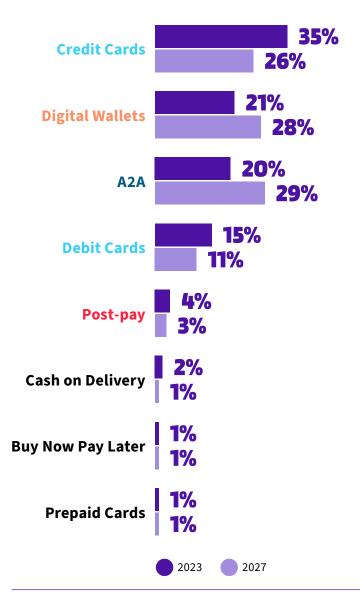
PAYMENT METHODS AND MARKET GUIDES

¹¹⁴ worldpay



LATAM E-COM PAYMENT METHODS

Transaction value % 2023-2027



Credit cards are the leading online payment method across LATAM. Credit cards accounted for more than a third (35%) of regional e-com transaction value in 2023 and were the leading online payment method in five of the six LATAM markets covered in this report.

LATAM had the highest percentage of A2A payment penetration

of any global region in 2023 with 20% of regional e-com transaction value. The overwhelming success of Brazil's instant payment system, **Pix**, is fueling the rise of online account-to-account (A2A) payments across LATAM. Brazil led regional A2A adoption with 30% of transaction value in 2023 making it Brazil's second most popular online payment method. A2A payments are also growing in popularity in Colombia (25% of online spend made possible by A2A service **PSE**) and in Peru, where 20% of online spend is driven by A2A apps **Yape** and **PLIN** as well as directly through local banking apps.

Latin America has by far the highest use of post-pay globally.

Post-pay is where a voucher is produced upon making an online purchase which is then paid by the consumer at a physical store such as a convenience store, most often in cash. Post-pay accounted for 4% of LATAM's e-com transaction value in 2023, an outlier in that in no other global region did post-pay account for 1%. Postpay continues to be an important link for cash-heavy consumers in Mexico (where **OXXO** and **7-Eleven** offer popular post-pay services), where it accounted for 7% of 2023 e-com value, and in Peru, where **PagoEfectivo** helped post-pay accounted for a global high of 9% of e-com value in 2023.

¹¹⁶ worldpay

LATAM MARKET GUIDES

LATAM E-COL **PAYMENT METHODS**

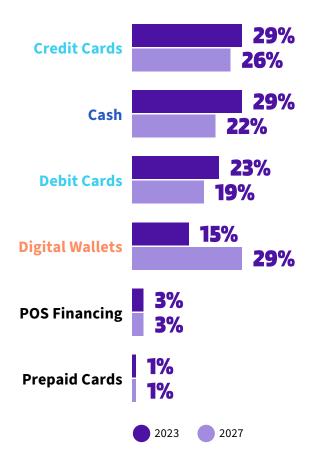
		Digital Wallets	Credit Cards	Debit Cards + Prepaid Cards	Account to Account (A2A)	Buy Now Pay Later	Cash on Delivery	Others
۲	Argentina	31% ★	35%	19%	10%	1% ★	3%	1%
	Brazil	16%	40% ★	9 %	30% ★	<1%	1%	4%
*	Chile	20%	26%	32% ★	17%	<1%	2%	4%
	Colombia	18%	27%	18%	25%	1% ★	6% ★	5%
۲	Mexico	28%	33%	22%	6%	1% ★	2%	8%
	Peru	11%	31%	21 %	20%	<1%	6% ★	11% 🛨

Country leading payment method

🛧 Regional high

LATAM POS PAYMENT METHODS

Transaction value % 2023-2027



Cash remains LATAM's leading payment method at POS, but that lead is fleeting. For the first time in 2023, cash shared the lead with credit cards with 29% of regional POS transaction value each; credit cards are projected to surpass cash as the leading inperson payment method in 2024. In 2023, cash was the leading POS payment method in Argentina, Colombia, Mexico and Peru.

Credit cards and debit cards combined account for more than half of in-person payment value. Credit cards caught cash in 2023 to co-lead regional POS payments with 29% of transaction value; debit cards were responsible for 23% of regional in-person spending. Credit cards were the leading payment method in Brazil with 36% of POS spend, while debit cards led in Chile with 37% of in-person payment value.

Digital wallets are the fastest growing payment method in LATAM.

Wallets accounted for 21% of regional e-com spending in 2023 and are projected to grow at 21% CAGR to 2027, when they'll represent an estimated 28% of regional online spending. At POS, wallets registered an estimated 15% of regional transaction value in 2023; wallets are on pace to grow at 24% CAGR to 2027, nearly doubling by that time to represent an estimated 29% of regional POS spend.

LATAM MARKET GUIDES

LATAM POS PAYMENT METHODS

		Cash	Credit Cards	Debit Cards	Prepaid Cards	Digital Wallets	POS Financing
۲	Argentina	27%	25%	25%	2%	18% ★	3% ★
	Brazil	22%	36% ★	20%	1%	18% ★	3% ★
*	Chile	22%	26%	37% ★	4% ★	10%	2%
	Colombia	34%	26%	24%	2%	11%	2%
۲	Mexico	38% ★	24%	24%	1%	11%	2%
	Peru	35%	26%	21%	2%	14%	2%

Country leading payment method 💦 🧃

★ Regional high

- In 2023, inflation in Argentina ran at <u>rates</u> <u>estimated as high as 185%</u> annually. The current economic situation is contributing to changing consumer payment behavior, including gravitating more to creditbased payment solutions. The inflationary environment is also driving adoption of instant payments such as <u>MODO</u> by merchants eager to receive funds immediately.
- Runaway inflation <u>helped drive adoption</u> of Buy Now Pay Later (BNPL) solutions, allowing consumers to lock in price with low or no interest credit. BNPL accounted for \$282 million in e-com transaction value in 2023, reaching 1% share of online value for the first time.
- Debit cards have been boosted by <u>government</u> initiatives to disperse social benefits via debit <u>cards</u> to promote electronic payments. However <u>studies</u> show the campaign had only limited

success in driving broader debit card adoption. Debit cards accounted for 18% of e-com and a quarter of POS transaction value in 2023.

- **Digital wallets continue to gain share,** accounting for 31% of e-com value and 18% of POS spend in 2023. Digital wallets are on pace to become Argentina's leading payment method in e-commerce during 2024 and at POS by 2027.
- Argentina's digital wallet market is dominated by <u>Mercado Pago</u>, the payment arm of <u>Mercado</u> <u>Libre</u>, Latin America's leading e-commerce marketplace. 63% of Argentine consumers surveyed indicated Mercado Pago was their main digital wallet. Argentina features several domestic wallets from banks (<u>Cuenta DNI</u> from <u>Banco Provincia</u> and <u>BNA+</u> from <u>Banco de la</u> <u>Nación Argentina</u>), neobanks (<u>Ualá</u>) and <u>MODO</u>, a private corporation owned by Argentina's public and private banks.

Population 215t 46,234,000 GDP Per Capita 26th

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POS Size **19th** \$240 billion

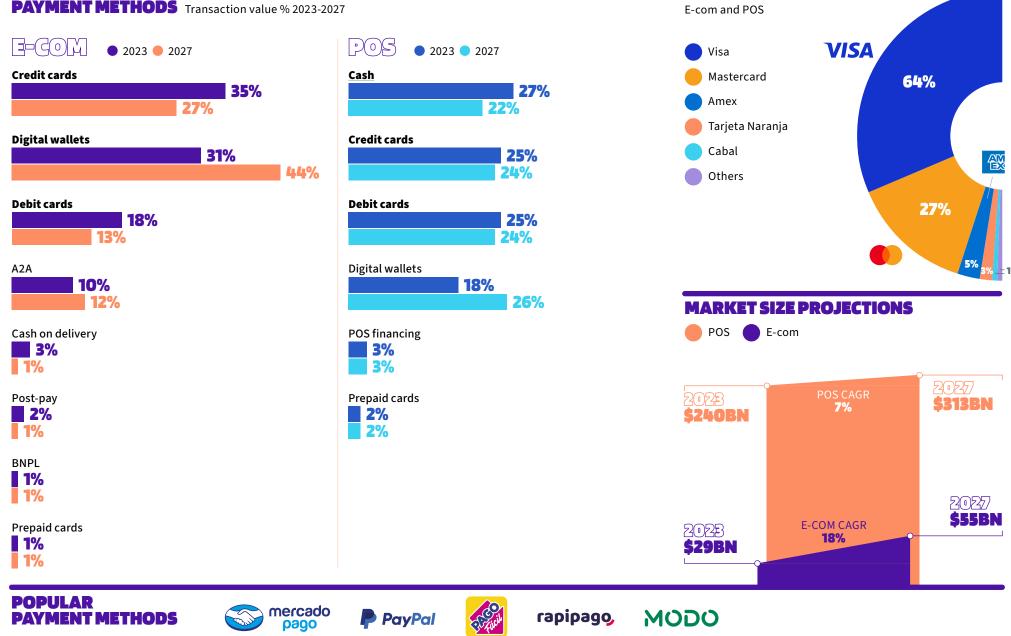
\$13.686

E-com Size
215t
\$28 billion

E CONTRACTOR OF CONTRACTOR OF

PAYMENT METHODS Transaction value % 2023-2027

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2023 = estimate; 2027 = forecast. Totals may not equal 100% due to rounding. *Card scheme shares are for the most recently available data (2022).

CARD SCHEME SHARE

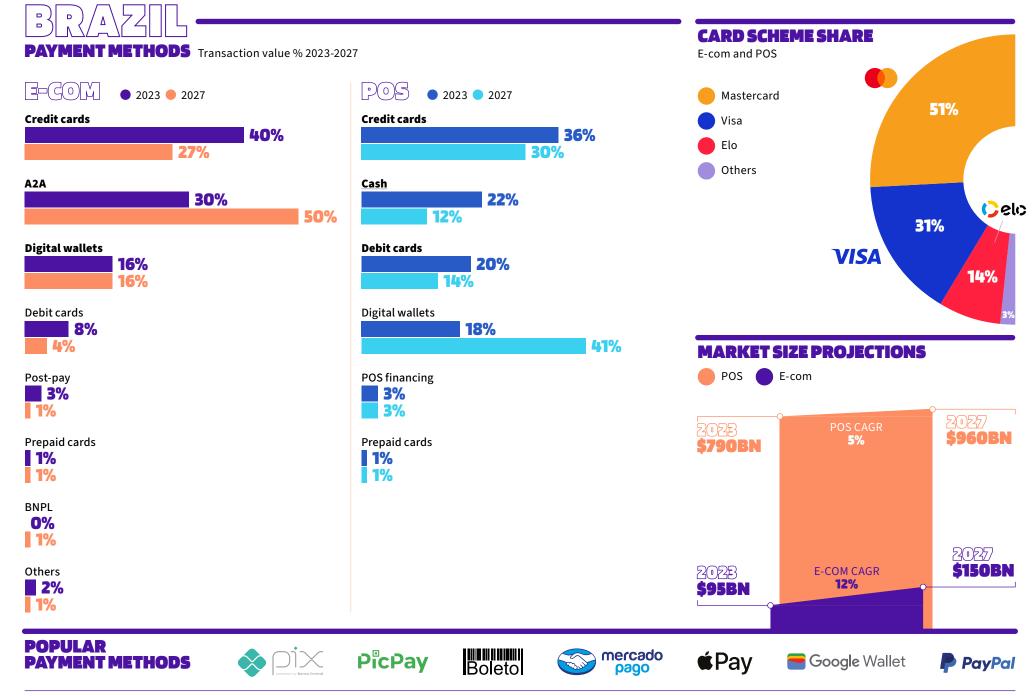
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- Launched in November 2020, **Pix quickly** grew to become Brazil's most popular payment method by number of transactions. Merchants are drawn to the lower costs of payment acceptance and instant settlement that boosts cashflow. Many merchants encourage Pix use by <u>offering consumers</u> discounts ranging from 5% to 20%.
- Driven by Pix, A2A payments online grew a remarkable 49% YoY in 2022-23 to account for 30% of e-com transaction value. Exceptional growth of 27% CAGR is forecast from 2023-27, setting A2A to see 50% share of e-com spend by 2027. Person to business are the fastest growing Pix transaction type and as of September 2023 accounted for 34% of all Pix transactions.
- Growth of Pix at the point of sale via QR codes is forecast to be even stronger than online, with 30% CAGR projected from 2023-27, five times that of the 6% CAGR for POS overall. Digital wallets accounted for 18% of POS transaction value in 2023 and is forecast to reach 41% to lead in-person payments in transaction value by 2027.
- Post-pay methods led by the Boleto voucher system - continue to cede share to the rising popularity of Pix and the use of other electronic payment methods. Earning double-digit share as recently as 2021, postpay registered just 3% of e-com spend in 2023; this increasingly niche market that we project will account just 1% in e-com spend by 2027.



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Rankings are out of 40 GPR markets



worldpay

- Chilean consumers are gravitating to digital wallets across channels and at increasing rates. Wallet use online grew 16% YoY from 2022-23 to account for 20% of e-com transaction value. After a two-year delay, in August 2023 <u>Apple Pay finally launched</u> in Chile, joining <u>Fpay</u>, <u>Google Wallet</u>, <u>Mercado Pago</u> and others in an increasingly competitive and fast-growing segment.
- Wallets are on pace to surpass cards as the leading payment method online by 2025 and to represent 34% of e-com spend by 2027. The rising popularity of QR code payments is driving wallet growth at POS. Estimated at 10% in 2023, digital wallet transaction value is projected to grow at 30% CAGR to 2027, more than doubling share of in-person payments to 23%.
- A new fintech law was implemented in 2023 aimed to promote financial innovation and interoperability through open finance. The law regulates a set of new financial services via the Financial Market Commission (CMF). The new law may spur a wave of regulation across the region, inspiring innovation through enhanced regulatory certainty.
- Chile has among the smallest share of unbanked consumers in LATAM with the <u>World Bank reporting</u> 87% of Chilean consumers surveyed in 2021 having some type of financial account. That strong financial inclusion helps set Chile apart in debit card use. Debit cards are Chile's leading payment method online (31%) and at POS (37%), both regional highs.



33rd \$135 billion E-com Size **36th**

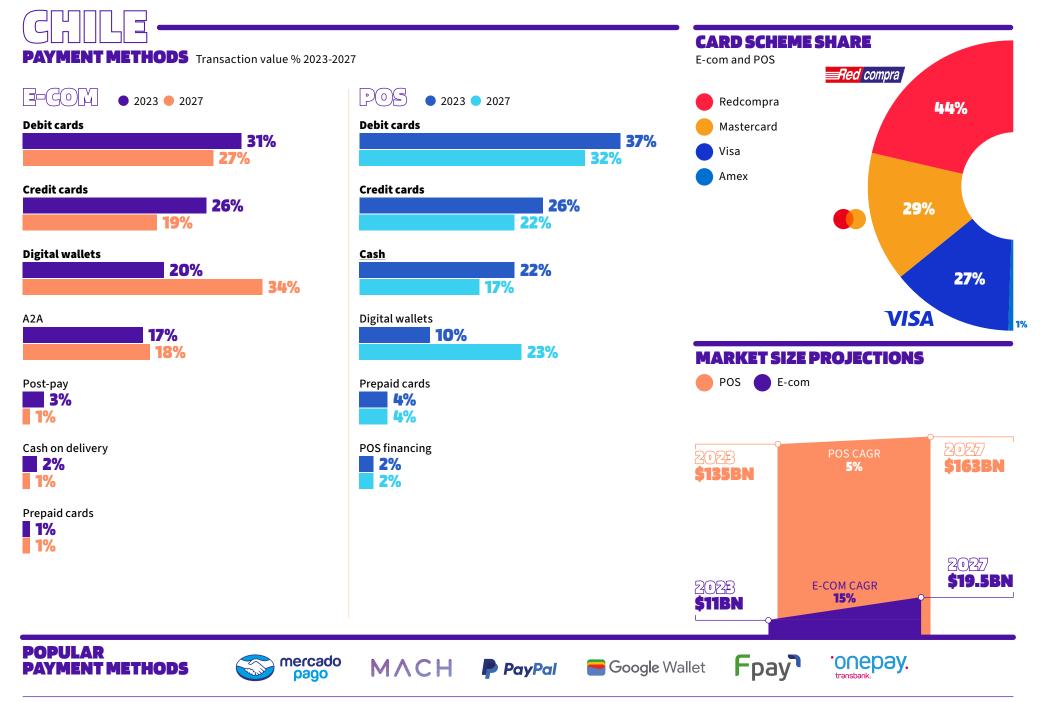
\$11 billion

POS Size

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Rankings are out of 40 GPR markets



- In late 2023, <u>Colombia's central bank</u> issued <u>regulations to mandate interoperability</u> <u>between the country's three low-value</u> <u>payment systems (Credibanco, Redeban</u> and <u>ACH Colombia</u>). This effort looks to replicate the success of Brazil's account-to-account payment phenomenon Pix and <u>hopes to go live in late 2024</u>.
- A2A payments accounted for 25% of e-commerce value in 2023 and are projected to grow at 20% CAGR from 2023-2027. That forecast is subject to significant upward revision should the project achieve anything approaching the scale achieved by Pix.
- Colombian consumers remain among the world's biggest users of cash. Persistent demand by a consumer base that was <u>estimated in 2021</u> to be 40% unbanked elevated cash use to an estimated 34% of POS transaction value in 2023. Projections are for effectively flat growth, with cash gradually ceding share to 29% by 2027.

- Digital wallets are experiencing landscapealtering growth online and in store. In 2023 wallets accounted for 18% of e-com and 11% of POS transaction value. Wallets are projected to grow at 34% CAGR online to 2027 when they'll account for an estimated 31% of spend. In-store growth is pegged at 27% CAGR 2023-27, when wallets share of POS spend is expected to reach 26%.
- Colombia's most popular wallet is <u>Nequi</u>. A spinoff from Bancolombia, Nequi was cited as their main digital wallet by nearly two-thirds (66%) of Colombian consumers. Challengers include domestic wallets DaviPlata and Movii, regional giant <u>Mercado Pago</u> and international heavyweights <u>Apple Pay</u> and <u>PayPal</u>. <u>Google Wallet</u> expanded to Colombia in 2023 via a partnership with neobank <u>Nu</u>.

Population **18th** 51,874,000 GDP Per Capita **35th** \$6,630

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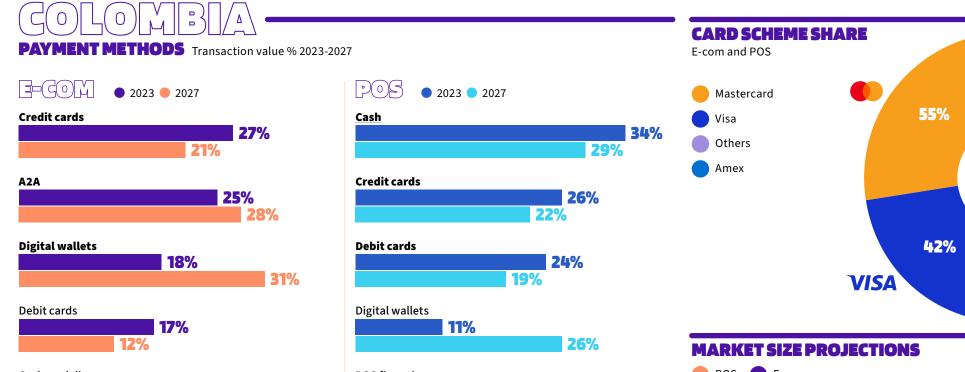
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POS Size **26th** \$184 billion

E-com Size **344th** \$14 billion

Rankings are out of 40 GPR markets

¹²⁶ worldpay

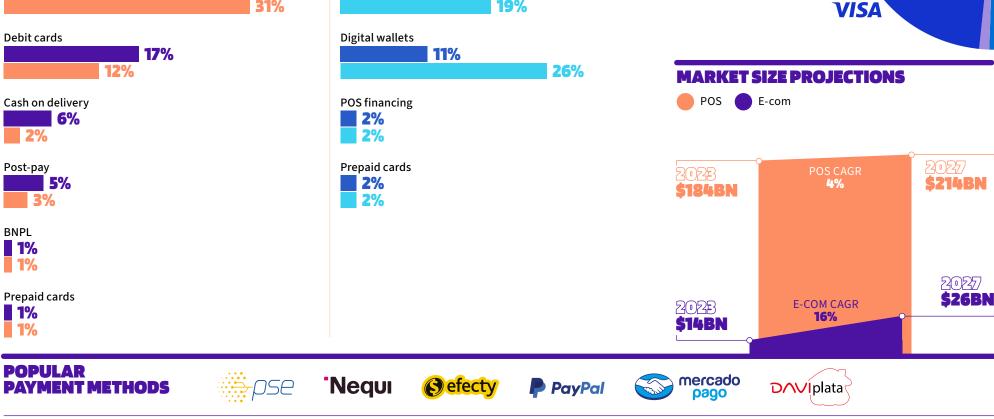








Prepaid cards 1% 1%



2023 = estimate; 2027 = forecast. Totals may not equal 100% due to rounding. *Card scheme shares are for the most recently available data (2022).

2%

- Mexico's Central Bank, <u>Banxico</u>, is making a second attempt to create a successful consumer-facing real time payment system. In March 2023, Banxico launched DiMo (<u>Dinero</u><u>Móvil</u>), an account-to-account service that runs on <u>SPEI</u>, Mexico's real-time gross settlement system. DiMo has an improved UX and although not mandatory for banks to participate, the country's major <u>banks and financial service</u> <u>providers seem enthusiastic</u> about the new scheme. While <u>CoDi</u> used QR codes, DiMo is based on phone numbers.
- Merchants are enthusiastic about DiMo in hopes it will reduce the costs of payment acceptance. A2A's growth forecast of 19% CAGR from 2023-27 would see A2A share rise from 6% to 8% of online spend will depend on consumer adoption in a historically very stable market.
- **Cash is still king in Mexico**, accounting for an estimated 38% of POS transaction value in 2023. Estimates of cash's share of number of transactions run higher given their typical lower value. An <u>estimated 82%</u> of Mexican consumers use cash for payments. Cash is an economic necessity for Mexico's comparably large unbanked population (51% as of 2022 <u>according to the World Bank</u>).
- Mexican consumers' love of cash drives use of post-pay. Post-pay allows consumers to make e-commerce purchases at participating stores, making payment in cash at convenience stores like <u>OXXO</u> and <u>7-Eleven</u> with a printed voucher or QR code. Accounting for 7% of e-com spend in 2023, Mexico had the second highest use of postpay (to Peru with 9%).



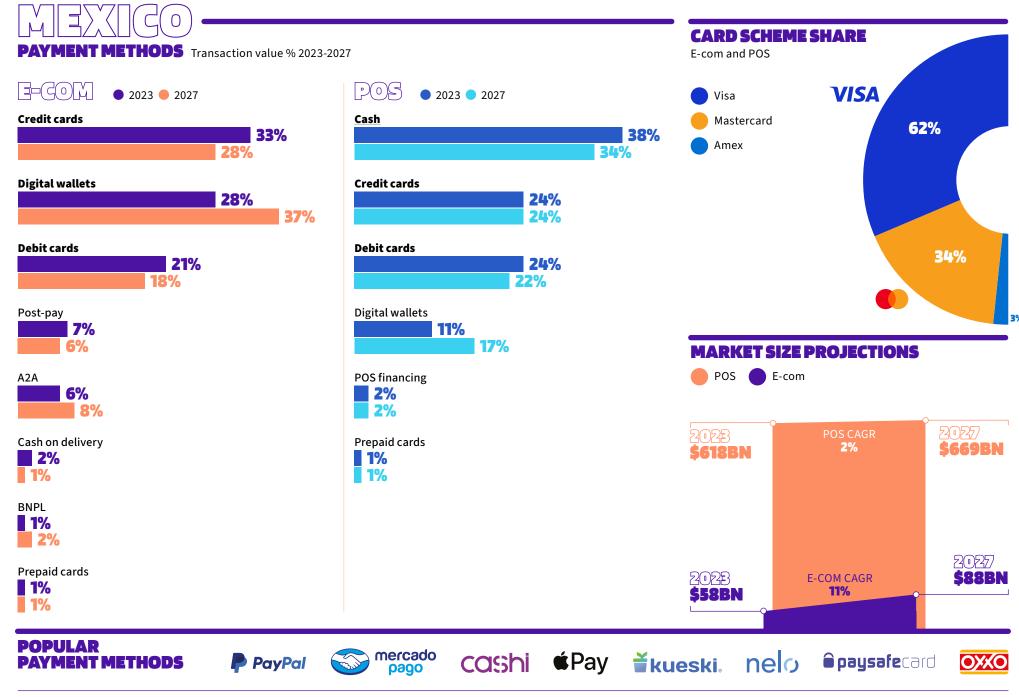
Population

127,504,000

Rankings are out of 40 GPR market

\$58 billion





- In October 2022, <u>Peru's Central Bank (CRBP)</u> mandated payment interoperability. The first phase was implemented in April 2023 with interoperability between the country's two largest payment apps – bank-owned A2A apps <u>Yape</u> and <u>PLIN</u>. The second phase went live in July to ensure interoperable account-to-account payment connectivity between all Peruvians.
- The popularity of Yape and PLIN **propelled A2A to be the fastest growing payment method in Peru.** A2A grew 34% YoY to account for 20% of online spend in 2023. Projected CAGR of 24% sets A2A on a path to 31% share and leading payment method online by 2027.
- Growing adoption of <u>QR code payments instore</u> helped propel digital wallets' share of POS payment value to 14% in 2023. Wallets are projected to grow at POS at 24% CAGR 2023-27, on pace to double share to 28% of in-store spend by 2027.

- Peru's Central Bank (CRBP) took steps forward in the potential development of a Central Bank Digital Currency (CBDC) in 2023. The effort's objectives are to increase financial inclusion among Peru's estimated 43% of unbanked consumers and to lower transaction costs. The initiative remains in study stage with no proposals or firm timeline for implementation.
- Peruvian consumers continue to find cash essential, still the leading payment method with 35% of POS spend in 2023. That attachment to cash remains in e-commerce where cash-based post-pay methods such as <u>PagoEfectivo</u> commanded 9% of e-com spend in 2023, the highest in our survey.

Population 25th 34,049,000 GDP Per Capita 32nd 57,125 POS Size 35th 5117 billion

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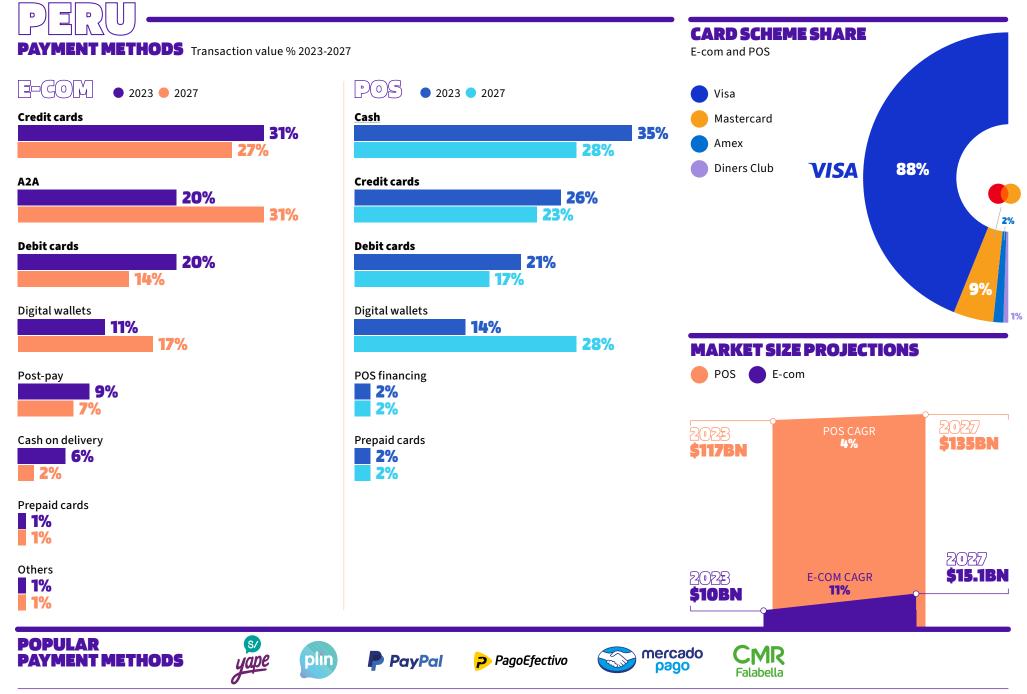
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E-com Size **38th** \$10 billion

Rankings are out of 40 GPR markets

worldpay

BBVA



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PAYMENT METHODS AND MARKET GUIDES

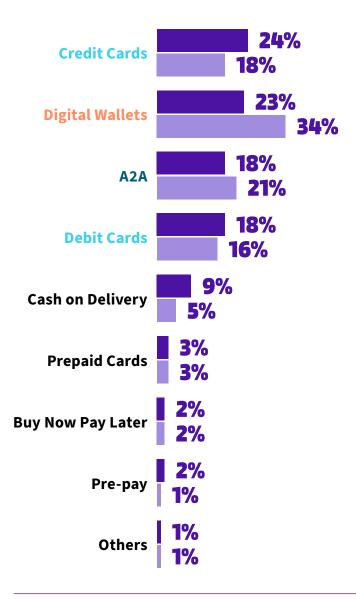
¹³² worldpay

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MEA E-COM PAYMENT METHODS

Transaction value % 2023-2027



Credit cards maintained a lead in e-com payments across MEA in 2023 with 24% of regional online spend. That regional figure is however skewed by use in the UAE; **debit cards are the leading payment method in Saudi Arabia and South Africa** both online and at POS. Both credit cards and debit cards are projected to continue to grow in transaction value through 2027 in each of the four covered MEA markets, albeit at growth rates lower than digital payment methods and thus gradually losing share.

Digital wallets are the fastest growing online payment method

in MEA, as it is globally. Wallets garnered 23% of regional e-com spend in 2023 with transaction value rising 35% YoY. Our forecast is for 26% CAGR through 2027 when wallets are projected to account for more than a third (34%) of e-com value.

MEA has the highest use of cash on delivery among all global regions at 9% of 2023 regional online spend, following from having the highest regional use of cash overall.

A2A payments will see tailwinds from new real-time payment rails as well as efforts to establish interoperability between domestic schemes across the region. Accounting for 18% of regional e-com spend in 2023, A2A transaction values across the region are forecast at 17% CAGR through 2027.



¹³⁴ worldpay

MEA MARKET GUIDES

MEA E-COM PAYMENT METHODS

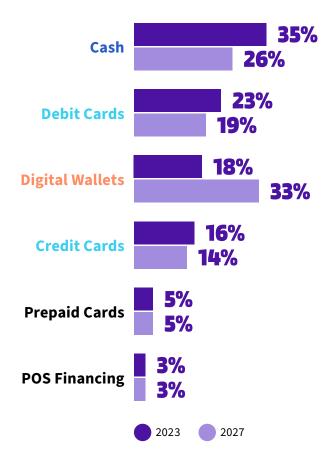
		Digital Wallets	Credit Cards	Debit Cards + Prepaid Cards	Account to Account (A2A)	Buy Now Pay Later	Cash on Delivery	Others
	Nigeria	11%	15%	22%	32% ★	2%	15% ★	2%
爱深阴别 。	Saudi Arabia	24%	13%	33% ★	16%	1%	9%	4%
	South Africa	20%	19%	29%	22%	2%	7%	1%
	UAE	29% ★	37% ★	12%	11%	2%	6%	3%

Country leading payment method 🛛 🛨 Regional high

Totals may not equal 100% due to rounding.

MEA POS PAYMENT METHODS

Transaction value % 2023-2027



Cash remains the leading payment method at POS across MEA, the last region in which that is the case. Cash accounted for an estimated 35% of POS transaction value across the four MEA markets covered in GPR. While the highest in any region, cash use in these markets fell in half from 70% in 2019. Gradual contraction of -3% CAGR forecast to 2027 will still see cash register 26% of POS transaction value.

Digital wallets continue their phenomenal growth. Mobile money stored value wallets such as **e& money**, **M-PESA**, **MTN MoMo** and **Orange Money** are popular in the region, many historically able to execute payments by text with feature phones. They compete with super apps like **Vodapay**, pass-through wallets such as **stc pay** in Saudi Arabia, and **Apple Pay** and **Google Pay** across the region. Accounting for 18% of POS transaction value in 2023, wallets are forecast for 21% CAGR through 2027 when they'll be responsible for an estimated 33% of POS spend among the four MEA markets covered in our report.

Debit cards are the leading payment method at POS in South Africa and Saudi Arabia. Debit cards led all other in-store payments with 30% of POS transaction value in Saudi Arabia, while accounting for a regional-high 37% of POS payment vale in South Africa. Debit cards earned 23% of regional POS spend in 2023 and with effectively flat transaction value projected to 2027 will fall to an estimated 19% of POS spend by 2027 as card spend continues to migrate to use within wallets.



		Cash	Credit Cards	Debit Cards	Prepaid Cards	Digital Wallets	POS Financing
	Nigeria	55% ★	5%	12%	6%	18%	3% ★
333700) 	Saudi Arabia	29%	9%	30%	7% 🛧	22% ★	3% ★
	South Africa	33%	18%	37% ★	2%	7%	3% ★
	UAE	17%	38% ★	15%	6%	22% ★	2%

Country leading payment method 🛛 🛧 Regional high

- Cash remains the undisputed consumer choice of Nigerian consumers. Cash accounted for 55% of 2023 POS transaction value, the highest share in this report. Nigerians are turning to digital payments – cash is forecast to decline in use at -4% CAGR from 2023 to 2027 – yet cash is forecast to retain supremacy through 2027 with 42% share of POS spend.
- Cash's importance translates to e-commerce, where cash on delivery represented 15% of 2023 e-com spend, second only in this report to Vietnam's 17%. Cash on delivery is projected to gradually cede share, to an estimated 9% of e-commerce value by 2027.
- February 2023 saw a cash crisis when Nigerians took to the streets in protest over the lack of sufficient banknote availability. <u>The Central Bank of Nigeria (CBN)</u> had intended to sunset existing currency to be exchanged for new notes. The Nigerian Supreme Court stepped in to force continued acceptance of the old notes. In November, the CBN retracted the plan ending months of uncertainty by declaring the old notes would remain legal tender.
- Efforts by the Central Bank of Nigeria (CBN) to implement digital cash have proved challenging. A May 2023 IMF working paper assessed Nigeria's Central Bank Digital Currency (CBDC) <u>e-Naira</u> as "disappointingly low." Launched in October 2021, <u>e-Naira has</u> yet to reach even 1% of Nigeria's consumers.



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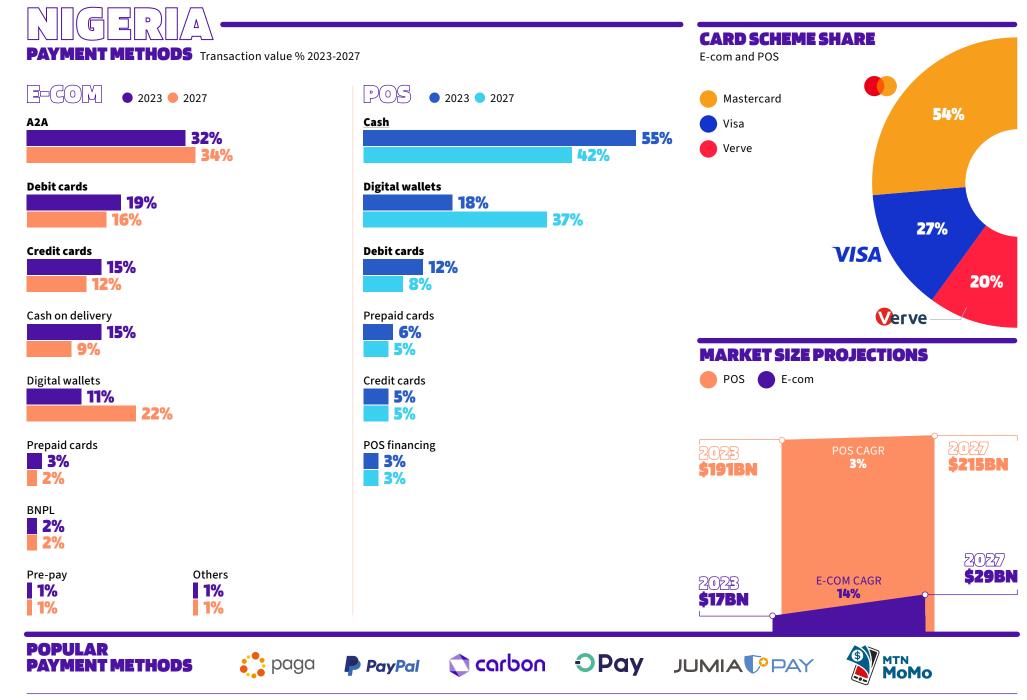
23rd \$191 billion

POS Size

E-com Size **315t** \$17 billion

Rankings are out of 40 GPR markets

¹³⁸ worldpay



worldpay

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- Two Saudi-based BNPL firms bucked the mostly bad news cycle for BNPL valuations in 2023. In November, Tabby raised a \$200 million round that valued the company at \$1.5 billion. In December, Tabby rival Tamara was valued at \$1 billion in a \$340 million funding round. BNPL accounted for 1% of Saudi Arabia e-com spend in 2023 and is projected to grow at 16% CAGR from 2023-2027.
- Debit cards are the leading payment method in Saudi Arabia both online and in store. In 2023, debit cards accounted for 27% of e-com spend and 30% of POS value. The overwhelming majority of debit cards carry the <u>Saudi Central Bank</u>-owned <u>mada</u> card brand.
- Cash use has dropped significantly since the pandemic, accounting for approximately 29% of transaction value in 2023, down more than half from the 61% recorded in 2020. Despite the decline, cash still plays a vital role in Saudi Arabia both at the point of sale and in e-commerce. Cash accounted for 13% of e-commerce payment value in 2023, 9% in cash on delivery and 4% in pre-pay.
- Saudi Arabia has among the world's highest rates of prepaid card use. In 2023, prepaid cards accounted for 6% of e-com and 7% of POS transaction value for more than \$14 billion in transaction value. Prepaid cards serve Saudi Arabia's <u>estimated 26% unbanked</u> population, to <u>dispense salary to migrant workers</u> and for pilgrims visiting the Kingdom for Hajj.



3 RANKINGS

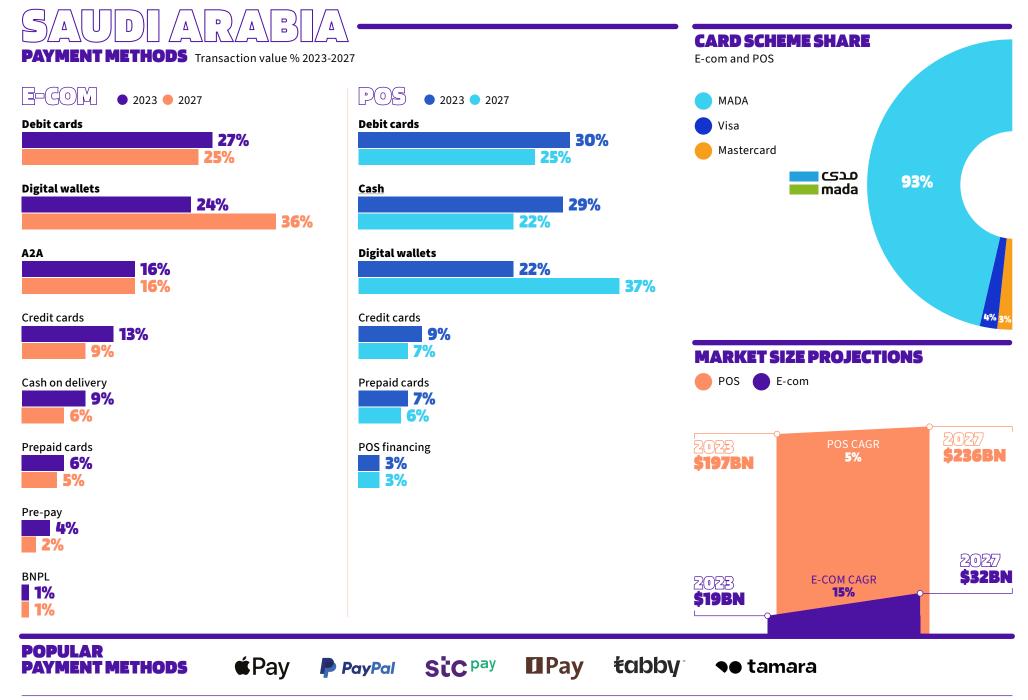
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E-com Size **29th** \$19 billion

Rankings are out of 40 GPR markets



- Debit cards were people's choice wherever South African consumers shopped in 2023. Debit eclipsed cash as the leading payment method at South Africa's POS in 2022 and retained that lead in 2023 with 37% of POS transaction value. Debit cards retained a longstanding lead in e-commerce, accounting for 28% of 2023 online spend.
- Cash use continues to drop, down to one-third (33%) of transaction value in 2023 from over half (53%) pre-pandemic in 2019. Cash use is forecast to drop slightly by -2% CAGR from 2023-2027 and is on pace to account for over one-quarter (26%) of POS spend by 2027.
- Buy Now Pay Later (BNPL) has established itself in South Africa by serving consumers that might not qualify for traditional credit products. A fragmented BNPL landscape includes domestic providers <u>4months, Float, Happy Pay, Mobicred,</u> <u>MoreTyme, Payflex, and PayJustNow</u>. BNPL accounted for 2% of e-com transaction value in 2023, or approximately \$110 million.
- Digital wallet use continues to grow, accounting for 20% of e-commerce and 7% of POS spend in 2023. Digital wallet use in South Africa is fragmented across domestic bank providers such as FNB's <u>Cell Pay Point</u>, stored value wallets like <u>MTN MoMo</u>, super app <u>VodaPay</u>, and international brands <u>Apple Pay</u> and <u>PayPal</u>. Our forecast sees wallets growing at 30% CAGR online and 34% CAGR at POS from 2023 to 2027.

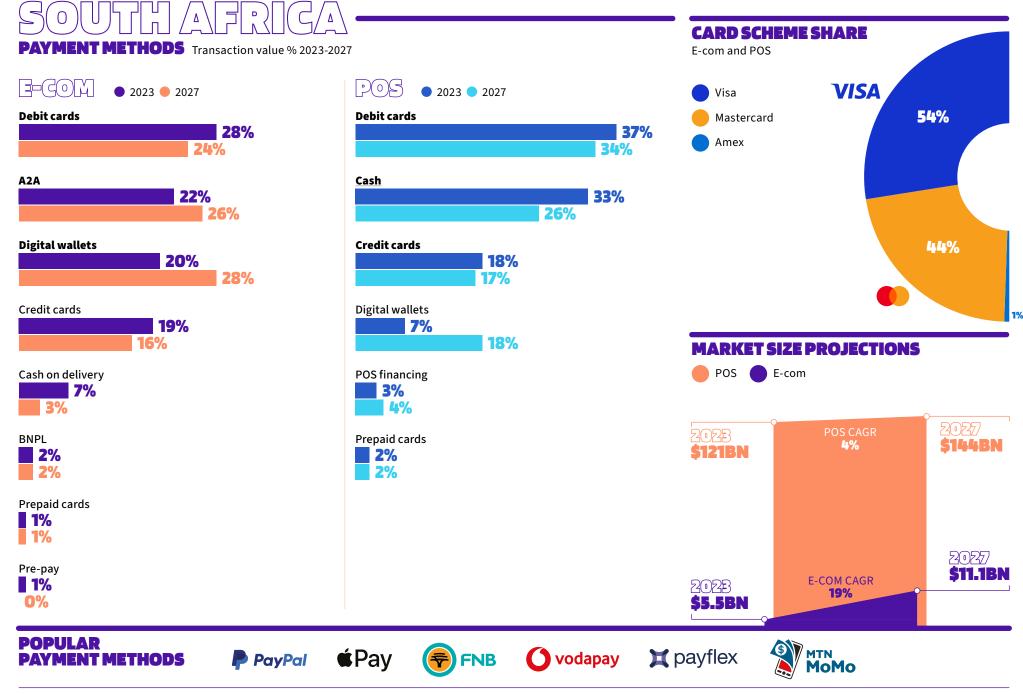




Population

Rankings are out of 40 GPR markets

\$5.5 billion



worldpay

- In July 2023 the <u>Central Bank of the UAE</u> and the <u>Reserve Bank of India signed an</u> <u>agreement</u> to establish interoperability between the UAE's Instant Payment Platform (IPP) and India's Unified Payments Interface (UPI). The agreement seeks to <u>boost cross-border transactions</u> in local currencies and with standardized messaging.
- In October 2023, the <u>Central Bank of the UAE</u> (<u>CBUAE</u>) subsidiary <u>Al Etihad Payments (AEP</u>) announced the launch of a 24/7 instant payments system and domestic card scheme. This <u>digital transformation effort</u> is part of the National Payments Systems Strategy (NPSS). Bill pay through <u>direct debit</u> will be an initial use case, with person-toperson and person-to-business to follow.
- Central Bank efforts to promote a cashless economy have been wildly successful, with the COVID-19 pandemic providing a catalyst to mass adoption of digital payment methods. In 2023, cash accounted for approximately 17% of POS transaction value, down more than threefold from 67% in 2019. Cash continues to play more than a niche role in e-commerce with cash on delivery registering 6% of 2023 spend.
- UAE initiatives toward digital payment transformations fuel A2A payment growth forecasts at 19% CAGR to 2027. Digital wallet transaction value growth is on pace for 23% CAGR in e-com and 17% CAGR at POS from 2023-27. Digital wallets – domestic wallets Careem Pay and e& money, international brands Apple Pay, Google Pay and PayPal – are projected to become the leading payment method online and in store by 2027.

Population **337d** 9,441,000 GDP Per Capita

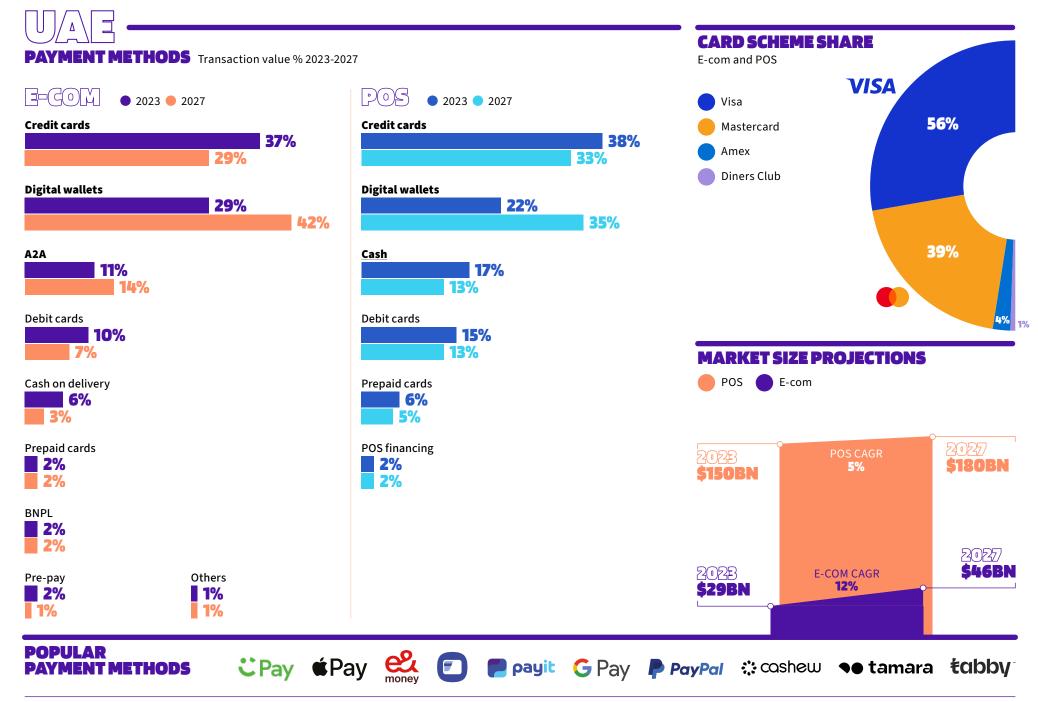
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POS Size **30th** \$150 billion

\$53.757

E-com Size **20th** \$29 billion

Rankings are out of 40 GPR markets

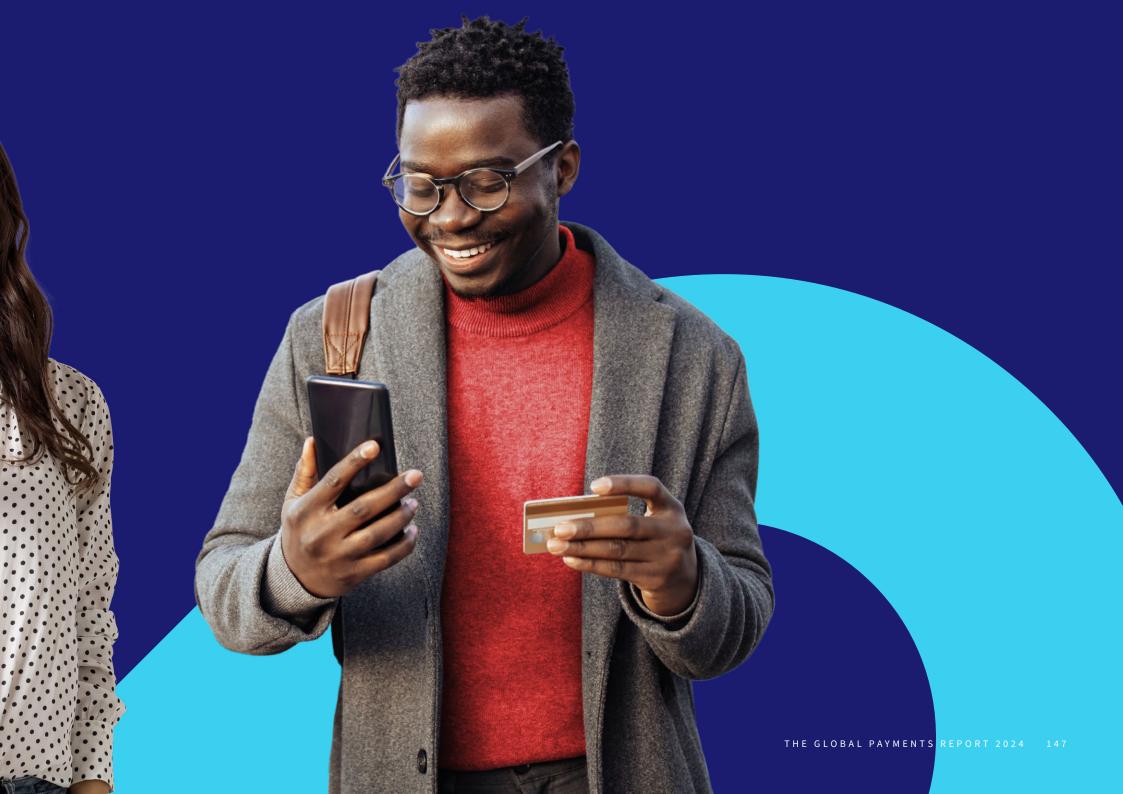


2023 = estimate; 2027 = forecast. Totals may not equal 100% due to rounding. *Card scheme shares are for the most recently available data (2022).

NORTH AMERICA

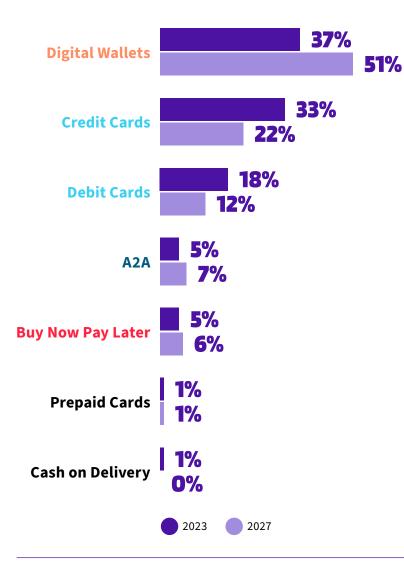
PAYMENT METHODS AND MARKET GUIDES

146 worldpay



NORTH AMERICA E-COM PAYMENT METHODS

Transaction value % 2023-2027



The **North American e-commerce payment market is fragmented but relatively stable** with consumers strongly attached to the use of cards. Merchants can satisfy consumer preferences by structuring checkout to accept major card brands and key digital wallets that collectively account for 89% of regional online spending. Targeted additions of A2A and BNPL solutions add 5% each to that coverage.

Direct card use combined still represents a majority of regional spend, with credit cards accounting for 33% and debit cards an additional 18% of 2023 transaction value, approximately \$1.04 trillion. Direct card use is projected to decrease online, with credit cards projected -3% CAGR and debit cards -4% CAGR to 2027. Rather than being "lost" that spend is moving to digital wallets.

Digital wallets extended their lead in e-commerce payments in 2023,

growing 23% YoY to reach 37% of regional transaction value, over \$748 billion. Wallets are forecast at 16% CAGR to 2027 to account for 51% of e-com spend. Regional wallet spend is heavily weighted to the pass-through card transaction model (**Apple Pay**, **Google Pay** and **PayPal**).

Buy Now Pay Later (BNPL) continued to attract record spend in

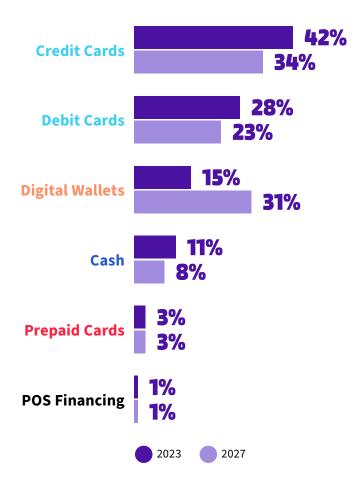
2023, accounting for 5% of regional e-com transaction value, over \$105 billion. Leading North American BNPL firms responded to an investor pivot to profit over growth. **Affirm** reported a second straight profitable <u>quarter</u> on quarterly gross merchandise volume (GMV) of \$5.6 billion. **Sezzle** notched two consecutive quarters of profitability, while **Klarna** reported having been profitable in the US for four consecutive quarters.

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NORTH AMERICA MARKET GUIDES

NORTH AMERICA POS PAYMENT METHODS

Transaction value % 2023-2027



North American consumers remain strongly attached to cards when shopping in-store – especially credit cards. Credit cards accounted for 42% of regional POS spending in 2023 while debit cards were used for 28% of transaction value. Credit, debit and prepaid cards combined accounted for over \$8.2 trillion in regional transaction value. The use of physical plastic at the point of sale will gradually decline at -2% CAGR, as cards cede share to (mostly pass-through) digital wallets.

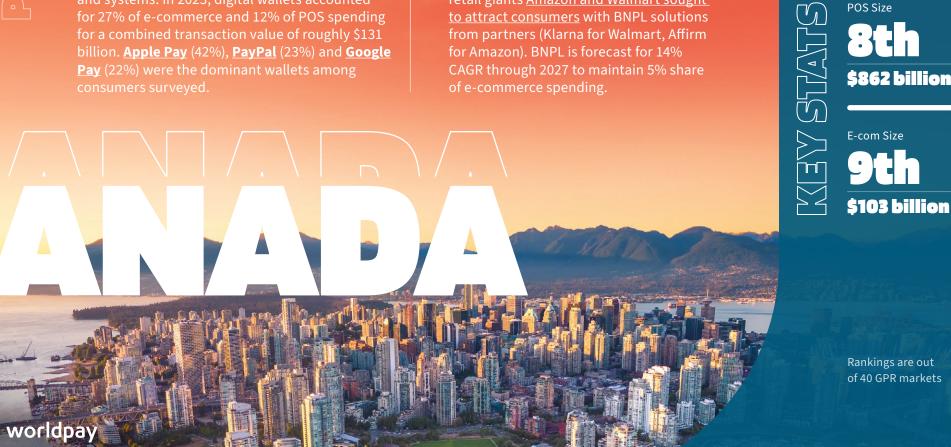
Digital wallets have been slower to catch on at POS where strong habituation to the use of physical cards has largely resisted change. Potential is finally being realized as North American consumers begin to catch up to their counterparts across APAC. Wallets at POS saw 36% year-over-year growth in 2023 to claim 15% of regional POS spend, over \$1.7 trillion in transaction value.

Cash has found a resistant floor of use across North America. Cash accounted for an estimated 11% of regional in-store spend in 2023 or roughly \$1.26 trillion. Cash use is forecast to decline at -7% CAGR to 2027 when it will still account for nearly \$1 trillion (8%) of regional POS value.

Prepaid cards remain a vital payment tool for underbanked consumers, gig workers, and anyone seeking to use a private, secure and reliable payment card without needing a bank account or credit card. Prepaid cards are an important tool to disperse government benefits and are used disproportionately in-store. Prepaid cards accounted for 3% of regional POS spend in 2023, over \$328 billion in transaction value.

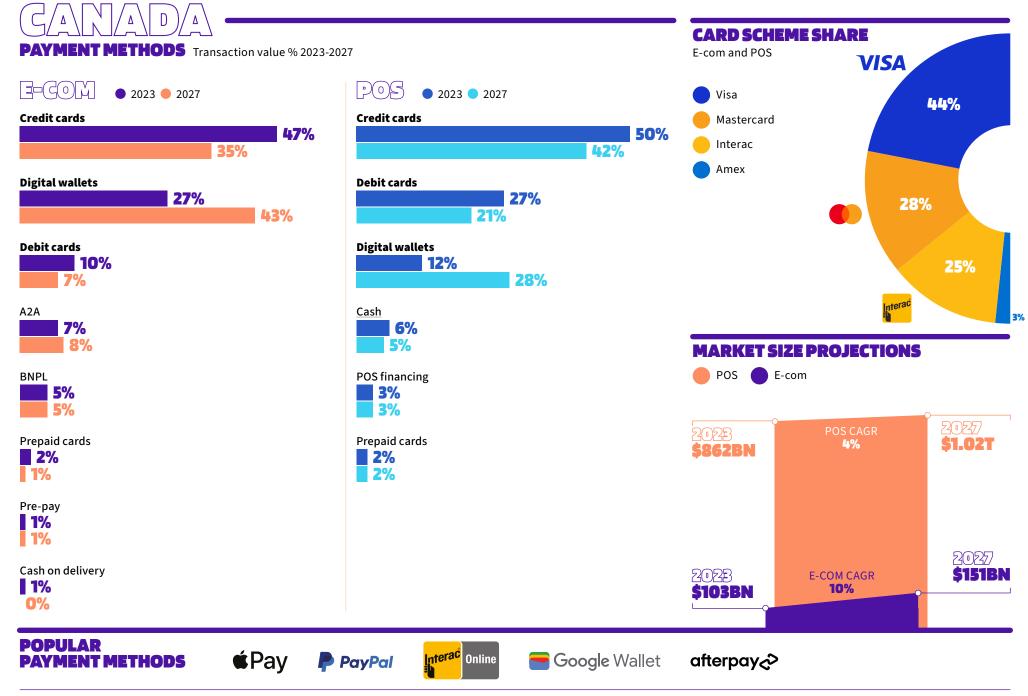
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- By the end of 2023, <u>Real Time Rail</u> (RTR), <u>Payment</u> Canada's effort to deploy instant payments remained without a proposed launch date. Estimates of A2A transaction value (7% of 2023 e-com spend) and growth forecasts (12% CAGR) are accordingly muted and are subject to further downward revision pending launch of RTR.
- Digital wallets became more closely regulated in 2023. In November, The Government of Canada published the final Retail Payments Activities Act (RPAA) Regulations. The legislation regulates payment service providers (PSPs) and invites those groups to Payment Canada's membership and systems. In 2023, digital wallets accounted for 27% of e-commerce and 12% of POS spending for a combined transaction value of roughly \$131 billion. Apple Pay (42%), PayPal (23%) and Google **Pay** (22%) were the dominant wallets among
- Credit cards accounted for roughly 50% of 2023 total consumer spend, nearly \$434 billion. In May, The Bank of Canada issued its 2023 Financial Systems Review expressing concern about potential stress among Canadian consumers who were increasingly reliant on credit.
- Buy Now Pay Later (BNPL) continued to earn consumer confidence, accounting for 5% of online transaction value in 2023. Klarna continued to gain momentum in 2023 with a reported 640,000 active users in Canada, while retail giants Amazon and Walmart sought to attract consumers with BNPL solutions from partners (Klarna for Walmart, Affirm for Amazon). BNPL is forecast for 14% CAGR through 2027 to maintain 5% share of e-commerce spending.





Rankings are out of 40 GPR markets



2023 = estimate; 2027 = forecast. Totals may not equal 100% due to rounding. *Card scheme shares are for the most recently available data (2022).

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• US consumers continued their strong attachment to cards in 2023. Credit,

debit and prepaid cards accounted for 71% of all 2023 consumer spending, over \$8.4 trillion. Credit card transaction value outpaced debit cards 32% to 19% online and 41% to 28% in store. Prepaid cards were responsible for 1% of e-commerce and 3% of POS spend in 2023. Further, card spend is increasingly happening from within wallets, which are the fastest growing payment method in the US in both e-commerce and at the point of sale.

• Launched in 2023, <u>FedNow is potentially</u> years away from influencing consumer payments. Bank adoption of the US Federal Reserve's new instant payment service has disappointed, with banks still grappling with instant payment challenges like <u>mitigating persistent fraud</u>.

- In October 2023, the <u>CFPB</u> proposed rules to jumpstart adoption of open banking. Growth of A2A payments above the estimated 5% of 2023 online value will require <u>clear incentives</u> for consumers to use them.
- BNPL spending value rose 23% year-over-year in 2023. Cyber Monday 2023 was reportedly BNPL's biggest day ever with over \$940 million in e-com transaction value. BNPL accounted for an estimated 5% of 2023 online spending and is forecast for growth of 10% CAGR through 2027.
- BNPL regulation is looming on the horizon to regulate such lending consistent with other consumer credit products. The Consumer Finance Protection Bureau (CPFB) issued a <u>March 2023 report</u> expressing concern that BNPL was used disproportionately by already stressed consumers. New BNPL legislation was still pending as of January 2024.

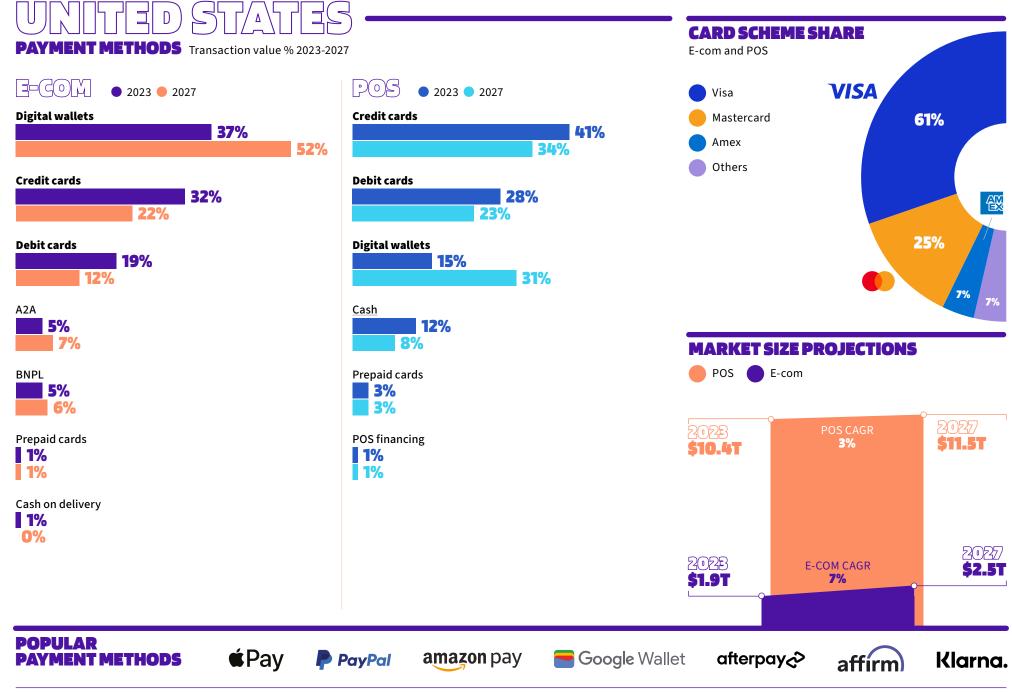
333,287,000 **GDP** Per Capita \$76.398 **POS Size** H. \$10.4 trillion E-com Size \$1.9 trillion

Population

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Rankings are out of 40 GPR markets



2023 = estimate; 2027 = forecast. Totals may not equal 100% due to rounding. *Card scheme shares are for the most recently available data (2022).

PAYMENT TERMS





General definitions

Alternative payment methods (APMs) -

Payment methods other than the traditional payment methods of cash and cards. Alternative payment methods include account-to-account (A2A), buy now pay later (BNPL), cryptocurrencies, digital wallets, pre-pay, post-pay and POS financing. APMs are now ascendant in e-com and will soon achieve parity with traditional payment methods at POS.

Therefore, we've effectively dropped "alternative" in regard to industry leading payment methods, while acknowledging its continued use in the payments industry. Globally in 2023, APMs accounted for approximately 65% of e-com and 31% of POS and transaction value.

Compound annual growth rate (CAGR) -

Compound annual growth rate for a given period of years. CAGR projections are offered in this report for e-com and POS transaction values at the global, regional and individual market level projected 2023 through 2027. CAGRs offered for specific payment methods refer to the projected growth rates of absolute transaction value, not of the share of transaction value. e-commerce (e-com) – Consumer purchases of goods and services made online by consumers from businesses via the internet, regardless of device or application. Our analysis is confined to person-to-business payments and excludes consumer payments to governments and purchases or installment payments of motor vehicles, real estate, rent, investments, utility and other bill or loan payments.

Global e-com transaction value for the 40 markets covered in GPR 2024 was over \$6.1 trillion in 2023. Our projection of 9% CAGR for e-com growth projects to a total global e-com market size of approximately \$8.8 trillion in 2027.

e-com as % of all commerce – E-commerce transaction value as a percentage of all commerce including e-com and POS sales. Global e-com sales represented approximately 14% of all commerce in 2023. Higher estimated growth rates for e-com relative to POS will see e-com as a percentage of all commerce rise to a projected 17% globally by 2027.

GPR – The Global Payments Report, Worldpay's industry-leading account of how consumers pay at checkout online and in-store in 40 leading global markets. This 2024 version is the GPR's ninth edition.

Point of sale (POS) – All person-to-business transactions that occur at the physical point of sale. Our analysis includes traditional instore transactions as well as all face-to-face transactions, regardless of where they take place.

Global POS transaction value for the 40 markets covered in this report was nearly \$36.5 trillion in 2023. Our projection of 4% CAGR for POS growth projects to a total global POS market size of approximately \$42.3 trillion in 2027

Real-time payment – An electronic payment where funds are irrevocably transferred from one account to another, confirmation of the payment is available to the originator and receiver, and the initiation, clearance and settlement of funds occur simultaneously and effectively in real time.

Transaction value – The total sum of U.S. dollars estimated to have been paid by consumers to businesses in e-commerce and at POS. Our analysis of payment method share is based on transaction value, not the number of transactions. The share of each payment method is based on the dollar value of transactions at the country, regional and global levels.

Payment methods

Account-to-account (A2A) – Electronic payments made directly from one party to another while bypassing card network rails. A2A payments are embedded in apps and online services such as Pix in Brazil, iDEAL in The Netherlands and BLIK in Poland. A2A includes bank transfers (for push payments) and direct debits (for pull payments). A2A is classed separately in the report's e-com payment method share analysis. At POS, A2A transactions are classed within digital wallets; we expect to break them out separately in GPR 2025. In 2023, A2A payments accounted for an estimated 7% of global e-com transaction value, or approximately \$449 billion.

Buy now pay later (BNPL) – BNPL service providers settle a payment with the merchant at the time of purchase while allowing consumers to pay for goods and services at a later date, typically in a finite set of installments and without interest if repaid within the agreed time. BNPL accounted for approximately 5% of global e-com transaction value in 2023, an estimated \$316 billion. **Cash** – Our analysis of cash is limited to physical cash or checks and excludes central bank digital currencies (CBDCs). Once the undisputed leader in POS commerce, physical cash accounted for approximately 16% of global POS transaction value in 2023, or \$6.1 trillion. Cash is projected to continue to decline to approximately 11% of global POS spend by 2027, roughly \$4.7 trillion.

Cash on delivery (COD) – Goods ordered online and paid for with cash at the time of delivery. COD accounted for 2% of global e-com transaction value in 2023, or \$101 billion. We project COD will fall to 1% of global e-com spend by 2027, when it will account for approximately \$51 billion of e-com spend.

Credit card – An essential anchor of personto-business payments for over half a century, credit cards are issued by financial institutions affiliated with a global card brand network such as **Mastercard, Visa** and **UnionPay**. Credit cards allow consumers to make purchases with credit from a financial institution. Our analysis of credit cards includes charge cards and deferred debit cards. In 2023, direct credit card use represented 22% of global e-com transaction value (over \$1.3 trillion) and 27% of global POS transaction value (nearly \$10 trillion). **Cryptocurrencies** – Cryptocurrencies include private coins such as Bitcoin and Ethereum, stablecoins such as Tether and USD Coin. Central Bank Digital Currencies (CBDCs) are not in scope and are currently classified within "Other." Cryptocurrencies accounted for approximately 0.2% of global e-com transaction value in 2023 and did not reach 0.5% in any of the 40 markets in our report.

Debit card – Cards that facilitate purchases with funds directly debited from consumer accounts held at a financial institution. Debit cards are issued by financial institutions in affiliation with a global card brand network such as **Mastercard**, **JCB** or **UnionPay**. In 2023, debit cards accounted for 12% of global e-com transaction value (over \$750 billion) and 23% of global POS transaction value (nearly \$8.3 trillion).

Digital wallet – Apps that securely store payment credentials, allowing consumers to pay for goods and services in e-commerce and at the point of sale. Our classification is broadly inclusive of passthrough wallets that facilitate card transactions, stored value wallets and mobile money wallets and includes global brands such as **Alipay, Apple Pay, Google Pay, M-Pesa** and **PayPal** as well as local and regional wallets. In 2023, digital wallets accounted for and estimated 50% of e-com (\$3.1 trillion) and 30% (\$10.8 trillion) of POS transaction value.

PAYMENT TERMS

POS financing – Credit extended to consumers at the point of sale. This includes credit offered by retailers such as layaway financing, by financial institutions, and by third-party BNPL services such as **Klarna, Afterpay** and **Affirm**. POS financing accounted for approximately 1% of global POS transaction value in 2023, or nearly \$520 billion.

Post-pay – Consumers order products online and pay for them in full later at an affiliated physical store or ATM. Although post-pay services represent only 0.3% of e-com transaction value globally, post-pay accounts for approximately 4% of LATAM e-com transaction value. Post-pay also thrives in Japan, where payments are typically made at Konbini (convenience) stores.

Prepaid card – Cards issued by financial institutions that run scheme networks such as **Visa** and **Mastercard** that are funded in advance. Prepaid cards can be funded once or be reloaded, and they can be used to make purchases as easily as debit or credit cards. Our scope is inclusive of prepaid cards issued as payroll and as government benefits. In 2023, prepaid cards accounted for 1% of e-com (over \$64 billion) and approximately 2% of global POS transaction value (approximately \$906 billion). **Pre-pay** – Services that allow consumers to make e-commerce purchases without a card account and without providing personal data. Services such as Paysafecard and Neosurf offer flexible payments via vouchers redeemable at participating merchants. Pre-pay accounted for approximately 0.3% of global e-com transaction value in 2023.

Others – We continue to track other emerging and otherwise uncategorized e-com payment methods, like central bank digital currencies and direct carrier billing. In 2023, uncategorized payment methods combined to account for approximately 0.2% of global e-com spend.

METHODOLOGY

This ninth edition of The Global Payments Report (GPR 2024) offers a snapshot of today's consumer to business payments landscape: globally, by region and in 40 select markets that account for 88% of global GDP.

Global D24) ay'S ayments gion and Global The report documents consumer payment methods when shopping online and at the physical point of sale highlighted by our payment method share analysis for the past year, 2023. The data is complemented by a series of insights highlighting the most relevant themes in the world of payments.

> GPR 2024 provides our view of the market, based on internal expertise, our own research and third-party vendor data. GlobalData's 2023 Financial Services Consumer Survey provides the foundational consumer feedback and was conducted online in H1 2023 among 48,000 consumers in 40 markets.

The Worldpay Market Insights team develops the GPR based on GlobalData survey results which are further supplemented by Worldpay internal data, public data sources from central banks, NGOs, payment associations, company filings, news accounts and third party published reports. References to external sources are noted by a hyperlink to the original source. This data is processed through Worldpay's proprietary model & categorization scheme, and the resulting data is validated with industry experts inside and outside of Worldpay. Share of payment methods in a market are estimated using aforementioned data model. Additionally, Worldpay's model is based on total transaction value, not the number of transactions.

The Global Payments Report continues to evolve to reflect market changes, evolving standards and reader feedback. In this 2024 edition, we've supplemented our payment share analysis with projections for the evolution of each market through 2027 at the global, regional and individual market levels. Prior to this edition, we only published payment method forecast globally and by region. Payment method share forecasts consider historical growth trends, microeconomic conditions, regulatory environments, technological innovations, landscape of market actors and other factors.

E-commerce market size and forecast data is sourced primarily from GlobalData's E-Commerce Analytics database based on data retrieved in July 2023. 2022 figures were updated in line with new revisions by GlobalData; 2023 data cited in

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the report are therefore estimates for the year. GlobalData collected this information using consumer surveys, B2B surveys and desk research. Our e-commerce market size estimates include retail, food and drink, travel, gaming, gambling, and digital content streaming.

GlobalData's proprietary e-commerce market size growth model provides the foundation for our growth analysis. E-commerce market size growth estimates for Argentina, India, Indonesia, Peru, Spain, Taiwan, and Thailand are based on our own analysis that include blended estimates from local government statistical authorities, NGOs and third-party research firms. The Worldpay Market Insights team determines the final published market size estimates and projections.

2023-2027 POS market sizes were calculated using macroeconomic data from McKinsey & Company, which continuously maintains its payments database from over 200 global sources, including public data, consumer surveys and local research team inputs. Total POS market size through 2027 was forecasted based on available macroeconomic projections at the time of writing. All projections are subject to changes in world events, market dynamics and other forces over the period concerned (to 2027). Any indicative predictions based on the data we have used should be treated as such. We augmented several POS market size calculations with additional insights from government sources, third-party vendors and other publicly available datasets. We also revised our published 2022 market size estimates in line with more recently available data for Argentina, Australia, Brazil, Chile, China, Taiwan, Thailand, and the UAE. These changes have affected regional and global estimates for payment method share, most notably due to the weight of the revised China data.

All market size data relate to the industry, not from direct Worldpay business. POS market size estimates include retail, entertainment, hospitality, grocery, food and drink. All estimates analyze consumer to business payments in the specified verticals only. Bill payments, personto-person (P2P) and business-to-business (B2B) payments fall out of scope.

Card scheme figures were sourced from Euromonitor and GlobalData with further internal analysis, and these are representative of all consumerto-business payments including via e-commerce and at POS. Additional secondary sources for this report include data from local card, banking and payments associations; card scheme and payment provider published data; e-commerce industry reports and studies; news articles; and international organizations including The World Bank and International Monetary Fund.

Certain information set forth in this report contains forward-looking statements including projections as to possible scenarios for market sizes and the consumer to business payment method landscape. All projections are inherently speculative and subject to infinitely variable changes in market dynamics over the period concerned (to 2027). All estimates in this report are thus offered on an "as is" basis as our best faith estimates at the time of writing.



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Worldpay is an industry leading payments technology and solutions company with unique capabilities to power omni-commerce across the globe. Our processing solutions allow businesses of all sizes to take, make and manage payments in-person and online from anywhere in the world. Annually, we process over 50 billion transactions across 146 countries and 135 currencies. We help our customers become more efficient, more secure and more successful.

To learn more, visit <u>worldpay.com</u> or follow us on <u>LinkedIn, X</u>, and on <u>Facebook</u>.

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