



worldpay
from FIS

GP 2023

THE GLOBAL PAYMENTS REPORT

Payment insights that drive growth

8th edition

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The background features a dynamic, abstract composition of glowing light trails in shades of blue, cyan, and yellow, set against a dark, textured grid. The light trails appear to flow and curve across the frame, creating a sense of motion and digital connectivity.


PAYMENT INSIGHTS THAT DRIVE GROWTH

Today's consumers have high expectations – especially when it involves making purchases. They want customized payment journeys that keep their data safe, speed the checkout process and reward them for their loyalty. In short, consumers expect nothing less than payment perfection.

To stay competitive, any organization that accepts payments should start with understanding the payment methods that their customers prefer. But that's just one piece of a puzzle. Payment experiences take place in a diverse global tapestry that defies one-size-fits-all solutions. That makes the payment landscape in every market unique.

How do you decide what's relevant to your business?

**The Global Payments Report helps
make sense of payment complexity.**



As you explore this year's report, you'll get more than facts and figures; you'll get analysis on what each trend means for your business and for the payments industry.

With expert insights at global, regional and country levels, you'll come away with a better understanding of the technologies, methods and consumer behaviors that are reshaping the payments landscape across 40 markets spanning five regions.

And of course, the Global Payments Report also gives you a breakdown of payment methods used by consumers when checking out online and at the point of sale.

With the Global Payments Report at your side, you'll have the insights you need to understand the fast-changing payments landscape – and position your business for a future of growth.

EXECUTIVE SUMMARY

THE STATE OF PAYMENTS TODAY

In 2023, the Global Payments Report continues its core mission to detail the contours of consumer payment behavior at checkout both in-store and online, and to offer merchants and the broader payments industry key insights into what's happening today and how to prepare for tomorrow.

- 1 Account-to-account (A2A) payments are taking off, driven by real-time payment (RTP) rails.** RTP schemes increasingly enable A2A payments from persons to businesses (P2B). A2A is disrupting payment value chains with lower costs of payment acceptance versus cards. Global A2A transaction value surpassed \$525 billion in 2022 and is projected to grow at 13% CAGR through 2026.
- 2 Consumer use of credit cards remains strong, while sources of credit are diversifying.** Despite our forecast of modest share declines, global credit card transaction value continued to rise both in store and online. Credit card spend exceeded \$13 trillion across all channels in 2022. Consumers are increasingly paying via credit card-funded digital wallets, BNPL and POS financing offered by banks, fintechs and merchants.
- 3 Digital wallets extend their omnichannel dominance.** Wallets such as Alipay, PayPal and Apple Pay remain the leading payment method globally in e-com (49% share) and at POS (32% share), accounting for ~\$18 trillion in consumer spending. Wallets remain among the fastest growing payment methods with 15% CAGR at POS and 12% annual growth in e-com forecast through 2026.
- 4 No longer king, cash remains essential.** The decline of cash continues with -6% CAGR projected through 2026, as consumers gravitate to the ease, convenience and safety of digital payments. Yet a “cashless society” isn’t on the immediate horizon. Cash continues to play an essential role in most economies, accounting for over \$7.6 trillion in global consumer spending in 2022.
- 5 BNPL enters the next phase of its evolution.** Following years of unrestrained growth, buy now pay later (BNPL) is facing increasing headwinds. Regulatory scrutiny, interest rate pressure and intense competition are transforming the sector. Yet BNPL remains popular among consumers and represented 5% of 2022 global e-com spend. BNPL “2.0” is likely to see sustained growth amid market consolidation and mainstreamed regulation.
- 6 Cryptocurrencies are emerging as a viable person-to-business (P2B) payment option.** Cryptocurrencies experienced extreme market volatility in 2022, which served as a headwind against greater acceptance as a P2B payment method. Yet “fringe” still meant over \$11 billion in 2022 global transaction value. Consumers are eager to exchange crypto for goods and services, and intermediaries that convert crypto to fiat are making that possible.

GLOBAL PAYMENT INSIGHTS

Payment insights that drive growth

HOW GLOBAL CONSUMERS PAY TODAY

1 Account-to-account (A2A) is taking off, driven by real-time payments

- Nearly 70 real-time payment schemes are providing the high-speed payment rails that enable new A2A payment use cases
- A2A is disrupting payment value chains by winning over merchants with lower costs and immediate availability of funds

2 Consumer use of credit cards remains strong

- Credit's transaction value continues to increase, even as relative share decreases
- Use of credit is expanding via credit-backed wallets, buy now pay later (BNPL) and POS financing

3 Digital wallet growth continues to accelerate

- Already the leading payment method globally, digital wallets remain among the fastest growing
- Supercharged competition among wallet providers includes fintechs, banks, neobanks, super apps, Big Tech and device manufacturers

4 Cash's decline continues, though "cashless societies" aren't imminent

- The decline of cash continues as governments promote digital payments, and mobile payment acceptance becomes cheaper and easier
- Though projected to decline in use in all markets, cash continues to play an essential role in most economies

5 BNPL enters the next phase of its evolution

- BNPL continues to be popular among consumers, who can now choose from an increasingly diverse set of BNPL offerings
- Although BNPL faces headwinds, the forecast through 2026 is for sustainable growth

6 Cryptocurrencies are still in their infancy for person-to-business (P2B) payments

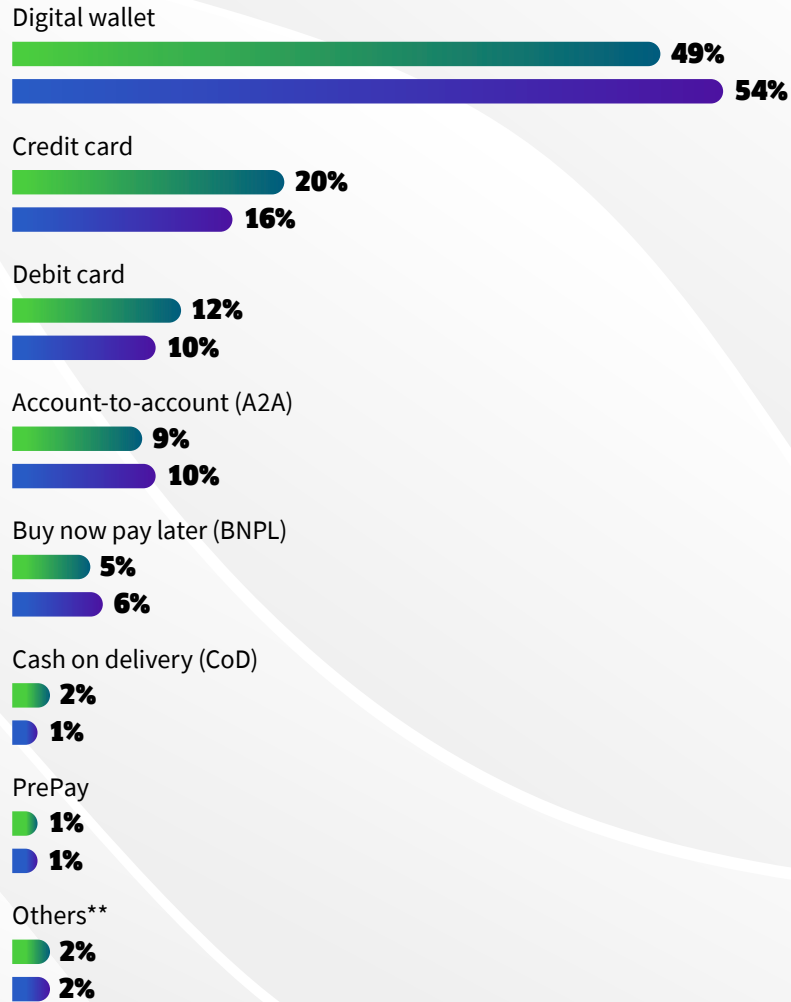
- Despite broad consumer awareness of cryptocurrencies as an investment vehicle, crypto remains a fringe P2B payment method
- Payment intermediaries that convert crypto to fiat are expanding opportunities for merchants to reach new customers

7 E-commerce growth remains robust in every global region

- The e-com growth rates of the pandemic's peak cooled slightly in 2022, but global e-com growth remains robust
- 37 of the 40 markets covered in GPR 2023 saw double-digit e-commerce growth in 2022

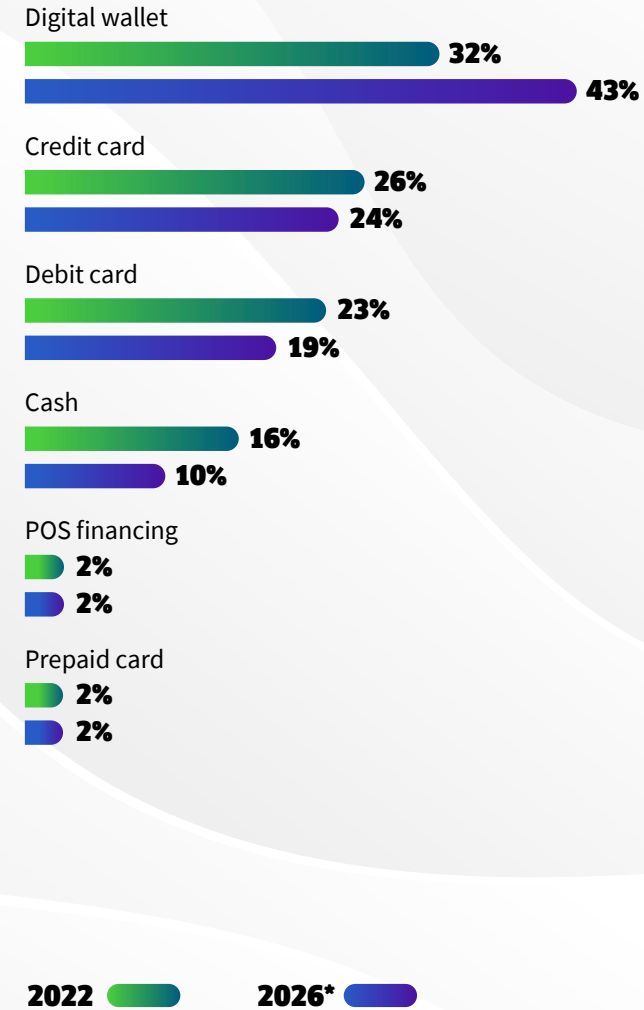
Global e-com payment methods

Share of transaction value, 2022-2026



Global POS payment methods

Share of transaction value, 2022-2026



*Forecast
 **“Others” include cryptocurrencies, prepaid cards and PostPay.
 Totals may not equal 100% due to rounding.

A2A IS TAKING OFF, DRIVEN BY REAL-TIME PAYMENTS

A2A is disrupting payment value chains by winning over merchants

While account-to-account (A2A) payments have long existed in some form, like ACH payments in the U.S., they're taking off today when executed over real-time payment (RTP) rails. In 2022, there were 64 live RTP schemes globally, four more than what we reported in 2021. That's driving A2A payment growth. Already accounting for nearly US\$525 billion in 2022 e-com transaction value, A2A e-com payments are projected to grow at 13% CAGR through 2026.



A2A payments are, as the name suggests, payments made directly from one account to another. A2A has long been popular for business-to-business (B2B) and person-to-person (P2P) use cases. Today, A2A is emerging as a force in person-to-business (P2B) payments. Merchants are drawn to A2A as they reduce the cost of payment acceptance versus cards while offering instant settlement of funds. Consumers are drawn to A2A payments by their safety, simplicity and speed. Some merchants are also offering customers discounts as an incentive to pay with A2A.

When transacted over RTP rails, A2A offers directness, immediacy and lower cost. The impact of A2A payments is amplified by their often dramatically lower cost to merchants, as transactions are not intermediated by major card networks and thus not subject to interchange fees. A2A payments therefore pose a significant threat to disrupt legacy payment value chains.



**In 2022, A2A payments
accounted for
\$525B
in global e-commerce
transaction value**

A2A payments are thriving in a variety of public, private and hybrid models

In Brazil, [Pix](#) is a central bank-led real-time payments scheme that has rapidly achieved tremendous success. Launched in November 2020, the popularity of Pix doubled A2A's share of e-com transaction value in Brazil in just one year between 2021 and 2022.

In Canada, [Interac Online](#) is an e-commerce payment service from Interac, a privately-run collaboration between major Canadian banks. Interac is also joining forces with Payments Canada as the exchange solution provider for Canada's forthcoming RTP system, [Real-Time Rail](#).

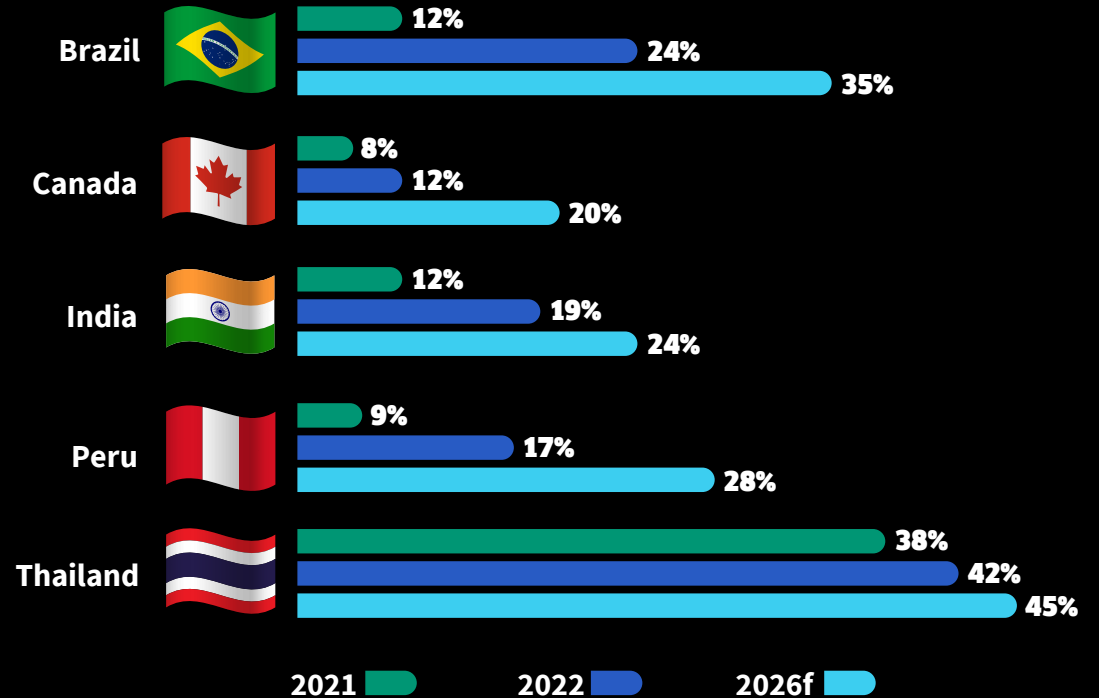
In India, [Unified Payments Interface \(UPI\)](#) was launched in 2016 by the National Payments Council of India and the Reserve Bank of India. UPI's dramatic success derives largely from its seamless interoperability with commercial wallets such as Google Pay, Paytm and PhonePe.

In Peru, [Yape](#) and [PLIN](#) are private bank-run systems that are driving the rise of A2A payments. Yape is run by Peru's largest bank, BCP, while PLIN is a joint service of BBVA, Interbank and Scotiabank.

In Thailand, [PromptPay](#) is a key component of Thailand's government initiative to transform the country's financial infrastructure, facilitating seamless digital payments online and at POS. The PromptPay system is a collaboration between Thailand's major banks and [Vocalink](#).

A2A PAYMENTS ARE TAKING OFF AROUND THE WORLD

A2A % of e-com transaction value, 2021-2026f



KEY TAKEAWAY:

For merchants, A2A payments reduce the cost of payment acceptance while improving cash flow with immediate availability of funds.

CONSUMER USE OF CREDIT CARDS REMAINS STRONG

Credit use is expanding via credit-backed wallets, BNPL and POS financing

Credit card transaction values grew 6% in e-com and 12% at POS YoY from 2021-2022, due largely to a resurgence in discretionary spending and global travel post-pandemic. Credit card transaction values are projected to grow at 4% CAGR through 2026 in both e-com and POS.





Credit demand is also broadening to alternate credit products: credit card-linked digital wallets, buy now pay later (BNPL) and other POS financing. BNPL accounted for 5% global of e-com transaction value in 2022, and it's projected to rise to 6% by 2026. POS financing – including BNPL, retailer financing and bank financing – represented 2% of POS transaction value in 2022, a share it is projected to maintain through 2026.

Digital wallets are the leading payment method globally in e-com and at POS, and credit cards are an important wallet funding mechanism. Globally, 22% of digital wallet users we surveyed typically use a credit card to fund their digital wallet purchases. Credit cards are consumers' third preference for funding wallets, behind bank accounts (34%) and debit cards (27%).

The result of these shifts is that – despite the fact that total credit card spend is rising – credit cards' share of global transaction value is projected to decline through 2026, by 2% at POS and 4% in e-com.



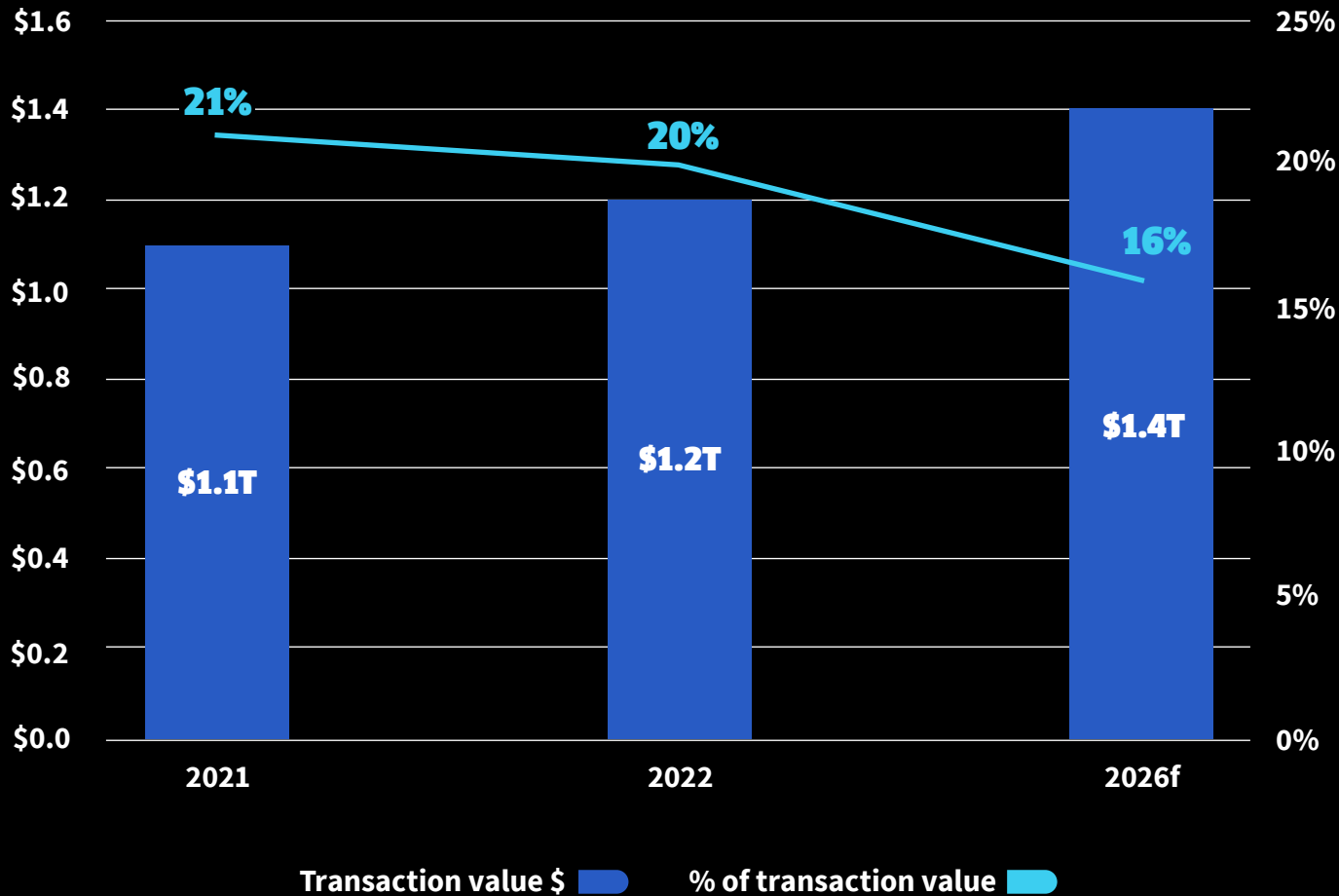
**Global credit card
transaction values
across e-com and
POS exceeded**

**\$13T in
2022**

CONSUMER DEMAND FOR CREDIT REMAINS STRONG GLOBALLY

Credit card transaction values continue to rise even as its share of e-com payment value declines

Global credit card e-com transaction value 2021-2026f, US\$ trillions (share %)



KEY TAKEAWAY:

In addition to direct credit card use, consumer preferences for credit at checkout are broadening to include card-funded digital wallets, BNPL and other POS financing options. Merchants should offer all these payment methods to satisfy consumer demand.

DIGITAL WALLET GROWTH CONTINUES TO ACCELERATE

Digital wallets are the leading payment method globally both in e-com and at POS

Already the market leader in payments globally, digital wallets are poised to continue to increase that leadership position through our forecast period. While APAC remains an outlier with the overwhelming majority of wallet share, digital wallets are now the leading e-com payment method in Europe (having taken the lead in 2021) and North America (where wallets passed credit cards for leading status in 2022).

A diverse and competitive global landscape

The competitive landscape for wallets is varied and dynamic. Local and regional providers lead in most markets. Providers range from fintechs, neobanks and banks to super apps, Big Tech and device manufacturers.

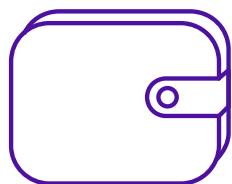
China has long been the global leader in digital wallet adoption, with [Alipay](#) and [WeChat Pay](#) as the main players. The prominent role of e-commerce marketplaces like [Alibaba](#) and [JD.com](#), the success of super app ecosystems and the rapid adoption of QR codes at POS have all contributed to the dominance of wallets in China.

North America's credit and debit card markets are increasingly intermediated by a handful of major digital wallet brands. These initially consisted of [PayPal](#), [Google Pay](#) and [Apple Pay](#), but challengers such as [Shop Pay](#) (Shopify's checkout solution) and [Cash App Pay](#) (recently becoming an open loop wallet) have joined the playing field.

Based on our survey, [PayPal](#) is the leading wallet in Belgium, France, Germany, Italy, Spain and the U.K., with significant share in most other European markets. Other international brands – such as [Apple Pay](#), [Google Wallet](#) and [Amazon Pay](#) – are also popular in Europe, as are many local payment apps, including [MobilePay](#) in Denmark, [Vipps](#) in Norway, [BANCOMAT Pay](#) in Italy and [Lydia](#) in France.

LATAM has seen [Mercado Pago](#) (the payment arm of LATAM's largest e-commerce marketplace, [Mercado Libre](#)) revolutionize digital payments across most of the region. However, local digital wallets are emerging among the leaders in their respective markets. These include [MACH Pay](#) in Chile, [PicPay](#) in Brazil, and [Nequi](#) and [RappiPay](#) in Colombia.

[MTN MoMo](#) – from [MTN](#), a leading mobile network operator across MEA – is poised for significant future growth in South Africa as banks remove ticket size limits on mobile payments and provide consumer incentives at partner merchants.



Digital wallets are projected to grow at 15% CAGR at POS from 2022-26



KEY TAKEAWAY:

As the leading payment method globally both in e-com and at POS, digital wallet acceptance is mandatory for merchants in all consumer-facing verticals.

CASH'S GLOBAL DECLINE CONTINUES

However, “cashless societies” aren't imminent

Three trends are driving cash's slide downwards. First, governments in emerging economies continue to promote financial inclusion via access to digital payments. Second, the shift in consumer habits towards digital payments, which accelerated during the first year of the COVID-19 pandemic, has solidified. Third, it's becoming cheaper and easier for merchants to accept mobile payments via QR codes.



However, cash is still relevant – if not mandatory – for POS merchants in most markets. The rate of decline that accelerated during the peak of the pandemic has leveled off. While its share of total transaction value is projected to decline in all markets we cover through 2026, cash continues to play an essential role in most economies.

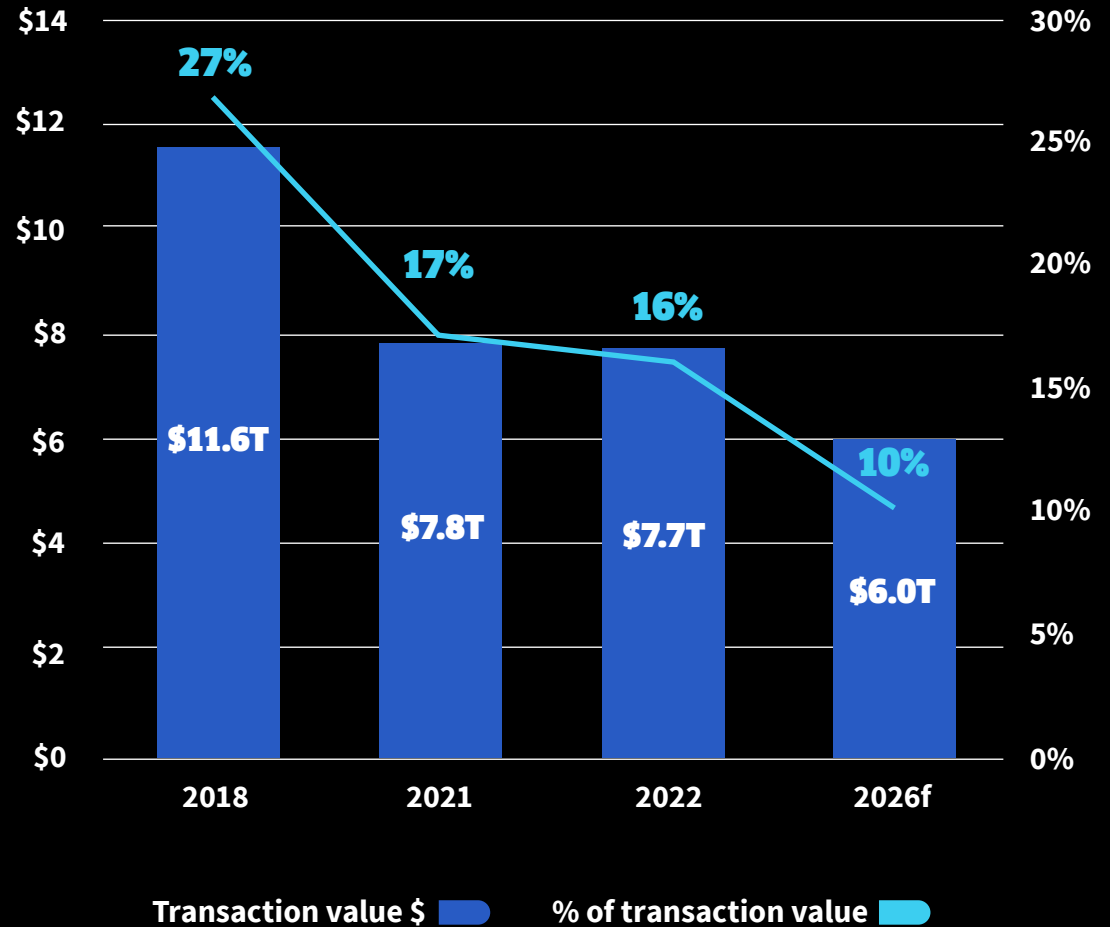


By 2026, cash's share of global POS transaction value is expected to fall to

less than 10%

CASH'S GLOBAL DECLINE CONTINUES

Global cash transaction value 2018-2026f, US\$ trillions (share %)



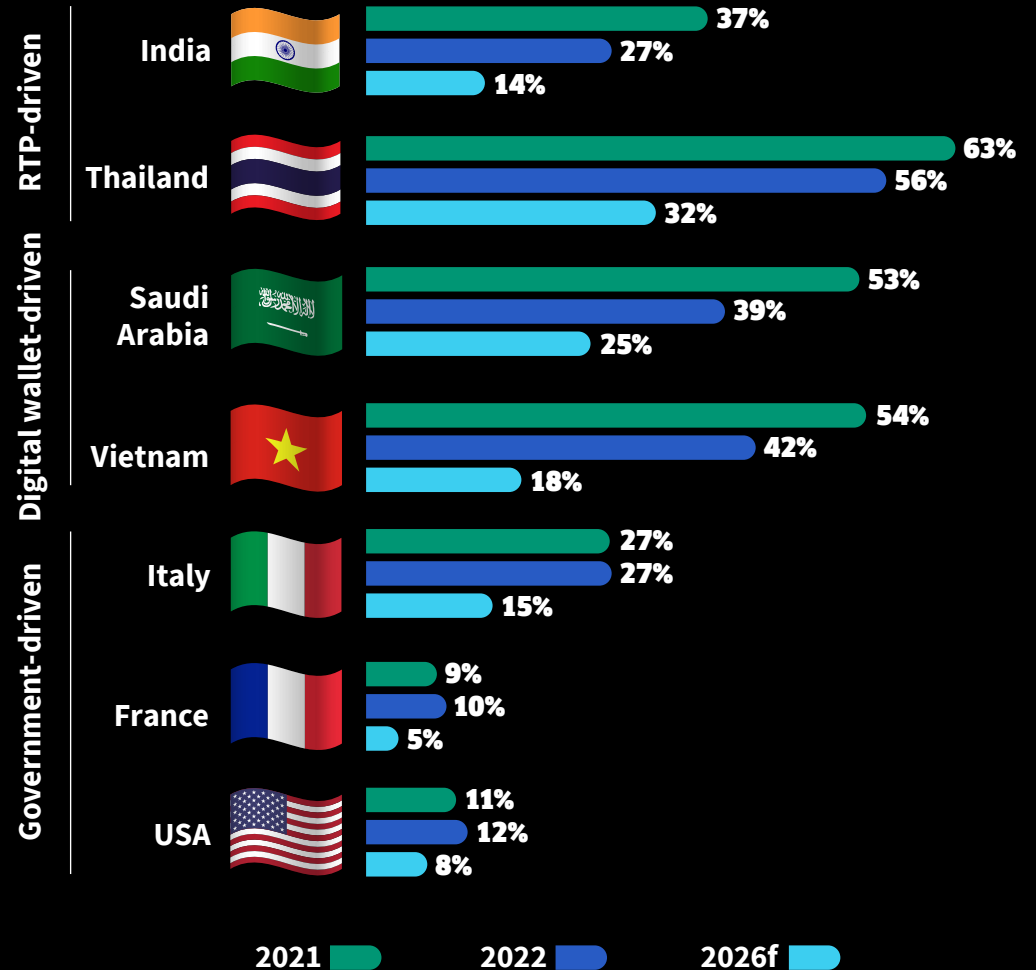
The rate and reasons for cash's decline vary by country, and the paths are not always linear. For example, in India and Thailand, the growth of A2A real-time payments is the primary driver for cash's decline. However, the rapid growth of digital wallets is the main factor for declining rates of cash use in Saudi Arabia ([Apple Pay](#) and [STC Pay](#)) and Vietnam ([MoMo](#), [ZaloPay](#) and [VNPAY](#)).

Some governments are actively promoting a move away from cash (Thailand, India, Brazil), while others are introducing new legislation to slow down the rapid decline in cash use, worried about the impact it will have on certain socio-demographics like the elderly and the unbanked. The French government recently [restricted ATM usage](#) during peak hours to curb illegal market activities and tax evasion. In contrast, the proposed [U.S. Payment Choice Act](#) aims to ensure the inclusion of low-income and unbanked consumers by mandating that retailers accept cash. Italy's government, led by Giorgia Meloni, is [pushing for legislation](#) that would raise the legal limit for cash transactions from €1000 to €5000.

CASH'S DECLINE TAKES DIFFERENT ROADS

Real-time payments, digital wallet adoption and government policies influence cash's path

Cash share of POS transaction value, 2021-2026f



KEY TAKEAWAY:

Rather than look to a future “cashless society,” it’s more likely that physical cash will gradually give way to central bank digital currencies (CBDCs).

BNPL ENTERS THE NEXT PHASE OF ITS EVOLUTION

Consumer interest in alternative credit remains high as BNPL enters “2.0” phase

The buy now pay later (BNPL) model featured prominently in the news in 2022. Several BNPL providers saw dramatic reductions in company valuations. The core BNPL fundamental of offering consumers interest-free credit is being challenged by rising inflation and interest rates. Regulators in prominent markets are introducing rules to address concerns around customer well-being to bring BNPL more firmly in line with legacy consumer credit products.



Despite these headwinds, BNPL continues to demonstrate strength. Consumers remain interested in alternative credit, especially in challenging economic times. Total BNPL transaction values continue to rise, as does its relative share. Following a dramatic growth phase from 2018-2021, the BNPL market trajectory has turned to one of sustainable growth as it enters the mainstream of credit regulation. Our view of this new “BNPL 2.0” era is characterized by:

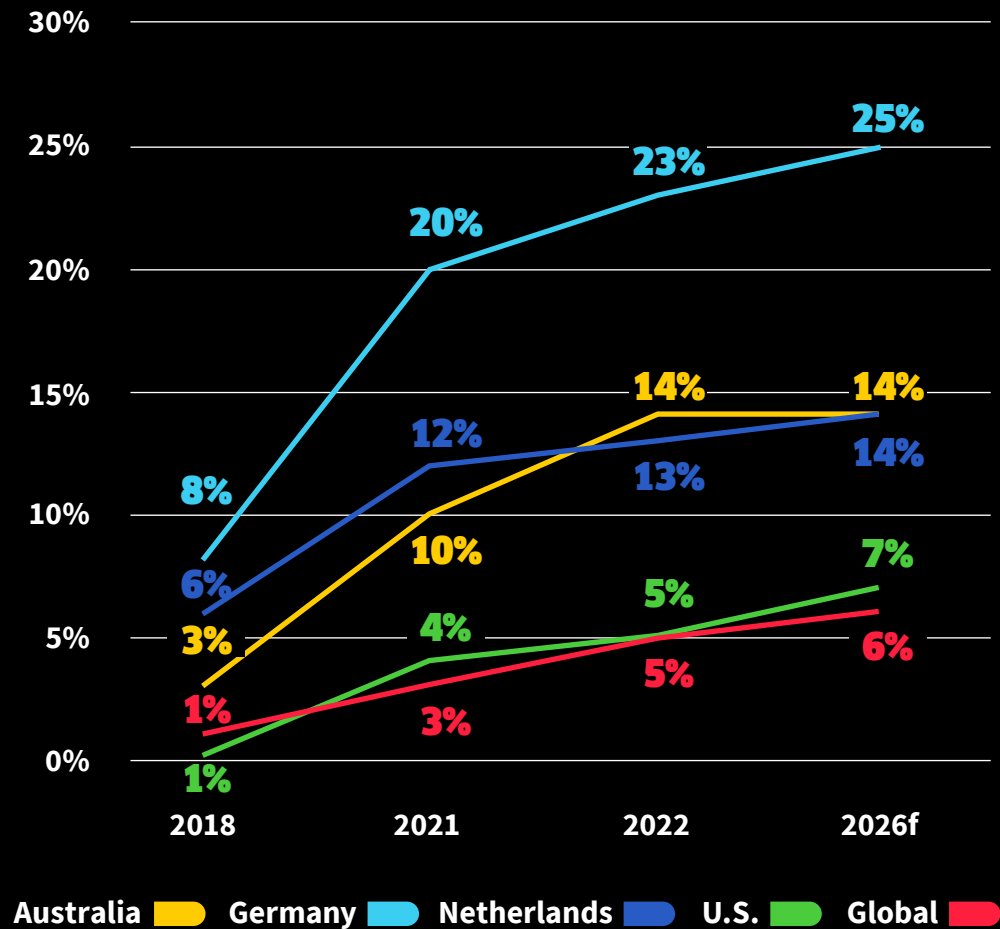
- A new class of BNPL providers that expands beyond fintechs to include merchants, Big Techs, banks, card networks and super apps
- New regulations that bring BNPL more in line with legacy consumer credit products
- A more diverse range of repayment terms, going beyond “pay in 4” or “pay in 6” to include longer terms of up to 12 months, as well as revolving accounts
- Increasing transparency of interest and fees for late payments
- BNPL being offered in a broader range of verticals (including vertical-specific BNPL providers) and for goods and services at a wider variety of price points

BNPL’s global e-commerce transaction value is projected to grow at 16% CAGR from 2022-2026

BNPL “2.0” SHIFTS TO SUSTAINED GROWTH

Following dramatic e-com growth 2018-21, BNPL is projected to solidify share from 2022-26

BNPL % e-com transaction value 2018-2026f, select markets



More than 200 global providers now offer installment loans at checkout. Given the proliferation of providers, the entry of large, well-funded players and a cycle of lower valuations for fintechs, consolidation may also emerge as a distinctive feature of BNPL 2.0.

A DIVERSE, CROWDED FIELD OF BNPL PROVIDERS

Big techs, banks, card networks and super apps have joined fintechs in the race for BNPL market share

Fintech + big tech

afterpay

ZIP

affirm

Apple Pay Later

PayPal
Pay in 4

Klarna

Banks + card networks

citibank

CHASE

nab

zinja

VISA

mastercard

Super apps

蚂蚁花呗
ANT CHECK LATER

Paytm
POSTPAID

gopaylater

微信支付
WeChat Pay

GrabPay

mercado
libre



KEY TAKEAWAY:

Consumer demand for BNPL remains strong. BNPL is expected to remain an important element of the payment mix in a broad range of merchant verticals.

CRYPTOCURRENCIES ARE STILL IN THEIR INFANCY FOR P2B PAYMENTS

Cryptocurrencies are being used for consumer purchases, but only on a limited scale

Consumer interest in cryptocurrencies as an investment vehicle hasn't fully translated yet into the use of crypto as a mainstream payment method. In our survey, 77% of respondents said they buy cryptocurrencies for investment, while only 18% indicated that they purchase crypto to pay for goods and services.





Further, our analysis finds that crypto was used for the equivalent of \$11.6 billion at e-commerce merchants in 2022, which represents 0.19% of global e-commerce transaction value. The figure includes direct payments made through cryptocurrency wallets as well as transactions via crypto-backed debit and credit cards.

The growth to date of cryptocurrency as a person-to-business (P2B) payment method has been largely overshadowed by crypto's market price volatility. This volatility was compounded in November 2022 [by the collapse of FTX](#), the world's second largest global crypto exchange at the time. This event raised concerns among consumers around keeping crypto in a custodial wallet held by a third party, as opposed to non-custodial crypto wallets held by individuals.

Despite these headwinds, more merchants are discovering the benefits of accepting cryptocurrencies as payment for goods and services: the ability to reach a new customer base, higher average transaction values, faster settlement times and lower transaction fees. For these reasons, our current forecast for cryptocurrencies as a P2B payment method is to rise from \$11.6 billion in e-com spend in 2022 to approximately \$39 billion by 2026, or slightly less than 0.5% of global e-com transaction value.

**In 2022,
cryptocurrencies accounted for
less than 0.2%
of global e-com transaction value**

Crypto use cases for P2B payments

The first use case is crypto payment gateways such as [BitPay](#), [Coinbase Commerce](#) or [CoinPayments](#). Consumers hold cryptocurrencies in these wallets, which the gateways (or their payment processors) convert into local fiat currencies for merchants that have signed on to accept them.

The second primary use case is the emergence of crypto-backed debit and credit cards. These payments take place via legacy card network rails such as Visa and Mastercard. Merchants get paid in local fiat currency, while the card providers enable crypto owners to pay via cryptocurrency. In many cases consumers are drawn to these cards by attractive rewards paid out as crypto.



KEY TAKEAWAY:

Although the use of cryptocurrencies as a P2B payment method is still relatively small, the emergence of crypto payment gateways and crypto-backed cards has given consumers the ability to use their crypto assets to buy goods and services.



GLOBAL E-COMMERCE GROWTH REMAINS ROBUST

The forecast remains bullish, despite reduced growth rates versus early in the pandemic

The explosive growth in global e-commerce that took place during the first two years of the pandemic cooled in 2022, but only slightly. Global e-commerce transaction value grew by a healthy 10% YoY from 2021-2022. With 9% CAGR forecast from 2022-2026, we project global e-commerce transaction value will rise from roughly \$6 trillion in 2022 to over \$8.5 trillion in 2026.



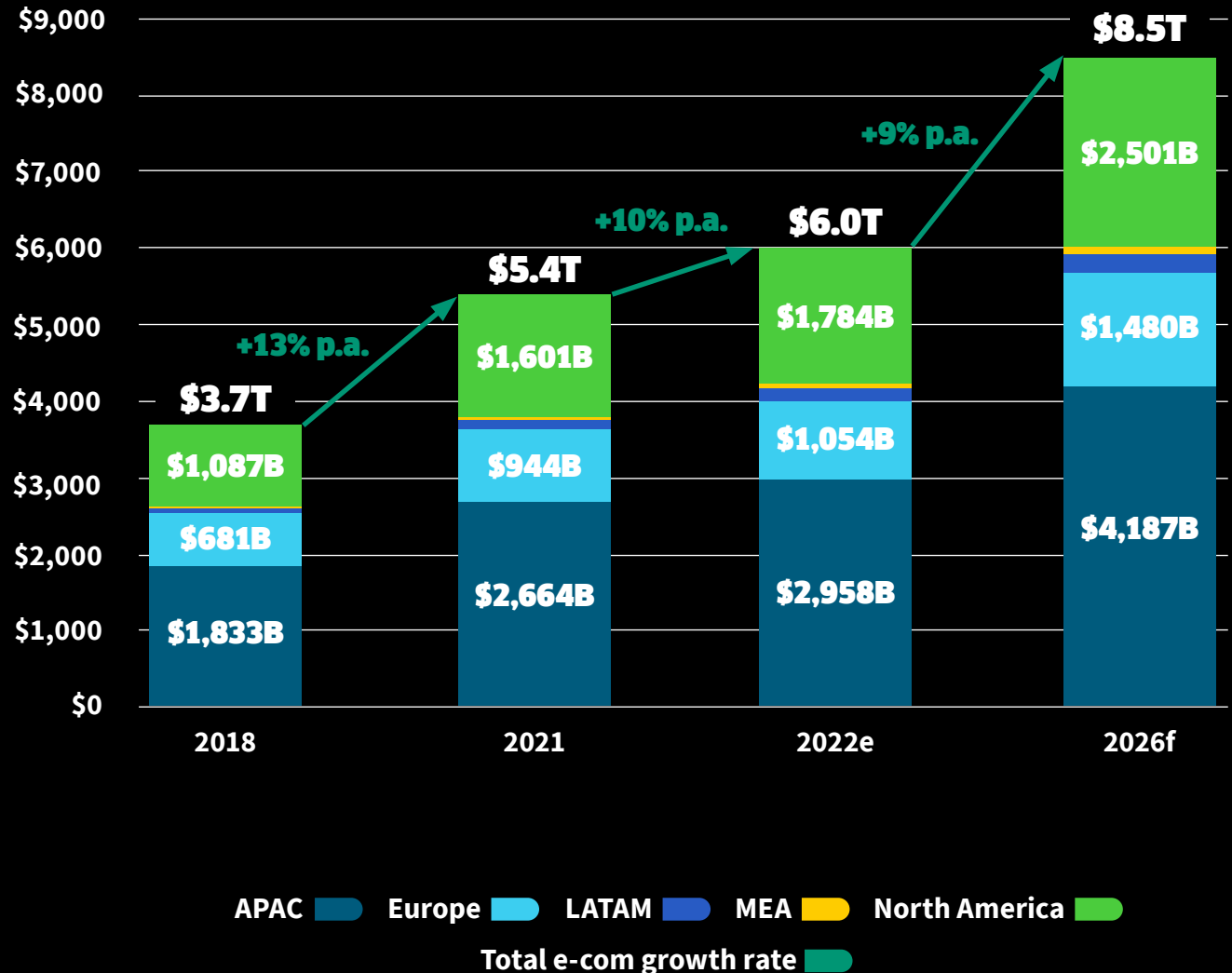
All regions except Europe saw double-digit growth from 2021-2022, with a high of 21% in MEA. Moreover, 37 of the 40 markets covered in GPR 2023 saw double-digit YoY growth from 2021-22. LATAM, MEA and Southeast Asia (except for Thailand at 9%) remain high-growth markets, with CAGRs in the mid-teens projected through 2026.



Global e-commerce is projected to grow at 9% CAGR from 2022-2026

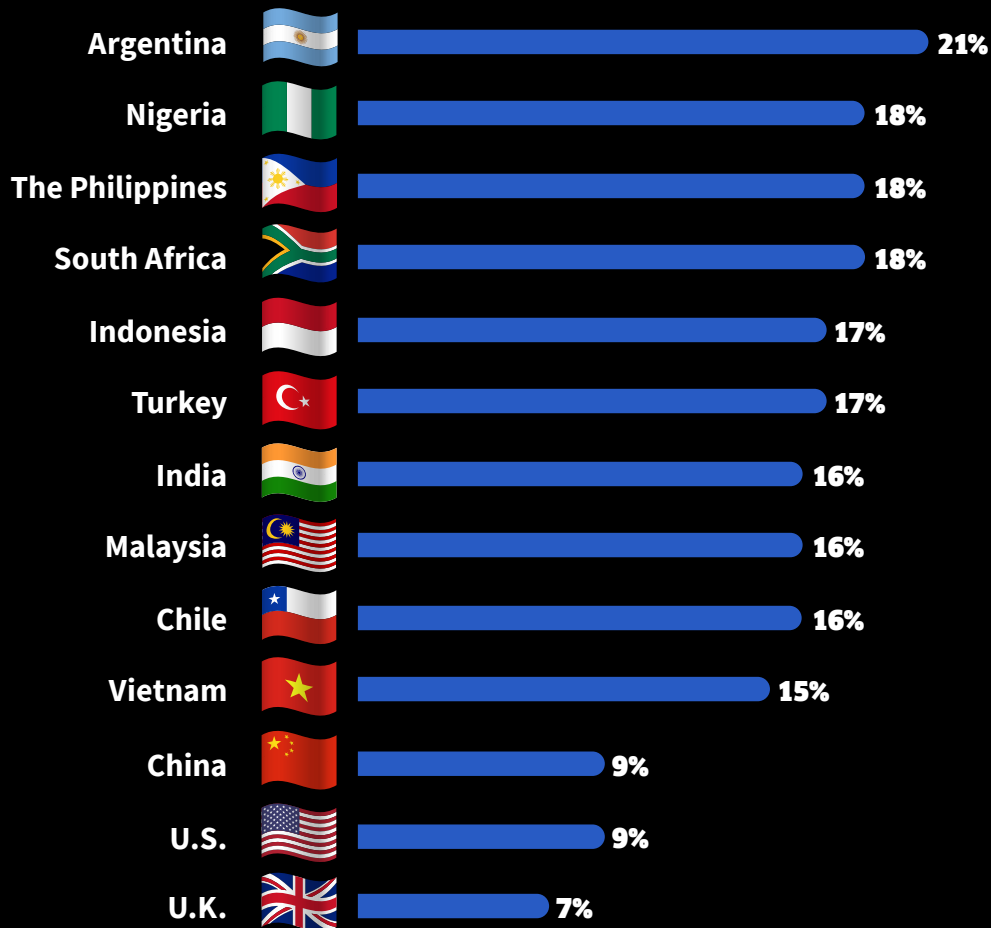
GLOBAL E-COM PROJECTED TO GROW TO \$8.5T BY 2026

Global e-commerce transaction value 2018-2026f, US\$ billions



NOTABLE E-COM GROWTH MARKETS

Projected CAGR % 2022-2026



KEY TAKEAWAY:

Global e-commerce continues to grow in all regions with robust double-digit growth projected in emerging markets, presenting attractive cross-border e-commerce opportunities.

ASIA-PACIFIC PAYMENT INSIGHTS

Payment insights that drive growth

HOW APAC CONSUMERS PAY TODAY

GPR 2023's coverage of APAC features fourteen markets: [Australia](#), [China](#), [Hong Kong](#), [India](#), [Indonesia](#), [Japan](#), [Malaysia](#), [New Zealand](#), [The Philippines](#), [Singapore](#), [South Korea](#), [Taiwan](#), [Thailand](#) and [Vietnam](#).

1 Following China's lead, digital wallets are growing fast across APAC

- The rest of APAC is catching up to China's lead in digital wallet adoption

2 Emerging economies lead regional e-com growth

- India and Southeast Asia will see APAC's strongest e-commerce growth through 2026

3 Buy now pay later sees big gains in e-commerce

- BNPL accounted for over \$100 billion of APAC's e-commerce transaction value in 2022

4 Cash continues to decline rapidly at POS

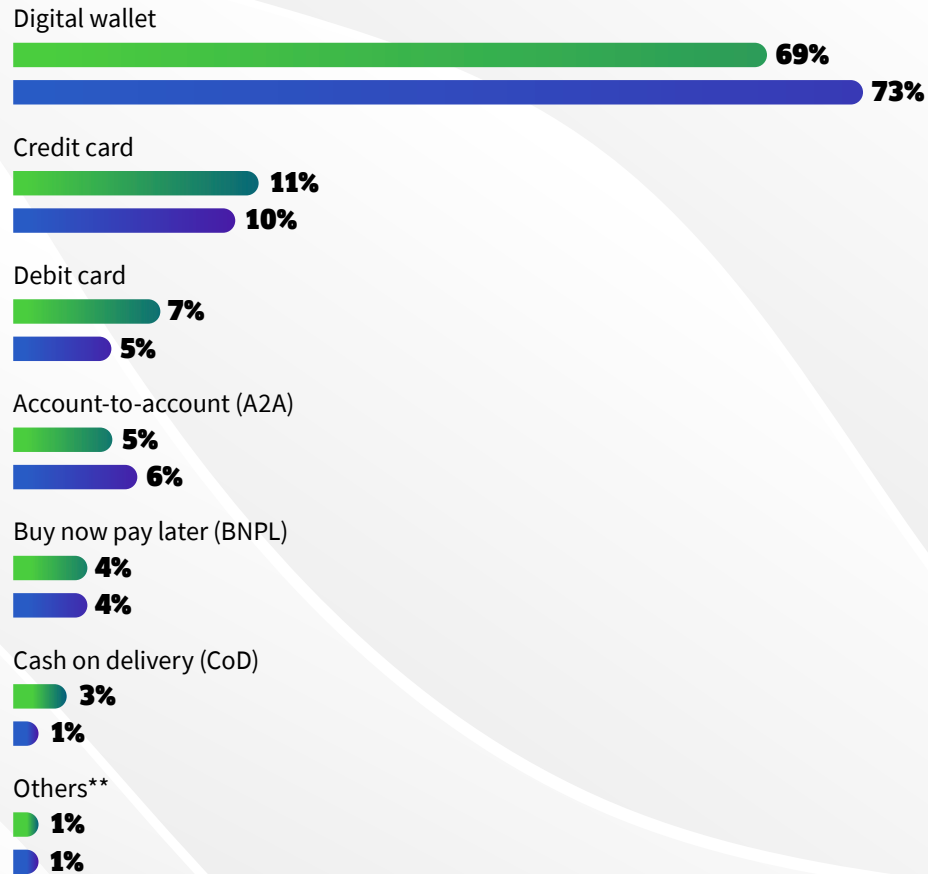
- The decline of cash has accelerated due in large part to the proliferation of QR codes

5 Real-time payments are driving adoption of A2A

- APAC is a global leader in RTP, fueling account-to-account (A2A) payments and cross-border commerce
- India's UPI is emerging as a global leader in real-time payments

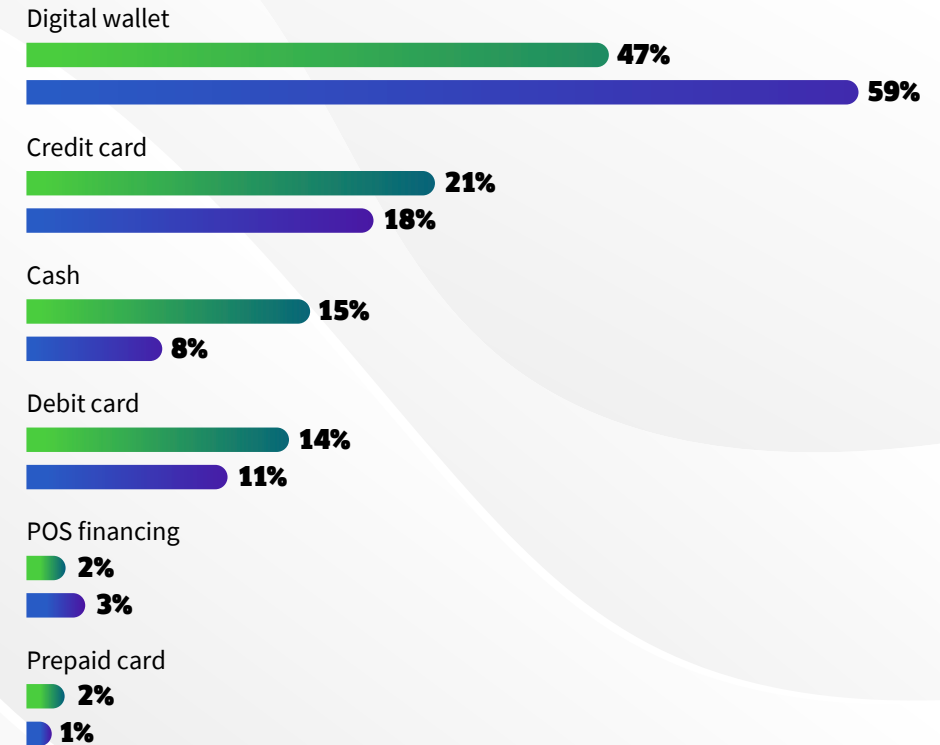
APAC e-com payment methods

Share of transaction value, 2022-2026



APAC POS payment methods

Share of transaction value, 2022-2026



2022 2026*

*Forecast

**"Others" include cryptocurrencies, prepaid cards, PrePay and PostPay.

Totals may not equal 100% due to rounding.

FOLLOWING CHINA'S LEAD, DIGITAL WALLETS ARE GROWING FAST ACROSS APAC

Until recently, most of the world lagged in digital wallet adoption compared to global leader China, where wallets accounted for 81% of e-com spend and 56% of POS spend in 2022. Now the rest of APAC is quickly catching up.





Digital wallets in APAC (excluding China) more than doubled their share of e-commerce transaction value in the last five years, and they're projected to grow steadily over the next three years. Similarly, digital wallets' share of payment transaction value at POS grew sixfold in the last five years. Going forward, digital wallets' growth will be even more dramatic. Overall, from just 3% in 2018, we project their share of APAC (outside China) transaction value at POS will reach 34% by 2026.

Global wallet leaders such as [Alipay](#), [WeChat Pay](#), [Paytm](#), [Apple Pay](#) and [PayPal](#) are active throughout APAC. Yet local wallets are market leaders in several APAC countries. These include [GrabPay](#) in Singapore, [MoMo](#) in Vietnam, [GoPay](#) in Indonesia and [GCash](#) in the Philippines.



Digital wallets are the leading e-com payment method in

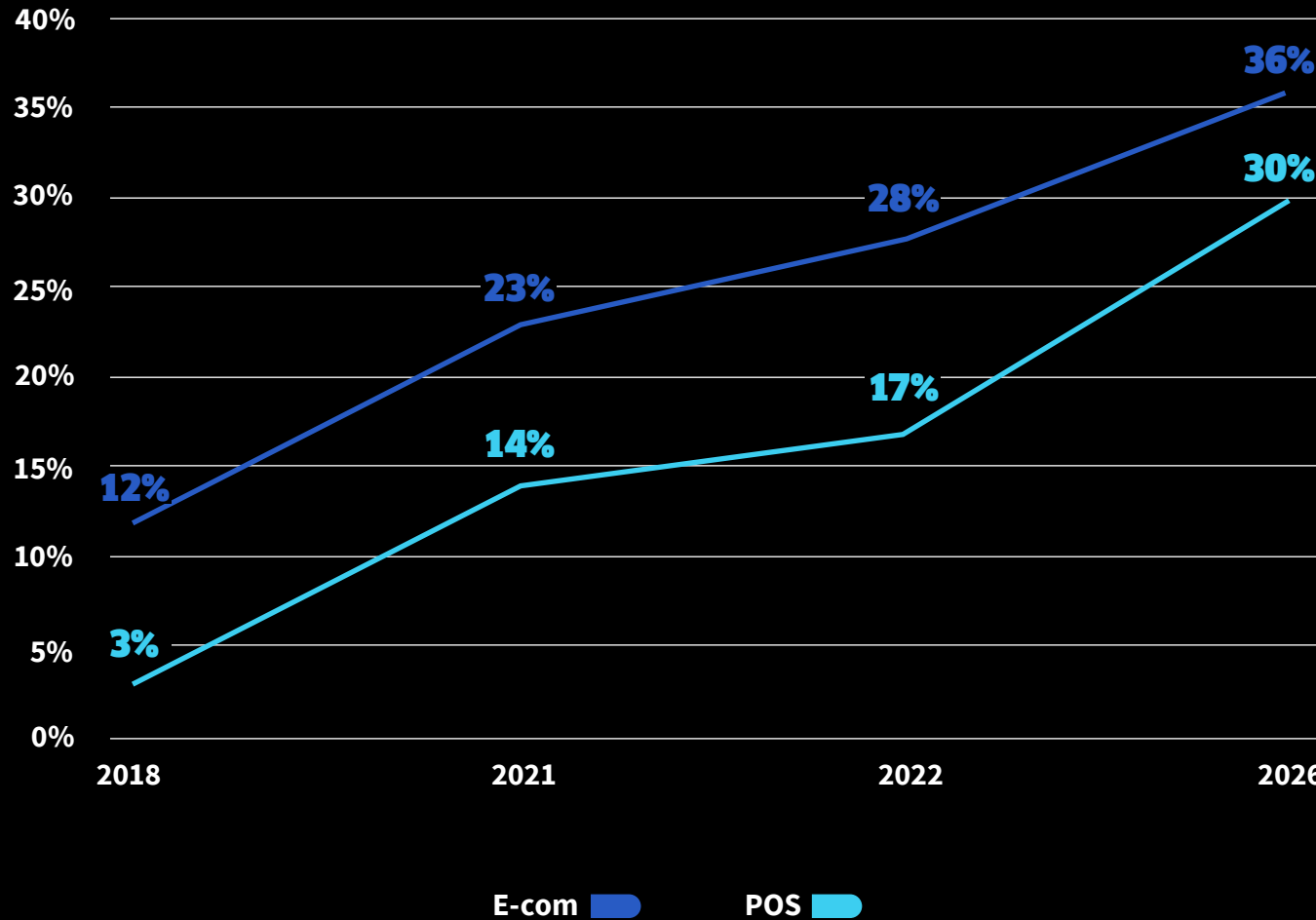
5 of the 14

APAC markets covered in GPR 2023: China, India, Indonesia, the Philippines and Vietnam.

DIGITAL WALLETS ARE GROWING FAST ACROSS APAC

Until recently lagging in wallet adoption to China, the rest of APAC is catching up fast

APAC digital wallet share of transaction value, excluding China, 2018-2026f

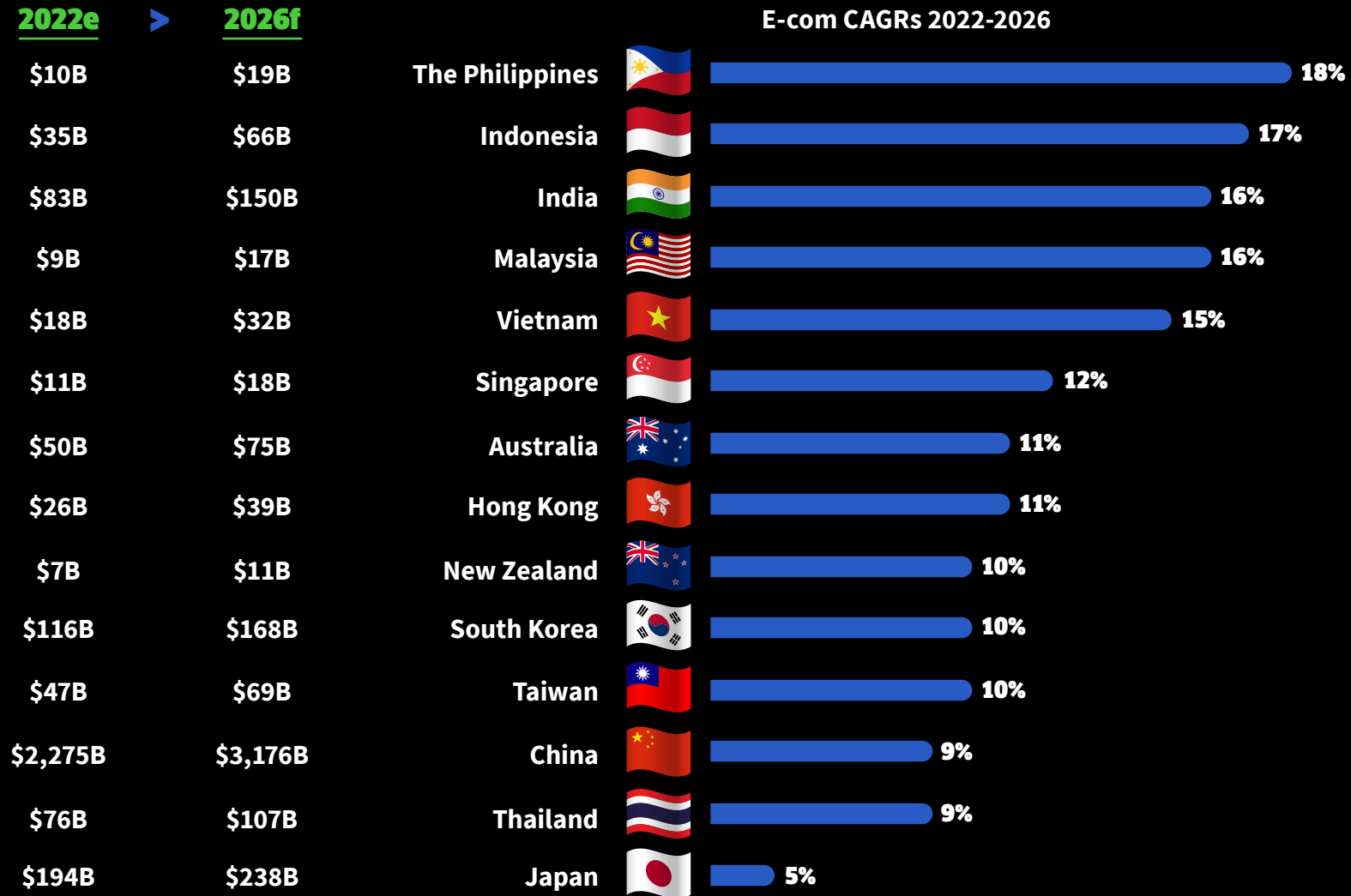


EMERGING ECONOMIES LEAD REGIONAL E-COM GROWTH

The emerging economies of India and Southeast Asia will see APAC's strongest e-commerce growth through 2026.

EMERGING ECONOMIES LEAD REGIONAL E-COM GROWTH

The Philippines, Indonesia, India, Malaysia and Vietnam are projected to lead e-commerce growth in APAC through 2026



e = estimate, f = forecast

BUY NOW PAY LATER SEES BIG GAINS IN E-COMMERCE

Like their peers in other regions, APAC consumers are eager to use alternative forms of credit. Comparatively low credit card penetration and high percentages of unbanked consumers in APAC create an ideal environment for BNPL providers, many of which leverage consumer data from their parent platforms to make more informed credit decisions.



Buy now pay later (BNPL) saw huge gains in China in 2022 from offerings that are embedded in the largest e-commerce platforms and super apps. Market leaders Ant Check Later (from [Ant Group](#), an affiliate of [Alibaba](#)), Baitiao (from [JD Finance](#) for use on [JD Mall](#), one of China's largest e-commerce platforms), and Fen Fu (the installment payment function of [WeChat Pay](#) by [Tencent](#)) helped BNPL to account for 4% of China's e-commerce transaction value in 2022.

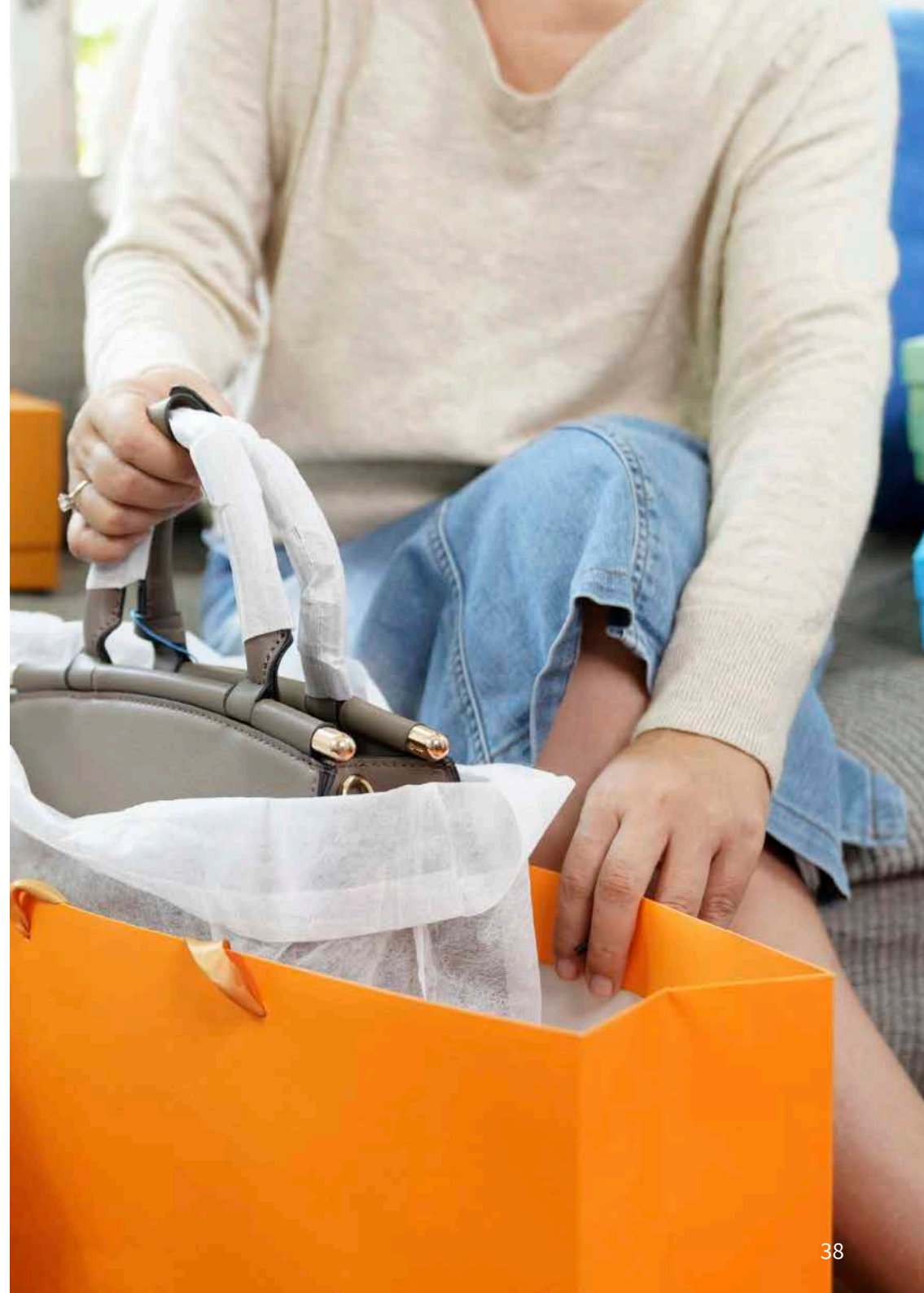
Australia leads the way

Australia was an early innovator in BNPL, propelling companies like [Afterpay](#) and [Zip](#) to positions of global leadership in the sector. The popularity of BNPL in Australia has in turn drawn other global leaders, including [PayPal](#) and [Klarna](#), into the Australian market.

Now Australia's BNPL market is diversifying into vertical-specific services such as [legal services](#), [restaurants](#), [solar installations](#) and even [tattoos](#).



**In 2022, BNPL accounted for
over \$100B
of APAC's e-commerce
transaction value**



CASH CONTINUES TO DECLINE RAPIDLY AT POS

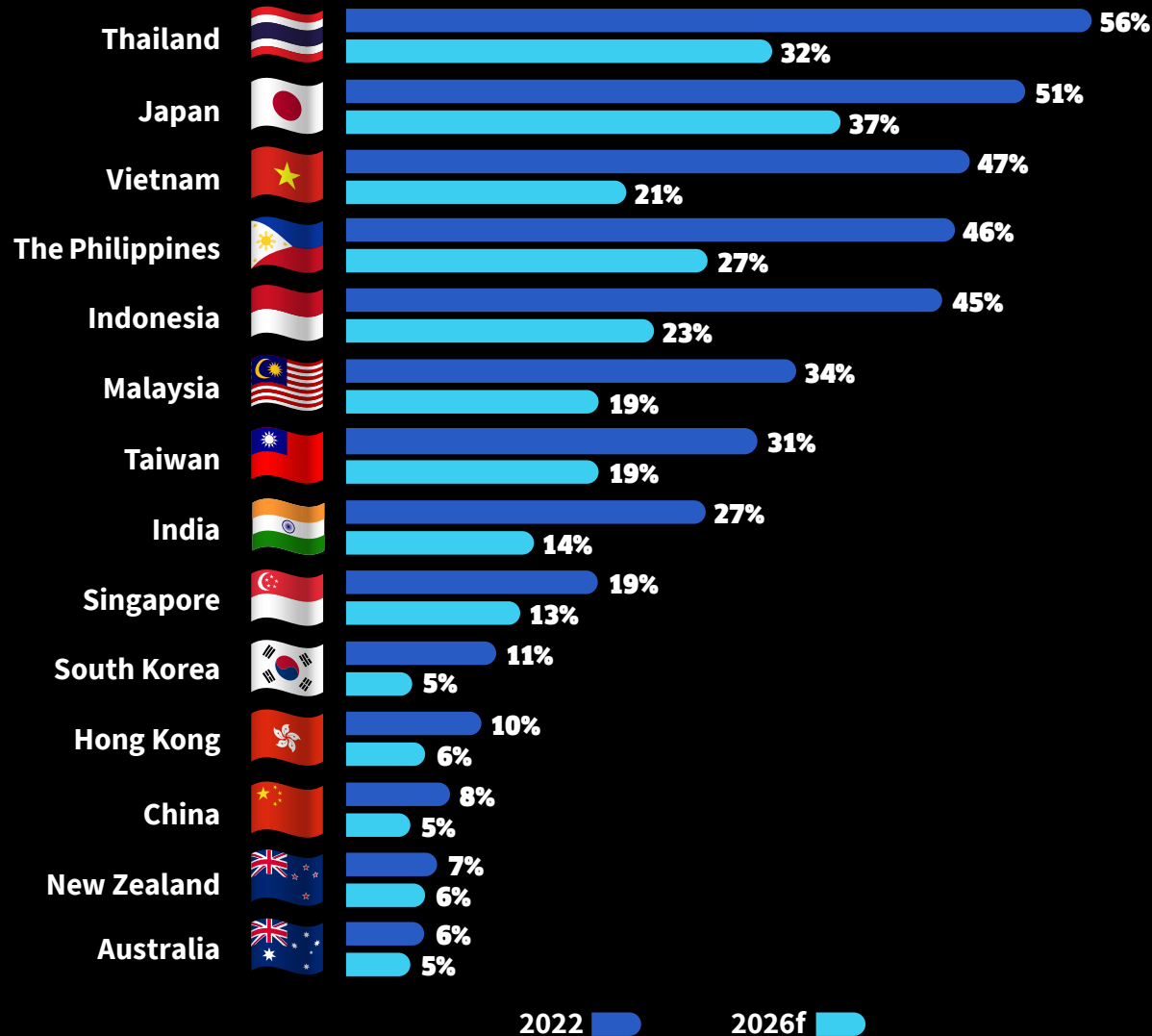
Cash use in APAC is projected to fall by half between 2021 and 2026 – from 16% to 8% of POS transaction value – accelerated by the proliferation of mobile payments and the use of QR codes. Many mature consumer economies – including South Korea, Hong Kong, China, New Zealand and Australia – will see cash fall below 10% of POS transaction value by 2026.



CASH USE CONTINUES TO DECLINE AT POS

Despite the declining across the region, cash remains essential in many APAC markets

Cash share % of POS transaction value, 2022-2026f

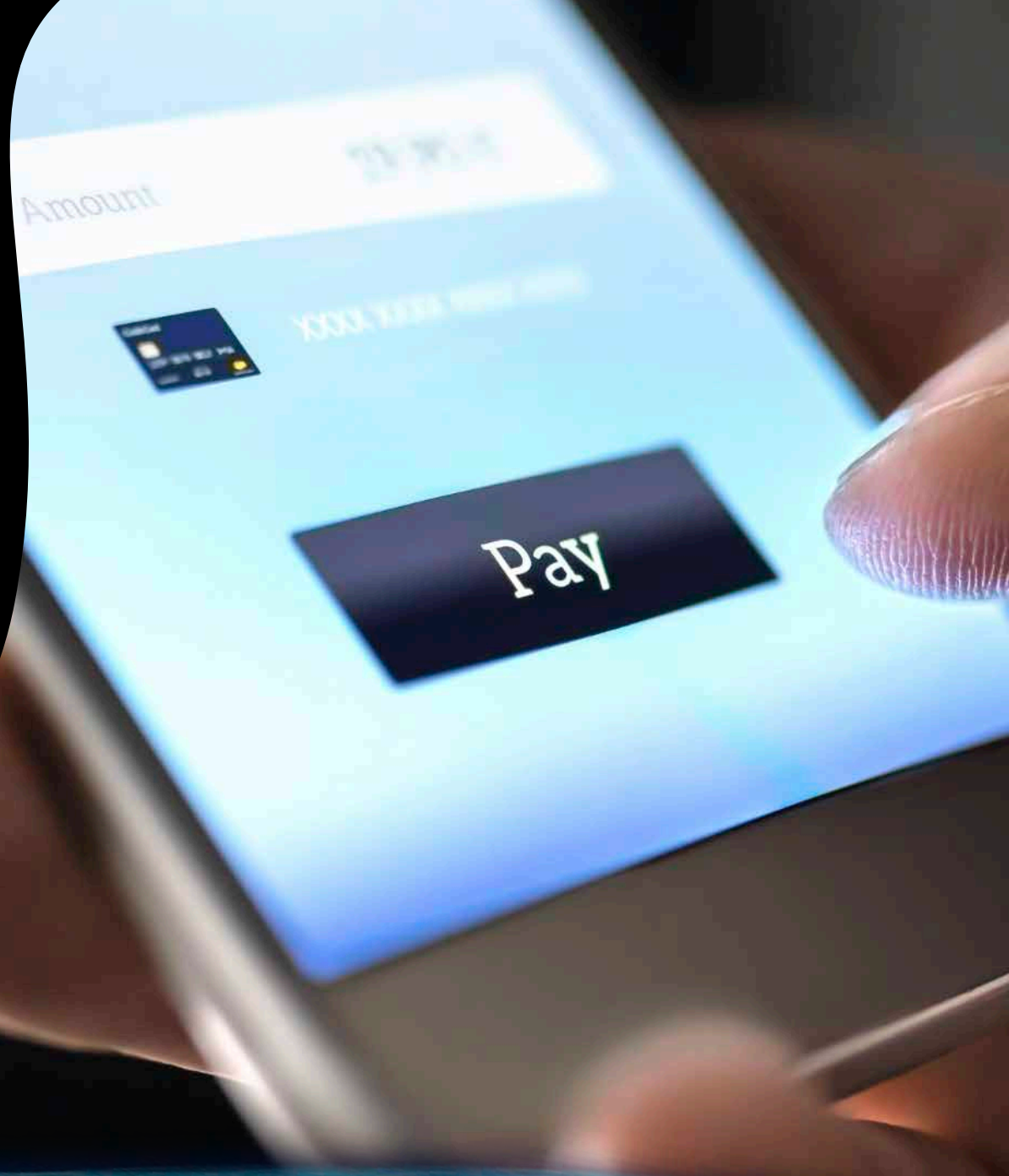


While cash is projected to decline in every market we cover, there are vast differences in cash use in individual countries, ranging from the regional high of 56% of 2022 POS transaction value in Thailand to the regional low of 6% in Australia.



REAL-TIME PAYMENTS ARE DRIVING ADOPTION OF A2A

APAC is a global leader in real-time payments – not just in the proliferation of RTP schemes but also in cooperation among the central banks that developed them.

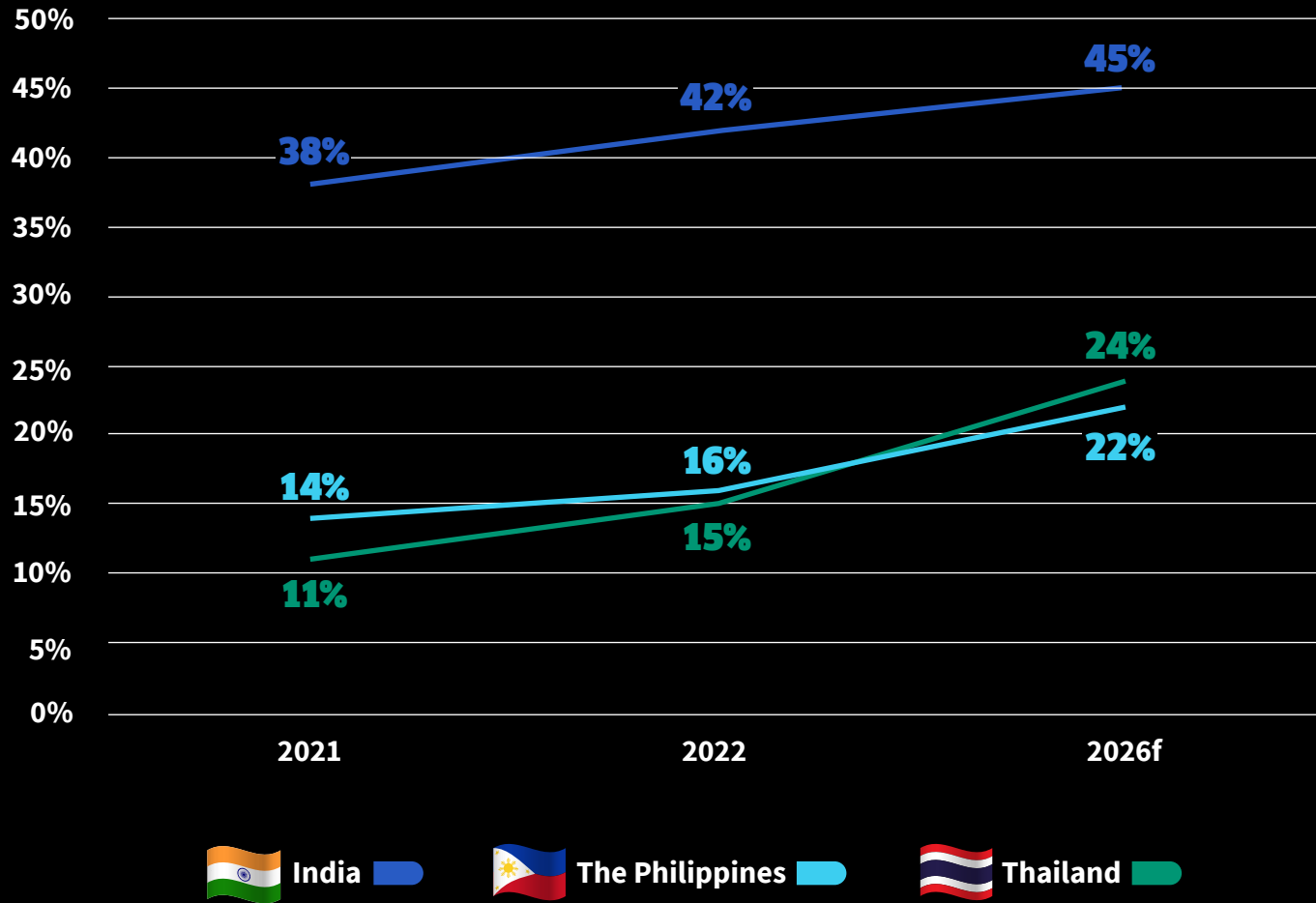


APAC's real-time payment schemes are increasingly interlinked:

- India's United Payments Interface ([UPI](#)) is linked with Singapore's [PayNow](#) system
- Malaysia's [DuitNow](#) is linked with Singapore's PayNow
- Singapore's PayNow is linked with [PromptPay](#) in Thailand
- Indonesia, Malaysia and Thailand linked their QR code payment systems

THE RISE OF RTP IS FUELING A2A PAYMENTS AND CROSS-BORDER COMMERCE ACROSS APAC

A2A share of e-com transaction value, 2021-2026f



RTP CASE STUDY: INDIA'S UPI IS EMERGING AS A GLOBAL PAYMENT POWERHOUSE



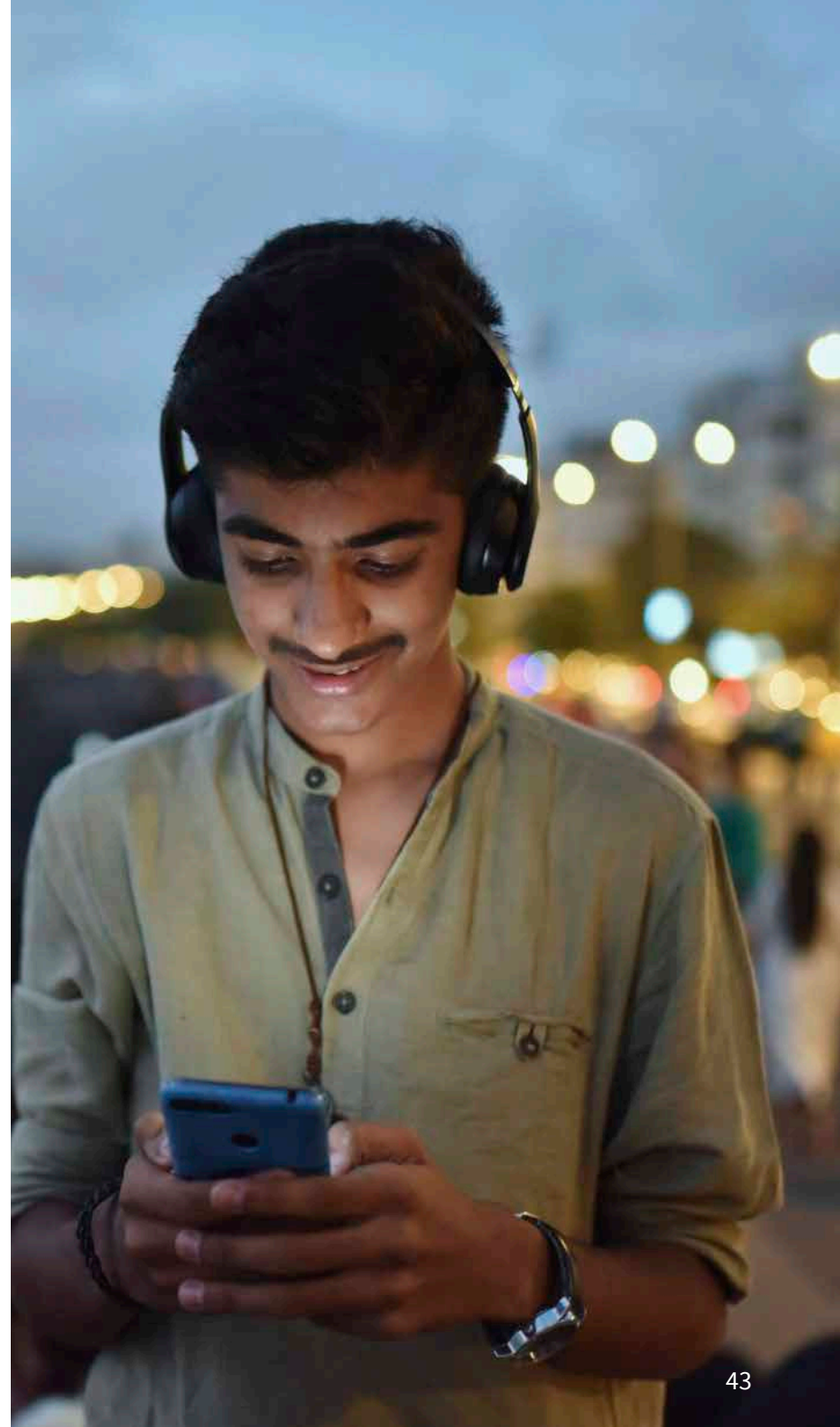
[UPI \(Unified Payments Interface\)](#) is India's leading digital payments platform. UPI is a real-time mobile payment method based on open banking principles. It allows consumers in India to transfer funds from one bank account to another easily, 24/7/365, instantly and free of charge.

[The National Payment Corporation of India \(NPCI\)](#) and [Reserve Bank of India \(RBI\)](#) launched UPI in 2016 to promote financial inclusion, accelerate use of digital payments and move away from cash.

UPI is easy to set up and is secure, using single-click two-factor authentication with the user's UPI PIN and mobile SIM card. Payments are tokenized, so consumers don't share bank details. Rather, they only need to supply merchants their UPI ID (a.k.a. Virtual Payment Address).

UPI's architecture is very versatile, as it connects to a variety of payment sources. Almost every bank in India allows UPI transactions through mobile applications. UPI is displayed at the checkout page along with other payment methods. When consumers click on UPI, they are offered several payment options, including using digital wallets (e.g., [Paytm](#), [Google Wallet](#), [BHIM](#), [PhonePe](#), [WhatsApp](#)), scanning a QR code or linking to a bank.

The success of UPI is driving dramatic growth in the transaction value share of A2A (15% in 2022, projected to reach 24% by 2026) and digital wallets (50% in 2022, projected to reach 54% in 2026). UPI is also propelling the use of digital wallets at POS: digital wallets' share of POS transaction value jumped from 25% in 2021 to 35% in 2022 and is projected to spike to 50% by 2026. As was intended by the project's design, almost all of that share came from cash that is declining in equal measure.



ASIA-PACIFIC MARKET GUIDES

Payment insights that drive growth



2022 payment highlights

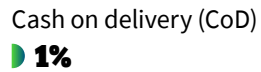
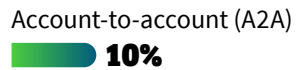
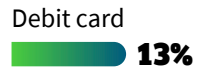
- Digital wallets continue their growth trajectory in Australia. Led by [Apple Pay](#), [Google Wallet](#) and [PayPal](#), we project wallets will grow at 15% CAGR from 2022 to 2026. Meanwhile, at POS, we estimate that wallets will grow at 16% CAGR, more than doubling POS transaction value between 2021 and 2026.
- Buy now pay later (BNPL) continues to thrive in Australia, with over 20 local providers plus major international brands competing for share of the consumer wallet. BNPL accounted for 14% of Australia's e-commerce transaction value in 2022, the highest in APAC. Australia also leads the way in POS financing, accounting for 7% of POS transaction value in 2022.
- In November 2022, the Australian Government Treasury took initial steps to regulate this burgeoning BNPL industry by soliciting comments on [three primary regulatory options](#): strengthening the [BNPL Industry Code](#) plus an affordability test, limited BNPL regulation under the [National Credit Act](#), or full regulation of BNPL under the Credit Act.

Real-time payments spotlight

- Launched in February 2018, the [New Payments Platform \(NPP\)](#) is Australia's national real-time payment infrastructure. Operated by [NPP Australia Limited \(NPPA\)](#), the NPP "[was developed](#)" via industry collaboration to enable households, businesses and government agencies to make simply addressed payments, with near real-time funds availability to the recipient, on a 24/7 basis." [According to the Reserve Bank of Australia](#), NPP processed over one billion transactions worth a total of more than \$1 trillion in the 12 months ending in April 2022.
- A core component of the NPP is the [PayTo](#) service. PayTo allows Australian consumers and businesses to authorize third parties to initiate NPP payments from their bank accounts. PayTo launched in July 2022, though the initiative has yet to take off due to a [lag in implementation by several large Australian banks](#). The Governor of the Reserve Bank of Australia set a new deadline of April 2023 for all of Australia's banks to make PayTo available to their entire customer base.

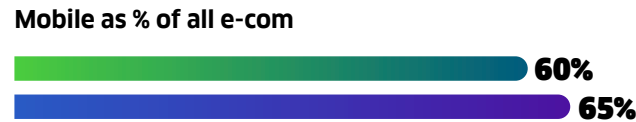
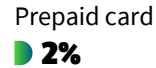
2022 e-com payment methods

Estimated share of transaction value*



2022 POS payment methods

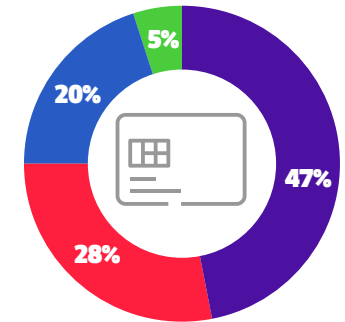
Estimated share of transaction value*



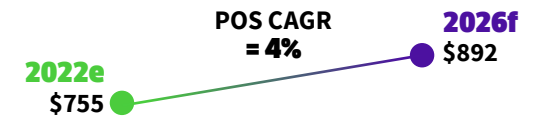
Popular alternative payment methods



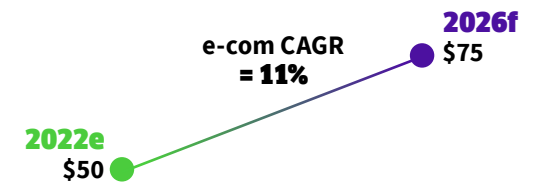
2021 card brand breakdowns (e-com and POS)



POS market size projections (US\$ Billions)



E-com market size projections (US\$ Billions)



e = estimate f = forecast 46



AUSTRALIA

CHINA

2022 payment highlights

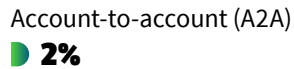
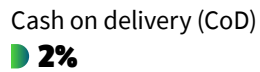
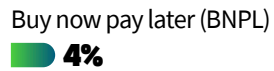
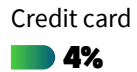
- China continues to set the pace in the adoption of digital wallets, both in e-commerce and at POS. Wallets accounted for a remarkable 81% of e-com transaction value in 2022, far exceeding the market with the second-highest adoption, India, which had 50%. Chinese consumers are also heavy users of wallets at POS, where they accounted for 56% of transaction value (the next highest globally being India again, at 35%).
- The wallet market in China is best-known for payment giants [Alipay](#) and [WeChat Pay](#). Yet China's wallet market features a diverse set of domestic options, including [HUAWEI Wallet](#) from the major mobile device manufacturer; [UnionPay App](#) from the ubiquitous card network; and Meituan Pay from food delivery giant [Meituan](#).
- China's central bank, the [People's Bank of China](#) (PBC), continues to expand the trial of its central bank digital currency, the e-CNY. In October 2022, [the PBC indicated](#) that the e-CNY accounted for \$14 billion in transaction value to date in 2022, a comparatively small figure for the size of China's economy. That's likely to grow in 2023 given the PBC's [September 2022 announcement](#) that the trial would be extended to four major provinces. The e-CNY can be used within [its own app](#) or via major wallets like Alipay and WeChat Pay. Once in mainstream use, the e-CNY should further drive the decline of physical cash use.

Real-time payments spotlight

- Real-time payments in China take place within the Internet Banking Payment System (IBPS). IBPS is a project of the [People's Bank of China](#) and launched in 2010 as part of the Second Generation of China National Advanced Payment System ([CNAPS II](#)). IBPS facilitates lower-value, real-time interbank payments by consumers, while a separate system (High Value Payment System, HVPS) manages large transactions by businesses. IBPS is operated by the China National Clearing Center (CNCC).
- [According to the World Bank](#), IBPS uses mobile numbers as aliases, operates 24/7/365 and supports the ISO 20022 messaging standard. Transactions are settled through a Deferred Net settlement mechanism. IBPS supports bill payments and other recurring payments; branch, internet and mobile banking; and proximity payments including near-field communication (NFC) and QR codes.
- Supporting over [18 billion](#) real-time payment transactions in 2021, China is second only to India globally in real-time payment adoption.

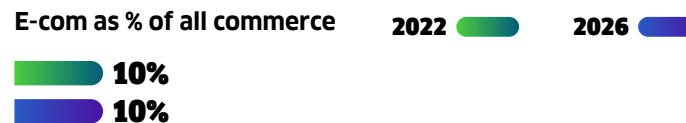
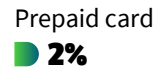
2022 e-com payment methods

Estimated share of transaction value*



2022 POS payment methods

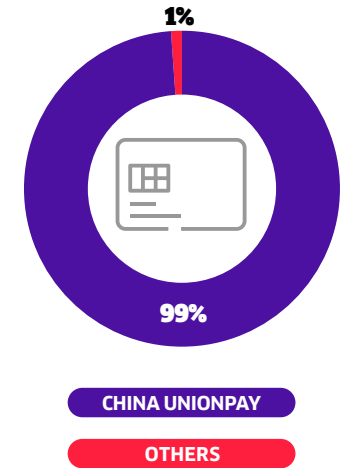
Estimated share of transaction value*



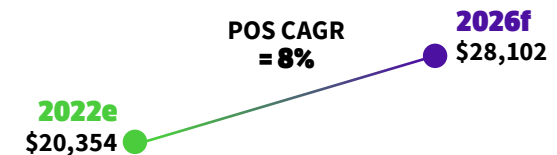
Popular alternative payment methods



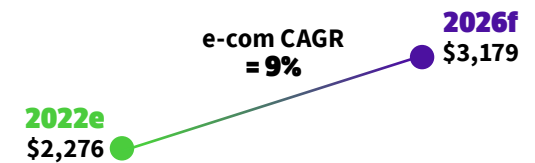
2021 card brand breakdowns (e-com and POS)



POS market size projections (US\$ Billions)



E-com market size projections (US\$ Billions)



e = estimate f = forecast



2022 payment highlights

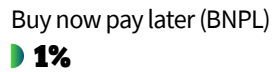
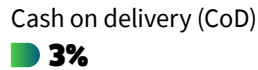
- The payment market in Hong Kong continues to be dominated by credit cards. Credit cards accounted for 41% of e-com transaction value in 2022, while garnering an outright majority (55%) of POS spend. The card brand landscape is highly competitive, with [UnionPay International](#) and [EPS](#) leading the way and [American Express](#), [Mastercard](#) and [Visa](#) earning smaller but meaningful shares.
- Despite the dominance of credit cards, digital wallets continue to gain in share of transaction value in e-commerce and at POS. Wallets trailed only credit cards in e-com (31% share) and at POS (27% share) in 2022. Wallets are projected to gain additional share in e-com, mainly at the expense of credit cards – though some of that shift is due to credit cards being used via wallets. At POS, wallets are expected to gain share from both cash and credit cards.
- Digital wallets played an important role in Hong Kong's [Consumption Voucher Scheme](#) (CVS) in 2022. The CVS was initiated during the pandemic and continued in several phases through 2022. Vouchers were issued to eligible Hong Kong residents to boost the local economy. Digital wallets including [AlipayHK](#), [BoC Pay](#), [PayMe](#), [Tap & Go](#) and [WeChat Pay HK](#) were used as the primary means for these distributions.

Real-time payments spotlight

- Real-time payments in Hong Kong occur on the [Faster Payment System \(FPS\)](#), operated by [Hong Kong Interbank Clearing Limited \(HKICL\)](#). Launched in September 2018, FPS is available to all banks and digital wallet providers in Hong Kong. FPS provides 24/7/365 payment services within banking applications and digital wallets and requires just a phone number or email address to initiate a payment.
- FPS offers a wide range of overlay services and use cases, such as proxy addressing services, account alias services, QR code interoperability, government bill payments and direct debit payments (e.g., top-up payments, bill payments and e-commerce payments initiated by merchants). Payments can be issued in both the Hong Kong Dollar (HKD) and the Renminbi (RMB).
- In April 2022, [FPS surpassed 10 million registered users](#). The number of users was fueled by the pandemic, as approximately six million users registered with FPS during the two years from the pandemic's onset.
- The [Hong Kong Monetary Authority \(HKMA\)](#) is [exploring a bilateral arrangement](#) with the [Central Bank of Thailand](#) to promote interoperability between Hong Kong's FPS and Thailand's [PromptPay](#). This arrangement would provide seamless cross-border payments in e-commerce as well as for tourists in each respective market.

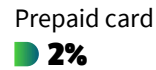
2022 e-com payment methods

Estimated share of transaction value*



2022 POS payment methods

Estimated share of transaction value*



E-com as % of all commerce **2022** **2026**



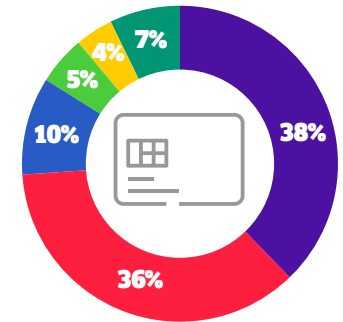
Mobile as % of all e-com



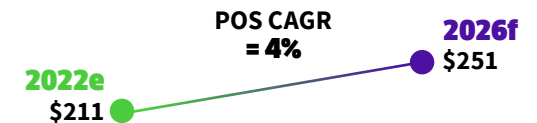
Popular alternative payment methods



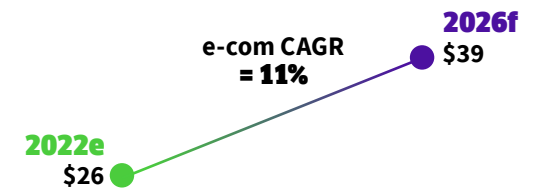
2021 card brand breakdowns (e-com and POS)



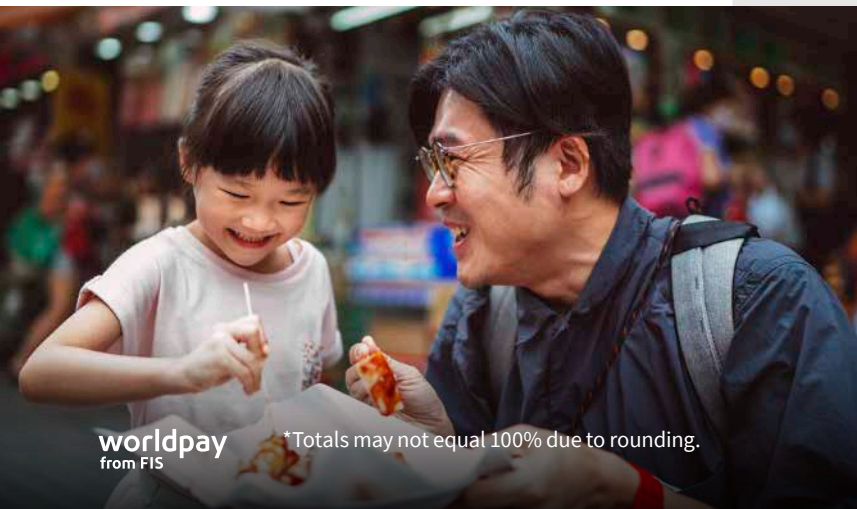
POS market size projections (US\$ Billions)



E-com market size projections (US\$ Billions)



e = estimate f = forecast 50





2022 payment highlights

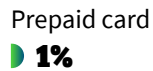
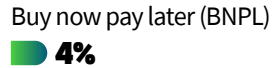
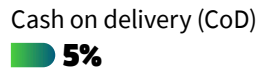
- India has emerged as a global payments leader, developing the next generation of real-time payments infrastructure with the [Unified Payments Interface \(UPI\)](#), a project of the [National Payments Corporation of India \(NPCI\)](#) and the [Reserve Bank of India \(RBI\)](#).
- Cash was dominant just a few years ago, accounting for 71% of POS transaction value in 2019. By 2022, cash represented just 27% of POS value, due to consumer habits that changed during the pandemic and the huge concurrent success of UPI. That spend shifted primarily to digital wallets, which grew from 5% to 35% of POS value over the same period.
- India's wallet landscape features a diverse array of local and global providers. Domestic wallets [Paytm](#) and Walmart-backed [PhonePe](#) are among the wallet leaders in a crowded field of global brands that includes [Amazon Pay](#), [Google Pay](#) and [PayPal](#). The same is true of India's emerging buy now pay later market, with [Flipkart Pay Later](#) (which is majority-owned by Walmart) and [Amazon Pay Later](#) competing with domestic providers such as [Paytm Postpaid](#), [ePayLater](#) and [ZestMoney](#).
- NPCI seeks to establish a balanced competitive landscape through legislation that ensures that [no third-party app provider has more than a 30% share](#) of UPI transactions. However, [implementation of that mandate was delayed](#) until December 31, 2024 to give Google Pay and PhonePe – each of which has more than 30% share – more time to comply.

Real-time payments spotlight

- India supports two real-time payment services, both owned and operated by the National Payments Corporation of India ([NPCI](#)) in cooperation with the Reserve Bank of India ([RBI](#)); the Immediate Payment Service ([IMPS](#)) launched in 2010 and the Unified Payment Interface ([UPI](#)) launched in 2016. UPI is emerging as a force for payment innovation in India and beyond.
- UPI provides immediate transfer of funds via mobile devices 24/7/365 with single-click, two-factor authentication via a secure virtual ID. Payments can be made via the NPCI's Bharat Interface for Money ([BHIM](#)) app, from within banking apps or via popular digital wallets. UPI supports person-to-person, person-to-business, business-to-business, bill payments, government payments and QR code payments. UPI volume is seeing tremendous growth: from 2.2 billion transactions in December 2020 to 4.5 billion in December 2021 and 7.8 billion in December 2022.
- In January 2023, NPCI [announced](#) that it was making UPI available to Indian non-residents of ten countries, including Australia, Canada, Singapore, the U.K. and the U.S., [paving the way](#) for a global remittance network. UPI is being adopted by other countries as well, including [Bhutan](#) and [Nepal](#), while UPI is integrating with payment systems in [Singapore](#) and the [UAE](#), while being available independently from [Saudi Arabia to France](#). In January 2023, the Indian government [announced](#) it was investing an additional \$320 million to promote UPI and its domestic card scheme [RuPay](#).

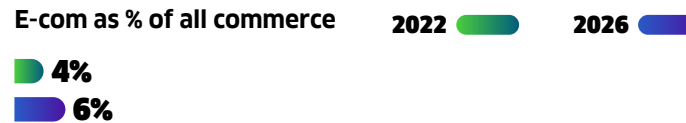
2022 e-com payment methods

Estimated share of transaction value*



2022 POS payment methods

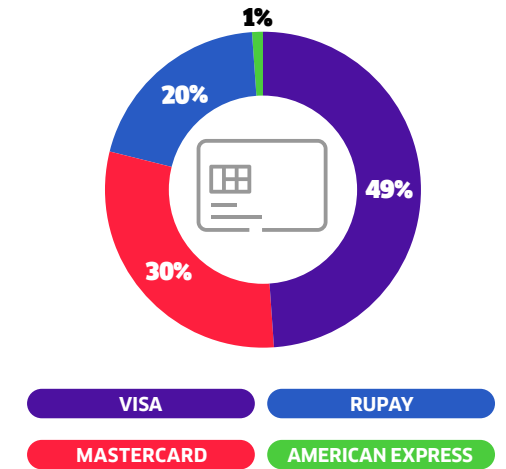
Estimated share of transaction value*



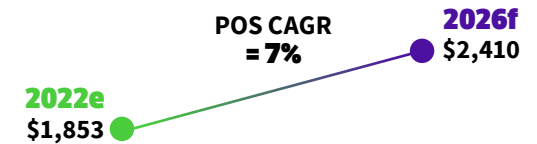
Popular alternative payment methods



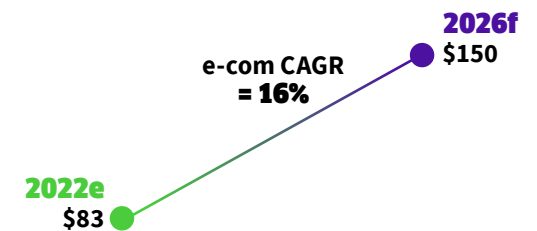
2021 card brand breakdowns (e-com and POS)



POS market size projections (US\$ Billions)



E-com market size projections (US\$ Billions)



e = estimate f = forecast





2022 payment highlights

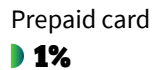
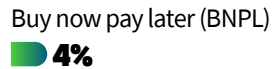
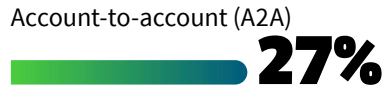
- Indonesia has seen one of the world's most dramatic and rapid transformations of payments in recent years. Cash was king before the pandemic in 2019, accounting for 77% of POS transaction value. In 2022, cash's share had dropped to 45% of POS value – still significantly higher than the global average of 16%, but nonetheless a radical change.
- Following global trends, the majority of cash's share has shifted to digital wallets. Accounting for just 6% of POS transaction value in 2019, wallets transacted 28% of POS value in 2022. Meanwhile, wallets are the leading payment method in Indonesia's e-commerce market, garnering 39% of e-com transaction value in 2022. The diverse wallet market includes [OVO](#) (owned by Singaporean super app [Grab](#)), [DANA](#) (owned by China-based [Ant Group](#)), [GoPay](#) (the wallet of super app [Gojek](#)) and [LinkAja](#) (Indonesia state-owned, Gojek-invested). The remarkable growth to date shows no signs of slowing anytime soon: digital wallet transaction values are projected to grow at 22% CAGR at POS and 21% CAGR in e-com through 2026.
- Indonesia's comparably [low credit card penetration](#) offers tremendous opportunities for buy now pay later (BNPL) providers to deliver digital credit services to an underserved market. In 2022, that opportunity was realized in 4% of Indonesia's e-com transaction value. Indonesia's crowded BNPL market features an impressive roster of local providers, including [Akulaku](#), [GoPayLater](#), [Kredivo](#) and [Traveloka PayLater](#), as well as [SPayLater](#) from Singaporean e-commerce giant [Shopee](#) and Singaporean BNPL provider [Atome](#).

Real-time payments spotlight

- Real-time payments in Indonesia are made via the [BI-FAST](#) system operated by [Bank Indonesia](#), Indonesia's central bank. Launched in 2021, BI-FAST is a core element in Indonesia's digital modernization efforts within the [Payment System Blueprint, IPS 2025](#).
- The initial phase of BI-FAST implementation, launched in December 2021, focuses on individual credit transfer services. The system offers automatic real-time notification and works via proxy address (mobile phone number, residence number and email address).
- BI-FAST services will be expanded incrementally to include bulk credit, direct debit and request for payment services. Also in the planning stages is a single integrated payment interface that connects all payment instruments and channels (such as QR codes and digital wallets) and routes transactions to back-end infrastructures.

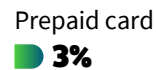
2022 e-com payment methods

Estimated share of transaction value*



2022 POS payment methods

Estimated share of transaction value*



E-com as % of all commerce **2022** **2026**



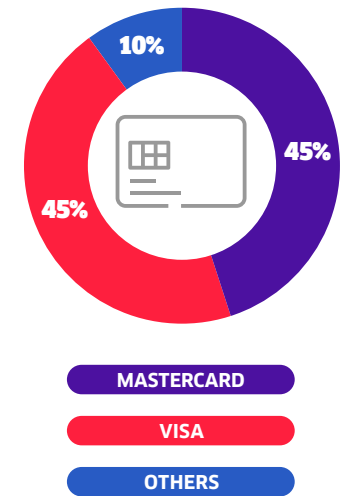
Mobile as % of all e-com



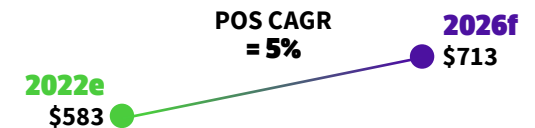
Popular alternative payment methods



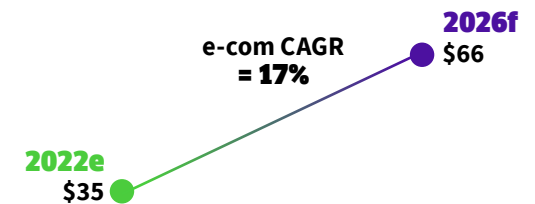
2021 card brand breakdowns (e-com and POS)



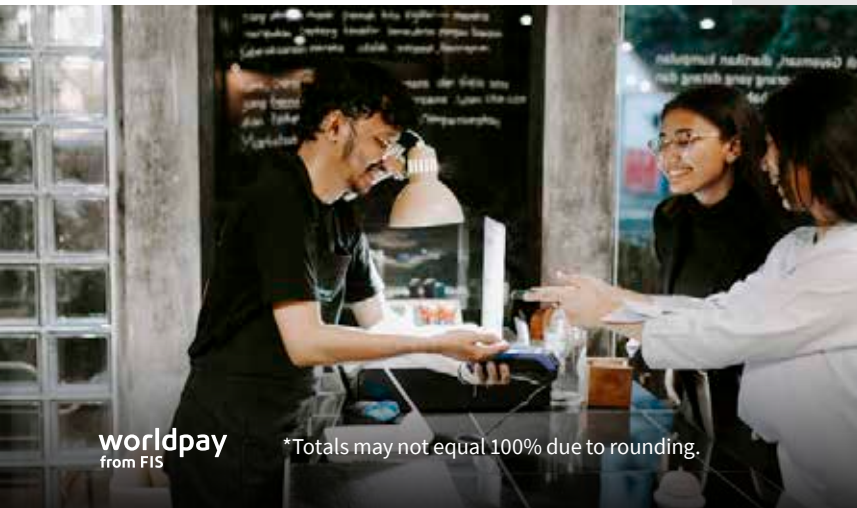
POS market size projections (US\$ Billions)



E-com market size projections (US\$ Billions)



e = estimate f = forecast



JAPAN

2022 payment highlights

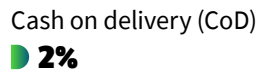
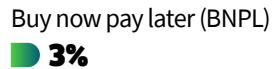
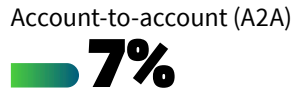
- Credit cards are integral to Japan's payments market. They are the leading payment method online, representing an outright majority of e-commerce transaction value in 2022 with 57% share, while placing second behind cash at POS with 32% share. Debit cards are far less popular among Japanese consumers, accounting for just 4% of e-com and 3% of POS transaction value in 2022.
- While Japanese consumers may lag their APAC counterparts in digital wallet adoption, wallets are increasingly popular. Wallets made major strides online in 2022, jumping from 12% of e-com transaction value in 2021 to 18% in 2022, while at POS they increased from 9% in 2021 to 10% in 2022. Japanese wallet users gravitate to a roster of domestic providers, including [au Pay](#), [D-Barai](#), [LINE Pay](#), [MerPay](#) and [PayPay](#).
- Japanese consumers maintain a strong attachment to the use of cash. With cash accounting for 51% of 2022 POS transaction value, Japan is one of only three markets in GPR 2023 (Nigeria and Thailand being the others) where cash retains a majority share of POS value. This attachment to cash is at least in part [attributable to Japan's aging population](#): in 2021, [nearly 29%](#) of Japan's population was aged 65 or older.

Real-time payments spotlight

- Real-time payments in Japan flow through the [Zengin](#), the Japanese Banks' Payment Clearing Network. Launched in 1973, Zengin is the oldest real-time payment system among those tracked in GPR 2023. Zengin remains a system for intrabank transfers among Japanese financial institutions. As such, the Zengin system has legacy limitations that inhibit the realization of many of the benefits of contemporary systems, particularly in consumer use cases.
- Now 50 years old, Zengin continues to make incremental upgrades. In 2018, the [Japanese Bankers Association](#) and Zengin-Net launched the "[more time system](#)." The system extended operating hours to 24/7. The [seventh generation](#) of the Zengin launched in 2019 with enhancements to improve the capacity, security and reliability of the system.
- Plans are in the works for Zengin to extend its functionality to consumer applications for the first time. In September 2022, [Zengin-Net announced](#) that they will seek to make the real-time payment system available to operators of mobile payment services such as [PayPay](#) and [LINE Pay](#).

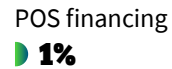
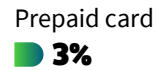
2022 e-com payment methods

Estimated share of transaction value*



2022 POS payment methods

Estimated share of transaction value*



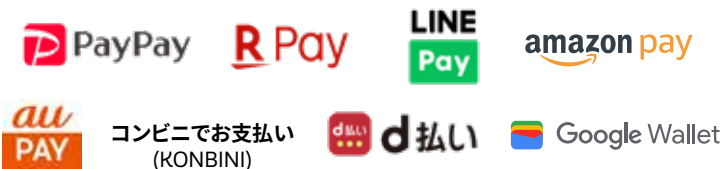
E-com as % of all commerce **2022** **2026**



Mobile as % of all e-com

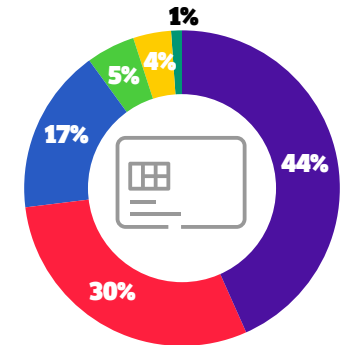


Popular alternative payment methods



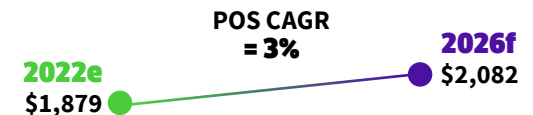
2021 card brand breakdowns

(e-com and POS)***



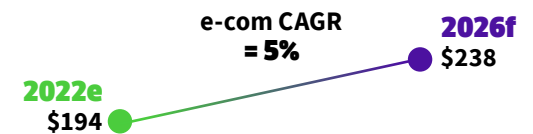
POS market size projections

(US\$ Billions)



E-com market size projections

(US\$ Billions)



e=estimate f=forecast



*Totals may not equal 100% due to rounding.

***"Others" include cryptocurrencies and prepaid cards and PrePay.

***Updated May 2023.

MALAYSIA



2022 payment highlights

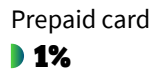
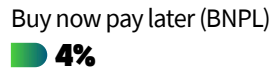
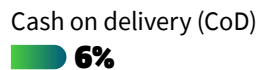
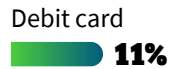
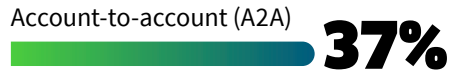
- Cash accounted for 34% of POS spend in 2022, down from 39% in 2021. However, while cash remains the leading payment method at POS in Malaysia, that's expected to change in the next few years. The Malaysian government is launching a [series of initiatives](#) to stimulate economic development, promote financial inclusion and drive Malaysia toward being a cashless society.
- Digital transformation is well underway in Malaysia's payments landscape, with digital wallets gaining significant traction both online and in-store. Wallet use is rising dramatically online, spiking from 16% of e-com transaction value in 2021 to 24% in 2022, while at POS wallets jumped from 15% in 2021 to 20% in 2022. As to digital wallet brands, Malaysian consumers prefer domestic providers such as [Boost](#) and [Touch 'n Go eWallet](#), as well as regional giants [GrabPay](#) and [ShopeePay](#).

Real-time payments spotlight

- Another vital element in Malaysia's digital transformation is the development of a real-time payment system, [DuitNow](#), that is administered by Malaysia's national payments network, [PayNet](#). All the biggest Malaysian bank payment systems use DuitNow, including [Public Bank](#), [CIMB](#) and [Maybank Malaysia](#), as do prominent fintechs like [Touch 'n Go](#). These systems have propelled account-to-account (A2A) payments to become Malaysia's leading e-commerce payment method, accounting for 37% of e-com transaction value in 2022.
- DuitNow is integrating with other regional real-time payment networks to facilitate cross-border payments as well as promote regional development through seamless interoperable payments. In June 2021, Bank Negara Malaysia ([BNM](#)) and Bank of Thailand ([BOT](#)) announced an agreement for cross-border interoperability between DuitNow and Thailand's [PromptPay](#). In September 2021, BNM and the Monetary Authority of Singapore ([MAS](#)) [announced](#) a phased linkage of Malaysia's DuitNow and Singapore's [PayNow](#), which began in Q4 2022.
- In July 2022, the central bank governors of five ASEAN central banks (Indonesia, Malaysia, Philippines, Singapore and Thailand) [committed](#) to achieving inclusive cross-border interoperability among their real-time payment systems to promote regional economic recovery.

2022 e-com payment methods

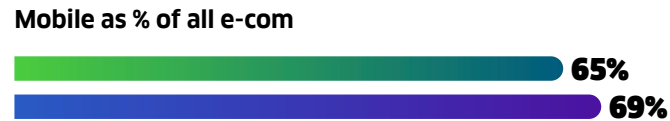
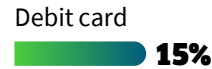
Estimated share of transaction value*



MALAYSIA

2022 POS payment methods

Estimated share of transaction value*

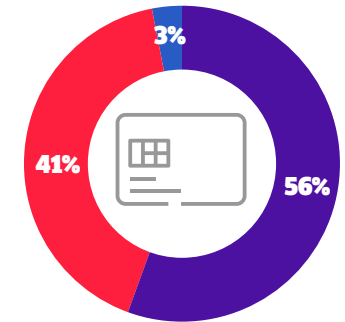


Popular alternative payment methods



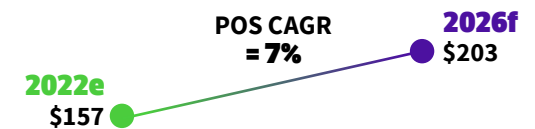
2021 card brand breakdowns

(e-com and POS)



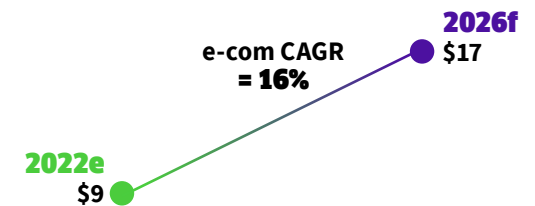
POS market size projections

(US\$ Billions)

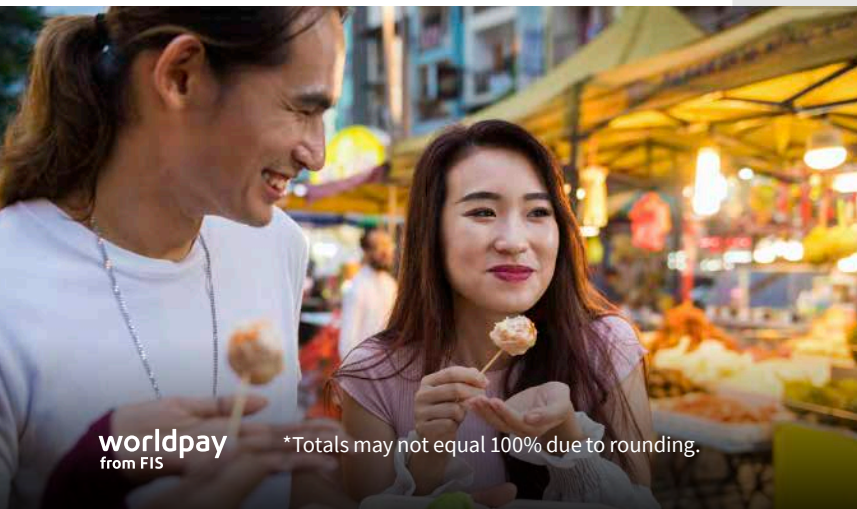


E-com market size projections

(US\$ Billions)



e = estimate f = forecast





2022 payment highlights

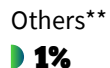
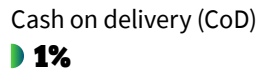
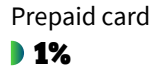
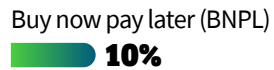
- Cards dominate New Zealand's payment markets; combined, they represent outright majorities of transaction value in e-commerce and at POS. In 2022, credit cards earned 30% of e-com transaction value, while debit cards accounted for an additional 21%. The scales are tipped even more toward cards at POS: in 2022 credit cards represented 44% of POS spend, with debit cards garnering 35%. Among card brands, EFTPOS and Visa are the market leaders, combining to account for over 80% of card transaction value.
- Buy now pay later (BNPL) represented 10% of e-com transaction value in 2022, with POS financing options accounting for 2% of in-store spending. Originating in Australia – and [acquired by Block](#) in a transaction that closed in 2022 – [Afterpay](#) is far and away the leading BNPL brand in New Zealand, with domestic provider [Laybuy](#) and Australian brands [Zip](#) also popular among New Zealand consumers.
- Although New Zealanders were late adopters of digital wallets, wallets continue their steady growth trajectories both in e-commerce and at POS. Wallets represented 22% of e-com share in 2022 (up from 20% in 2021), while wallets accounted for 10% of spend in 2022 (up from 7% in 2021). The wallet market is dominated by global brands [Apple Pay](#) and [Google Wallet](#), with a small share held by domestic provider [Dosh](#).

Real-time payments spotlight

- New Zealand, together with Israel, are [the only two OECD](#) countries without operational real-time payment systems. But plans are in motion to change that in New Zealand, led by [Payments NZ](#), which is owned by the biggest banks in New Zealand and responsible for the governance of the country's core payment systems.
- In September 2022, Payments NZ [launched a consultation](#) with a variety of stakeholders, including payment service providers, financial institutions and members of the public, to gain a better understanding of the potential demand for real-time payments, define standards and identify main players who will bring the system to life.
- Although a real-time payment system is still years away, in June 2022 Payments NZ [announced](#) that participating Kiwi banks will start processing electronic payments 365 days a year beginning in May 2023.

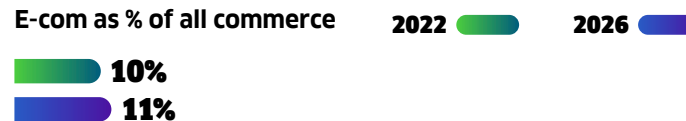
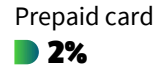
2022 e-com payment methods

Estimated share of transaction value*



2022 POS payment methods

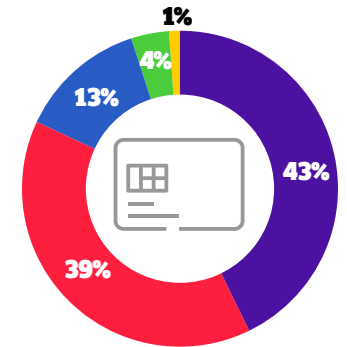
Estimated share of transaction value*



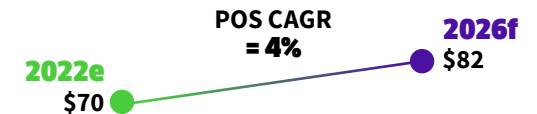
Popular alternative payment methods



2021 card brand breakdowns (e-com and POS)



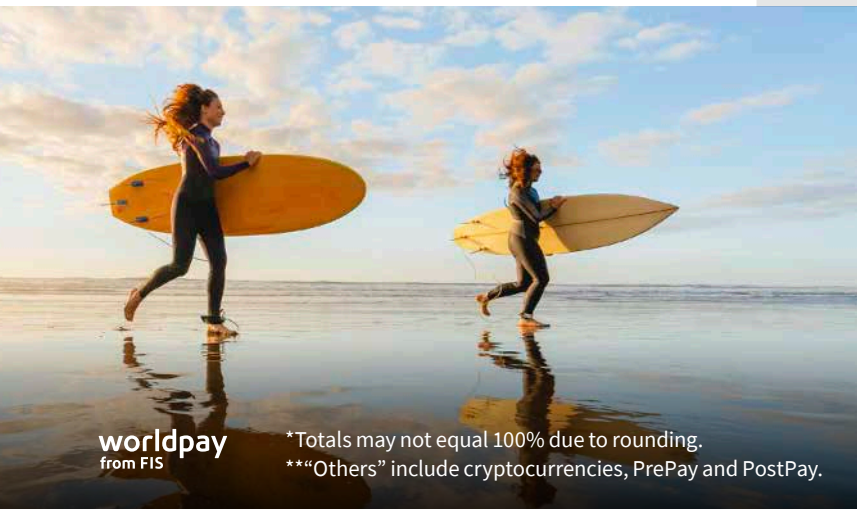
POS market size projections (US\$ Billions)



E-com market size projections (US\$ Billions)



e=estimate f=forecast





2022 payment highlights

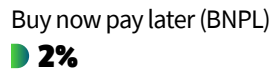
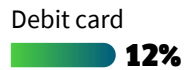
- Philippine consumers have dramatically reduced their use of cash. As recently as 2017, cash accounted for 84% of POS transaction value; that figure fell by nearly half to 46% in 2022. The number of [Filipino adults with an account more than doubled](#) to 42.9 million in 2021 from 20.9 million in 2019. This increase in the banked population is reflected in debit card use at POS, rising from 8% in 2019 to 15% in 2022. Credit card use at POS more than doubled from 8% in 2018 to 17% in 2022.
- The rate of digital wallet use at POS [more than quadrupled from 2019 to 2022](#), during which time wallets rose from 5% to 17% of POS transaction value. In e-commerce, wallets more than doubled their share of transaction value from 16% in 2019 to 33% in 2022. The wallet leader is domestic provider [GCash](#), cited by 80% of Philippine consumers in our 2022 survey as their preferred wallet.
- Buy now pay later (BNPL) has found a niche in the Philippine e-commerce market, accounting for 2% of e-com transaction value in 2022. The market in the Philippines is led by the BNPL functions within regional super app [Grab \(PayLater by Grab\)](#) and the giant shopping platform [Shopee \(SPayLater\)](#). The Philippines also features a wide variety of domestic providers, including [BillEase](#), [Cashalo](#) and [GGives](#) (the BNPL function within the digital wallet GCash).

Real-time payments spotlight

- Real-time payments in the Philippines are conducted by the [InstaPay](#) system. Launched in 2018, InstaPay is operated by [BancNet](#). The value of payment transactions processed through InstaPay has seen tremendous growth since the onset of the pandemic: between November 2019 and November 2022, both payment volume and transaction value [increased at least ten-fold](#).
- In 2020, the [Central Bank of the Philippines](#) announced the [Digital Payments Transformation Roadmap for 2020 to 2023](#). The roadmap outlines a plan to establish an efficient, safe and inclusive payments ecosystem. The main strategic objectives were to convert 50% of retail payment volume into digital form and to increase the rate of financial inclusion to 70% of Filipino adults. InstaPay is a key pillar of this transformation effort, as is [PESONet](#), an interbank funds transfer service operated by the National Retail Payment System ([NRPS](#)).
- In conjunction with the [Bank for International Settlements](#), the Central Bank of the Philippines is seeking to connect InstaPay with other regional real-time payment systems. Dubbed [Project Nexus](#), the initiative seeks to enable seamless cross-border payments between users of InstaPay, Singapore's [PayNow](#) and Malaysia's [DuitNow](#).

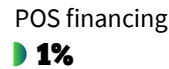
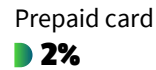
2022 e-com payment methods

Estimated share of transaction value*



2022 POS payment methods

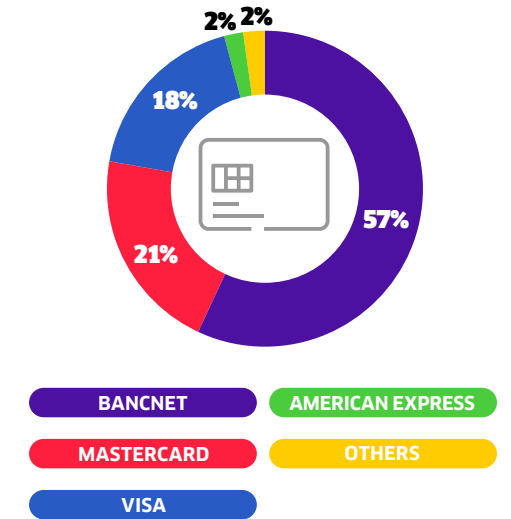
Estimated share of transaction value*



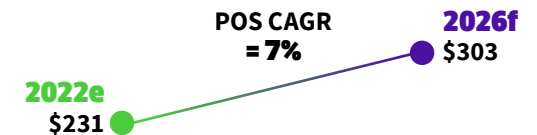
Popular alternative payment methods



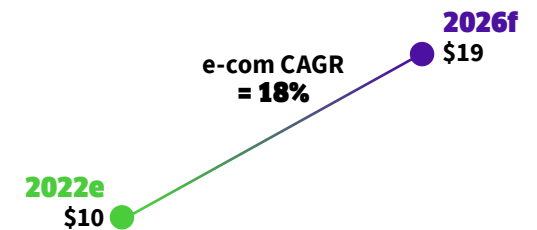
2021 card brand breakdowns (e-com and POS)



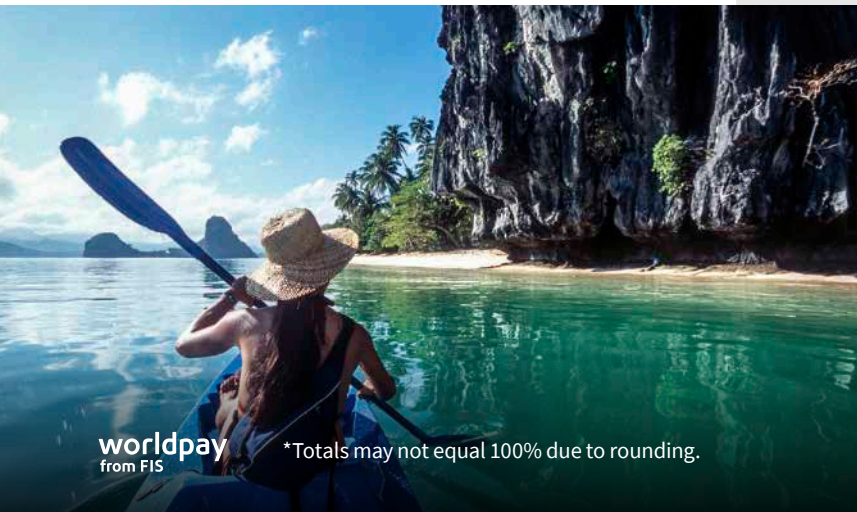
POS market size projections (US\$ Billions)



E-com market size projections (US\$ Billions)



e = estimate f = forecast





2022 payment highlights

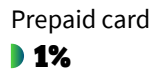
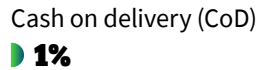
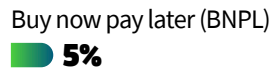
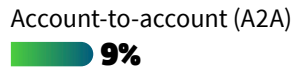
- Singapore's payment landscape reflects its mature economy, with payment cards dominating the landscape. Credit and debit cards combined to command majorities of payment share both in e-commerce and at POS. Credit cards were dominant in e-com with a 42% share of transaction value in 2022, while debit cards had an 11% share. At POS, credit cards accounted for 36% of 2022 transaction value, with debit cards at 21% share.
- Digital wallets continue to increase their share of all shopping channels. In e-com, wallets accounted for 32% of spend in 2022, up from 29% in 2021. We project they will become Singapore's leading online payment method by 2026. Wallets made an even larger jump at POS, rising from 13% share of transaction value in 2021 to 18% share in 2022. Singapore features a diverse landscape of wallet providers, including wallets affiliated with banks ([DBS PayLah](#)), super apps ([GrabPay](#)) and e-commerce platforms ([Lazada Wallet](#) and [ShopeePay](#)).
- Singaporeans are avid users of buy now pay later (BNPL), which accounted for 5% of e-commerce spend in 2022. Singapore features a rich variety of domestic BNPL providers, including [PayLater](#) by [Grab](#), [SPay Later](#) by [Shopee](#), [ShopBack PayLater](#) (formerly Hoolah and acquired by [ShopBack](#) in 2021) and [Pace](#).

Real-time payments spotlight

- Launched in 2014, Fast and Secure Transfers ([FAST](#)) is an intrabank service that allows nearly instant transfers of Singapore dollars between account holders of 24 major banks operating in the market. In February 2021, six non-bank financial institutions (NFIs) were provided FAST access: [GrabPay](#), [LiquidPay](#), [MatchMove](#), [Razer](#), [Singtel Dash](#) and [Wise](#) (formerly TransferWise).
- Launched in 2017 for banks and in 2021 for NFIs, [PayNow](#) is an [overlay central addressing service](#) that runs on top of the FAST payment system. PayNow facilitates nearly instant payments between account holders of ten participating banks and four NFIs ([GrabPay](#), [LiquidPay](#), [Singtel Dash](#) and [Xfers](#)). The key differentiator from FAST is that the sender only needs to know the recipient's mobile number. PayNow Corporate offers the same instant payment rails for corporate, business and government transactions. FAST and PayNow are both administered by the [Association of Banks in Singapore \(ABS\)](#).
- The [Monetary Authority of Singapore \(MAS\)](#) and the [Reserve Bank of India \(RBI\)](#) [announced in 2021](#) a project to link their respective fast payment systems, [UPI](#) and PayNow; the project is expected to [go live in 2023](#). In November 2022, the central banks of Indonesia, Malaysia, the Philippines, Singapore and Thailand [agreed](#) to strengthen cooperation on payment connectivity to support real-time cross-border payments.

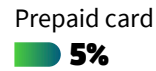
2022 e-com payment methods

Estimated share of transaction value*

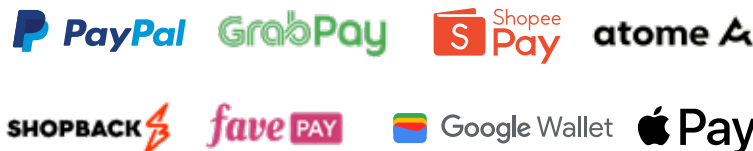


2022 POS payment methods

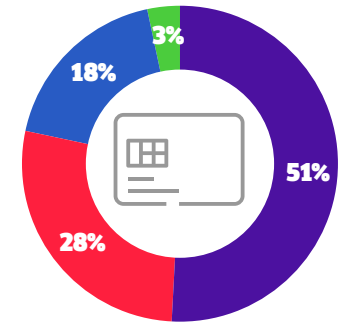
Estimated share of transaction value*



Popular alternative payment methods

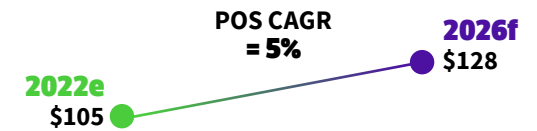


2021 card brand breakdowns (e-com and POS)



*Includes NETS

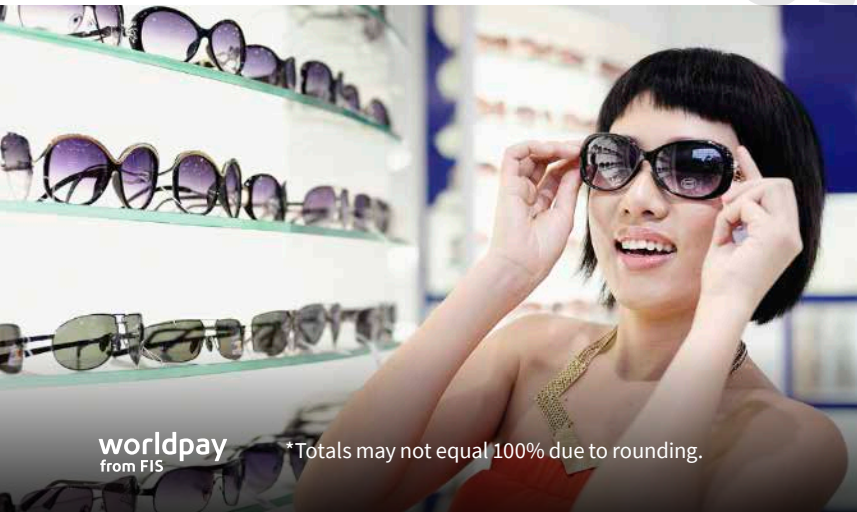
POS market size projections (US\$ Billions)



E-com market size projections (US\$ Billions)



e = estimate f = forecast





2022 payment highlights

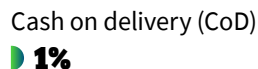
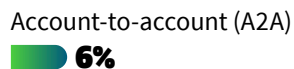
- Payment cards – and particularly credit cards – dominate the mature payment market in South Korea. Credit cards enjoy an outright majority share both in e-commerce and at POS. Credit cards accounted for 59% of POS spend in 2022, with debit cards representing a 15% share. The landscape is similar in e-com, where credit cards took 54% of transaction value in 2022 and debit cards were responsible for a 10% share.
- Cash is still an important part of South Korea’s payment landscape at POS. Cash accounted for 11% of POS transaction value in 2022, though we project a CAGR of -15% through 2026. In terms of digital currency, the [Bank of Korea](#) continues to explore the viability of a [CBDC](#). [Testing continued](#) through 2022, though as of year-end 2022 a live launch schedule had yet to be announced.
- Digital wallets continue to gain popularity among South Korean consumers, absorbing more share of payment value both online and in-store. Wallets accounted for 25% of e-com and 13% of POS transaction value in 2022. An impressive roster of domestic wallets competes for this fast-growing segment: [Kakao Pay](#) (the wallet of the messaging super app [KakaoTalk](#)), [Naver Pay](#) (from the search engine and ISP [Naver](#)), [PAYCO](#), [Samsung Wallet](#) (from the [ubiquitous global brand](#)) and [Toss](#) (an emerging financial super app).

Real-time payments spotlight

- South Korea has among the world’s oldest – [and largest](#) – real-time payment networks. The [Interbank CD/ATM](#) system launched in 1988 and continues to operate despite [declining volume](#). Electronic Banking System (EBS) was introduced in 2001. Both systems are operated by the Korea Financial Telecommunications and Clearing Institute ([KFTC](#)).
- In December 2019, [KFTC established](#) an open API portal to boost real-time payment services. APIs are now offered for remitter identification, account holder identification, account balance inquiry, receipt information, credit transfer, debit transfer and transaction information inquiry.
- In July 2021, South Korea’s payment regulator, Financial Services Commission (FSC), announced an initiative to expand open banking opportunities for fintechs. [According to FSC](#), the first batch of 23 fintech companies, including [Kakao](#) and [Naver](#), joined the platform in July 2021, with four additional companies following in August 2021.

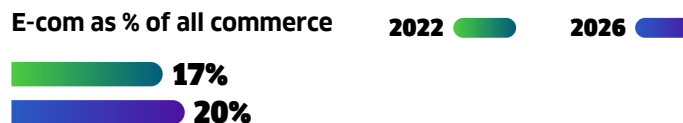
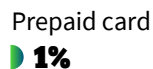
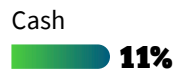
2022 e-com payment methods

Estimated share of transaction value*



2022 POS payment methods

Estimated share of transaction value*

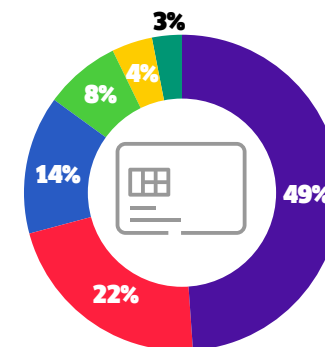


Popular alternative payment methods



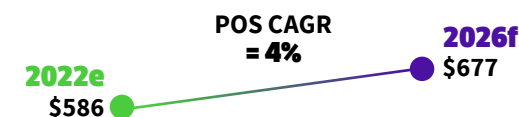
2021 card brand breakdowns

(e-com and POS)



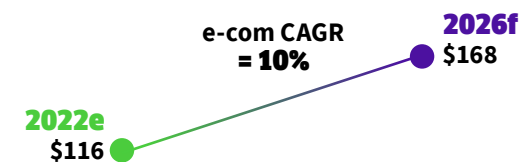
POS market size projections

(US\$ Billions)



E-com market size projections

(US\$ Billions)



e = estimate f = forecast



*Totals may not equal 100% due to rounding.

**"Others" include cryptocurrencies, buy now pay later, prepaid cards and PostPay.



2022 payment highlights

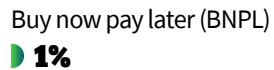
- Taiwan's payment landscape is dominated by credit cards. Accounting for 46% of POS and 43% of e-commerce transaction value in 2022, credit cards were Taiwan's leading payment method in-store and online. Debit cards are used at a fraction of the rate of credit, garnering just 5% of POS and 4% of e-com spend. Despite rapidly shifting payment trends globally, we project that these shares will remain steady through 2026, with a slight uptick expected in debit use.
- Cash remains an important part of the payment ecosystem in Taiwan. Cash accounted for 31% of POS transaction value in 2022, the second leading payment method in store behind credit cards. Unlike the many markets that have seen cash decline precipitously, the use of cash has declined more gradually in Taiwan. We project that cash use will fall at -9% CAGR through 2026.
- Digital wallets continue to grow both online and in-store. Wallets accounted for 22% of e-com transaction value in 2022, up from 18% in 2021. At POS, wallets commanded 16% share, up from 15% in 2021. Preferred wallets among consumers in Taiwan include global brands such as [Alipay](#), [Apple Pay](#), [Google Wallet](#) and [PayPal](#); regional wallets, including [LINE Pay](#); and local wallets such as [JKOPay](#).

Real-time payments spotlight

- Taiwan's long-standing real-time payment system is the [CIFS Interbank Funds Transfer System](#). Launched in 1987, CIFS "connects with retail payment systems to settle interbank remittances, ATM withdrawals and transfers, bill and tax payments, credit card transactions, check clearing, and ACH payables and receivables." The system underwent a series of upgrades in 2019 that added an open API management platform as well as a mobile phone number alias service.
- A second real-time payments system, [Financial XML](#) or FXML, was launched in 2003. Based on the XML standard, FXML facilitates large value intrabank transfers and business-to-business (B2B) payments. FXML and CIFS Interbank Funds Transfer System are administered by Taiwan's Financial Information Service Company ([FISC](#)) under the supervision of the [Financial Supervisory Commission](#).

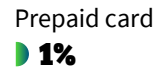
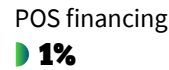
2022 e-com payment methods

Estimated share of transaction value*



2022 POS payment methods

Estimated share of transaction value*



E-com as % of all commerce **2022** **2026**



Mobile as % of all e-com

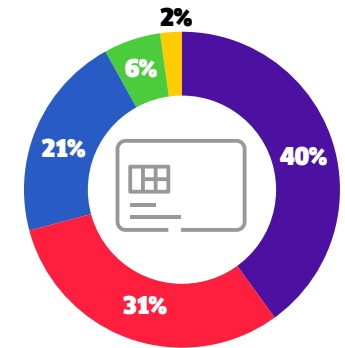


Popular alternative payment methods



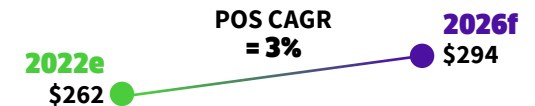
2021 card brand breakdowns

(e-com and POS)



POS market size projections

(US\$ Billions)



E-com market size projections

(US\$ Billions)



e=estimate f=forecast



THAILAND



2022 payment highlights

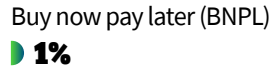
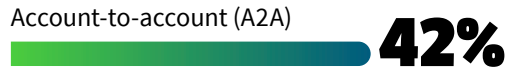
- Thailand continues to see high rates of cash use, though that rate continues to decline steadily. Cash accounted for 56% of POS transaction value in 2022, the highest in APAC among the markets covered in GPR 2023. Though it's still the majority payment method, cash fell from its 63% share in 2021.
- Payment cards have never caught on in any significant way among Thailand's consumers, though they do continue to occupy an important, if niche, market. In 2022, credit cards accounted for 13% of e-com and 11% of POS transaction value, while debit cards represented 8% of e-com and 7% of POS spend.
- Account-to-account (A2A) payments are increasingly an anchor in Thailand's consumer payments market. A2A payments are made primarily via [PromptPay](#), a real-time system that facilitates payments directly from bank accounts via a variety of apps. PromptPay has propelled A2A payments to become Thailand's leading payment method online, accounting for 42% of e-com transaction value in 2022, up from 38% in 2021.
- Digital wallets continue to gain in popularity both online and in-store. In 2022, wallets accounted for 25% of e-com and 23% of POS transaction value. [TrueMoney Wallet](#) is the leading wallet in Thailand, with a majority (56%) of our 2022 survey respondents in Thailand indicating it was their preferred wallet. Other important wallets in Thailand include [Rabbit LINE Pay](#), [mPAY](#) and [ShopeePay](#).

Real-time payments spotlight

- Thailand has among the world's largest and most successful real-time payment networks in [PromptPay](#). Launched in 2017 as a project of [National ITMX](#) and the [Thai Bankers' Association](#), PromptPay allows real-time funds transfer between account holders based on AnyID, a multi-proxy platform that supports bank account numbers, biller ID, digital wallet ID, mobile phone numbers, national ID or Tax ID. PromptPay is available at ATMs, bank branches, call centers, digital wallets, internet banking sites and mobile banking apps.
- In September 2022 alone, [PromptPay processed](#) 1.4 billion transactions totaling more than 3.6 trillion Baht, or approximately \$11.6 billion. PromptPay supports a broad range of payment use cases and overlay services: e-commerce payments, request to pay, standardized QR code for payments by mobile phone at merchant locations, payee confirmation, corporate payments and income tax refunds.
- In April 2021, the [Monetary Authority of Singapore \(MAS\)](#) and [Bank of Thailand \(BoT\) announced](#) that they had successfully linked PromptPay with Singapore's [PayNow](#). Though among the first real-time payment systems to establish cross-border interoperability, it's certain not to be the last. The [BoT is exploring](#) additional cross-border interoperability between PromptPay and Malaysia's [DuitNow](#) and India's [UPI](#) real-time payment systems.

2022 e-com payment methods

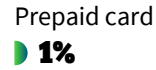
Estimated share of transaction value*



THAILAND

2022 POS payment methods

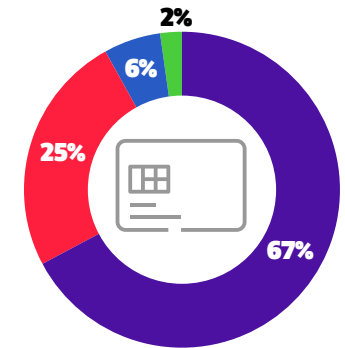
Estimated share of transaction value*



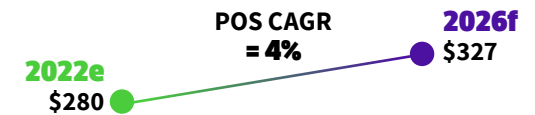
Popular alternative payment methods



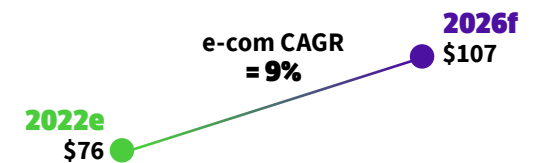
2021 card brand breakdowns (e-com and POS)



POS market size projections (US\$ Billions)



E-com market size projections (US\$ Billions)



e=estimate f=forecast



VIETNAM



2022 payment highlights

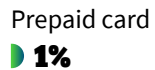
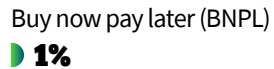
- Nowhere is the transition from a cash-based economy to one rooted in digital payments unfolding more dramatically than in Vietnam. Cash accounted for 85% of POS transaction value as recently as 2019. Cash continues its steep descent, falling from 54% of POS value in 2021 to 42% in 2022. We project further declines in cash transaction value of -11% CAGR through 2026.
- Digital wallets are the primary beneficiary of cash's decline, with a rise no less dramatic. The use of wallets jumped from 14% share of POS transaction value in 2021 to 29% in 2022. We forecast additional gains for wallets of 31% CAGR through 2026. Wallets are already the leading payment method online, accounting for 31% of e-com spend in 2022. [MoMo](#) is the leading wallet in Vietnam, cited as the preferred wallet by 71% of Vietnamese consumers in our 2022 survey. MoMo is joined by [Moca](#), [ZaloPay](#), [PayPal](#) and others in this fast-growing segment.
- Buy now pay later (BNPL) services have gained a small but growing foothold in Vietnam's payment market. A crowded field of providers competes in this emerging space, including regional companies like [Kredivo](#) and [Akulaku](#), as well as domestic entrants such as [WowMelo](#), [Fundiin](#) and the BNPL function within wallet leader MoMo.

Real-time payments spotlight

- Real-time payments in Vietnam are made via the [NAPAS Quick Money Transfer \(Chuyển tiền nhanh\) Service](#). Launched in 2016, the system is provided by The National Payment Corporation of Vietnam (NAPAS).
- NAPAS continues to expand its QR code network, NAPAS 247 Quick Money Transfer Service, via VietQR. [Launched in 2021](#) with 14 banks, the network [expanded](#) to 40 banks and over three million users in 2022. Also in 2022, VietQR was [launched](#) on the [National Public Service Portal](#), offering residents a more convenient way to pay for public services. Tourists from Thailand can also pay via VietQR code in a [reciprocal arrangement](#) between NAPAS and Thailand's electronic payments network, ITMX.
- In January 2023, NAPAS [announced](#) that non-cash transactions through its systems doubled in 2022 versus 2021. Specific accounting of transaction volume and value has not, to date, been published. However, the NAPAS general director indicated that the Quick Money Transfer real-time payment rails had seen "impressive growth."

2022 e-com payment methods

Estimated share of transaction value*



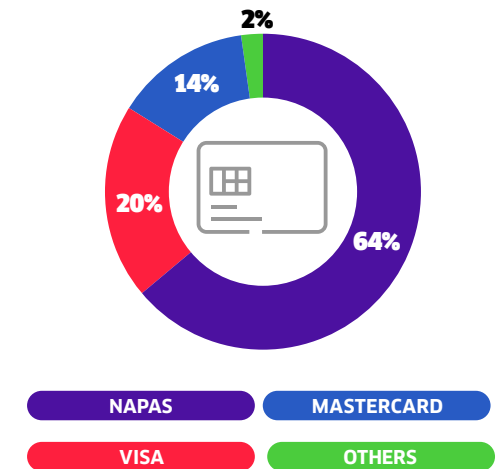
2022 POS payment methods

Estimated share of transaction value*

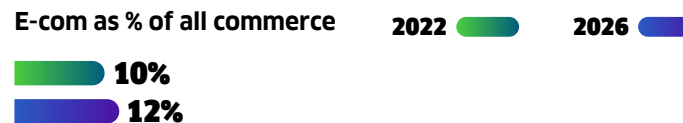


2021 card brand breakdowns

(e-com and POS)



VIETNAM

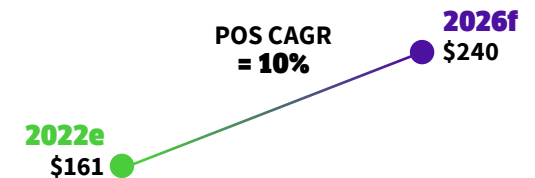


Popular alternative payment methods



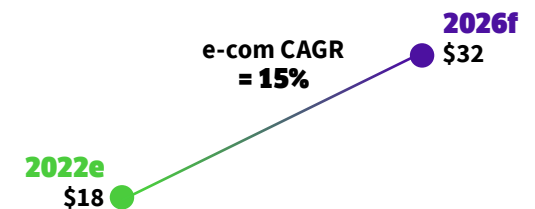
POS market size projections

(US\$ Billions)

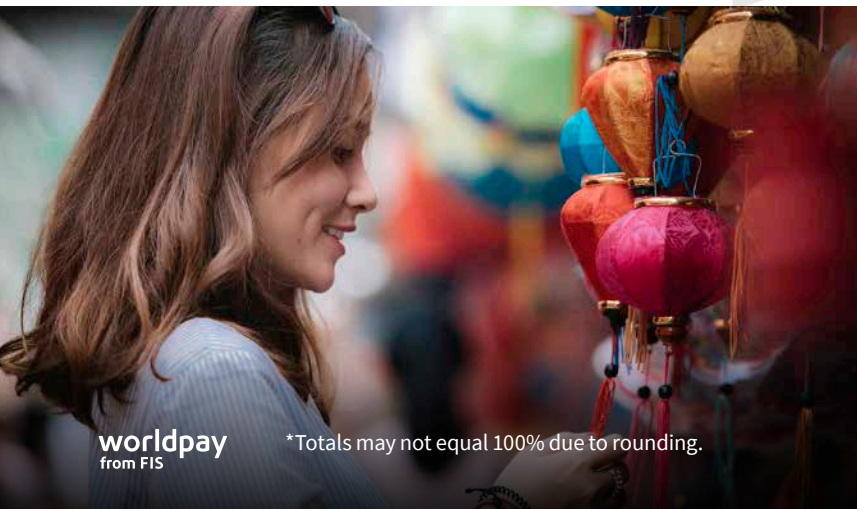


E-com market size projections

(US\$ Billions)



e = estimate f = forecast



EUROPE PAYMENT INSIGHTS

Payment insights that drive growth

HOW EUROPEAN CONSUMERS PAY TODAY

GPR 2023's coverage of Europe features fourteen markets: [Belgium](#), [Denmark](#), [Finland](#), [France](#), [Germany](#), [Ireland](#), [Italy](#), [Netherlands](#), [Norway](#), [Poland](#), [Spain](#), [Sweden](#), [Turkey](#) and [the U.K.](#)

1 **Alternative payment methods continue to gain share in e-com**

- Payment methods continue to shift from cards and cash towards APMs

2 **Payment method preferences vary greatly across Europe**

- Credit card, debit card, digital wallet, account-to-account (A2A) and BNPL are each the leading payment method in at least one market

3 **A2A payments flourish across Europe**

- Simplicity, safety, interoperability and speed are driving consumer adoption of A2A payments
- Spotlight on Poland's leading A2A payment method, BLIK

4 **The Nordics are pointing the way for regional cooperation**

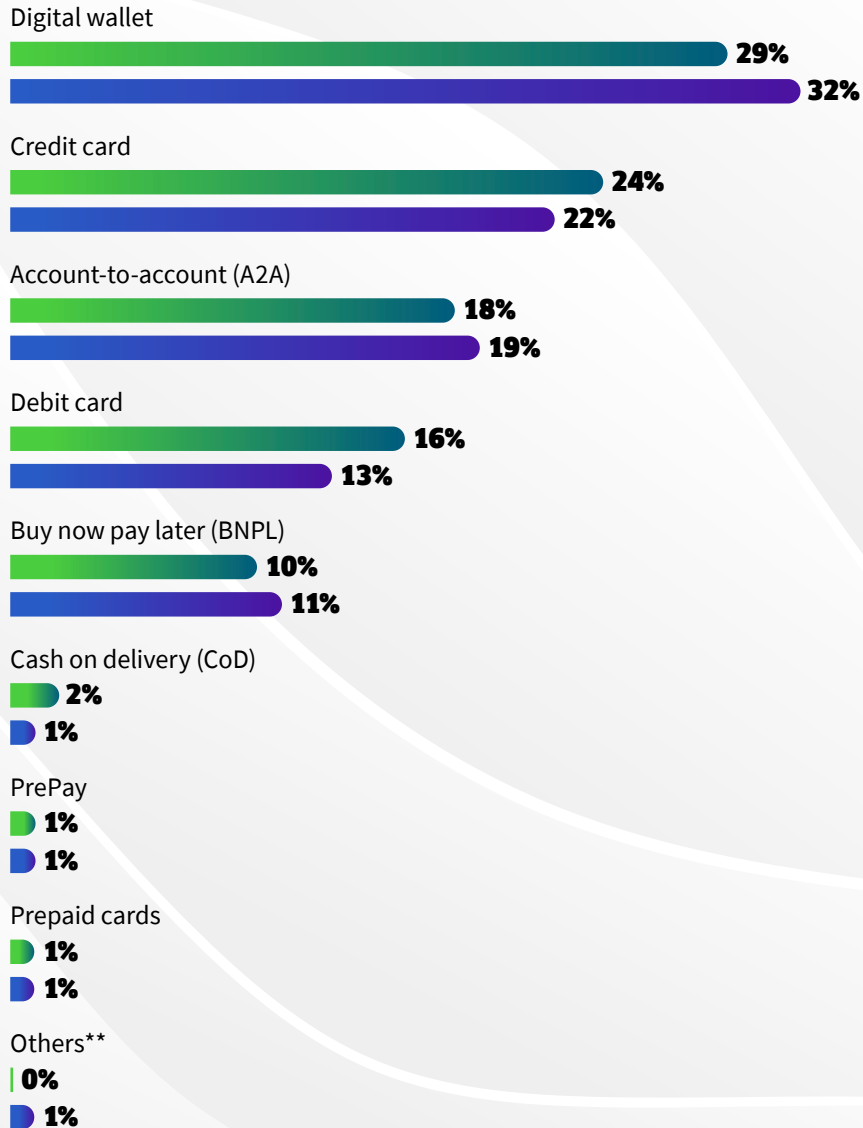
- A cross-border real-time A2A payment system sets an example for regional payment collaboration

5 **Cash use continues to decline at POS**

- Cash use continues to fall at POS, though the region's cash use is diverse across markets

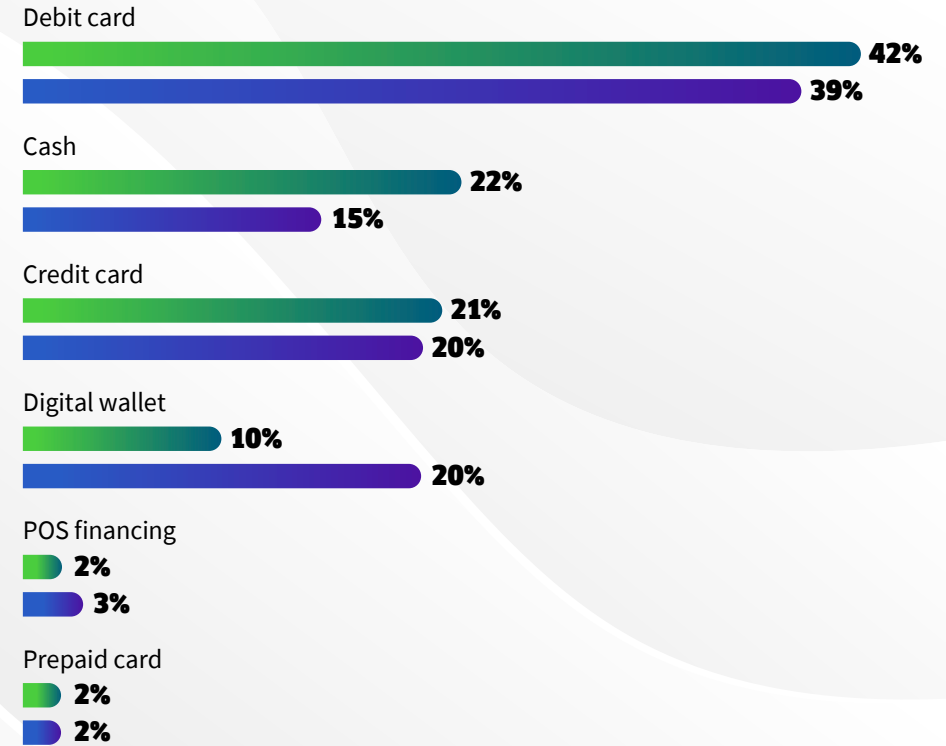
Europe e-com payment methods

Share of transaction value, 2022-2026



Europe POS payment methods

Share of transaction value, 2022-2026



2022 █ 2026* █

*Forecast
 **“Others” include cryptocurrencies and PostPay.
 Totals may not equal 100% due to rounding.

ALTERNATIVE PAYMENT METHODS CONTINUE TO GAIN SHARE IN E-COM

European consumers continue to shift from paying with cards and cash towards alternative payment methods (APMs) such as digital wallets, account-to-account (A2A) and buy now pay later (BNPL).



Credit and debit cards' combined share of regional e-com transaction value is forecast to decline from 40% in 2022 to 35% in 2026. European consumers are also moving away from cash on delivery (CoD), which is projected to fall to just 1% of regional e-com transaction value by 2026. This correlates with the overall regional decline in cash use.

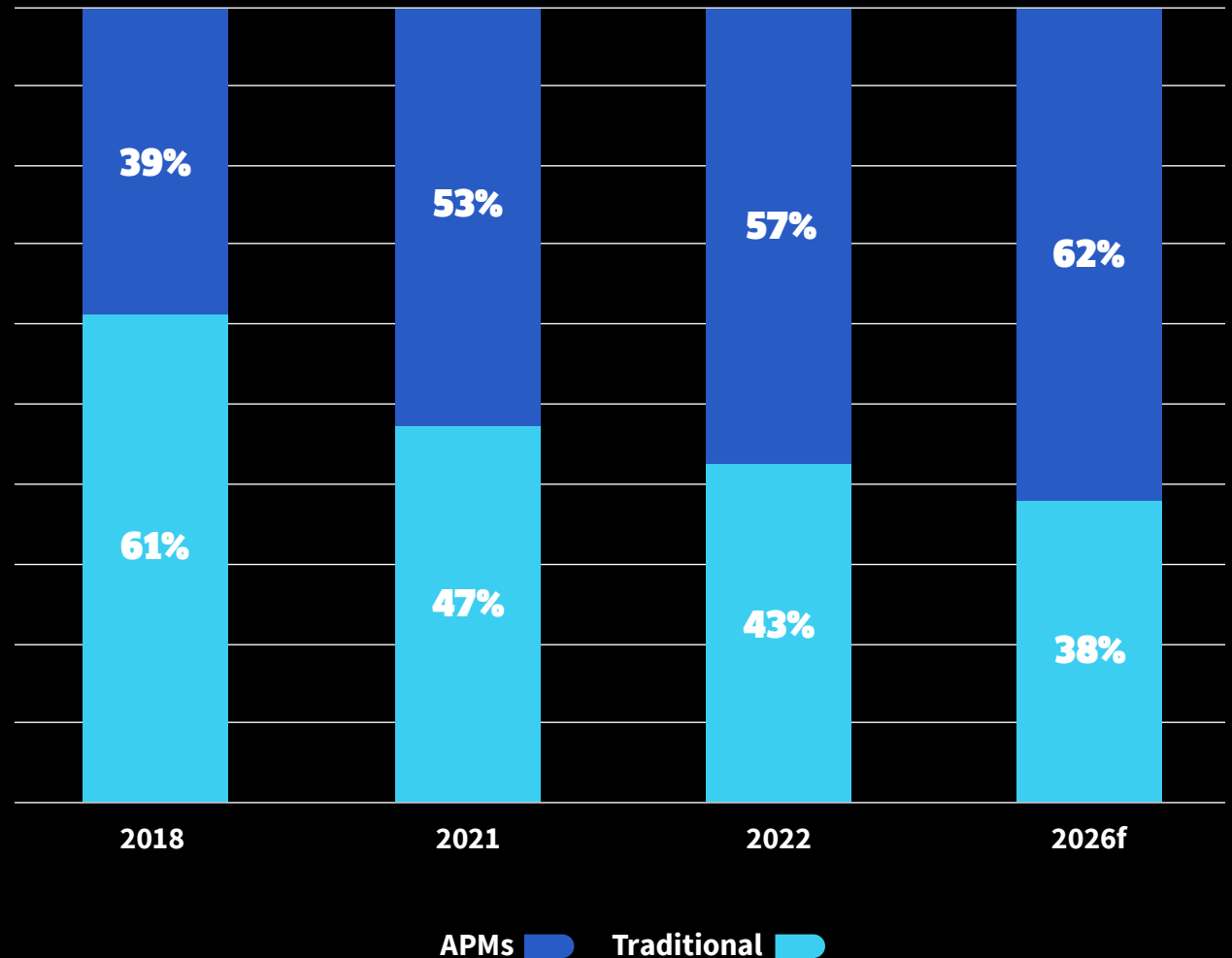
In contrast, APMs are the most preferred payment method in 10 out of the 14 European countries featured in GPR 2023. Digital wallets are projected to grow at 12% CAGR in e-com between 2022 and 2026. Europe also has by far the largest regional share of BNPL e-com transaction value in the world, estimated at 10% in 2022.

Meanwhile, PayPal is still popular in countries like France, Germany and the U.K., while local A2A brands are flourishing in markets across Europe. These include [MobilePay](#) in Denmark, [Vipps](#) in Norway and [BANCOMAT Pay](#) in Italy.

ALTERNATIVE PAYMENTS CONTINUE TO GAIN SHARE

Payment methods are shifting from cards and CoD towards APMs

Europe e-com share of transaction value 2018-2026f



PAYMENT METHOD PREFERENCES VARY GREATLY ACROSS EUROPE

There is no pan-European, one-size-fits-all e-commerce payment method. Instead, credit cards, debit cards, digital wallets, A2A and BNPL are each the leading payment method in at least one market.



This is due to multiple factors, including differences in local culture, regulation and technological innovation. For example, in Germany there is a cultural aversion to debt, so credit cards are not popular. [According to GlobalData](#), credit card penetration in Germany stands at 7.2 cards per 100 individuals, compared to 89.9 cards per 100 individuals in Turkey.















Meanwhile, French consumers are avid credit card users, with credit cards outpacing all other payment methods.

Led by [BLIK](#), A2A is the overwhelming choice of Polish consumers, accounting for a dominant 67% of e-com transaction value.

In Sweden, home of [Klarna](#), buy now pay later leads the way with 24% of e-com spend.

PAYMENT METHOD PREFERENCES VARY GREATLY ACROSS EUROPE

Europe share of e-com transaction value, 2022

	Traditional methods			APMs			
	Cash on delivery	Credit card	Debit card	Digital wallets	Account-to-account	BNPL	Others
Belgium 	3%	17%	30%	15%	17%	14%	3%
Denmark 	1%	28%	21%	29%	7%	12%	2%
Finland 	2%	13%	13%	24%	34%	13%	1%
France 	2%	34%	18%	27%	11%	5%	3%
Germany 	4%	12%	3%	29%	27%	23%	2%
Ireland 	4%	22%	27%	29%	12%	4%	2%
Italy 	4%	22%	18%	35%	13%	6%	2%
Netherlands 	1%	9%	3%	9%	62%	13%	2%
Norway 	2%	26%	17%	18%	17%	18%	2%
Poland 	2%	7%	8%	15%	67%	2%	<1%
Spain 	3%	28%	16%	31%	18%	3%	1%
Sweden 	1%	17%	16%	21%	20%	24%	<1%
Turkey 	6%	53%	15%	9%	14%	<1%	2%
U.K. 	1%	24%	23%	35%	9%	8%	1%

Regional high  Leading country payment method 

A2A PAYMENTS FLOURISH ACROSS EUROPE

Account-to-account (A2A) payments represented 18% of Europe's e-com transaction value in 2022, but there are huge differences in adoption rates by country. In Poland, Finland and the Netherlands, A2A is the dominant online payment method. Cards and digital wallets dominate in Denmark and the U.K., with A2A representing only single-digit shares.



The success of A2A payments in Poland and the Netherlands represents examples of how, through cooperation, banks can be a leading force in P2B payment innovation. Thanks to the huge popularity of [BLIK](#), A2A dominated the Polish e-commerce market with 67% share in 2022. Similarly, the Dutch rely heavily on [iDeal](#), which commanded 62% of e-commerce transaction value.

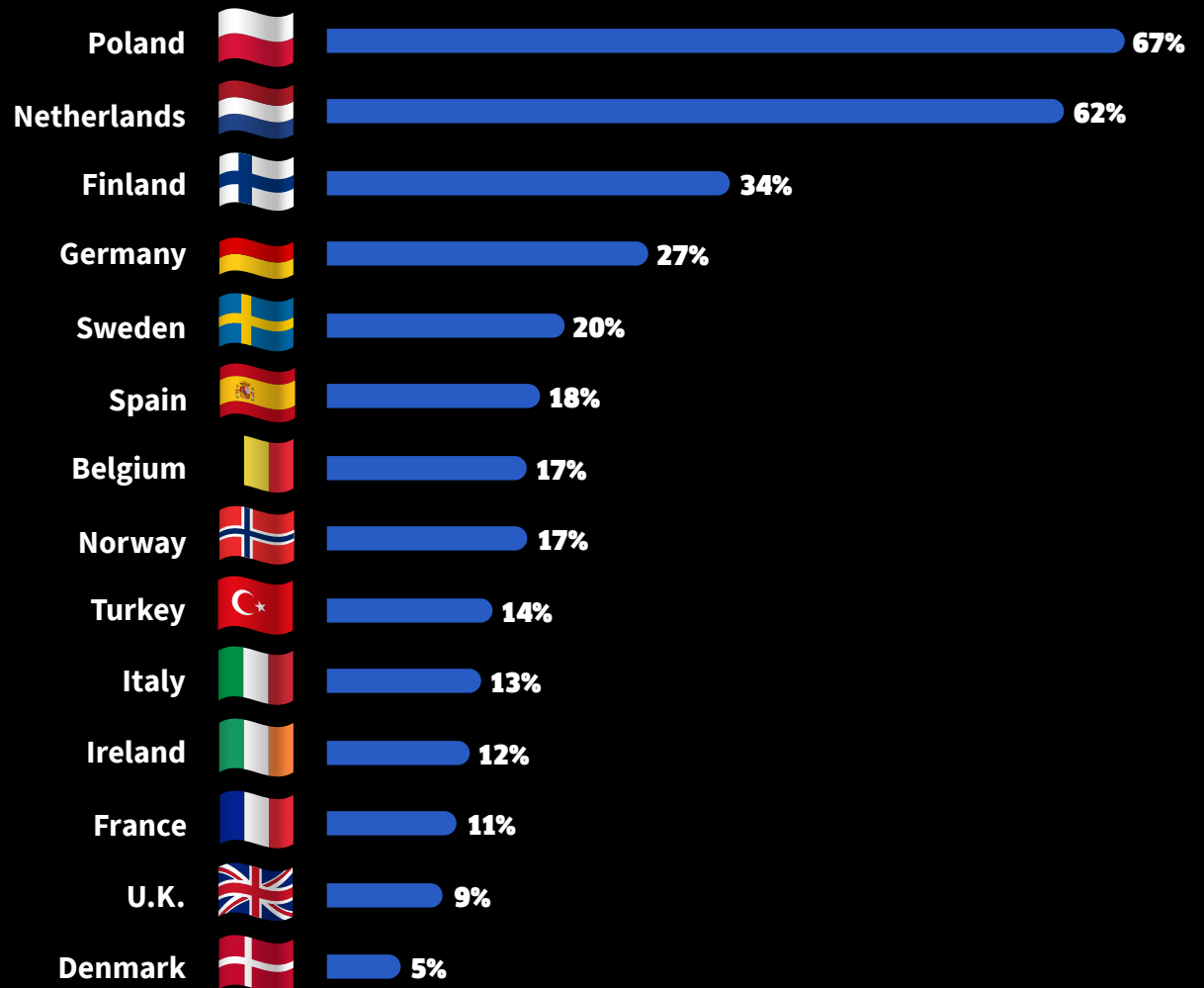
A2A is also growing fast in Spain, from 13% in 2019 to 18% share in 2022. [Bizum](#), a joint project by the Spanish banking sector that was founded in 2016, has become one of the most popular payment methods among Spanish consumers.

A2A is currently projected to grow at 10% CAGR region-wide through 2026, when it will – if trends hold – account for 19% of Europe’s e-com transaction value. That forecast may well be revised upward based on a number of factors, including the further development of consistent [Open Banking standards](#), the ability to offer chargebacks on A2A transactions and the relative success of the Nordic cross-border real-time payment system [P27](#).

A2A PAYMENTS FLOURISH ACROSS EUROPE

Simplicity, safety, interoperability and speed are driving adoption of A2A

A2A share of 2022 e-com transaction value



SPOTLIGHT ON POLAND'S LEADING ACCOUNT-TO-ACCOUNT PAYMENT METHOD – BLIK



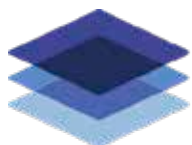
[BLIK](#) is an A2A mobile payment solution formed through strategic cooperation among six major Polish banks. Launched by [Polski Standard Płatności \(PSP\)](#) in February 2015, BLIK is currently supported by most Polish banks' mobile apps, in e-com and at POS, and for P2P payments, cash deposits and ATM withdrawals.

As of June 2022, BLIK was actively used by 11.3 million people, 3.3 million more than in 2021. In Q2 2022, BLIK users completed 292 million transactions (up 66% YoY). At the end of March 2022, the number of BLIK transactions was higher than the number of card transactions by 218%, [according to the National Bank of Poland](#).

BLIK generates revenues from transaction clearing fees paid by banks and settlement agents, as well as transaction authorization fees. BLIK allows users to make both online and in-store payments using BLIK Code and BLIK Cheque. BLIK also supports recurring payments, enabling users to make payments for subscriptions and bills. In September 2022, BLIK expanded its portfolio of services and launched a BNPL product, [BLIK Pay Later](#).

BLIK's popularity is due in large part to its simplicity. BLIK allows consumers to pay quickly and safely in online stores, without logging into their bank.

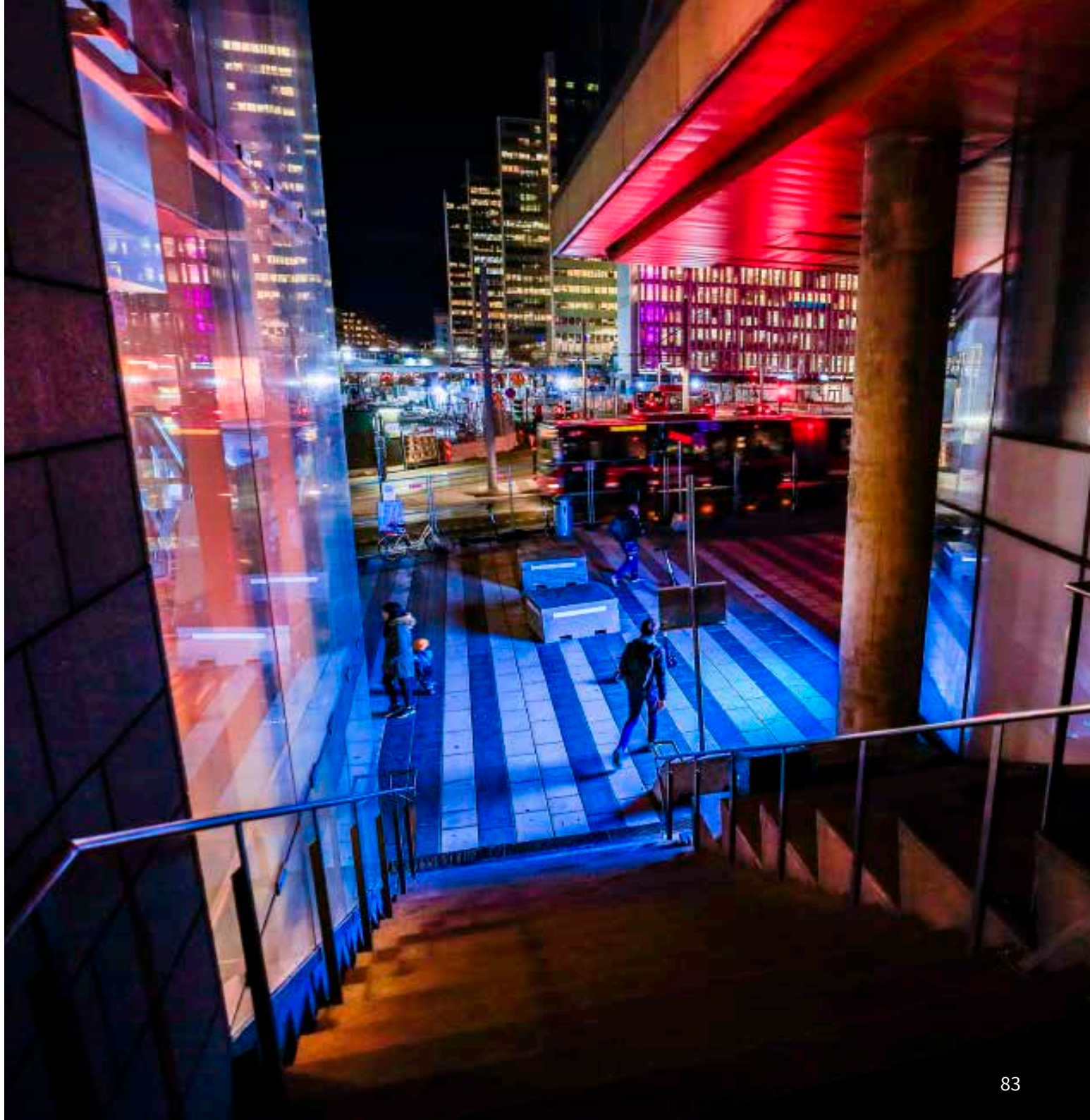




P27
Nordic
Payments

THE NORDICS' P27 AND THE FUTURE OF REGIONAL RTP COOPERATION

[P27](#), the Nordics' cross-border real-time A2A payment system, is pointing the way towards a future of regional payment collaboration. P27 combines eight payment clearing systems into one integrated real-time, instant-clearing, multi-currency payment platform, with the aim of improving payments for the 27 million inhabitants of the Nordics.





The P27 infrastructure is expected to deliver a wide range of benefits, including an excellent user experience with a simplified set of products and services (e.g., bill payments and digital wallets), lower transaction costs, data-driven services like anti-money laundering and fraud monitoring, and a single integration point that gives banks access to a broader set of services.

Currently banks from three countries have signed on: Denmark, Finland and Sweden. Though it's been delayed several times, P27 is [scheduled to launch in 2023](#).

CASH CONTINUES TO DECLINE AT POS

Cash use continues to decline rapidly in Europe, in line with global trends. Cash's regional share of POS transaction value dropped from 40% in 2019 to 22% in 2022. Cash is projected to decline at -5% CAGR, which would equate to a 15% share of regional POS transaction value by 2026.

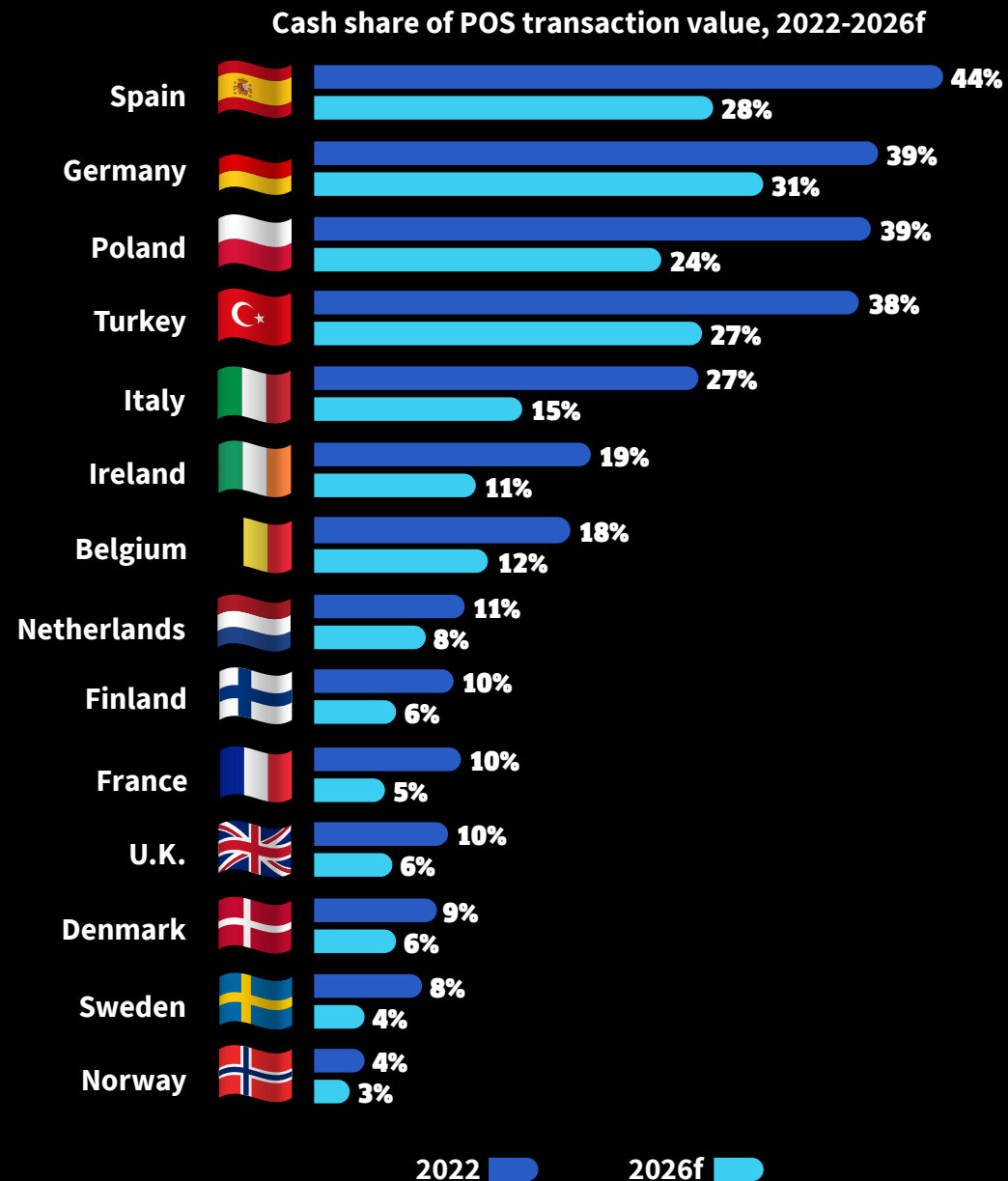


CASH USE CONTINUES DECLINE AT EUROPE'S POS

Cash use continues to fall at POS, though vast differences characterize the region

The sharp decline in cash usage accelerated in 2020 due to lockdowns and other restrictions on face-to-face commerce during the first year of the pandemic. The pandemic spurred rapid growth in contactless payments at POS in the form of digital wallets and contactless cards.

However, like A2A, there are vast differences in cash's share of POS value across Europe. Cash use is lowest in the Nordics, but it still retains significant shares in Spain, Germany, Poland and Turkey. Given the ample room for additional growth of digital payments, the most dramatic declines in cash's share of POS transaction value by 2026 are projected for Spain, Poland, Italy and Turkey.



EUROPE MARKET GUIDES

Payment insights that drive growth

BELGIUM



2022 payment highlights

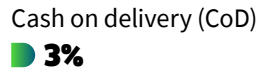
- Debit cards are the leading payment method in Belgium both in e-commerce and at POS. The Belgium-based scheme [Bancontact](#) is the overwhelming debit choice of Belgian consumers, representing 80% of card-based transaction value. In 2022, debit cards accounted for 30% of e-com and nearly half (49%) of POS transaction value.
- While debit cards have maintained their substantial leading position at POS, payment methods in e-com were more balanced. Account-to-account (A2A), buy now pay later (BNPL), credit cards and digital wallets joined debit cards in representing double-digit share of transaction value. The leading A2A payment method in Belgium is [Payconiq by Bancontact](#), an interoperable European mobile payment platform that's based on scanning QR codes.
- Belgian consumers are gravitating toward alternative credit such as BNPL and other forms of point-of-sale financing. Driven by brands such as [Riverty](#), [Klarna](#) and [PayPal](#), in 2022 BNPL accounted for 14% of e-com value, while POS financing represented 2% of POS transaction value.
- PayPal is among the leaders in Belgium's digital wallet market, alongside other popular international brands such as [Apple Pay](#) and [Google Wallet](#). We project that wallets' share of POS transaction value will more than double between 2021 (7%) and 2026 (15%).

Real-time payments spotlight

- Belgium's real-time payment infrastructure is based on SEPA Instant Credit Transfer ([SCT Inst](#)), the pan-European instant payment scheme. Launched in 2019, real-time payments in Belgium are managed by the [National Bank of Belgium](#) in conjunction with [CEC Belgium \(the Centre for Exchange and Clearing\)](#).
- The National Bank of Belgium serves as the primary intermediary for real-time payments in the country via the ECB's TARGET Instant Payment Settlement ([TIPS](#)), which is based on the SCT Inst scheme. TIPS is designed to complete secure transfer and settlement of funds between parties in ten seconds or less.
- A major Belgian bank, [KBC Group](#), is a participating member of the [European Payments Initiative \(EPI\)](#). Despite not gaining significant traction to date, [EPI's aim is to establish](#) "an account-to-account instant payment solution for all kinds of use cases, all through a wallet."

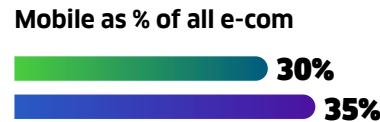
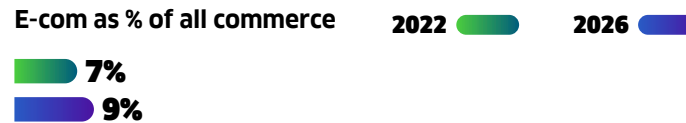
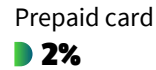
2022 e-com payment methods

Estimated share of transaction value*



2022 POS payment methods

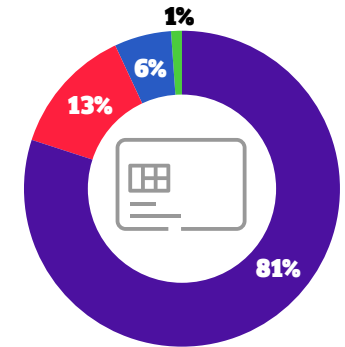
Estimated share of transaction value*



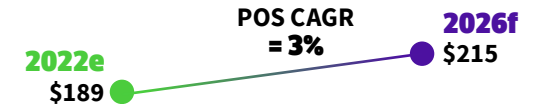
Popular alternative payment methods



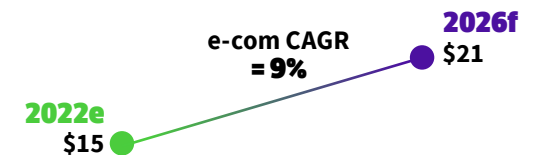
2021 card brand breakdowns (e-com and POS)



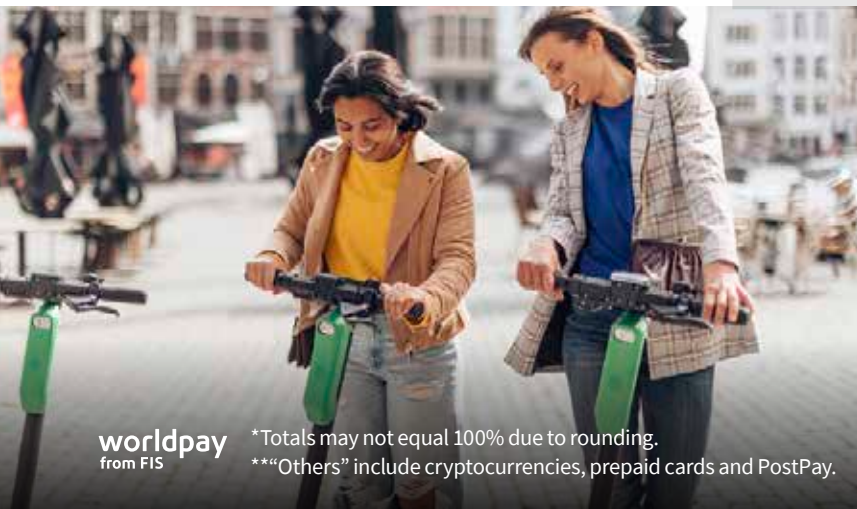
POS market size projections (US\$ Billions)



E-com market size projections (US\$ Billions)



e = estimate f = forecast



BELGIUM

DENMARK



2022 payment highlights

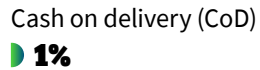
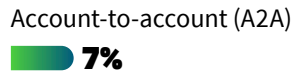
- Debit cards are an essential element in Denmark's payment landscape. They continued to account for an outright majority of POS transaction value in 2022 (63%), while representing 21% of e-com value. Local debit scheme [Dankort](#) accounted for approximately 69% of Denmark's card market in 2022, with cards issued in conjunction with leading international schemes (either Dankort/Visa or Dankort/Mastercard).
- 2022 saw an important milestone for Denmark's most popular mobile payments provider, [MobilePay](#). After clearing regulatory approval from the EU Commission, MobilePay [completed its merger](#) with the Norwegian digital payments provider [Vipps](#). The new group, [Vipps MobilePay](#), began operating in November 2022. The combined entity will serve 11 million users and 400,000 merchants.
- While MobilePay has dominated digital payments in Denmark to date, the newly combined Vipps MobilePay faces increasing competition in the wallet space from regional providers like [Nordea Wallet](#), as well as from global leaders Apple Pay, Google Wallet and [PayPal](#).
- Denmark features a vibrant market for alternative forms of credit. In 2022, buy now pay later accounted for 12% of e-com transaction value, while POS financing represented 2% of in-store value. Competitors in this substantial market include domestic provider [ViaBill](#), regional leaders such as [Riverty](#) (rebranded from AfterPay BV in 2022), and global leaders like [Klarna](#) and [PayPal](#).

Real-time payments spotlight

- Instant payments were introduced to the Danish payment system in 2014 via the express clearing system Straksclearing, which is owned by the [Danish Bankers Association](#). To participate, banks must be linked both to Straksclearing as well as Denmark's central bank payment real-time gross settlement system, [Kronos2](#). For individual consumers, use of the Straksclearing system takes place primarily within the [Vipps MobilePay](#) app.
- In January 2022, [Finance Denmark](#), Denmark's banking business association, [announced its intention](#) to use the regional Nordic payment platform [Project 27 \(P27\)](#) as the new national payment clearing house. A project of six of the Nordic's largest banks, P27 will enable real-time, batch, domestic and cross-border payments between and among individuals and businesses in Denmark, Finland and Sweden. As of this writing, [P27 was scheduled](#) to go live in 2023.

2022 e-com payment methods

Estimated share of transaction value*



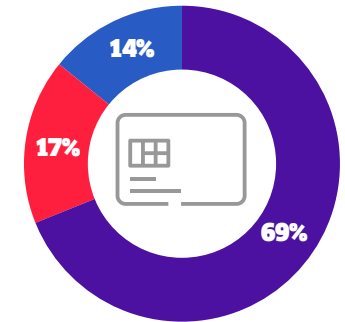
2022 POS payment methods

Estimated share of transaction value*



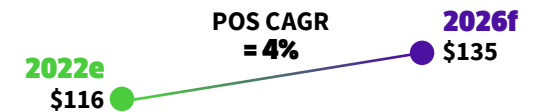
2021 card brand breakdowns

(e-com and POS)



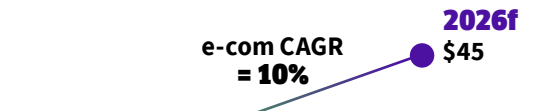
POS market size projections

(US\$ Billions)



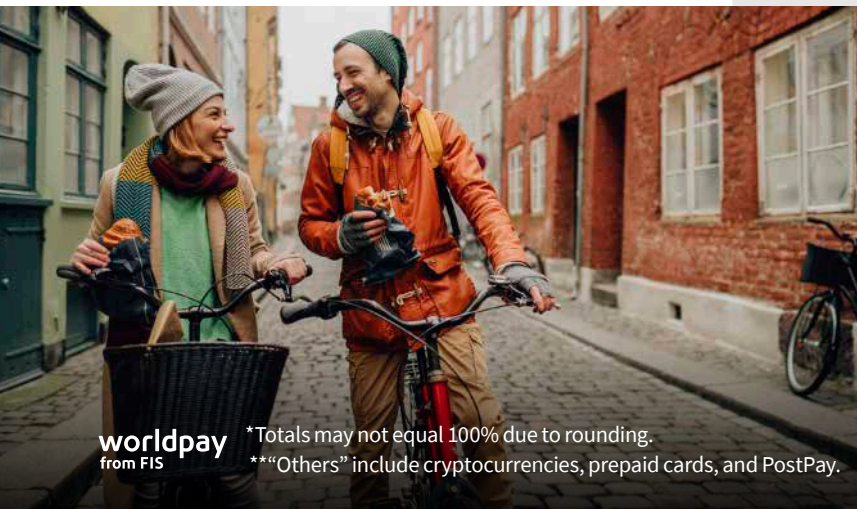
E-com market size projections

(US\$ Billions)



e=estimate f=forecast

DENMARK



E-com as % of all commerce 2022 2026



Mobile as % of all e-com



Popular alternative payment methods



FINLAND



2022 payment highlights

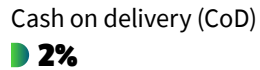
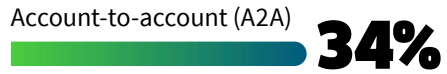
- The Finland payment market's most notable event in 2022 was Finnish payment leader [Pivo's](#) withdrawal from a proposed merger with Denmark's [MobilePay](#) and Norway's [Vipps](#). The merger was announced in June 2021 as an effort to better compete against international brands. [Pivo withdrew](#) over anti-competitive concerns raised by the EU Commission.
- Finnish consumers overwhelmingly prefer debit cards when shopping at POS; debit cards accounted for 62% of POS transaction value in 2022. This is consistent with the other Nordic countries, where debit cards have outright majority shares of POS value. In fact, Norway, Denmark, Finland, the Netherlands and Sweden have the highest rates of debit card use at POS of all the markets covered in GPR 2023.
- Account-to-account (A2A) payments are the leading e-commerce payment method in Finland, representing 34% of e-com transaction value in 2022. Finnish consumers prefer paying directly from their bank accounts via tools like [Siirto](#) and [Trustly](#). The forecast for A2A payments in Finland may strengthen even further in coming years with the long-awaited launch in 2023 of [P27](#), the pan-Nordic real-time payment system.
- Beyond A2A, e-com payment preferences are balanced across wallets, cards and buy now pay later (BNPL). Digital wallets register as the second leading preference, with 24% of e-com transaction value in 2022, while credit cards, debit cards and BNPL each accounted for 13%.

Real-time payments spotlight

- Finland supports two real-time payment systems, the domestic [Siirto](#) system and the European Payment Council's SEPA Instant Credit Transfer (SCT Inst). A third is on the horizon in 2023, [Project 27](#), or [P27](#).
- [Siirto](#) is a domestic real-time payment network. Launched in 2017, it allows consumers and business to make payments and intra-bank transfers with just a mobile phone number. Consumers can use the Siirto system to make payments to accounts within domestic banks [Nordea](#), [OP](#), [S-Bank](#) and [Bank of Åland](#). Individuals can make payments and transfer funds via popular apps including [Nordea Siirto](#), [OP-Mobil](#) and [Pivo](#).
- The European Payment Council's SEPA Instant Credit Transfer ([SCT Inst](#)) launched in Finland in 2018. SCT Inst complements the domestic Siirto system by facilitating payments between parties throughout the Single Euro Payment Area.
- [Project 27 \(P27\)](#) is a project of six of the Nordic's largest banks. It will enable real-time, batch, domestic and cross-border payments between and among individuals and businesses in Denmark, Finland and Sweden. As of this writing, P27 was scheduled to go live in 2023.

2022 e-com payment methods

Estimated share of transaction value*



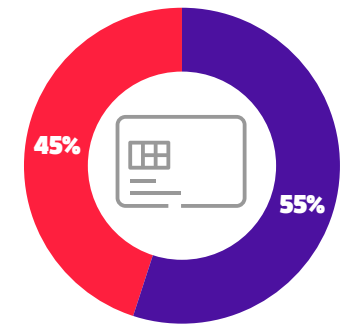
2022 POS payment methods

Estimated share of transaction value*



2021 card brand breakdowns

(e-com and POS)

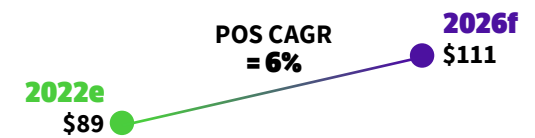


VISA

MASTERCARD

POS market size projections

(US\$ Billions)



E-com as % of all commerce 2022 2026



Mobile as % of all e-com

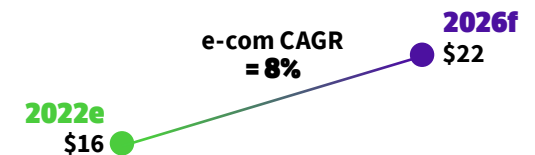


Popular alternative payment methods

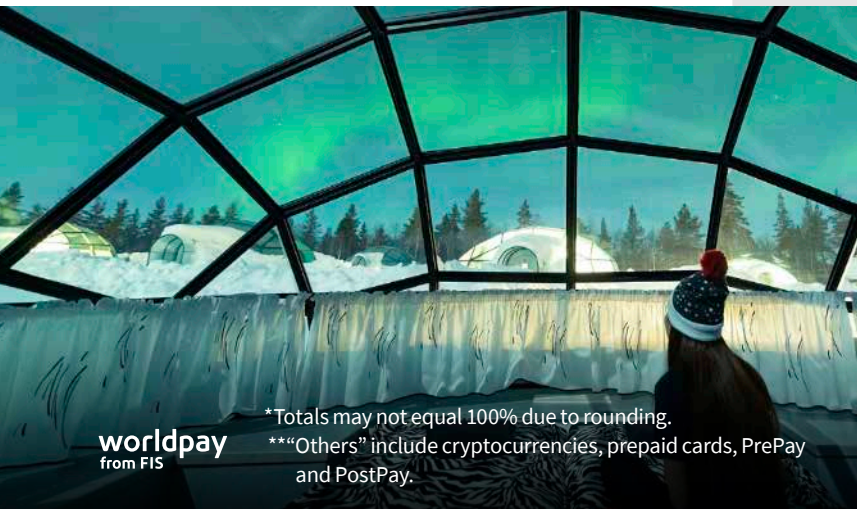


E-com market size projections

(US\$ Billions)



e = estimate f = forecast



FINLAND

*Totals may not equal 100% due to rounding.

**“Others” include cryptocurrencies, prepaid cards, PrePay and PostPay.

FRANCE

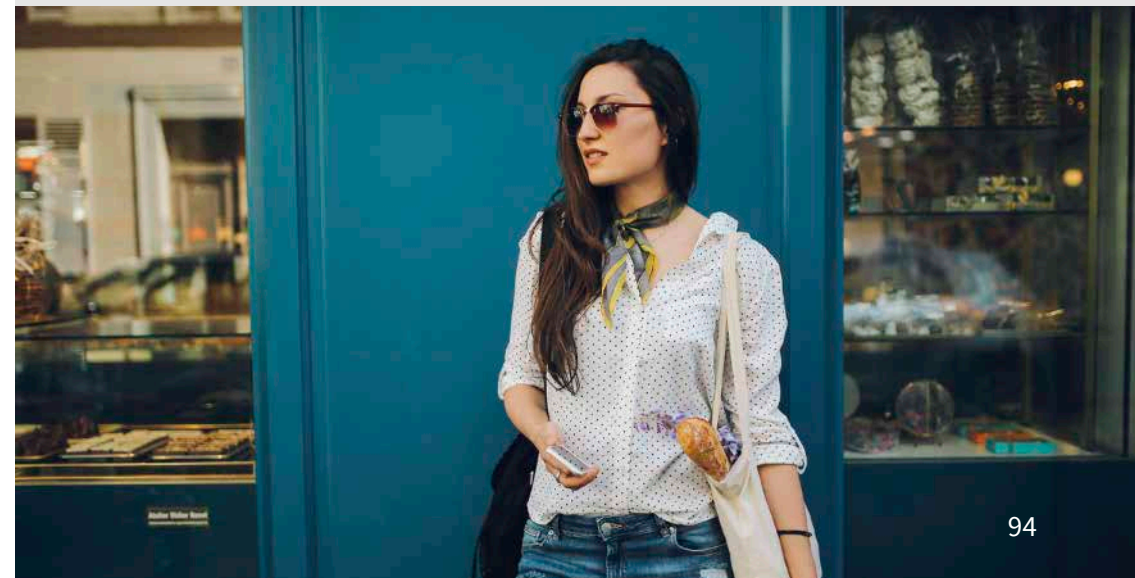


2022 payment highlights

- Whether shopping online or in stores, French consumers prefer to pay with cards. Credit cards remained the leading e-commerce payment method in 2022, with 34% share of transaction value, while debit cards accounted for an additional 18%. That preference is even more pronounced at POS, where debit cards represented 48% of POS spend and credit cards accounted for 31%. Most of that card transaction value (approximately 85%) is processed via France's domestic card scheme, [Cartes Bancaires](#), which is often co-branded with Mastercard or Visa.
- After dropping precipitously during the pandemic, the use of cash stabilized to account for 10% of POS transaction value in 2022, the same as in 2021. However, we forecast a slow but steady decline for cash, to the benefit of digital wallets. Wallets accounted for just 8% of POS spend in 2022 yet are forecast to grow their transaction value at 26% CAGR through 2026.
- Digital wallets continue their ascent in France's e-commerce market. In 2022, wallets accounted for 27% of e-com transaction value, up from 25% in 2021, solidifying their position as France's second-leading payment method online. One notable domestic wallet provider is the financial super app [Lydia](#), which [achieved unicorn status](#) in December 2021.

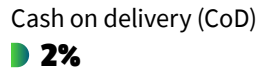
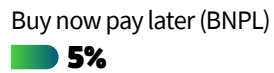
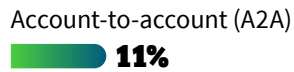
Real-time payments spotlight

- France does not currently have its own national real-time payment scheme. The European Payment Council's SEPA Instant Credit Transfer ([SCT Inst](#)) launched in France in 2018. SCT Inst services are managed in France by [Banque de France](#).
- French financial institutions rely on TARGET Instant Payment Settlement ([TIPS](#)) by the European Central Bank for round-the-clock transfers, while [STET](#) provides clearing and settlement mechanism.



2022 e-com payment methods

Estimated share of transaction value*



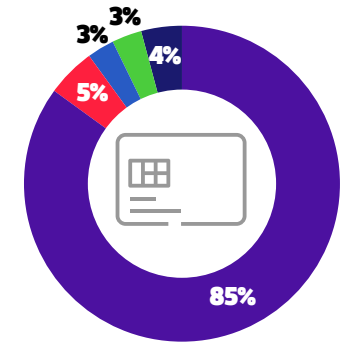
2022 POS payment methods

Estimated share of transaction value*



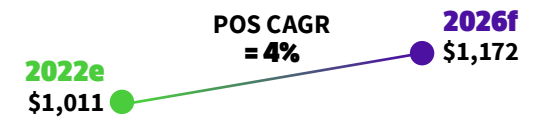
2021 card brand breakdowns

(e-com and POS)



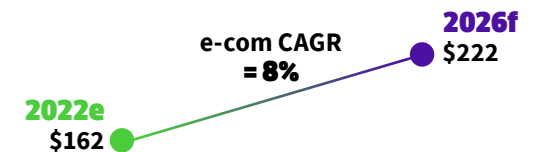
POS market size projections

(US\$ Billions)



E-com market size projections

(US\$ Billions)



e = estimate f = forecast

E-com as % of all commerce **2022** **2026**



Mobile as % of all e-com



Popular alternative payment methods



GERMANY



2022 payment highlights

- German consumers shun credit cards, but they gravitate more to buy now pay later (BNPL). In 2022, BNPL accounted for 23% of e-com transaction value, more than any market in GPR 2023 except Sweden. POS financing – including BNPL, retailer financing and bank financing – represented 2% of 2022 POS spend. [Klarna](#) and [PayPal](#) are leading BNPL providers in Germany, as are retailers and banks that provide point-of-sale financing directly to consumers.
- Cash's long reign of dominance at POS in Germany is coming to an end. Debit cards achieved parity with cash in 2022, with each accounting for 39% of POS spend. Although comparative laggards in adoption, digital wallets are growing fast at POS, accounting for 9% share of POS transaction value in 2022. Further gains are projected for wallets through 2026, mostly at the expense of cash.
- Digital wallets are far more popular among German consumers in e-commerce. Wallets became the leading online payment method in 2022, accounting for 29% of e-com spend and surpassing account-to-account (A2A) payments. Lacking a strong domestic wallet offering, German consumers turn to global brands such as [Apple Pay](#), [Google Wallet](#) and [PayPal](#).
- Despite losing their supremacy in online payments, A2A payments remain an important component of Germany's online payment landscape as both push payments and direct debits. Led by [SOFORT](#) (a Klarna brand), [Giropay](#) and [SEPA Direct Debit](#), A2A accounted for 27% of Germany's e-com transaction value in 2022.

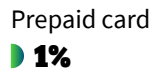
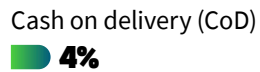
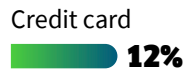
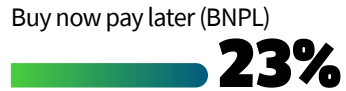
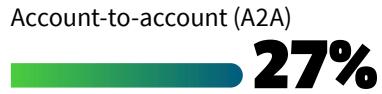
Real-time payments spotlight

- Germany does not currently have its own national real-time payment scheme. The European Payment Council's SEPA Instant Credit Transfer ([SCT Inst](#)) launched in Germany in 2017. SCT Inst services are managed in Germany by [EBA Clearing](#).
- German financial institutions rely on TARGET Instant Payment Settlement ([TIPS](#)) by the European Central Bank for round-the-clock real-time payment transfers, while EBA Clearing provides clearing and settlement mechanisms via its [RT1](#) system.



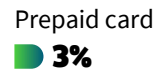
2022 e-com payment methods

Estimated share of transaction value*



2022 POS payment methods

Estimated share of transaction value*



E-com as % of all commerce **2022** **2026**



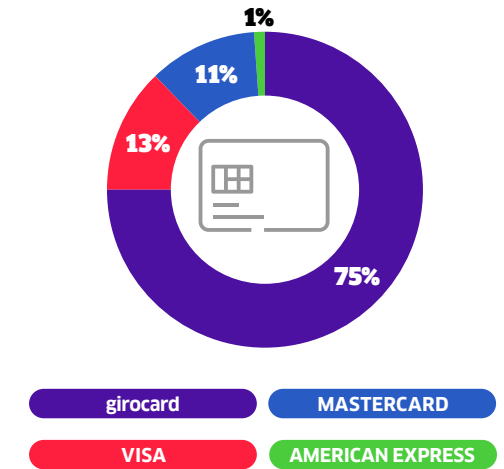
Mobile as % of all e-com



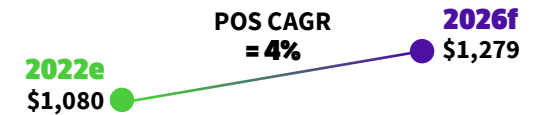
Popular alternative payment methods



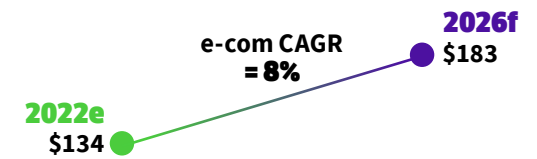
2021 card brand breakdowns (e-com and POS)



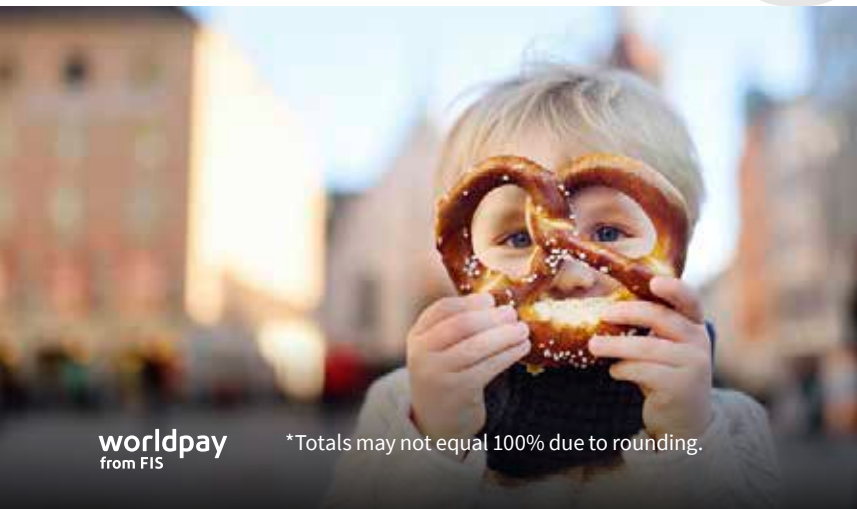
POS market size projections (US\$ Billions)



E-com market size projections (US\$ Billions)



e = estimate f = forecast



IRELAND



2022 payment highlights

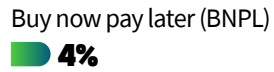
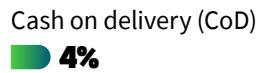
- Digital wallets are Ireland's leading online payment method, accounting for 29% of e-com transaction value in 2022. That same enthusiasm has yet to translate to POS, where wallets garnered just 7% of spend in 2022. However, we forecast significant growth of wallet transaction value at POS of 34% CAGR through 2026. Ireland's digital wallet landscape is rare in that it has no notable domestic wallet providers, but rather is dominated by global brands such as [Apple Pay](#), [Google Wallet](#) and [PayPal](#).
- One effort to create a domestic wallet is [Synch](#), a collaborative effort by a consortium of Ireland's major banks, including [AIB](#), [Bank of Ireland](#), [KBC](#) and [Permanent TSB](#). Their aim is to establish a collective mobile instant payment system that might help ward off competition from challenger banks such as [Revolut](#) and [N26](#). Ireland's [Competition and Consumer Protection Commission granted Synch regulatory clearance](#) for the launch of its payment tool in June 2022.
- Ireland's POS market is dominated by cards, which, combined, represented 72% of transaction value in 2022. Debit cards were the leading payment method at POS, accounting for 49% of transaction value in 2022; credit cards represented an additional 21% of POS value, while prepaid cards earned 2% share. Cash use in Ireland has fallen by half since prior to the pandemic, from 38% of POS transaction value in 2019 to just 19% in 2022.

Real-time payments spotlight

- Ireland does not currently have a domestic real-time payment system – nor is one in development. Several banks do offer real-time payment services via SEPA Instant Credit Transfer ([SCT Inst](#)) from the European Payments Council. As of January 2023, [Barclays Bank Ireland](#), [PFS Card Services Ireland](#), [SumUp](#), [Revolut](#) and [HSBC Ireland](#) offered SCT Inst services in Ireland via the [RT1](#) operator.
- In June 2022, the Irish Competition and Consumer Protection Commission (CCPC) [approved](#) a new instant mobile person-to-person (P2P) system called Synch, which was established by the main Irish retail banks to counter the threat from neobanks like Revolut and N26. However, there is no timeline yet for the launch of Synch's own app, which will be called [Yippay](#).

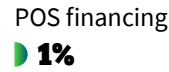
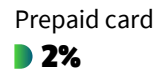
2022 e-com payment methods

Estimated share of transaction value*



2022 POS payment methods

Estimated share of transaction value*



E-com as % of all commerce **2022** **2026**



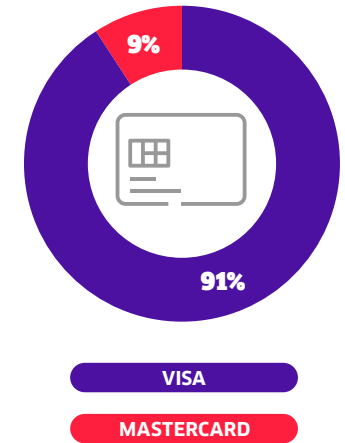
Mobile as % of all e-com



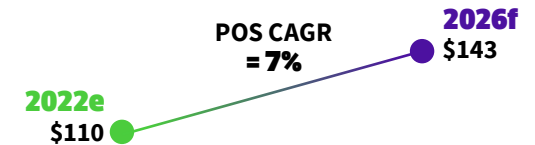
Popular alternative payment methods



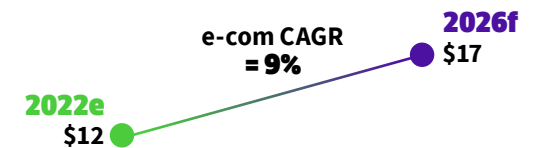
2021 card brand breakdowns (e-com and POS)



POS market size projections (US\$ Billions)



E-com market size projections (US\$ Billions)



e=estimate f=forecast 99



ITALY



2022 payment highlights

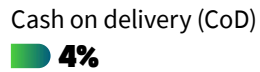
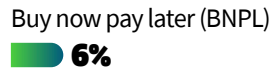
- Digital wallets remained the leading payment method online in 2022, channeling 35% of e-com transaction value. In addition to global brands [Apple Pay](#), [Amazon Pay](#), [Google Wallet](#) and [PayPal](#), [PostePay](#) – the wallet for the widely used prepaid cards – is a popular option. Wallets are gaining popularity at POS, jumping from 10% of POS transaction value in 2021 to 13% in 2022.
- Cash remains an important part of the Italian payment landscape, representing 27% of 2022 POS spend. The future of cash in Italy is uncertain: in 2022, Italian Prime Minister Giorgia Meloni sought to reverse previous Italian government policy by proposing regulations that would raise cash withdraw limits and allow merchants to [refuse card payments](#) for transactions of less than €60. That plan faces [resistance from both Italy's central bank and the EU](#).
- Italy has one of the largest prepaid card markets in the world. In 2022, prepaid cards represented 9% of e-com transaction value (highest among all markets in GPR 2023) and accounted for 12% of POS spend (second only behind Saudi Arabia). Called PostePay – as they are obtained at the Italian postal service, [Poste Italiane](#) – these physical and virtual cards are available in a [wide variety of categories](#) and help serve consumers [distrustful of the formal banking system as well as immigrants who are unbanked](#).

Real-time payments spotlight

- Real-time payment services in Italy are provided by SEPA Instant Credit Transfer ([SCT Inst](#)) from the European Payments Council; Italy does not have a domestic-based real-time payments service. The system went live in 2017 and is operated by [EBA CLEARING](#) and the [European Central Bank \(ECB\)](#) using both [RT1](#) and TARGET Instant Payment Settlement ([TIPS](#)).
- [Banca d'Italia](#) (Bank of Italy, Italy's central bank) – along with Deutsche Bundesbank, Banque de France and Banco de España – [operates and manages the TIPS instant payment service](#). As part of that function, Bank of Italy has conducted cross-border, cross-currency and cross-system instant payment tests with the Arab Regional Payments Clearing and Settlement Organization ([ARPCSO](#)). The [BUNA-TIPS experiment](#) is one of many promising collaborations toward international real-time payment system interoperability.

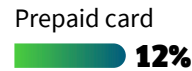
2022 e-com payment methods

Estimated share of transaction value*



2022 POS payment methods

Estimated share of transaction value*



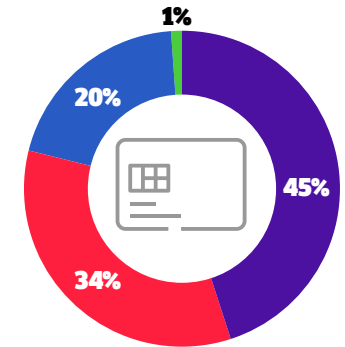
E-com as % of all commerce **2022 7%** **2026 8%**



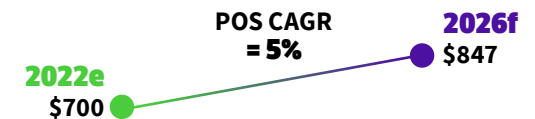
Popular alternative payment methods



2021 card brand breakdowns (e-com and POS)



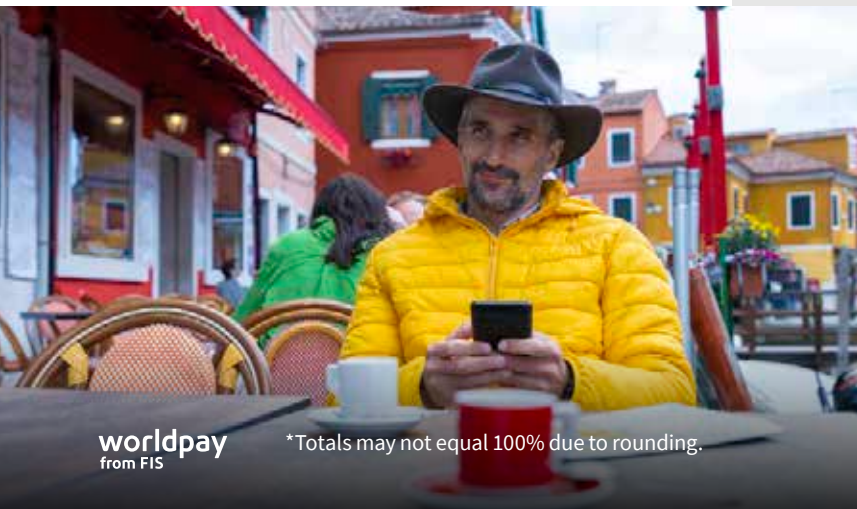
POS market size projections (US\$ Billions)



E-com market size projections (US\$ Billions)



e=estimate f=forecast 101



NETHERLANDS



2022 payment highlights

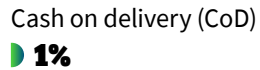
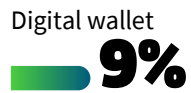
- The e-commerce payment market in the Netherlands is dominated by account-to-account (A2A) payments and – overwhelmingly – by a single brand: [iDeal](#). All major banks in the Netherlands are members of [Currence](#), which operates iDeal. iDeal is also increasingly available [via QR codes](#). A2A payments accounted for 62% of e-com transaction value in 2022.
- The only other payment method to achieve double-digit share in the Netherlands e-commerce market is buy now pay later (BNPL), which accounted for 13% of e-com transaction value in 2022. The two leading BNPL brands in the Netherlands are the global leader, [Klarna](#), and the domestic provider [Riverty](#). In 2022, Riverty rebranded from its former name – AfterPay – in part to avoid confusion with BNPL provider [Afterpay](#).
- At the Netherlands POS, cards are king, representing nearly three-quarters of POS spend. Debit cards far outpaced credit, accounting for 60% of transaction value in 2022 versus 12% for credit cards. We project that this balance of payments will remain steady through our forecast period.
- Given their preference for iDeal, Dutch consumers lag their counterparts in the adoption of digital wallets in e-com. Wallets accounted for only 9% of e-com spend (versus a European average of 29%) in 2022. Wallets are, however, making more of an impact at POS, where they accounted for 14% of POS spend in 2022 (versus a European average of 10%).

Real-time payments spotlight

- The Netherlands does not maintain a national real-time payments scheme but instead utilizes the pan-European SEPA Instant Credit Transfer ([SCT Inst](#)) system from the [European Payments Council](#). Real-time payments are administered by [EBA CLEARING](#) utilizing the TARGET Instant Payment Settlement ([TIPS](#)) as well as [RT1](#). The [vast majority of Dutch banks](#) (over 95%) facilitate real-time payments for their account holders.
- According to the [Dutch Payments Association](#), consideration will be made in 2023 for implementation of the European Payment Council's [SEPA Request-to-Pay \(SRTP\) 3.0](#) scheme rulebook, published in November 2022. The SRTP messaging standard seeks to enhance SEPA Credit Transfers (SCTs) real-time payment use cases, adding value to person-to-business (P2B), business-to-business (B2B) and person-to-person (P2P) payments.
- Businesses and consumers in the Netherlands enjoy a highly modernized payment system in addition to the real-time payment services offered via SCT Inst. Account-based payments in Netherlands are extremely popular among consumers, merchants and many banks, led by the online banking payment solution [iDEAL](#).

2022 e-com payment methods

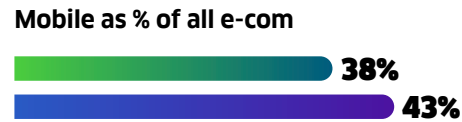
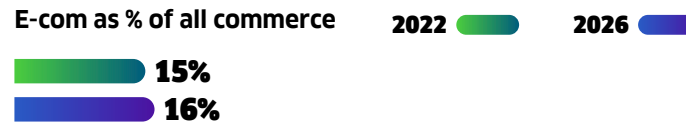
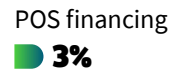
Estimated share of transaction value*



NETHERLANDS

2022 POS payment methods

Estimated share of transaction value*



Popular alternative payment methods



FIVERTY

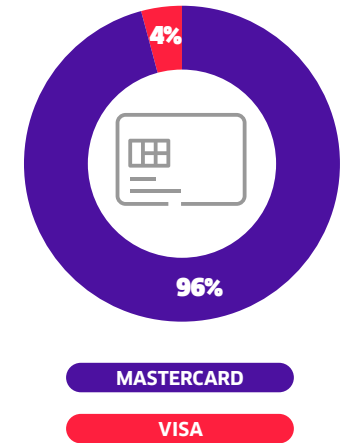


Klarna.



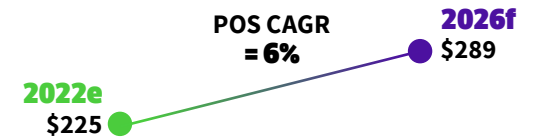
2021 card brand breakdowns

(e-com and POS)



POS market size projections

(US\$ Billions)

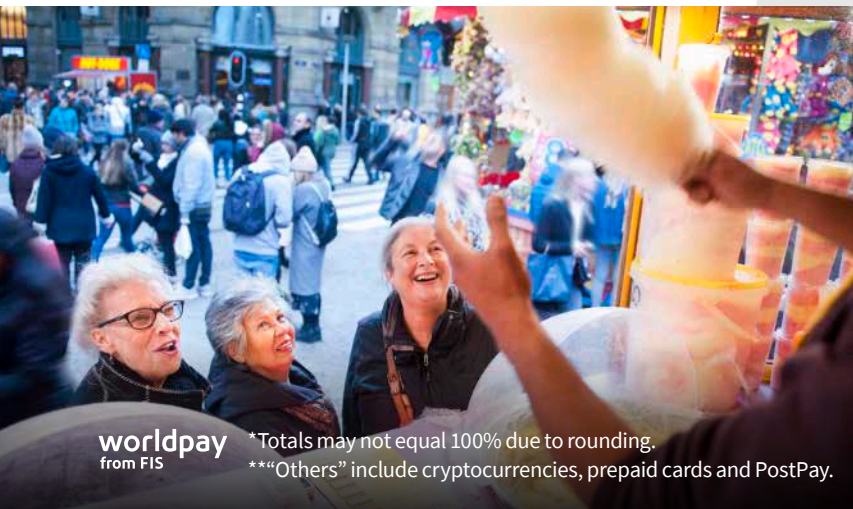


E-com market size projections

(US\$ Billions)



e=estimate f=forecast





2022 payment highlights

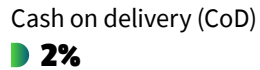
- Cards have a formidable grip on POS payments in Norway. In 2022, debit cards were the overwhelming choice for Norwegian consumers, accounting for 66% of transaction value, while credit cards represented an additional 15% share. Digital wallets continue to grow, rising to 11% of POS transaction value. Norway is the closest to becoming a “cashless society,” with just 4% share of POS value, the lowest rate of cash use among the markets covered in GPR 2023.
- Norway’s e-commerce payment market is remarkably balanced, with five payment methods accounting for at least 17% of transaction value in 2022. Credit cards led the way with 26% of transaction value in 2022, with debit cards earning 17% share. Norwegians have among the world’s highest rates of buy now pay later (BNPL) use with 18% of e-com transaction value, while digital wallets also earned 18% share in 2022.
- Account-to-account (A2A) payments are an important pillar of Norway’s payment market, accounting for 17% of e-com transaction value. 2022 saw an important milestone for Norway’s most popular A2A payments provider, [Vipps](#). After clearing regulatory approval from the EU Commission, Vipps [completed its merger](#) with the Danish digital payments provider [MobilePay](#). The new group, [Vipps MobilePay](#), began operating in November 2022. The combined entity will serve 11 million users and 400,000 merchants.

Real-time payments spotlight

- Real-time payments in Norway are performed with the [Straksbetalinger](#), commonly known as “Straks.” Straks is operated by [Bits](#), a financial infrastructure company owned by [Finance Norway](#) and directed by a consortium of Norwegian financial companies.
- The original Straks system was [beset by settlement risks](#) that inhibited full participation by Norwegian financial institutions. In 2020, a major system upgrade – Straks 2.0 – rectified those deficiencies and resulted in participation by all Norwegian banks. An updated version – [Straks 2.1](#) – incorporates the [ISO 20022](#) financial messaging standard.
- Most real-time payments in Norway are initiated from the [Vipps](#) mobile payment app. Vipps is now [Vipps MobilePay](#) as the result of the [October 2022 merger](#) between the two Nordic payment systems. Rooted in Straks infrastructure, Vipps overlay services include account balance query, bill payments via Vipps elnvoice, recurring payments, request to pay, QR code payments and split bill.

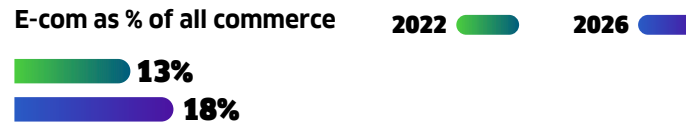
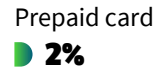
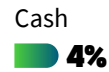
2022 e-com payment methods

Estimated share of transaction value*



2022 POS payment methods

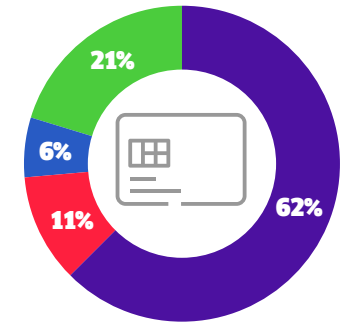
Estimated share of transaction value*



Popular alternative payment methods



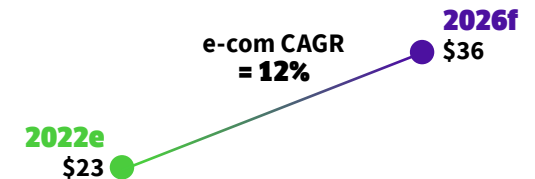
2021 card brand breakdowns (e-com and POS)



POS market size projections (US\$ Billions)

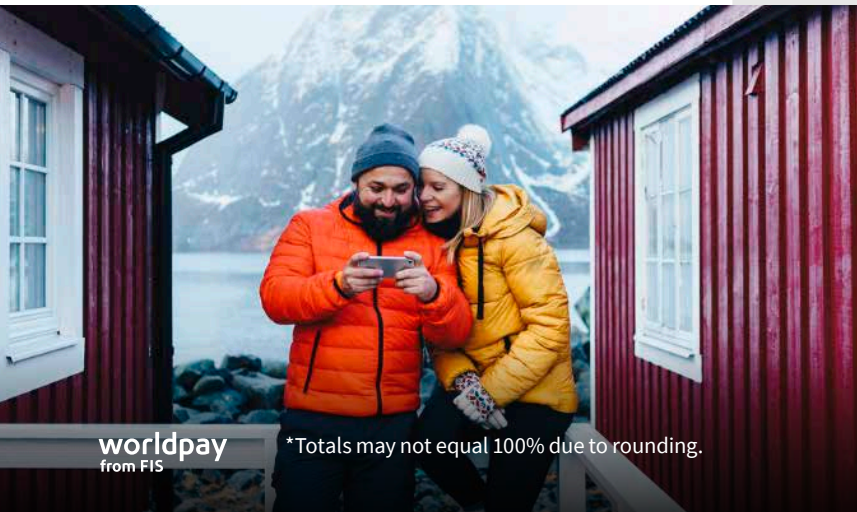


E-com market size projections (US\$ Billions)



e = estimate f = forecast

NORWAY





2022 payment highlights

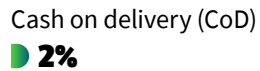
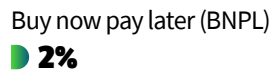
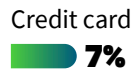
- The Polish e-commerce payments market is dominated by a single payment application: [BLIK](#). BLIK is administered by [Polski Standard Płatności \(PSP\)](#), a collaborative effort by six of Poland's biggest banks. Launched in 2015, [BLIK has grown](#) to support 12 million active users making 3.5 million daily transactions. BLIK has propelled Poland to the highest account-to-account (A2A) share of e-commerce of all the markets covered in GPR 2023. A2A accounted for 67% of e-com transaction value in 2022, up from 58% in 2021.
- Poland continues to have among Europe's highest rates of cash use, but that rate is declining rapidly. In 2022, cash represented 39% of POS transaction value; among the European countries in our survey, that is second only to Spain (which had 44%). Nevertheless, that marks a drop of half from a decade earlier; in 2012, cash dominated with an 82% share.
- Polish consumers are credit-averse compared to their European counterparts. In 2022, credit cards accounted for just 7% of e-com transaction value (compared to 24% for Europe as a whole) and 9% of POS spend (compared to 21% for Europe). However, buy now pay later (BNPL) has made inroads in Poland. Led by local provider [PayPo](#), the BNPL market may see a boost with the 2022 entrance of BLIK's [BLIK Pay Later](#) service.

Real-time payments spotlight

- Real-time payments in Poland are conducted primarily within the [Express Elixir](#) system, operated by Poland's payment clearing system, Krajowa Izba Rozliczeniowa ([KIR](#)). Launched in 2012, Express Elixir is the second oldest real-time payment systems in Europe (after the U.K.'s [Faster Payment System](#), which launched in 2008).
- Express Elixir's most common use case is that it facilitates person-to-person (P2P) payments made within Poland's popular consumer payment application, [BLIK](#). Express Elixir operates 24/7/365, and users can make P2P payments using a phone number alias. The system supports a wide variety of use cases beyond P2P, including business-to-business (B2B), person-to-business (P2B), person-to-government (P2G) and business-to-government (B2G).
- Express Elixir achieved a milestone on September 9, 2022 by [exceeding one million transactions in a single day](#) for the first time, representing PLN 858 million, or approximately \$198 million. Since its launch in June 2012, the system has facilitated [nearly 310 million transactions](#) worth over PLN 330 billion (\$76 billion).
- A second real-time payment service in Poland is [BlueCash](#), operated by [Blue Media](#). BlueCash claims to have 880,000 daily users, connect to over 100 Polish banks and execute approximately 6.2 million instant transfers per year.

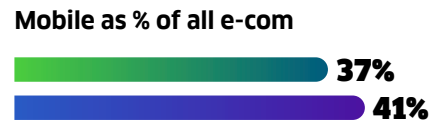
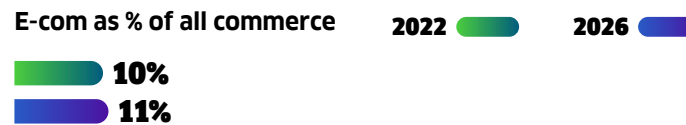
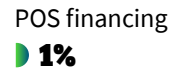
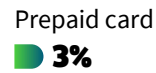
2022 e-com payment methods

Estimated share of transaction value*



2022 POS payment methods

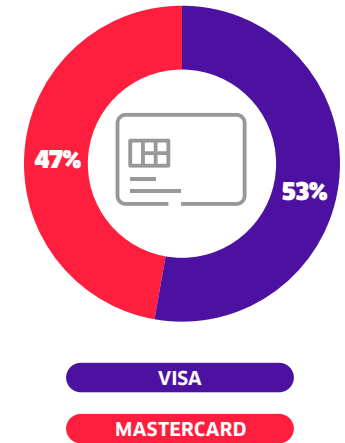
Estimated share of transaction value*



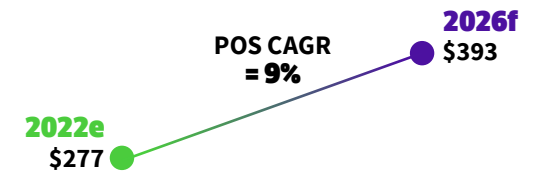
Popular alternative payment methods



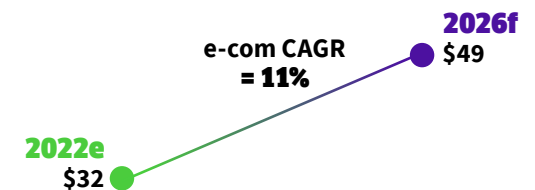
2021 card brand breakdowns (e-com and POS)



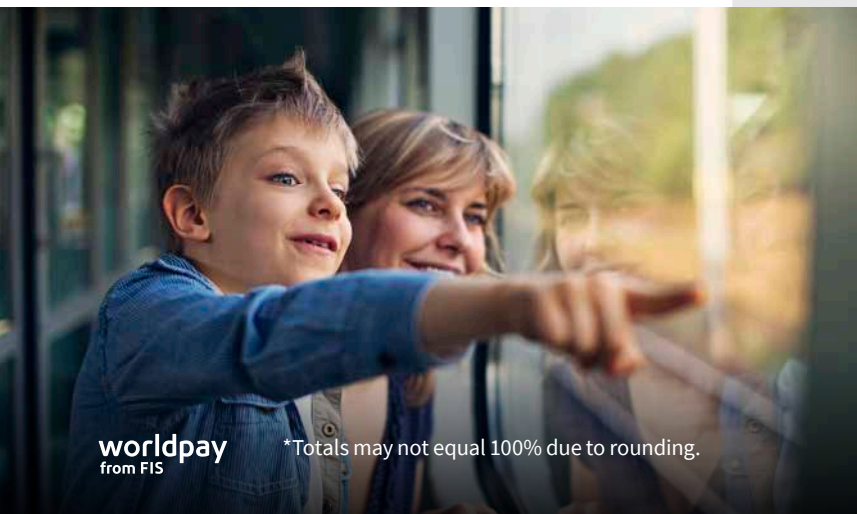
POS market size projections (US\$ Billions)



E-com market size projections (US\$ Billions)



e=estimate f=forecast 107



SPAIN



2022 payment highlights

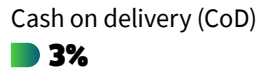
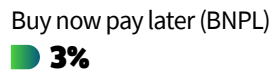
- Spanish consumers are holding on to cash. Accounting for 44% of POS transaction value in 2022, cash remained the leading payment method in Spain, representing the highest rate of cash use among the European markets covered in GPR 2023. Cards accounted for the majority of non-cash payments in-store, with debit cards representing 25% of POS transaction value and credit cards 21%.
- Digital wallets are the leading payment method among Spanish consumers online, accounting for 31% of e-com transaction value in 2022. Wallets have been slower to catch on in-store, representing just 8% of POS spend in 2022. Popular wallets among Spanish consumers include those from large domestic banks ([BBVA Wallet](#), [CaixaBankNow](#)) and global fintech brands ([Amazon Pay](#), [Apple Pay](#), [Google Wallet](#) and [PayPal](#)).
- Account-to-account (A2A) payments are taking off in Spain, principally due to the success of [Bizum](#). Created as a collaboration by major Spanish banks, Bizum was launched in 2016 as a person-to-person (P2P) payment service. Built on the [SEPA Instant Credit Transfer](#) (SCT Inst) standard, Bizum branched out in 2019 to include person-to-business (P2B) payments in e-commerce. A2A payments accounted for 18% of Spain's e-com transaction value in 2022. In 2020, Bizum [expanded into in-person payments](#) via QR code.

Real-time payments spotlight

- Spain supports two parallel real-time payment schemes, [Bizum](#) and the [CICLOM Platform](#). Launched in 2016, Bizum is [owned](#) and operated by a consortium of 23 Spanish banks. [Iberpay](#) manages Spain's national payment system ([SNCE](#)) through its platform, CICLOM. Bizum and CICLOM are both based on the European Payment Council's SEPA Instant Credit Transfer ([SCT Inst](#)) standard.
- Bizum began as a person-to-person (P2P) payment application. While P2P is still the [primary use case](#), Bizum can now be used for person-to-business (P2B) payments in [e-commerce](#) and at the point of sale via QR code. Bizum uses mobile phone numbers as an account proxy and transactions are initiated via a consumer's mobile banking app. As of January 2023, Bizum boasted over 22 million active users, who have made over 1.5 billion transactions. Bizum can be used for account-to-account (A2A) payments in over 42,000 e-commerce shops.
- Iberpay's CICLOM platform provides the infrastructure for the entire Spanish payment system, including Bizum. CICLOM connects the Spanish banking system to the rest of Europe via [EBA Clearing's](#) RT1 service and to the European Central Bank's TARGET Instant Payment Settlement ([TIPS](#)).

2022 e-com payment methods

Estimated share of transaction value*



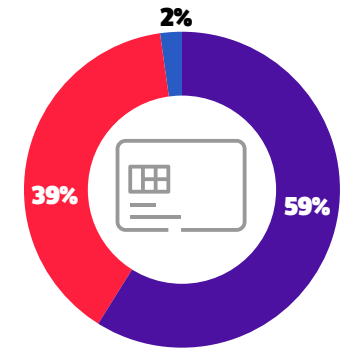
2022 POS payment methods

Estimated share of transaction value*



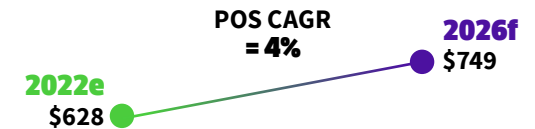
2021 card brand breakdowns

(e-com and POS)



POS market size projections

(US\$ Billions)



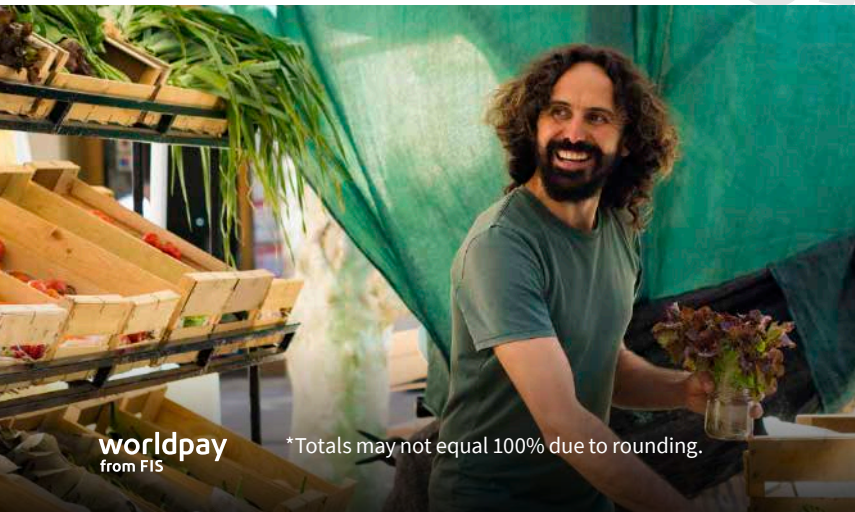
E-com market size projections

(US\$ Billions)



e=estimate f=forecast

SPAIN



E-com as % of all commerce 2022 2026



Mobile as % of all e-com



Popular alternative payment methods

bizum PayPal Aplazame seQura

amazon pay Apple Pay Google Wallet

SWEDEN



2022 payment highlights

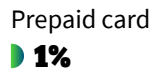
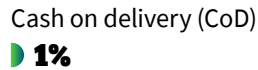
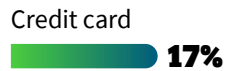
- Swedish consumers gravitate to buy now pay later (BNPL) unlike in any other market. BNPL commanded 24% of Sweden's e-com transaction value in 2022, the highest rate of any market covered in GPR 2023 and the leading e-com payment method in Sweden. POS financing – inclusive of BNPL – represented 5% of in-store spend in 2022. A majority of that value was transacted via Sweden's own global leader in the BNPL space, [Klarna](#). Klarna was cited as the BNPL provider of choice by 65% of Swedish BNPL users in our 2022 survey.
- In store, Swedish consumers prefer cards as their primary payment method. Debit cards accounted for an outright majority (52%) of in-store POS transaction value in 2022, with credit cards representing an additional 20% of spend. Cash held steady at 8% of POS spend in 2022, though we anticipate that it will continue to fall at -11% CAGR through 2026.
- Account-to-account (A2A) payments are an important part of Sweden's payment market ecosystem, accounting for 20% of e-com transaction value in 2022. A2A payments are done primarily via [Swish](#), a mobile payment app that links to consumers' bank accounts. Launched in 2012, Swish is a cooperative effort among [Danske Bank](#), [Handelsbanken](#), [Länsförsäkringar](#), [Nordea](#), [SEB](#), [Swedbank](#) and [Sveriges Riksbank](#), Sweden's central bank.

Real-time payments spotlight

- Launched in 2012, [Betalingar i realtid \(BiR\)](#) – Swedish for real-time payments – is operated by [Bankgirot](#), a private payment clearing system owned by a conglomerate of Swedish banks. Bankgirot administers [Swish](#), the popular account-to-account (A2A) payment application. The payment solution relies on Swish for initiating and reporting payments and BiR as the real-time payment and settlement platform. The system facilitates person-to-person (P2P) payments, person-to-business (P2B) payments in e-commerce and at POS via QR code, business-to-person (B2P) payouts and person-to-government (P2G) payments, including taxes.
- [RIX-INST](#) is a project of [Riksbank](#), Sweden's central bank. Launched in May 2022, RIX-INST utilizes the ECB's TARGET Instant Payment Settlement ([TIPS](#)). Riksbank manages two settlement services: RIX-RTGS for the settlement of large-value payments between banks and RIX-INST for the settlement of instant payments. In December 2022, [Riksbank announced](#) that beginning in 2023, Swish payments will be settled in RIX-INST.
- [Project 27 \(P27\)](#) is a project of six of the Nordic's largest banks, including Sweden-based [SEB](#) and [Swedbank](#). P27 will enable real-time, batch, domestic and cross-border payments between and among individuals and businesses in Denmark, Finland and Sweden. As of this writing, [P27 was scheduled](#) to go live in 2023.

2022 e-com payment methods

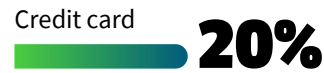
Estimated share of transaction value*



SWEDEN

2022 POS payment methods

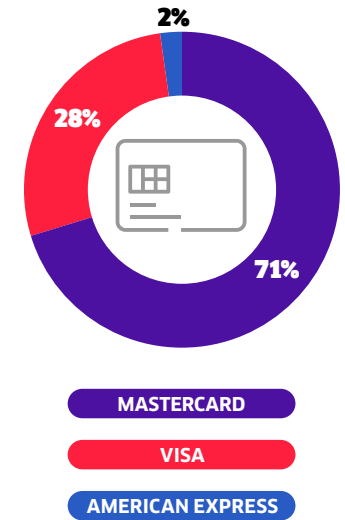
Estimated share of transaction value*



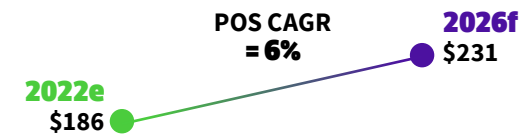
Popular alternative payment methods



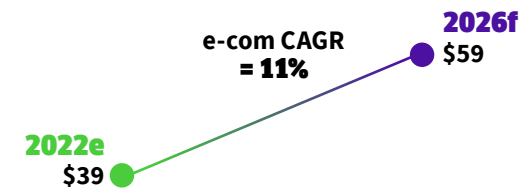
2021 card brand breakdowns (e-com and POS)



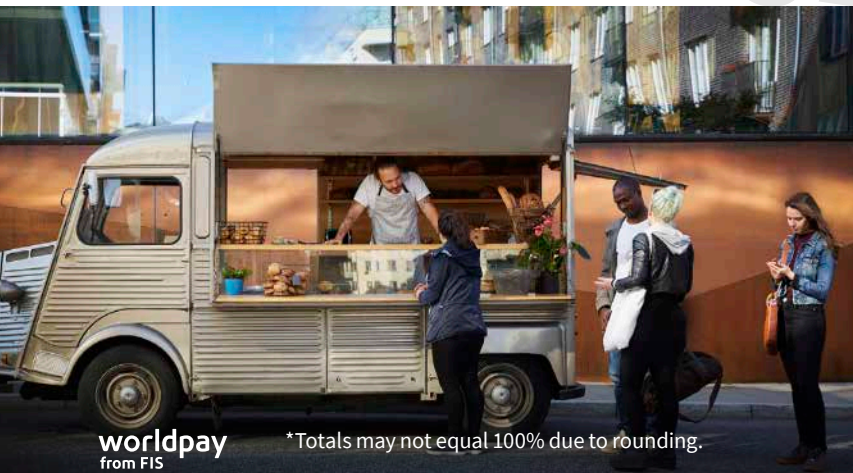
POS market size projections (US\$ Billions)



E-com market size projections (US\$ Billions)



e = estimate f = forecast 111



TURKEY

2022 payment highlights

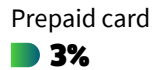
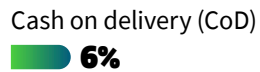
- Cash's long reign of dominance as Turkey's leading payment method at the point of sale came to an end in 2022. Cash's share of POS transaction value – registering 70% as recently as 2018 – fell to 38% in 2022, putting it behind credit cards for the top slot.
- The popularity of credit cards among Turkish consumers continues, and they are now the leading payment method both in e-commerce and at POS. Led by issuers such [Akbank](#), [Garanti BBVA](#), [İşbank](#), [QNB Finansbank](#) and [Yapı Kredi](#), credit cards accounted for 42% of POS and 53% of e-com transaction value in 2022. Debit cards represented an additional 12% of e-com and 10% of POS spend.
- Digital wallets continued their growth trajectory in Turkey, albeit from a comparatively low volume. In 2022, digital wallets' share of e-com transaction value rose by 50% over 2021, from 6% to 9%. Yet that 9% still represented a tie (with the Netherlands) for the lowest wallet share of e-com transaction value among markets covered in GPR 2023. Wallets also earned 9% of POS transaction value in 2022. This is among the lowest in the world, though not at the bottom (which was 7%, shared by Ireland and South Africa). Among Turkish consumers who use wallets, popular brands include [BKM Express](#), [Maximum Mobil](#), [Papara](#) and [Paycell](#).

Real-time payments spotlight

- Turkey supports two real-time payment systems, both operated by Central Bank of the Republic of Turkey ([CBRT](#)). The Retail Payment System (RPS) was launched in 2013. [Fonların Anlık ve Sürekli Transferi \(FAST\)](#), or Instant and Continuous Transfer of Funds, was launched in 2021.
- Though ostensibly a real-time system, RPS transfers are not conducted 24/7 but rather can be settled only during banking hours. RPS is designed for low-value transactions. [As of December 2021](#), the average daily volume of RPS was 4 million, while the peak daily volume of transactions was 10 million.
- The FAST system is designed to overcome limitations of RPS, with 24/7 availability [upon launch](#) in January 2021. FAST facilitates alias/proxy payments via its Easy Addressing System, operated by [BKM](#), allowing users to initiate payments by using mobile phone numbers or e-mail addresses. FAST provides instant notification of transaction status details to sender and recipient. The [TR QR Code](#) allows FAST payments via e-commerce sites and at the point of sale.

2022 e-com payment methods

Estimated share of transaction value*

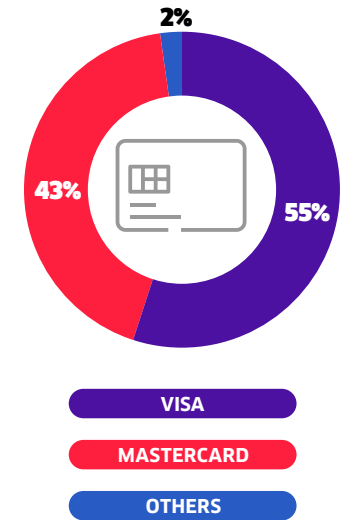


2022 POS payment methods

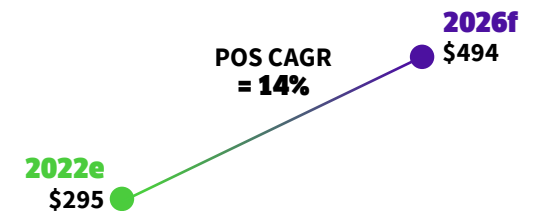
Estimated share of transaction value*



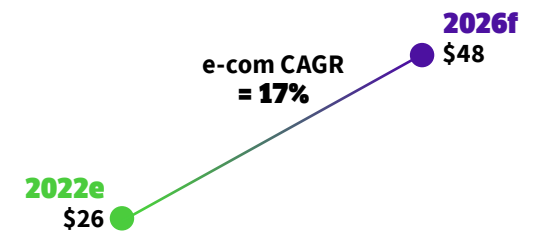
2021 card brand breakdowns (e-com and POS)



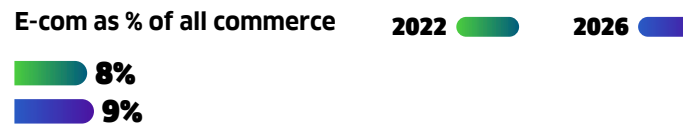
POS market size projections (US\$ Billions)



E-com market size projections (US\$ Billions)



e = estimate f = forecast 113

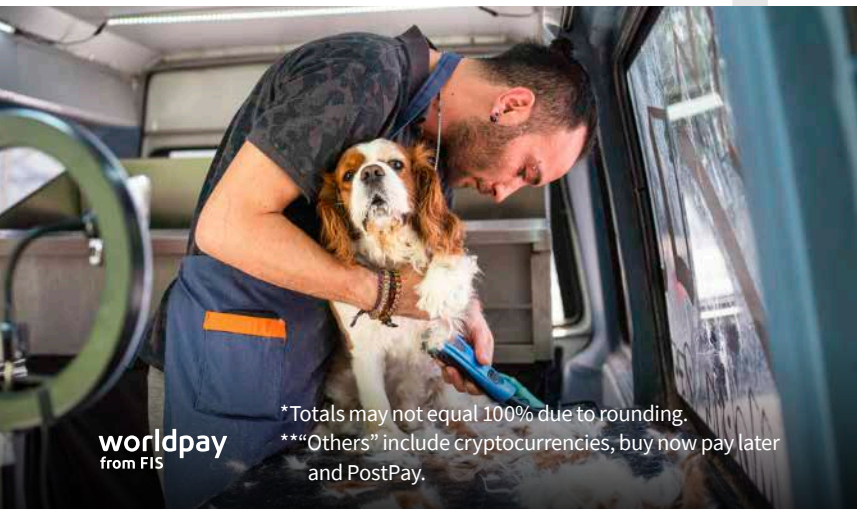


Popular alternative payment methods



*Totals may not equal 100% due to rounding.

**"Others" include cryptocurrencies, buy now pay later and PostPay.





2022 payment highlights

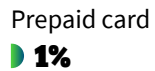
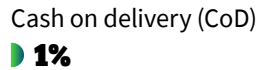
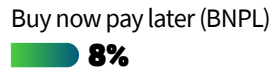
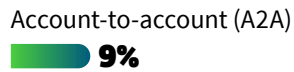
- Consumers in the U.K. prefer to pay with cards when shopping in-store, with cards combining for more than three-quarters of spend. In 2022, debit cards remained the leading payment method at POS, accounting for 47% of POS transaction value, while credit cards contributed 29%.
- The rate of cash use in the U.K. has fallen by more than half since prior to the pandemic, from 21% of POS transaction value in 2019 to 10% in 2022. While cash continues to play an important role on the high street, that role is waning. We project that cash use will see further declines of -9% CAGR through 2026.
- That spend has shifted primarily to digital wallets, which have more than doubled their share of POS spend, from 4% in 2019 to 10% in 2022. We project that wallets will see significant growth in POS transaction value of 25% CAGR through 2026. Digital wallets are already the leading payment method among U.K. consumers shopping online. Wallets accounted for 35% of e-com transaction value in 2022, up from 32% in 2021.
- U.K. consumers continue to gravitate to buy now pay later (BNPL). BNPL accounted for 8% of e-com spend in 2022, up from 6% in 2021. Already an attractive option for consumers and merchants alike, the cost-of-living crisis may be [driving consumers to seek alternative credit via BNPL](#). In June 2022, the U.K. [government laid out plans](#) to strengthen BNPL regulation.

Real-time payments spotlight

- Real-time payments in the U.K. take place within the [Faster Payment System](#). Launched in 2008, the Faster Payment System is operated by [Pay.UK](#), which also serves as the standards body for the U.K.'s retail interbank payment systems.
- The Faster Payment System [continues to grow](#) in both volume and transaction value: the system processed over one billion transactions in Q3 2022 (a 14% increase over Q3 2021), worth £840 billion (approximately \$1.04 trillion), a 26% increase over Q3 2021. In February 2022, the Faster Payment System increased the transaction limit four-fold from £250,000 to £1 million. New overlay services added to the system in recent years include [confirmation of payee](#) and [request to pay](#).
- The next generation of real-time payment systems in the U.K. is being built under the auspices of the New Payments Architecture ([NPA](#)). Critically, the NPA will include the [ISO 20022](#) financial messaging standard and will also allow third parties to develop overlay services. During 2023, Pay.UK will develop a [new rulebook](#) for the NPA, with a “lightweight” approach that is easier to use and understand than existing documentation.

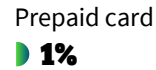
2022 e-com payment methods

Estimated share of transaction value*



2022 POS payment methods

Estimated share of transaction value*



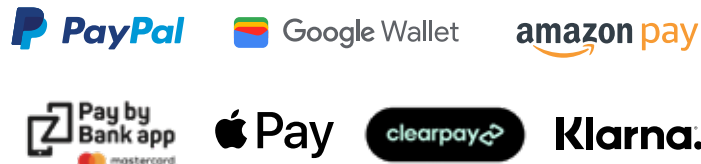
E-com as % of all commerce **2022** **2026**



Mobile as % of all e-com

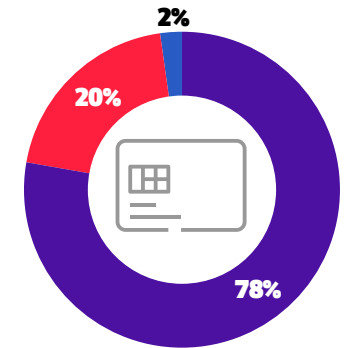


Popular alternative payment methods



2021 card brand breakdowns

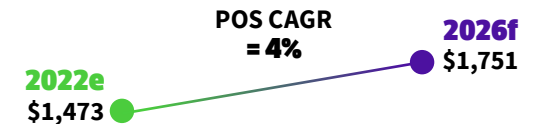
(e-com and POS)



- VISA
- MASTERCARD
- OTHERS

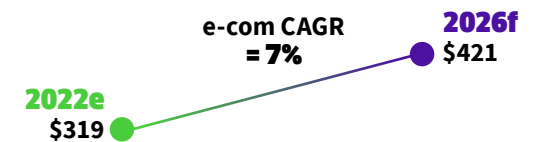
POS market size projections

(US\$ Billions)



E-com market size projections

(US\$ Billions)



e=estimate f=forecast



LATIN AMERICA PAYMENT INSIGHTS

Payment insights that drive growth

HOW LATIN AMERICAN CONSUMERS PAY TODAY

GPR 2023's coverage of Latin America consists of [Argentina](#), [Brazil](#), [Chile](#), [Colombia](#), [Mexico](#) and [Peru](#).

1 Mobile commerce continues to fuel e-com growth

- M-com is driving double-digit e-com growth in all LATAM markets

2 A2A payments see dramatic growth

- A2A payments grow, inspired by the example of Brazil's Pix system

3 The twilight of credit card dominance

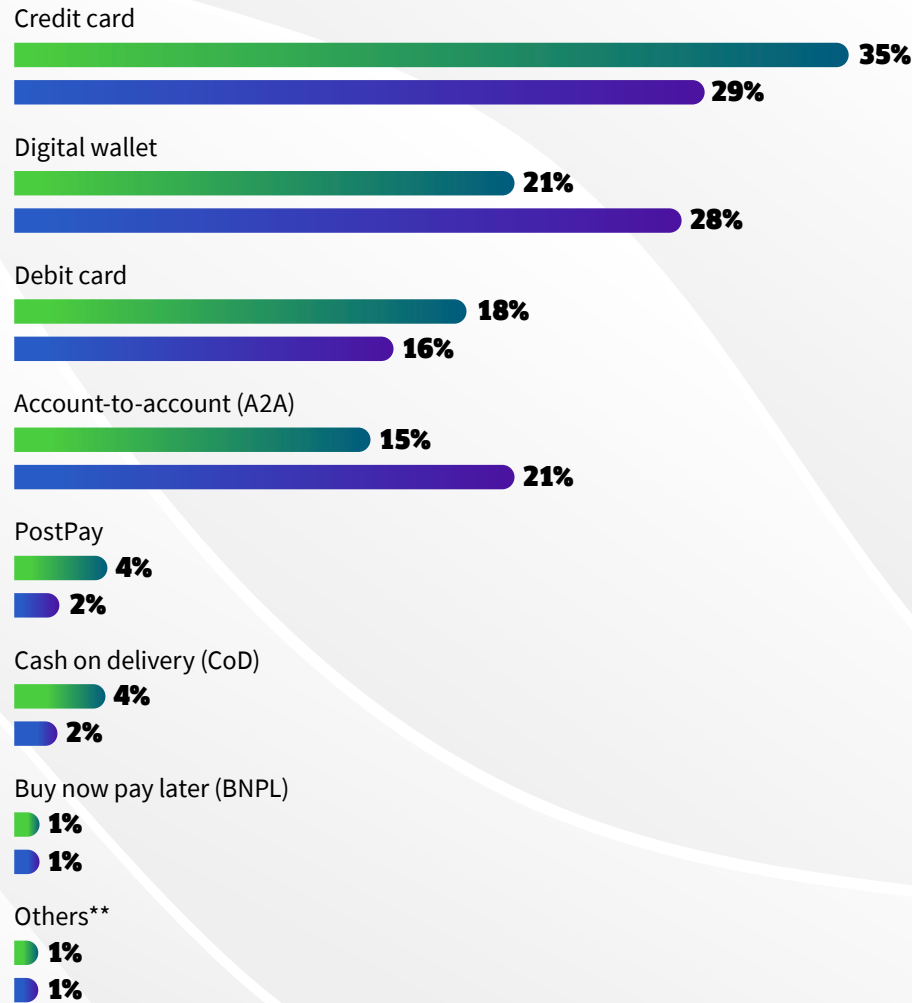
- Credit cards remain the leader in e-com payments but are slowly losing share to APMs like A2A and digital wallets

4 Mobile payments are surging as cash declines

- Since 2018, cash use has fallen by nearly half as digital wallets have grown four-fold

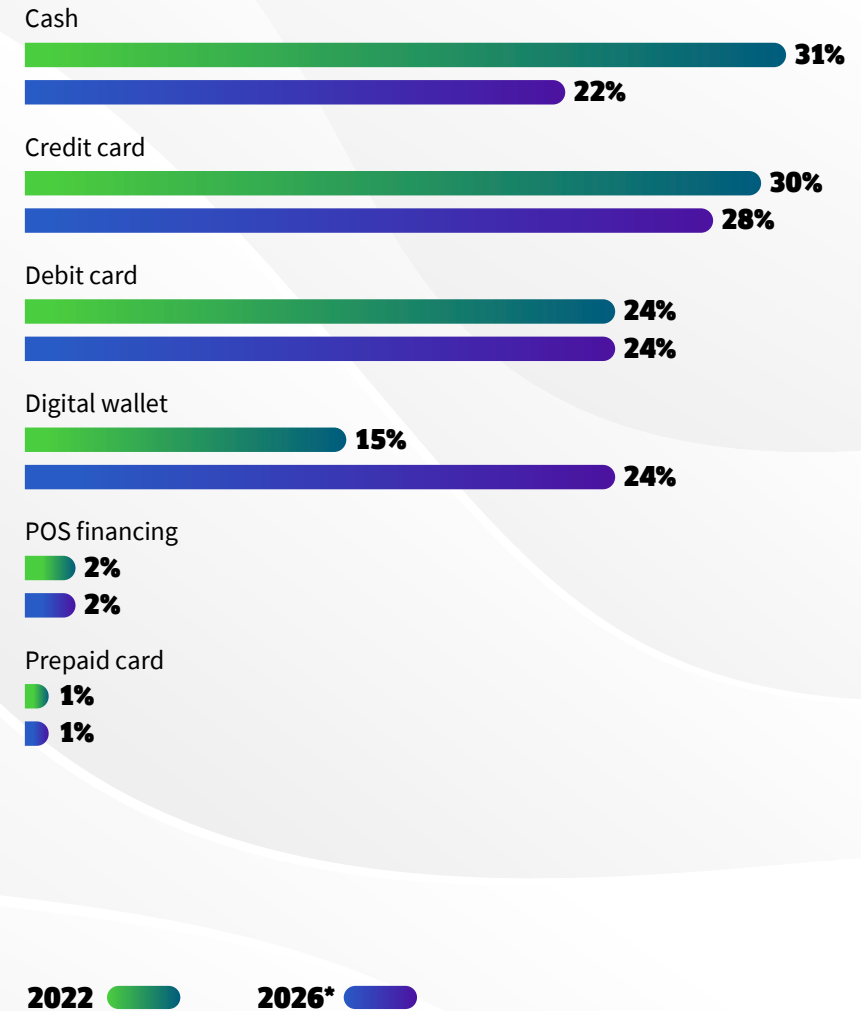
LATAM e-com payment methods

Share of transaction value, 2022-2026



LATAM POS payment methods

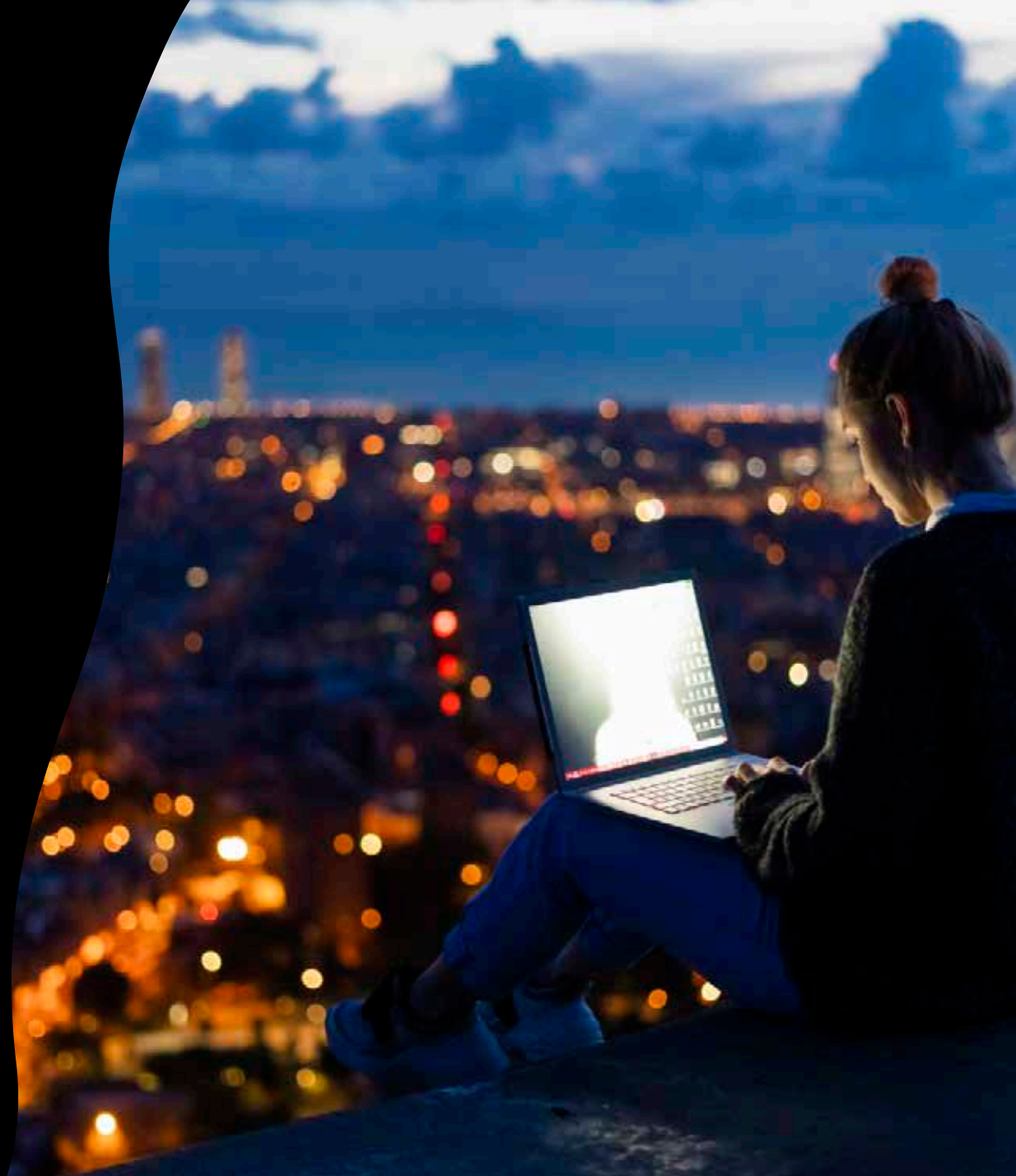
Share of transaction value, 2022-2026



*Forecast
 **“Others” include cryptocurrencies, prepaid cards and PrePay.
 Totals may not equal 100% due to rounding.

MOBILE COMMERCE FUELS LATAM'S E-COM GROWTH

If you're an e-commerce merchant seeking expansion to new high-growth markets, look no further than Latin America. LATAM's regional e-com market grew 19% YoY from 2021-2022, and it's projected to grow at 13% CAGR through 2026. While that represents a minor downshift from the even more dramatic growth rates of 2018-2021, regional e-com transaction value is set to nearly double between 2021 and 2026, when we project it will reach \$256 billion.



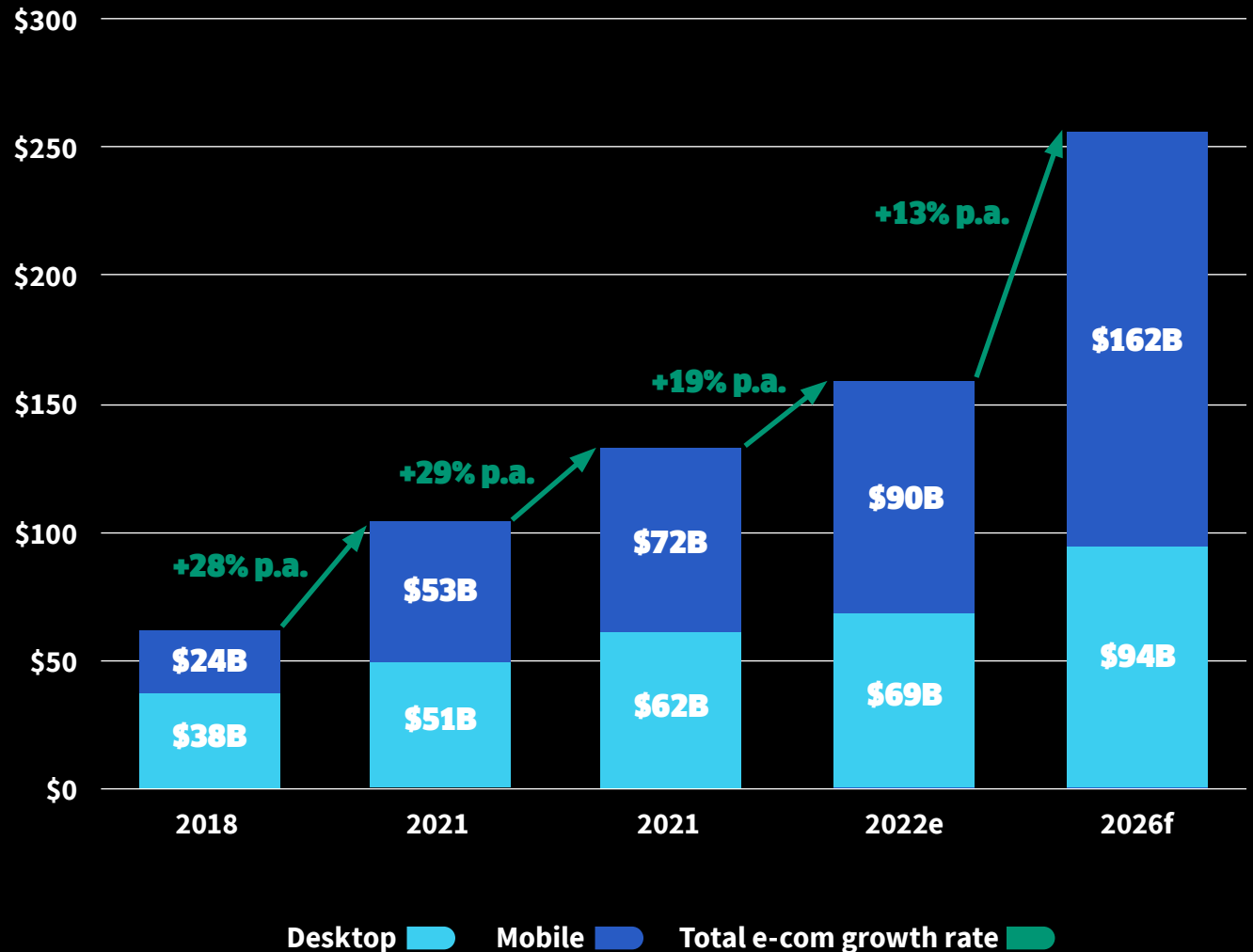
Mobile commerce is the real fuel for this growth. M-com accounted for 56% of e-com transaction value in 2022. It's projected to grow at twice the rate (16% CAGR) of desktop e-commerce (8% CAGR) through 2026. By 2026, m-com is projected to account for 63% of all e-com value.

LATAM's robust growth trajectory and young, upwardly mobile demographic make it an attractive region for e-commerce merchants to discover new customers and drive new business. The pandemic, the popularity of local e-com platforms like [Mercado Libre](#) and [Americanas Empresas](#), and the expansion of international merchants in the region, including [Amazon](#), [Shopify](#), [Disney](#) and [AliExpress](#), are also important contributors to Latin America's e-com growth.

MOBILE COMMERCE FUELS E-COM GROWTH

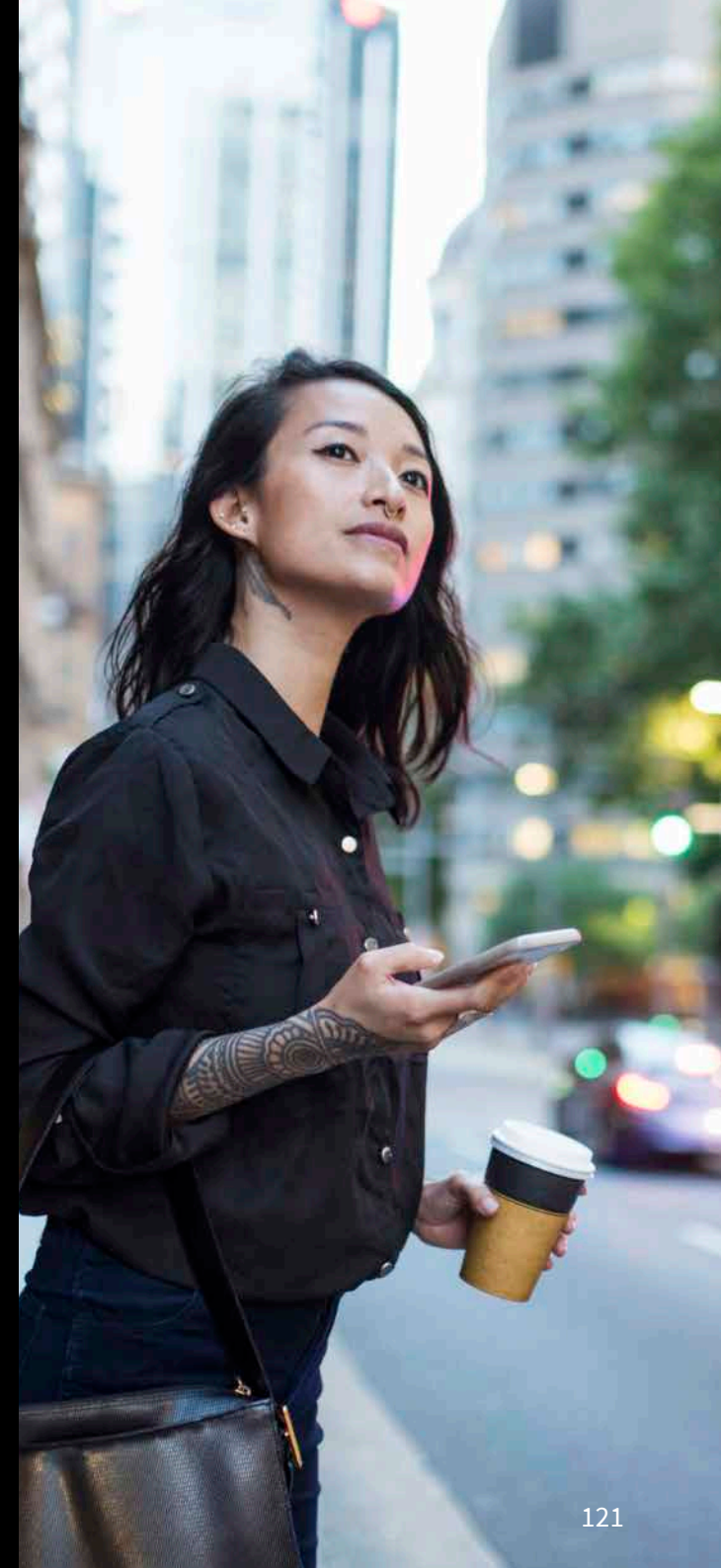
Mobile commerce in LATAM is projected to grow at 16% CAGR through 2026

LATAM e-commerce transaction value, 2018-2026f, US\$ billions



LATAM'S ROBUST E-COMMERCE GROWTH

All LATAM markets in GPR 2023 project double-digit annual growth through 2026



A2A PAYMENTS SEE DRAMATIC GROWTH

With a combination of low cost and near-universal accessibility, A2A's share of e-com payment value grew by 71% between 2021-2022, driving its regional share of e-com transaction value from 11% to 15%.

Its popularity looks sustained, with A2A projected to grow regionally at 22% CAGR from 2022-2026. The rise of A2A to date is most dramatic in Brazil, Colombia and Peru.





A2A payments are also poised for growth in Argentina. In 2022, the Central Bank of Argentina (BCRA) established a series of new Open Banking regulations for A2A payments, including mandating the interoperability of QR codes. It also requires payment service providers such as digital wallets to accept direct payments from bank accounts. These initiatives are likely to boost the fortunes of [MODO](#), an A2A payment method started by Argentina banks during the pandemic. Offered by 33 banks (as of 2022), MODO was launched to compete with market leaders like Mercado Pago.







In contrast, real-time payments haven't caught on as fast in Mexico. Its primary A2A system, [CoDi](#), has suffered from low adoption rates by both merchants and consumers. This is partly because CoDi requires a bank account and Mexico has a large underbanked population. Observers also cite [insufficient awareness campaign](#) efforts by its sponsor, Mexico's central bank, Banxico.

Another major contrast between the success of Pix as an A2A payment method in Brazil and the lack of traction to date of CoDi in Mexico is the relative openness and interoperability of the systems. In Brazil, close to 800 firms offer Pix, including banks, fintechs and public institutions. In contrast, [CoDi is limited](#) to a finite set of registered financial institutions.

A2A PAYMENTS SEE DRAMATIC GROWTH IN LATAM

Inspired by Brazil's Pix, A2A payments are flourishing

LATAM A2A e-com growth, 2021-2026f

	2021-2022 GROWTH	2022-2026 CAGR
Latin America	+71%	+22%
Argentina 	+68%	+24%
Brazil 	+123%	+23%
Chile 	+62%	+21%
Colombia 	+64%	+21%
Mexico 	-16%	+8%
Peru 	+130%	+31%



SPOTLIGHT ON PIX, BRAZIL'S REAL-TIME A2A PAYMENT SYSTEM



[Pix](#) is the Brazilian instant payment system developed and operated by the [Central Bank of Brazil](#). It went live in November 2020 and aims to lower costs of payment acceptance for merchants, stimulate market competition and promote financial inclusion.

Pix is used via a mobile app for e-commerce and at POS. There is no need to exchange personal data; the payer just asks for the Pix alias or scans a QR code. Individuals, companies and government entities can send or receive payment transfers in a few seconds, anytime, 24/7. [According to GlobalData](#), average fees on Pix transactions are 0.22%, compared to 1% for debit card and 2.2% for credit card.

[According to the Central Bank of Brazil](#), person-to-person (P2P) payments are the dominant use case for Pix, representing 67% of all Pix transactions. However, while person-to-business (P2B) payments only accounted for 23% of Pix transactions in 2022, that share is growing. The number of P2B Pix transactions grew by 209% between October 2021 and October 2022, from 152 billion to 472 billion.

As of November 2022, 788 institutions are participating in this scheme, including fintechs, credit cooperatives, banks, finance companies and payments institutions. The result of this success is that A2A payments doubled their share of e-com transaction value in Brazil in a single year (from 12% in 2021 to 24% in 2022).

Pix can also be used via digital wallets such as [PicPay](#) and [Mercado Pago](#) at POS, including via QR code. Largely on the strength of Pix transactions, digital wallets nearly doubled their share of POS transaction value in Brazil from 8% in 2021 to 15% in 2022. Wallets are projected to double their share of POS value again, to 30% by 2026.

Pix has become such a popular payment method that it has become a verb: “Pix me!”



THE TWILIGHT OF CREDIT CARD DOMINANCE

Credit cards remain the leader in e-com payments across LATAM. Building on a longstanding tradition of installment payments in the region, credit cards have high penetration in the region. [According to GlobalData](#), credit card penetration among the six LATAM countries featured in GPR 2023 ranges from 52% in Peru to 81% in Brazil.

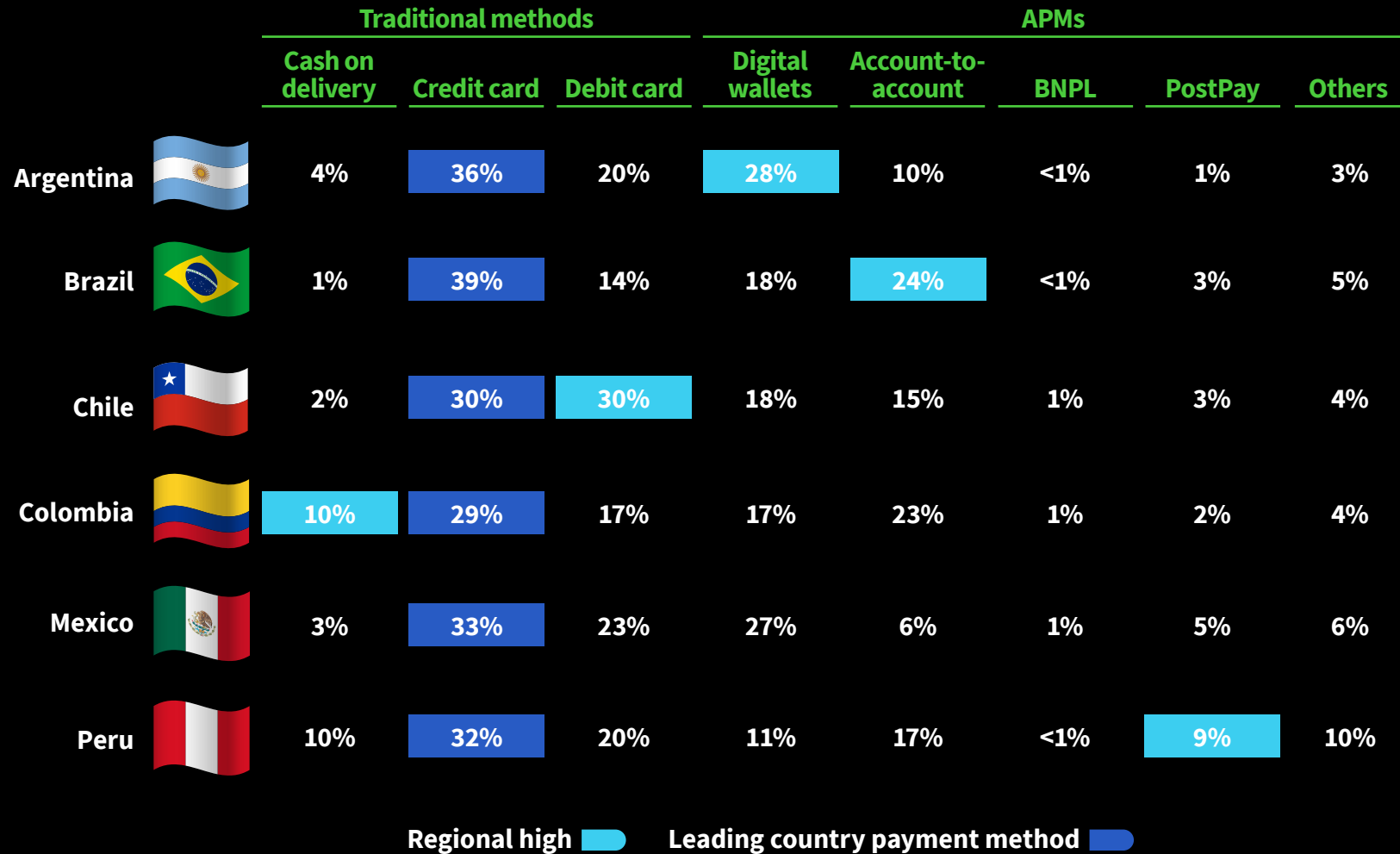
However, credit cards are slowly losing share to APMs like account-to-account (A2A) and digital wallets. In e-com, credit cards are forecast to grow at 7% CAGR between 2022 and 2026, compared to 22% for A2A and 21% for wallets.



THE TWILIGHT OF CREDIT CARD DOMINANCE

Credit cards still lead LATAM e-com payments but are slowly losing share to APMs

LATAM share of e-com transaction value, 2022



MOBILE PAYMENTS ARE SURGING AS CASH DECLINES

Since 2018, cash's share of POS transaction value has fallen by nearly half – from a 58% share to 31% in 2022. At the same time, digital wallet share has grown four-fold.



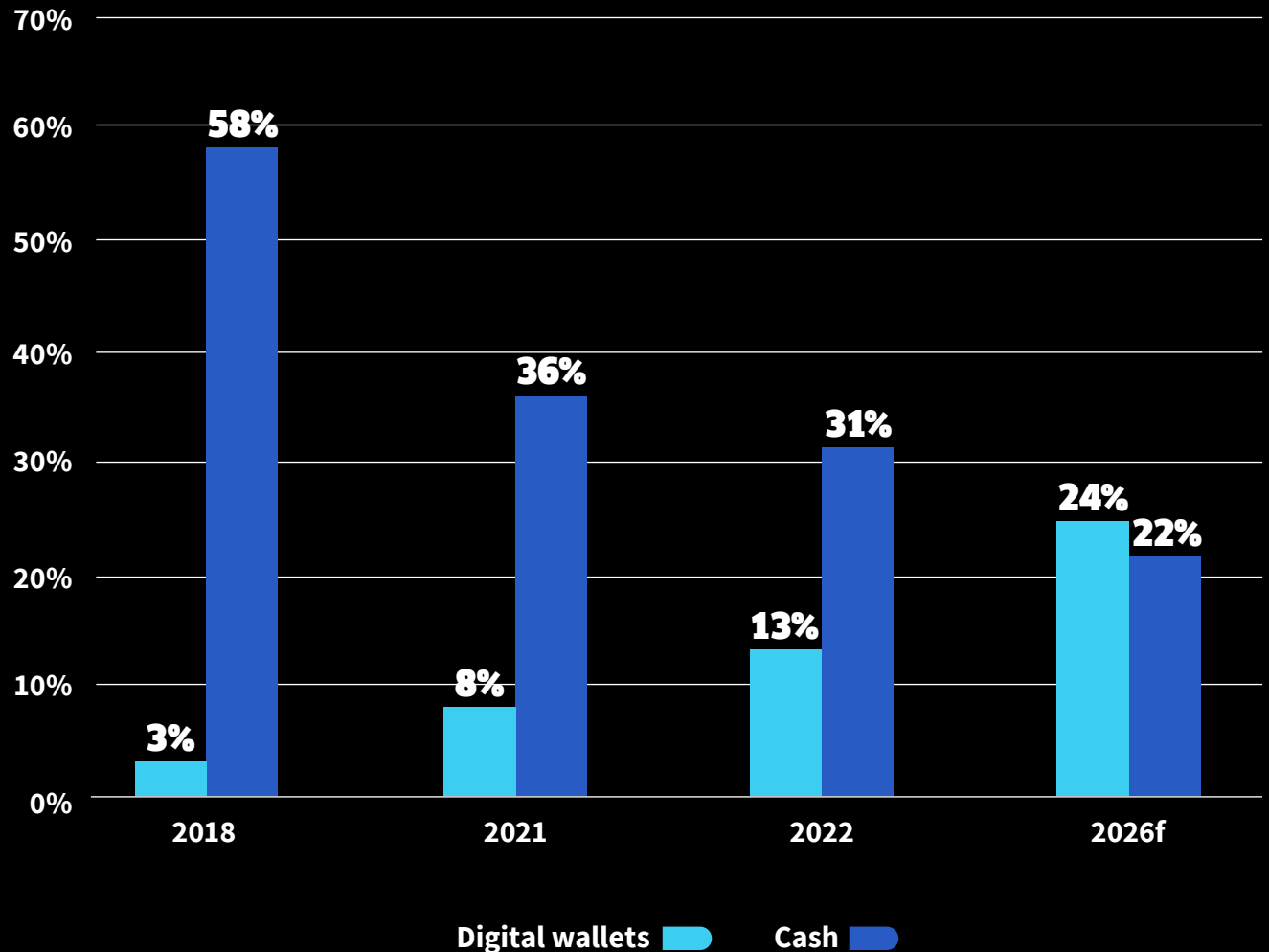
The decline of cash's share and the increasing use of digital wallets and contactless cards can both be attributed to pandemic-related restrictions. According to research by Mastercard, more than one in three in-person payments in Latin America and the Caribbean are now contactless.

However, although the use of cash will continue to decline, it's projected to still account for more than a fifth of all regional POS transaction value by 2026.

MOBILE PAYMENTS ARE SURGING AS CASH DECLINES

Since 2018, cash share has fallen by nearly half as digital wallets have grown four-fold

LATAM POS % share of transaction value 2018-2026f



LATIN AMERICA MARKET GUIDES

Payment insights that drive growth



2022 payment highlights

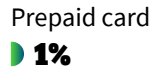
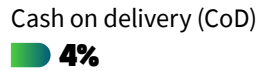
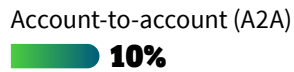
- Argentina is Latin America's third largest e-commerce market, behind Brazil and Mexico, and its fastest growing. In addition, Argentina has the fastest projected e-com growth rate – 21% CAGR through 2026 – of all markets covered in GPR 2023. That growth sets the total size of the e-com market on a path to more than double from \$19 billion in 2022 to \$41 billion by 2026.
- Consumers in Argentina prefer using cards when paying online, with credit cards (36%) and debit (18%) combined accounting for an outright majority of 2022 e-com transaction value.
- Argentina features a vibrant and diverse market for digital wallets, with nearly two dozen brands competing for this fast-growing payment market. Digital wallets are ascendant both in e-com and at POS, projecting to grow at 26% CAGR and 21% CAGR, respectively, through 2026.
- In May 2022, [Argentina's Central Bank \(BCRA\) established regulations](#) that will help promote the expanded use of A2A payments. [Communiqué "A" 7514](#) directs payment service providers – such as fintechs offering digital wallets – to allow users to link their bank accounts in addition to credit and debit cards.

Real-time payments spotlight

- In December 2020, the [Central Bank of Argentina](#) launched a new real-time payments system, [Transferencias 3.0](#) (Transfers 3.0), that “aims at boosting digital payments and financial inclusion in Argentina.” Transferencias 3.0 was built to replace two existing real-time payment schemes in the country: [Immediate Electronic Payments \(PEI\)](#), which facilitates P2P and mobile payments, and [DEBIN](#), a direct debit scheme.
- Transferencias 3.0 seeks to reduce the costs of payment acceptance for merchants and to eventually serve as a replacement for cash. The service is free for consumers, and [free for merchants](#) in the first three months of use, with nominal fees for merchants above certain volume thresholds thereafter.
- The first phase of Transferencias 3.0 establishes a standardized interoperable payment interface based on QR codes that can be read by all approved banking applications and mobile wallets. The second stage will involve payments messaging confirmation to conform with [ISO 2022](#).

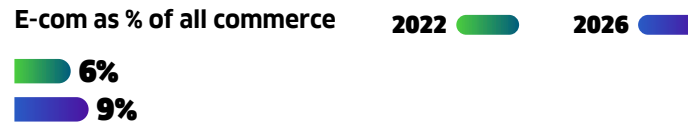
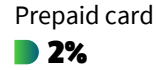
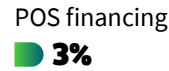
2022 e-com payment methods

Estimated share of transaction value*



2022 POS payment methods

Estimated share of transaction value*

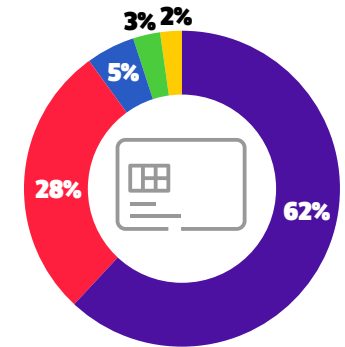


Popular alternative payment methods



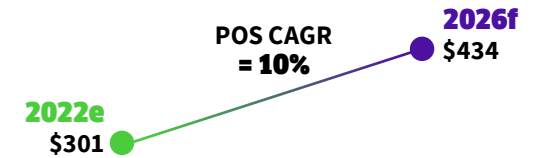
2021 card brand breakdowns

(e-com and POS)



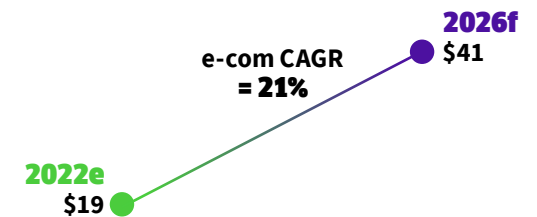
POS market size projections

(US\$ Billions)

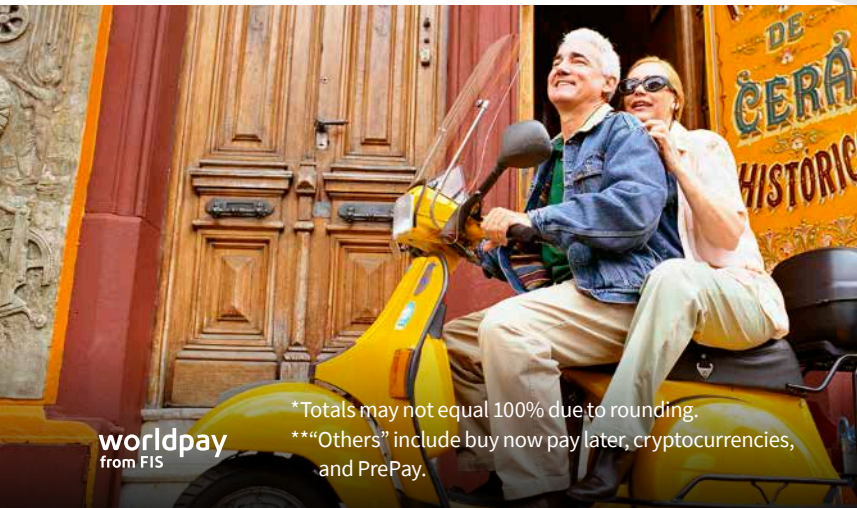


E-com market size projections

(US\$ Billions)



e = estimate f = forecast 132



*Totals may not equal 100% due to rounding.

**"Others" include buy now pay later, cryptocurrencies, and PrePay.

BRAZIL

2022 payment highlights

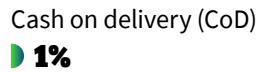
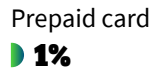
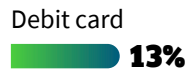
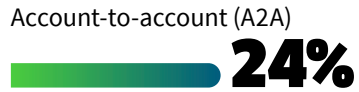
- The biggest story in Brazil's payment landscape is the sudden rise of [Pix](#). The real-time payment system from the [Central Bank of Brazil](#), Pix is setting a global example for how money can move in the 21st century; it's a system transformed by the power of the mobile phone. Since its introduction in November 2020, individuals, governments and businesses have adopted Pix [in dramatic numbers](#) due to its speed, convenience, safety and low cost.
- Pix is rapidly achieving its stated goal of digitizing Brazil's retail payments market. Cash represented an outright majority (52%) of POS transaction value as recently as 2018. The combination of the pandemic and the rise of Pix resulted in that figure dropping to 26% in 2022, down from 32% in 2021.
- Digital wallets' share of POS transaction value nearly doubled in share from 8% in 2021 to 15% in 2022. Led by São Paulo-based [PicPay](#), with [more than 65 million registered users](#) as of July 2022, we expect to see transaction values for digital wallets grow considerably in the coming years.
- Pix's influence on e-commerce is no less dramatic, with account-to-account (A2A) payments' share of transaction value doubling from 12% in 2021 to 24% in 2022. The growth of Pix is causing a decline in the use of Brazil's PostPay cash voucher system, Boleto Bancário, which fell from 11% of e-com value in 2021 to just 3% in 2022.

Real-time payments spotlight

- Brazil has emerged as a global leader in payment innovation with its real-time payment system, [Pix](#). Launched in November 2020 by the [Central Bank of Brazil](#), Pix has achieved remarkable success while transforming Brazil's payment landscape. By [some measures](#), Pix is now the most used payment method in Brazil.
- Pix transactions are fast (immediate settlement), simple (requiring only the recipient's alias, e.g., a phone number, email address, Taxpayer ID or even an anonymous alias), always available (24/7/365) and cost-effective (free to individuals with nominal fees to businesses). Pix supports a wide variety of use cases such as person-to-person (P2P) money transfers; person-to-business (P2B) payment in physical stores, e-commerce or bill payments; business-to-business (B2B) payment of service providers or suppliers; person-to-government (P2G) or business-to-government (B2G), e.g., tax or utility payments; and government payments to citizens (G2P) such as income tax refunds, social benefits, grants, etc.
- According to Central Bank of Brazil [statistics](#), Pix processed 2.4 billion transactions in December 2022, nearly double the number processed in December 2021 (1.23 billion). Transaction value reflected a similar rise, from approximately \$12 billion in December 2021 to roughly \$23 billion in December 2022. P2P and B2B use cases continue to account for the most transactions, through P2B use cases are growing the fastest, rising ten-fold from January 2021 to December 2022.

2022 e-com payment methods

Estimated share of transaction value*



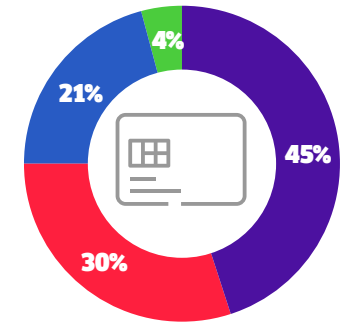
2022 POS payment methods

Estimated share of transaction value*



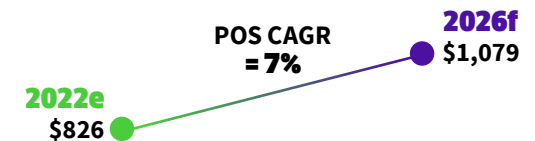
2021 card brand breakdowns

(e-com and POS)



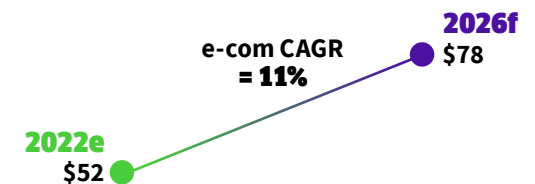
POS market size projections

(US\$ Billions)

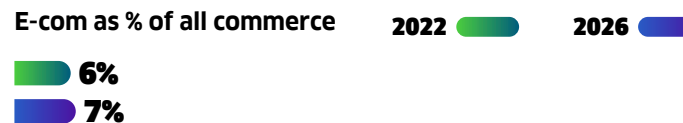


E-com market size projections

(US\$ Billions)



e = estimate f = forecast 134



Popular alternative payment methods



*Totals may not equal 100% due to rounding.

**"Others" include buy now pay later, cryptocurrencies and PrePay.



2022 payment highlights

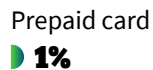
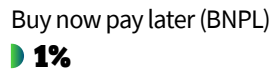
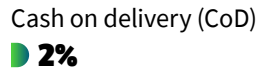
- Cards dominate the Chilean payment landscape, combining to account for 60% of e-com and 66% of POS transaction value in 2022. Credit cards (30%) slightly outpaced debit cards (29%) in e-com value, while debit (34%) was the leading payment method at POS, with credit cards second, accounting for 27% share of transaction value.
- Tracking with global trends, digital wallet use continues to rise in Chile, primarily at the expense of cash. The use of cash fell from 27% of POS value in 2021 to 23% in 2022; cash is projected to decline further at -11% CAGR through 2026.
- Digital wallets continue their steep ascent in e-commerce (spiking from 12% to 18% of transaction value from 2021 to 2022) and at POS (rising from 6% in 2021 to 8% in 2022). Global wallet brands such as [Mercado Pago](#), [PayPal](#) and [Google Wallet](#) compete with local wallets such as [Fpay](#), [MACH Pay](#) and [OnePay](#) for this fast-growing payment segment.
- Chile has made significant strides in increasing financial inclusion in the past decade. [According to the World Bank](#), 87% of Chilean adults maintained an account with a financial institution in 2021, more than doubling the rate since 2011 (42%). PostPay payment methods – led by [ServiPag](#) – fill an important gap for consumers who remain unbanked, accounting for 3% of e-com value in 2022.

Real-time payments spotlight

- Real-time payments in Chile take place within the Transferencias Electrónicas de Fondos (Electronic Funds Transfer, or TEF) system. Launched in 2008, TEF is administered by the Centro de Compensación Automatizado ([CCA](#)). TEF performs two settlements per day and operates on the [ISO 8583](#) messaging format. [According to CCA](#), TEF facilitated nearly 1.2 billion real-time payment transactions in 2022, more than double the transaction volume from 2019. 18 financial institutions are currently using CCA.
- In October 2022, a new “[Fintech Law](#)” was passed by the Chilean congress. The main objective of this law is to promote competition, innovation and inclusion in the financial system. In addition to regulating technology-based financial services such as crowdfunding platforms or other financial instrument transaction systems, the new law specifically regulates a mandatory open finance system. An important element of this new law – the “[Resilience Bill](#)” – seeks to create greater interoperability among payment service providers. Soon, financial infrastructure such as the real-time gross settlement system from Chile’s Central Bank will be available to non-banking entities such as fintechs.

2022 e-com payment methods

Estimated share of transaction value*



2022 POS payment methods

Estimated share of transaction value*



E-com as % of all commerce **2022** **2026**



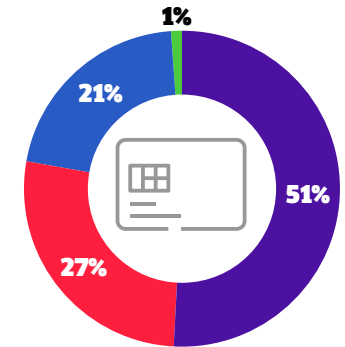
Mobile as % of all e-com



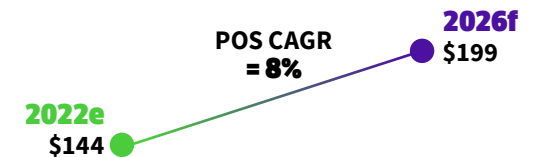
Popular alternative payment methods



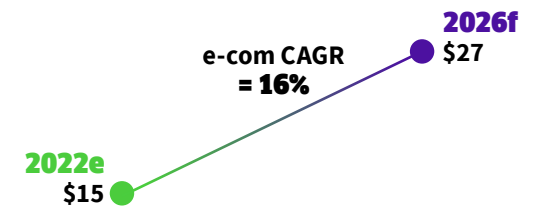
2021 card brand breakdowns (e-com and POS)



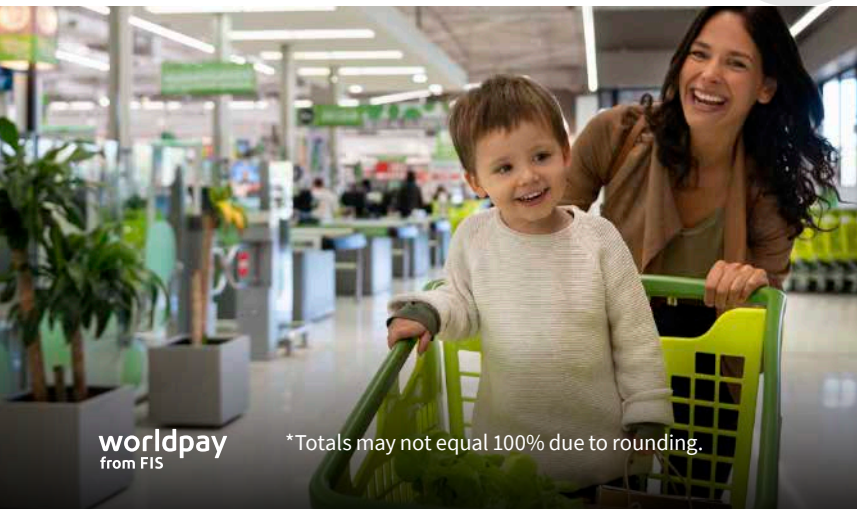
POS market size projections (US\$ Billions)



E-com market size projections (US\$ Billions)



e = estimate f = forecast 136



COLOMBIA



2022 payment highlights

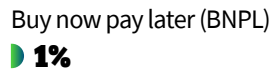
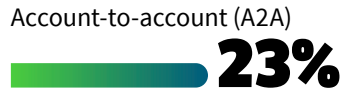
- Colombia's notoriously cash-intensive economy continues to make strides toward a more inclusive digital economy. After rebounding slightly in 2021, cash resumed its downward trajectory, falling from 42% of POS transaction value in 2021 to 36% in 2022. We forecast continued declines in cash use of -2% CAGR through 2026.
- In e-commerce, account-to-account (A2A) and digital wallets both continued their strong growth trajectories in 2022. Led by [PSE](#) from ACH Colombia, A2A payments saw significant growth, jumping from 17% of e-com transaction value in 2021 to 23% in 2022. Digital wallets saw transaction value spike 47% YoY while growing their share of e-com value from 14% in 2021 to 17% in 2022.
- In addition to regional wallet giant [Mercado Pago](#), Colombia's digital wallet market features an emerging roster of domestic providers. The competitive wallet landscape includes traditional banks (e.g., [BBVA Wallet](#), [Nequi](#) from [Bancolombia](#)), challenger banks (such as [MOVii](#)) and super apps (including [RappiPay](#) from delivery and mobility giant [Rappi](#)).
- Colombia may see even greater growth in A2A payments in 2023 and beyond if Brazil's popular [Pix](#) system expands regionally. That's the hope of the [Colombian Fintech Association](#), which in 2022 [engaged in discussions](#) with the central banks in both Colombia and Brazil about importing Pix to Colombia.

Real-time payments spotlight

- Real-time payments in Colombia take place on [Transfiya](#). Unlike the vast majority of real-time payment services globally, which are initiated and overseen by central banks, Transfiya is an entirely private service. Transfiya is a service of [ACH Colombia](#), operator of the popular A2A payment method [Pagos Seguros en Línea \(PSE\)](#).
- Transfiya was launched in late 2019. [According to its own reporting](#), over 2.5 million active users had conducted more than 17 million transfers on the system through the first ten months of 2022, up 321% from the same period in 2021.
- Transfiya allows users to send money and make payments to any other bank account holder in Colombia with just their cell phone number. Transfiya can be used from within the mobile apps of many of Colombia's largest banks, including [Bancolombia](#), [Banco de Bogotá](#), [Davivienda](#) and [Scotiabank Colpatria](#), as well as via popular digital wallets such as [DaviPlata](#), [Dale](#), [MOVii](#) and [Nequi](#).

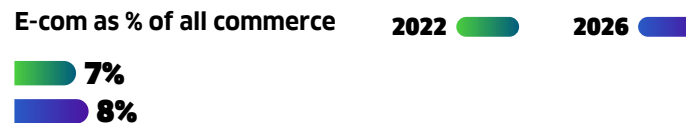
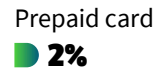
2022 e-com payment methods

Estimated share of transaction value*



2022 POS payment methods

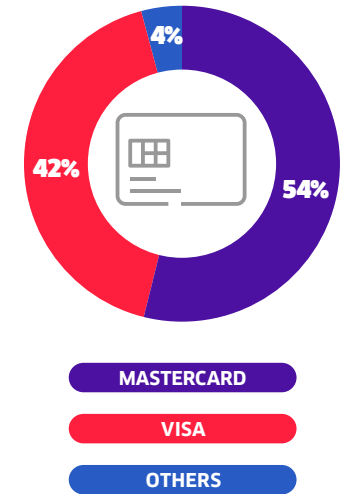
Estimated share of transaction value*



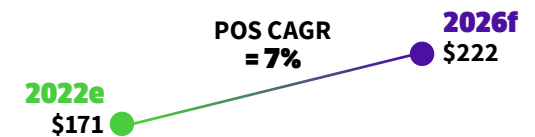
Popular alternative payment methods



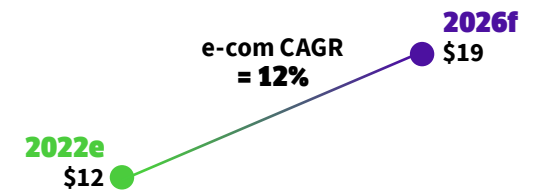
2021 card brand breakdowns (e-com and POS)



POS market size projections (US\$ Billions)



E-com market size projections (US\$ Billions)



e = estimate f = forecast 138



MEXICO



2022 payment highlights

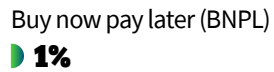
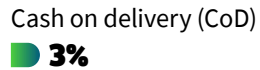
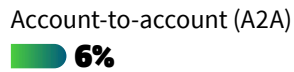
- Credit and debit cards are the driving engine behind Mexico's growing e-commerce market, with cards combining to represent an outright majority of spend. Credit cards earned 33% of e-com spend in 2022, while debit accounted for an additional 22%. Cards are almost as influential in-store, with credit accounting for 24% of POS spending and debit cards representing 25%.
- A nascent buy now pay later (BNPL) market is emerging in Mexico. BNPL accounted for just 1% of e-com transaction value in 2022. But there's reason to believe that will increase in coming years, with an array of well-funded startups seeking to provide credit to traditionally underserved consumers. Domestic BNPL providers include [Aplazo](#), [Atrato](#), [Finvero](#), [Kueski](#) and [Nelo](#), while Colombian BNPL provider [Addi](#) and regional e-commerce giant [Mercado Libre](#) (with its BNPL offering [Mercado Crédito](#)) also compete in this space.
- Cash remains the leading payment method at Mexico's point of sale, accounting for 39% of transaction value in 2022, down from 41% in 2021. Cash also has a meaningful role in Mexico's e-commerce landscape, with PostPay accounting for 5% of e-com spend via voucher systems that are paid for at major convenience stores like [OXXO](#) and [7-11](#). Cash on delivery (CoD) remains a relevant payment option, accounting for 3% of e-com spending.

Real-time payments spotlight

- Mexico currently operates two real-time payment systems. In 2019, Bank of Mexico launched mobile real-time payments through [Cobro Digital \(CoDi\)](#). CoDi extended the functionality of the long-established [Sistema de Pagos Electronicos Interbancarios \(SPEI\)](#) – Interbank Electronic Payment System – service that Bank of Mexico launched with commercial banks in 2004.
- SPEI is designed by and for institutional clients; system participants can initiate transfers on their own behalf or for their clients. SPEI is used primarily for high-value transfers by banks but also by pension fund management firms, brokerage and investment firms, foreign exchange firms, insurance companies and non-bank financial entities. SPEI serves as the Bank of Mexico's real-time gross settlement system.
- CoDi seeks to extend real-time payment functionality to person-to-business (P2B) payments in e-commerce and in-person at the point of sale, both via mobile phones. Overlay services include account alias (mobile number or debit card number), request to pay, QR codes and near-field communications (NFC). To date CoDi has yet to realize the success of similar systems, such as Pix in Brazil, in part because of a [lack of interoperability](#) and a [lack of awareness among consumers](#).

2022 e-com payment methods

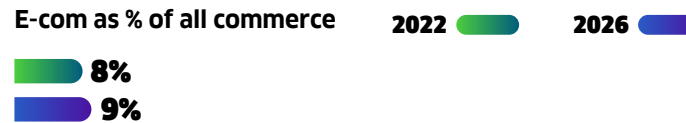
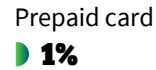
Estimated share of transaction value*



MEXICO

2022 POS payment methods

Estimated share of transaction value*

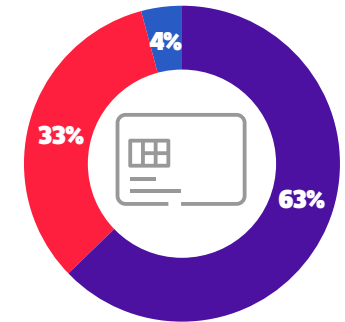


Popular alternative payment methods



2021 card brand breakdowns

(e-com and POS)



POS market size projections

(US\$ Billions)

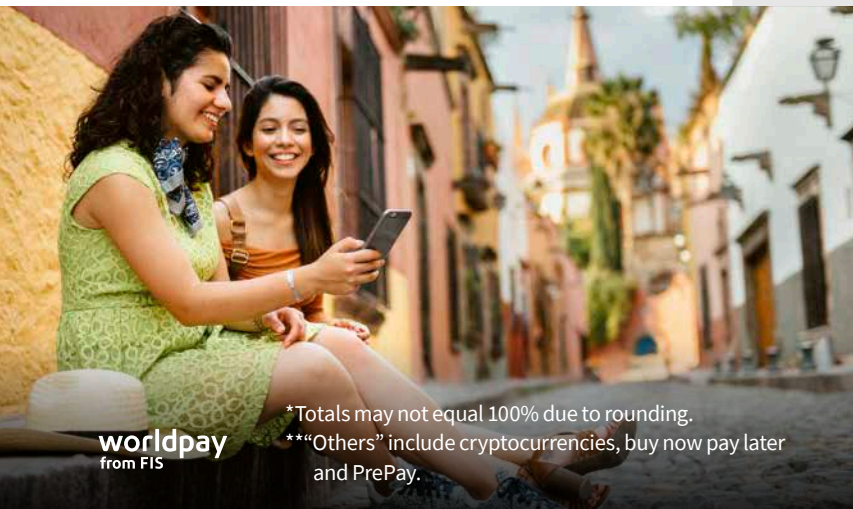


E-com market size projections

(US\$ Billions)



e = estimate f = forecast 140



*Totals may not equal 100% due to rounding.

**"Others" include cryptocurrencies, buy now pay later and PrePay.

PERU



2022 payment highlights

- Peru's payment landscape reflects a country in transition. [According to the World Bank](#), 57% of Peruvian adults had a bank account in 2021, nearly triple the percentage in 2011 (20%). Meanwhile, while cash represented 60% of POS transaction value in 2019, it fell to 37% share in 2022. In addition, the rate of debit card use at POS has more than doubled from 2019 to 2022 (from 9% to 20%), while use of digital wallets has more than tripled (from 4% to 13%).
- The rapid digitization of Peru's payment market is predominantly the story of two applications: [Yape](#) (from [Banco de Crédito del Perú](#), or BCP) and [PLIN](#) (a collaborative effort of [BBVA](#), [Interbank](#) and [Scotiabank](#)). The rapid adoption of these apps has in part contributed to the massive growth in account-to-account (A2A) payments in Peru. A2A payments nearly doubled in just one year, from 9% of e-com transaction value in 2021 to 17% in 2022.
- Already in high-growth mode, digital payments are set to become even easier for Peruvian consumers and merchants. In October 2022, the [Central Reserve Bank of Peru \(BCRP\)](#) [established new regulations](#) that mandate interoperability among payment service providers. The regulations will help ensure that consumers can use their choice of digital payment application and funding mechanism to issue and receive payments, regardless of the application used by the recipient. The new regulations take effect in March 2023.

Real-time payments spotlight

- Real-time payments in Peru are facilitated by the Immediate Interbank Transfers ([IIT](#)) scheme. Launched in 2016, IIT is operated by Cámara de Compensación Electrónica (CCE), or Electronic Clearing House. CCE is a private company directed by Peruvian banks and the [Central Bank of Peru](#).
- The volume of real-time payments is rising rapidly in Peru, spurred by both the extraordinary circumstances of the pandemic as well as by competition from the popular A2A payment apps [Yape](#) and [PLIN](#). [According to CCE](#), real-time monthly payment volume jumped from 2.8 million transactions in January 2021 to over 6.9 million in January 2022.
- In 2022, CCE was recognized by [Celent](#) with the [Model Bank 2022 Award for Payment Infrastructure](#) for its work in delivering real-time financial inclusion.

2022 e-com payment methods

Estimated share of transaction value*



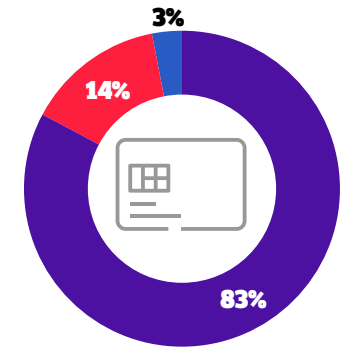
2022 POS payment methods

Estimated share of transaction value*



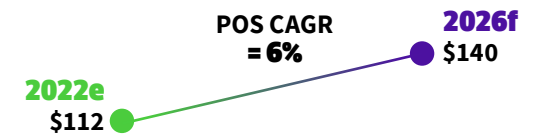
2021 card brand breakdowns

(e-com and POS)



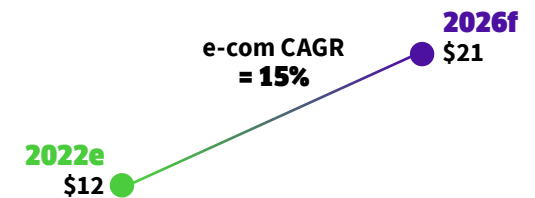
POS market size projections

(US\$ Billions)



E-com market size projections

(US\$ Billions)



e = estimate f = forecast

PERU

E-com as % of all commerce 2022 2026



Mobile as % of all e-com

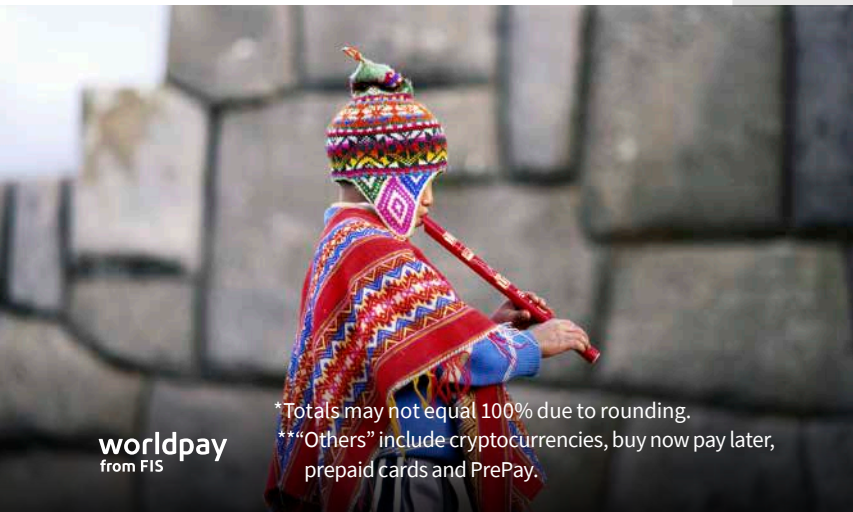


Popular alternative payment methods



*Totals may not equal 100% due to rounding.

**“Others” include cryptocurrencies, buy now pay later, prepaid cards and PrePay.



MIDDLE EAST AND AFRICA PAYMENT INSIGHTS

Payment insights that drive growth

HOW MEA CONSUMERS PAY TODAY

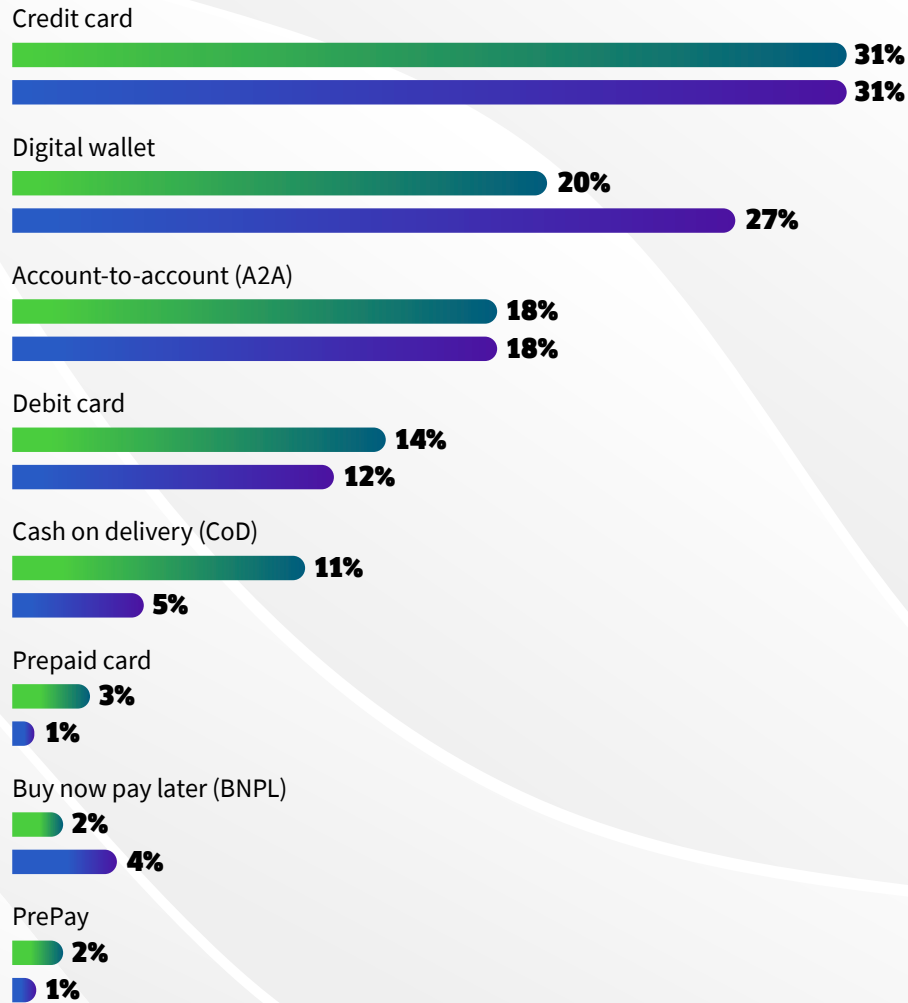
GPR 2023's coverage of the Middle East and Africa consists of [Nigeria](#), [Saudi Arabia](#), [South Africa](#) and [UAE](#).

- 1 MEA's great migration to wallets**
 - Online shoppers are replacing cash with digital wallets
- 2 A2A payments rise in prominence across MEA**
 - A2A is the third leading e-com payment method after credit cards and digital wallets

- 3 BNPL is MEA's fastest growing e-com payment method**
 - BNPL is projected to grow in MEA at 43% CAGR through 2026
 - MEA's BNPL market is dominated by local and regional providers
- 4 MEA sees dramatic declines in cash use at POS**
 - The rise of mobile payments signals the end of cash's dominance

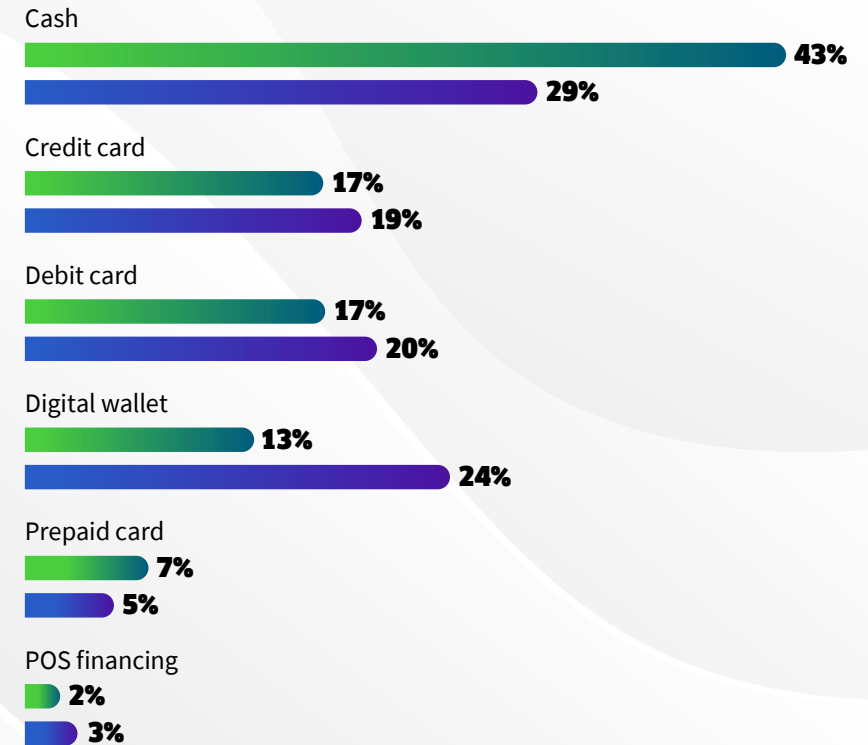
MEA e-com payment methods

Share of transaction value 2022-2026



MEA POS payment methods

Share of transaction value 2022-2026



2022 █ 2026* █

*Forecast
Totals may not equal 100% due to rounding.

MEA'S GREAT MIGRATION TO WALLETS

Consumers across the Middle East and Africa (MEA) are indicating a preference for digital wallets. Already the second-leading online payment method in MEA with 20% share, digital wallets are set to continue their remarkable growth at 25% CAGR through 2026, when they are projected to attain 27% share of e-com transaction value. A similar story is unfolding at POS: wallets are projected to double their 2021 share of 12% to 24% by 2026.

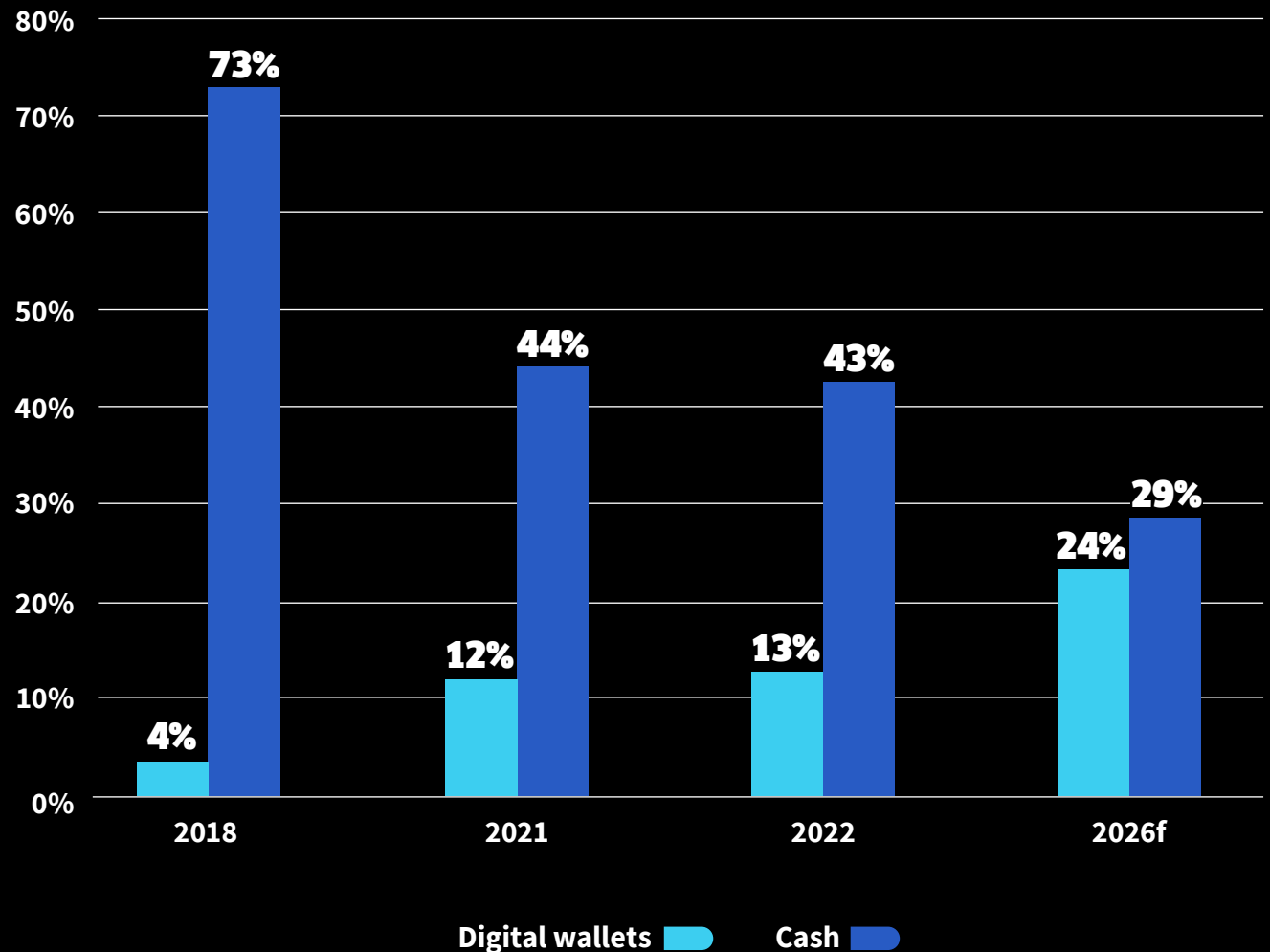
International brands such as Apple Pay, Google Pay, Samsung Pay and PayPal have substantial shares of the MEA digital wallet market. However, local brands are gaining popularity: [JumiaPay](#) and [KongaPay](#) (Nigeria), [MTN MoMo](#) (South Africa), [STC Pay](#) (Saudi Arabia), [Careem PAY](#) and [Etisalat Wallet](#) (UAE) are all prominent players in their respective markets, as are wallets issued by local banks.

Meanwhile, despite their low penetration in MEA due to religious reasons, credit cards still command the highest share of regional e-com transaction value at 31%; credit cards are projected maintain this share through 2026. This is because the frequency of use is high among credit card holders, while banks play a key role in promoting them. Banks addressed the religious concerns head-on by developing [Shariah-compliant cards](#), and offer incentives such as reward points, discounts and cash back.

MEA'S GREAT MIGRATION TO WALLETS

In-store shoppers are substituting digital wallets for cash

MEA share of POS transaction value, 2018-2026f



A2A PAYMENTS RISE IN PROMINENCE ACROSS MEA

A2A has taken hold as the third most popular e-com payment method in MEA, accounting for 18% of regional e-commerce transaction value in 2022. A2A holds significant potential to achieve even greater heights, leapfrogging legacy credit and debit cards.



A2A was the leading e-commerce payment method in Nigeria in 2022, accounting for 29% of e-com transaction value. In Nigeria, A2A bank transfer payments are made via [NIBSS Instant Payments \(NIP\)](#), one of MEA's (and the world's) largest real-time payment systems. NIP connects all commercial banks, Micro-Finance Banks (MFBs) and Mobile Money Operators (MMOs) in Nigeria through a fast, safe, convenient and low-cost payment infrastructure.

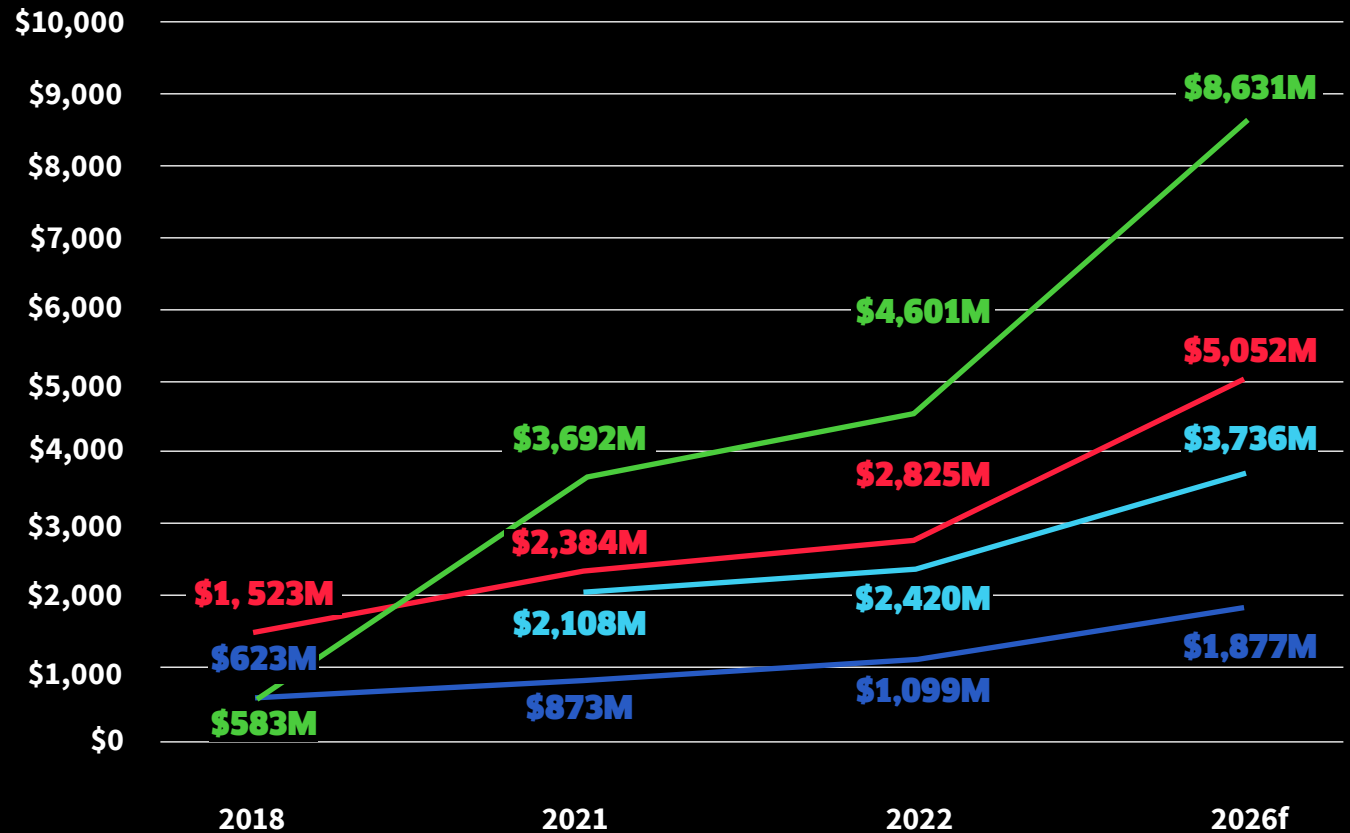
In South Africa, A2A secured second place in 2022 with a 22% share, trailing only debit cards' 24% share. One of the biggest A2A brands in South Africa is [instantEFT by PayFast](#). In use since 2007, instantEFT is an inter-bank online payment method that instantly verifies bank transfers and is supported by all the major banks in the country.

In Saudi Arabia, A2A earned third place with 16% share of e-com transaction value in 2022. However, it is poised for significant growth following the November 2022 [announcement by SAMA](#) (Saudi Central Bank) of a new Open Banking Framework that establishes new laws, regulatory guidelines and technical standards.

A2A PAYMENTS RISE IN PROMINENCE ACROSS MEA

A2A is the third leading e-com payment method after credit cards and digital wallets

A2A e-com transaction value 2018-2026f, US\$ millions



Nigeria



Saudi Arabia



South Africa



UAE

MEA SEES DRAMATIC DECLINES IN CASH USE AT POS

Cash's share of POS transaction value is declining rapidly across the region, from 73% in 2018 to 43% in 2022. We project cash will fall to just 29% by 2026.





The shift from cash is mirrored by the rise of digital and mobile payments, which is driven by governments, banks and fintechs. [According to GSMA](#), mobile money transaction values in 2021 grew fastest in the Middle East and North Africa (49%), followed by Sub-Saharan Africa (40%). [Mastercard's New Payments Index 2022](#) found that 95% of people in South Africa have used at least one emerging digital payment method in the last year.

Every country has its own reasons to drive digital payments. In South Africa, for instance, there is no ticket size limit on mobile payments, and banks incentivize consumers by providing discounts or promotions at partner merchants.

MIDDLE EAST AND AFRICA MARKET GUIDES

Payment insights that drive growth

NIGERIA

2022 payment highlights

- Dozens of countries are in various stages of development and trials of central bank digital currencies (CBDCs), but Nigeria is one of only a handful with a CBDC in live use. Launched by the Central Bank of Nigeria in October 2021, the [eNaira](#) is digital legal tender that serves as a unit of account, store of value and medium of exchange. To date, the eNaira has suffered from low adoption among consumers and merchants alike, with [reports suggesting only 1 in 200 Nigerians have used the currency](#).
- The physical Naira currency remains king of POS payments, in part due to Nigeria's substantial [informal economy](#). Cash accounted for 62% of POS transaction value in 2022, the highest rate of cash use among the markets covered by GPR 2023. To promote the eNaira, in December 2022 Nigeria's central bank imposed [significant restrictions on cash withdrawals](#) from banks and ATMs.
- Account-to-account (A2A) is the leading payment method in Nigeria's (formal) e-commerce economy, accounting for 29% of e-com transaction value in 2022. Cash's significant influence in Nigeria extends to e-com, where cash on delivery (CoD) was used for 17% of transaction value in 2022.
- Nigeria's digital wallet market is growing fast, representing 10% of e-com and 14% of POS spend in 2022. Leading digital wallets include [KongaPay](#), [MTN MoMo](#), [OPay](#) and [Paga](#).

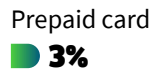
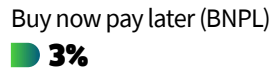
Real-time payments spotlight

- Real-time payments in Nigeria take place within the NIBSS Instant Payment ([NIP](#)) system. NIP is operated by the Nigeria Inter-Bank Settlement System ([NIBSS](#)) – which is owned by all of Nigeria's licensed banks – in coordination with the Central Bank of Nigeria ([CBN](#)). Launched in 2011, NIP facilitates person-to-business (P2B), person-to-person (P2P) and business-to-business (B2B) payment use cases.
- NIP supports a wide variety of use cases, such as chat banking, cardless payments and bill payments. In 2021, [NIP launched New Quick Response \(NQR\)](#), a low-cost QR-code payment solution for P2B and P2P use cases. NIP also operates [CentralPay](#), an online payment gateway that allows Nigerian e-commerce merchants, governments, schools, utility companies and payment service providers to make and receive payments via a single API integration.

2022 e-com payment methods

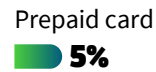
Estimated share of transaction value*

Account-to-account (A2A)



2022 POS payment methods

Estimated share of transaction value*



E-com as % of all commerce 2022 2026



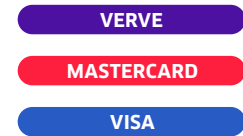
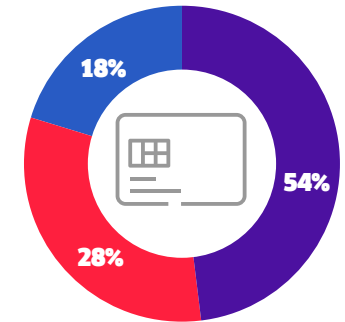
Mobile as % of all e-com



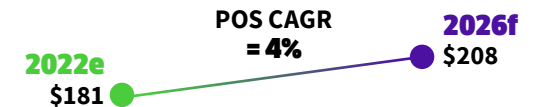
Popular alternative payment methods



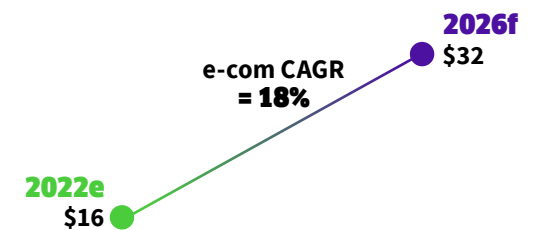
2021 card brand breakdowns (e-com and POS)



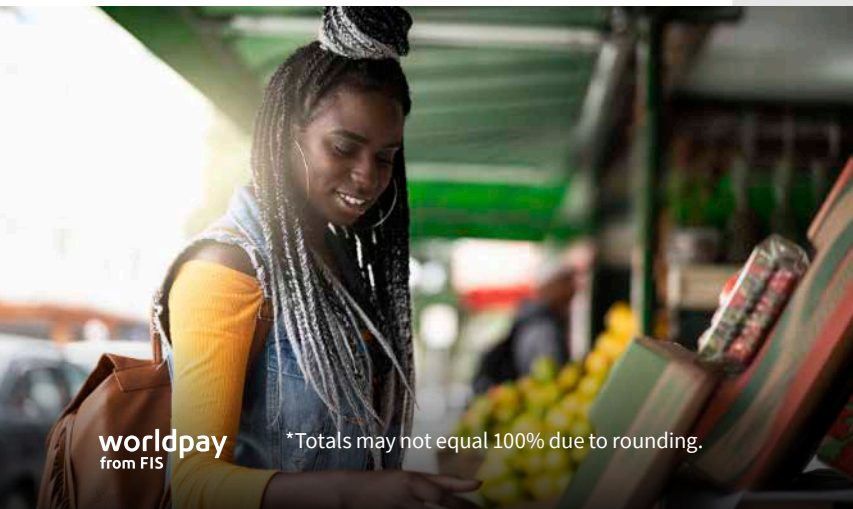
POS market size projections (US\$ Billions)



E-com market size projections (US\$ Billions)



e = estimate f = forecast 154



NIGERIA



2022 payment highlights

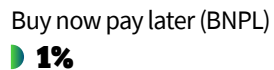
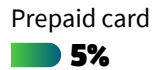
- Although still a cash-intensive economy, Saudi Arabia is moving quickly away from cash and toward a more digital payment landscape. Accounting for a majority of POS transaction value as recently as 2021, cash dropped to 39% of POS value in 2022. Most of the shift in spending at POS has moved to debit cards, credit cards and digital wallets.
- Saudi Arabia has the highest rate of prepaid card use among all the markets covered in GPR 2023. Prepaid cards accounted for 15% of Saudi Arabia's POS transaction value in 2022. Prepaid cards are particularly useful to [promote financial inclusion](#) among unbanked populations, for [payroll](#) and for foreign worshippers making their pilgrimage to Mecca for Hajj. Prepaid cards are appealing in MEA as they charge no interest and thus are Shariah-compliant.
- Digital wallets continue to rapidly gain share in e-commerce, with wallets rising from 18% of e-com transaction value in 2021 to 22% in 2022. The wallet market is led by domestic offerings such as [STC Pay](#) from leading telecom provider [STC](#) and [mada Pay](#) from Saudi Arabia's Ministry of Finance.
- Buy now pay later (BNPL) is making slow but steady progress among Saudi Arabian consumers, led by domestic provider [Tamara](#) and UAE-based providers [Spotii](#) and [Tabby](#). Although only garnering 1% of e-com transaction value in 2022, we project that BNPL will grow at 68% CAGR through 2026.

Real-time payments spotlight

- Since its launch in April 2021, real-time payments have been available via the Saudi Arabian Riyal Interbank Express ([SARIE](#)) system. SARIE is supervised by the Saudi Central Bank ([SAMA](#)) and operated by Saudi Payments. [Saudi Payments](#) is an umbrella organization representing the country's leading payment brands – [mada](#), [SADAD](#), SARIE and [Esal](#) – with the mandate to operate the national payment infrastructure.
- SARIE is part of Saudi Arabia's Financial Sector Development Program [Saudi Vision 2030](#), which – among other goals – targets achieving 70% non-cash transactions by 2030. Substantial progress has been made toward that end: in 2021, [cashless transactions \(57%\) exceeded cash transactions \(43%\)](#) for the first time.
- SAMA and Saudi Payments planned to launch the [second phase](#) of SARIE in 2022 with four main services: request to pay, account verification, bundled payments and expanded participation of fintech companies in SARIE. Also, under consideration in 2022 was a [higher ceiling](#) on transaction value within the system.

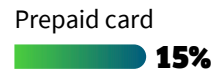
2022 e-com payment methods

Estimated share of transaction value*



2022 POS payment methods

Estimated share of transaction value*



E-com as % of all commerce **2022** **2026**



Mobile as % of all e-com

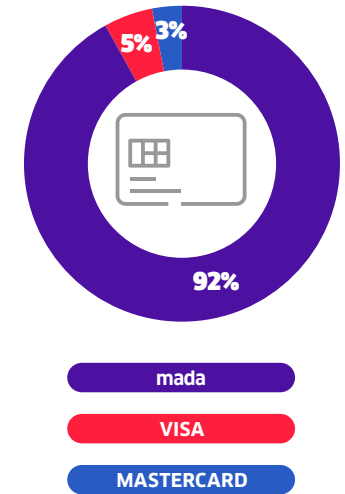


Popular alternative payment methods



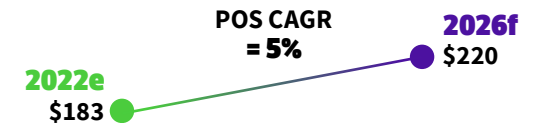
2021 card brand breakdowns

(e-com and POS)



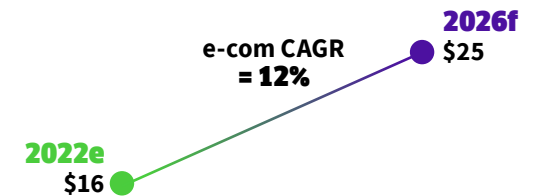
POS market size projections

(US\$ Billions)

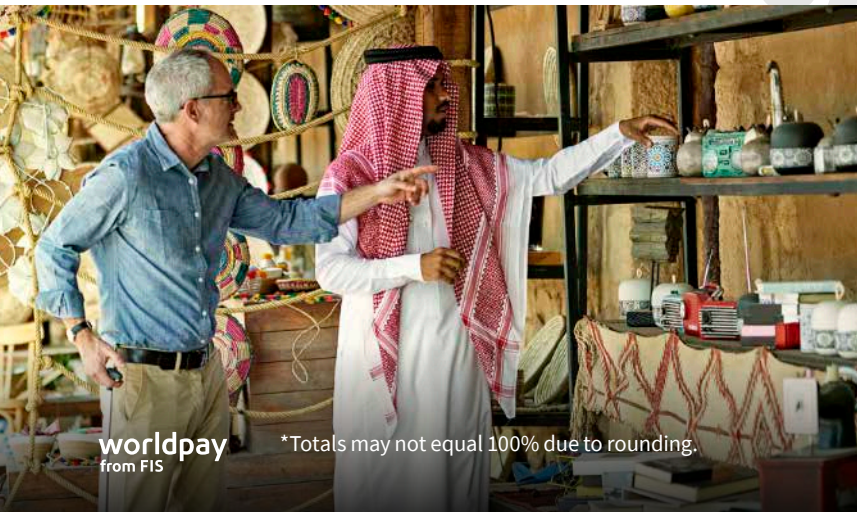


E-com market size projections

(US\$ Billions)



e = estimate f = forecast 156



*Totals may not equal 100% due to rounding.

SOUTH AFRICA



2022 payment highlights

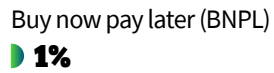
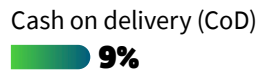
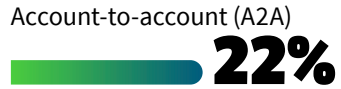
- South Africa features a stable and mature payments market that is led by cards. Cards combined to account for a majority of POS transaction value, with debit cards (38% share) outpacing credit cards (18%) by more than 2-to-1. Debit cards are also the leading payment method in e-commerce, though with a much narrower margin over credit cards (24% versus 19%, respectively). Card brand transaction value is split nearly evenly between [Mastercard](#) and [Visa](#).
- Buy now pay later (BNPL) is still in its early stages in South Africa, accounting for just 1% of e-com transaction value in 2022. That share is likely poised to rise, however, given the proliferation – and acquisition – of domestic BNPL providers. The leading domestic provider, [Payflex](#), was acquired by [Zip](#) in 2021; [Mobicred](#) was acquired by [RCS Group](#) in 2022; and [PayJustNow](#) was acquired by [Weaver Fintech](#) in 2022. Though it's starting small, we project that BNPL in South Africa will grow at 63% CAGR through 2026.
- Digital wallets accounted for 20% of e-com transaction value in 2022, while grabbing just 7% of POS spend. Those shares are projected to rise over the next few years, with wallets projected to grow at 25% CAGR in e-com and 29% CAGR at POS through 2026. Popular wallets among South African users consumers include [Cell Pay Point](#), [MTN MoMo](#), [SnapScan](#) and [Samsung Wallet](#).

Real-time payments spotlight

- Real-time payments in South Africa are at a crossroads. The long-standing payment system Real Time Clearing ([RTC](#)), launched in 2006, continues to provide interbank clearing and settlement services. Operated by the automated clearing house [BankservAfrica](#), RTC is known to consumers as “Pay and Clear Now” and “[Instant EFT](#).” Despite existing in the market for 17 years, however, the system has seen comparatively low adoption due to settlement risk and [high fees](#).
- A new real-time payment system, Rapid Payments Program ([RPP](#)), was scheduled for launch in 2022, but a go-live date was [still pending](#) as of January 2023. The new system – also created by BankservAfrica – is “[designed](#) to be a viable alternative to cash payments with a core focus on humanizing digital payments for all of South Africa.”
- RPP was inspired by the [Reserve Bank of South Africa's National Payment System Framework and Strategy Vision 2025](#). The program sets out nine goals: a clear and transparent regulatory and governance framework, transparency and public accountability, financial stability and security, the promotion of competition and innovation, cost-effectiveness, interoperability, flexibility and adaptability, regional integration and financial inclusion.

2022 e-com payment methods

Estimated share of transaction value*



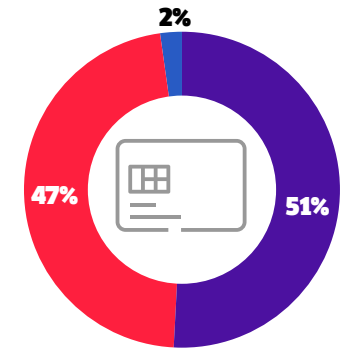
2022 POS payment methods

Estimated share of transaction value*



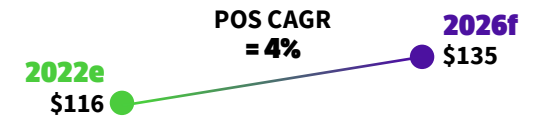
2021 card brand breakdowns

(e-com and POS)



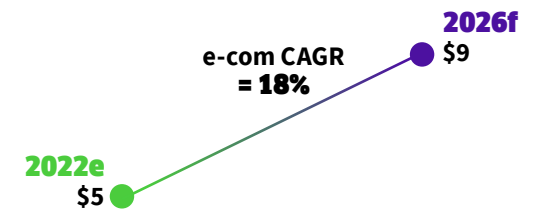
POS market size projections

(US\$ Billions)



E-com market size projections

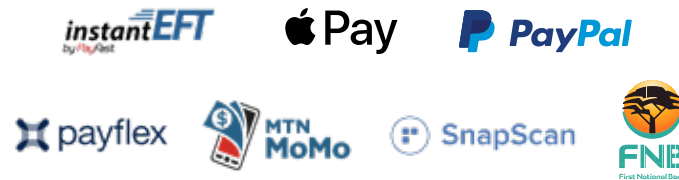
(US\$ Billions)



E-com as % of all commerce 2022 4% → 2026 7%



Popular alternative payment methods



UAE



2022 payment highlights

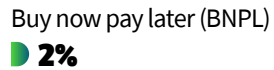
- Consumers in the United Arab Emirates prefer cards. Cards remained the majority payment method in e-commerce in 2022, with credit cards accounting for 41% of transaction value and debit cards representing 11%. A similar picture emerges at POS, where credit cards were responsible for 40% of transaction value, with debit cards earning 17% share. [Mastercard](#) and [Visa](#) process the overwhelming majority of card spend in the UAE.
- Wallets are the second-leading payment method behind credit cards online, accounting for 24% of transaction value in 2022, up from 23% in 2021. Wallets are growing even faster at POS, growing from 13% share in 2021 to 16% share in 2022. Consumers in the UAE can choose from among the world's biggest wallet brands, such as [Alipay](#), [Apple Pay](#), [Google Wallet](#), [Samsung Wallet](#) and [WeChat Pay](#), as well as domestic wallets like [Careem Pay](#), [e& money](#) (Etisalat Wallet) and [Payit](#).
- Although still in its early stages, buy now pay later (BNPL) is growing fast in the UAE. BNPL doubled its share of transaction value from 2021 to 2022, from 1% to 2% of e-com transaction value. The UAE is a center of BNPL development, with domestic BNPL providers such as [Cashew](#), [PostPay](#), [Spotii](#) and [Tabby](#) competing with regional providers like Saudi Arabia's [Tamara](#). Accordingly, we project that BNPL will continue to grow in UAE e-commerce by 37% CAGR through 2026.

Real-time payments spotlight

- Real-time payments in the UAE are conducted via two different schemes: the Immediate Payment Instruction (IPI) scheme and the Instant Payments Platform (IPP). IPI launched in 2019, while the IPP was – at the time of publication – [scheduled for launch](#) in Q1 2023. Both systems are administered by the Central Bank of the UAE ([CBUAE](#)).
- IPI was built on the UAE Funds Transfer System ([UAFTS](#)) real-time gross settlement system. Transfers are only possible between local AED-denominated bank accounts and up to a daily limit of AED 25,000 (approximately \$6,800). According to the CBUAE's [2021 Financial Stability Report](#), in 2021 IPI processed 21.1 million transactions worth AED 51.7 billion (approximately \$14 billion), a 47% rise in transaction value over the AED 20.9 billion (\$5.7 billion) processed in 2020.
- While IPI facilitated person-to-business (P2B) payments only, the new IPP system will facilitate a [wider range of use cases](#), including person-to-person (P2P) and business-to-business (B2B). IPP will be available 24/7/365 and will also make direct debits and QR code payments possible. Participation by UAE banks will be mandatory. [According to the CBUAE](#), IPP will be introduced in phases throughout 2023.

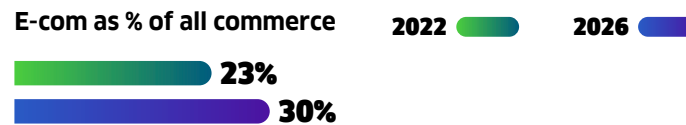
2022 e-com payment methods

Estimated share of transaction value*



2022 POS payment methods

Estimated share of transaction value*

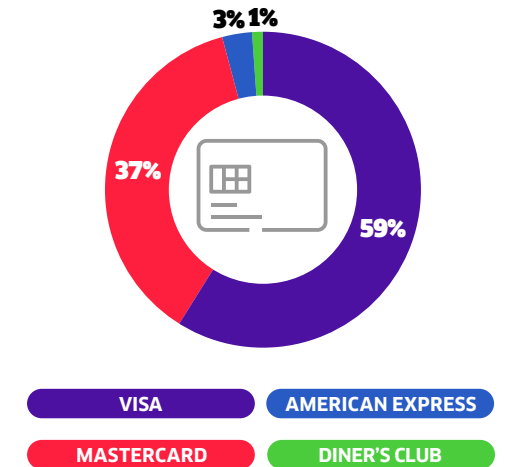


Popular alternative payment methods



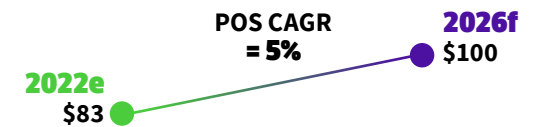
2021 card brand breakdowns

(e-com and POS)



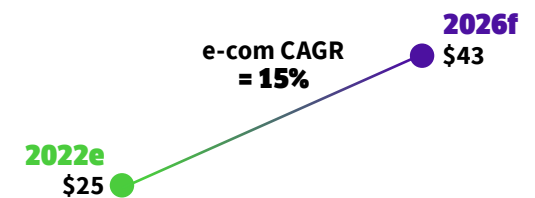
POS market size projections

(US\$ Billions)

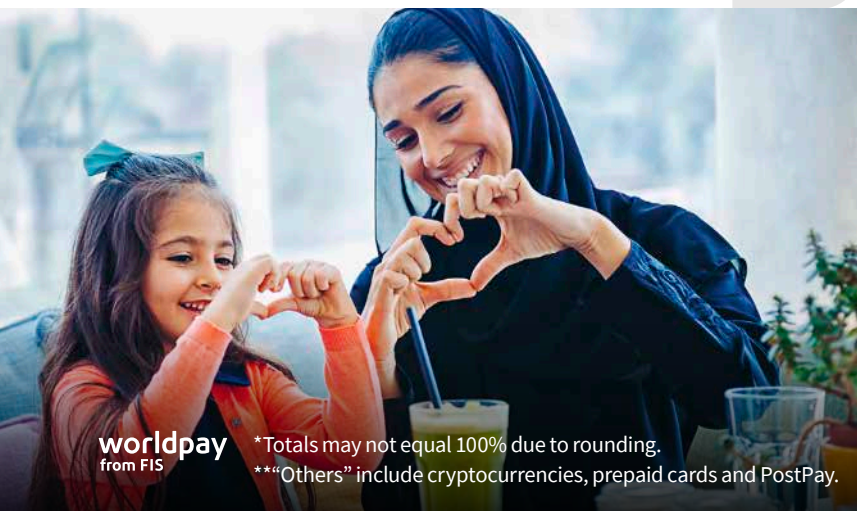


E-com market size projections

(US\$ Billions)



e=estimate f=forecast 160



NORTH AMERICA PAYMENT INSIGHTS

Payment insights that drive growth

HOW NORTH AMERICA CONSUMERS PAY TODAY

GPR 2023's coverage of North America consists of [Canada](#) and [the U.S.](#)

1 North American e-com growth slows to 9% CAGR

- E-commerce continues to grow, albeit at lower rates than during pandemic's peak

2 A2A is poised for growth in North America

- A third real-time payments system, FedNow, is coming to the U.S. in 2023, joining The Clearing House RTP and Zelle
- A2A adoption is growing fast, driven by Interac Online

3 Wallets are now North America's #1 e-com payment method

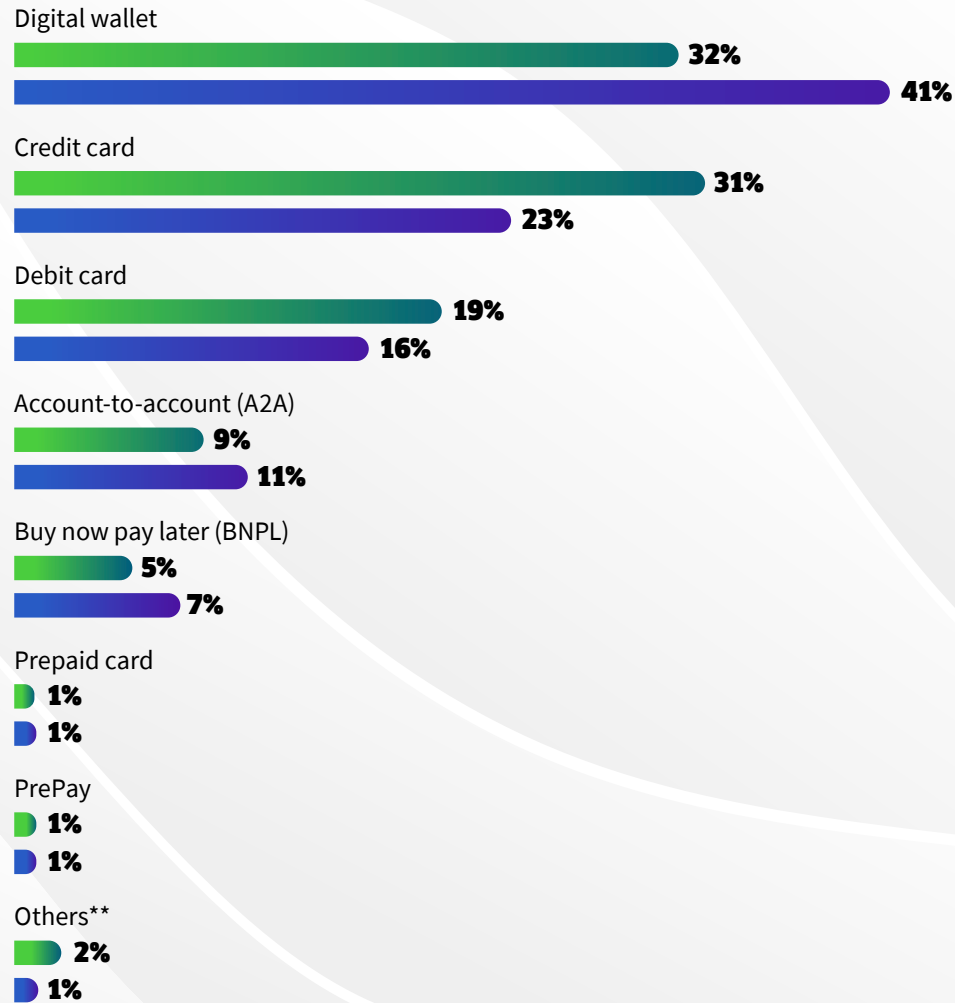
- Digital wallets have displaced credit cards as consumers' preferred online payment method

4 Credit card use remains high amid consumer behavior shifts

- Credit card use remains high, even as share shifts to digital wallets and BNPL
- A deep dive on the diversification of wallet funding

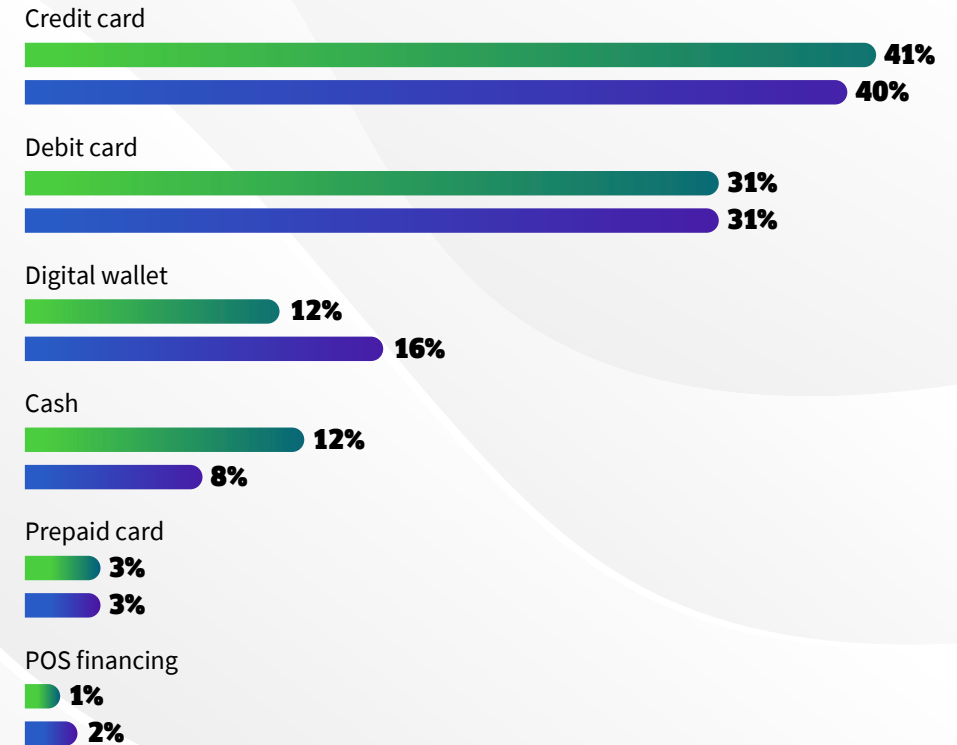
North America e-com payment methods

Share of transaction value 2022-2026



North America POS payment methods

Share of transaction value 2022-2026



2022 █ 2026* █

*Forecast

**“Others” include cryptocurrencies, prepaid cards and PostPay.

Totals may not equal 100% due to rounding.

NORTH AMERICAN E-COM GROWTH SLOWS POST-PANDEMIC

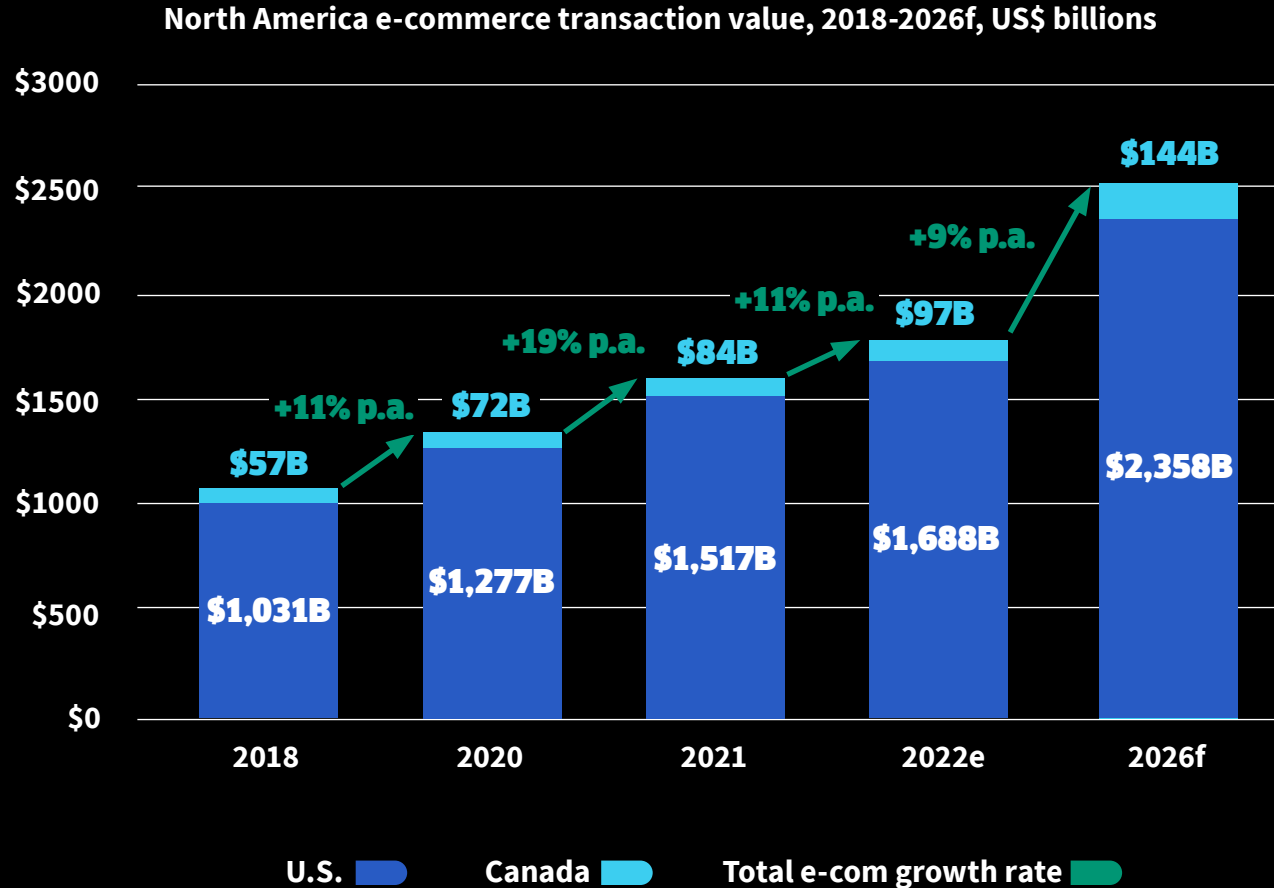
North America's e-com market continues to grow – but that growth has slowed since the peak of the pandemic, reaching a projected 9% CAGR in 2026. However, even at this reduced growth rate, we expect the transaction value of e-com in North America to increase by more than \$700 billion between 2022 and 2026.

The ubiquity of smartphones, in addition to increasingly entrenched buying habits, means mobile shopping will drive most of North America's e-com growth. We project m-com to expand at 12% CAGR from 2022-2026, versus a projected 6% CAGR for desktop e-commerce.

Canada's e-com market is approximately 6% the size of the U.S. market, but it's projected to grow faster at 10% CAGR through 2026, compared to 9% for the U.S. Canada's e-com market is projected to double in value between 2020 to 2026, when it will account for approximately \$144 billion.

NORTH AMERICAN E-COM GROWTH SLOWS

E-commerce continues to grow, albeit at lower rates than during the pandemic's peak



A2A IS POISED FOR GROWTH

A2A in North America is on the rise thanks to new real-time payment systems and government efforts to encourage the use of these payments. And Canada is leading the way.

The use of A2A payments in Canada increased from 8% of e-com transaction value in 2021 to 12% in 2022, primarily driven by [Interac Online](#), the Canadian instant transfer system that enables users to pay merchants directly from their bank account, 24/7/365.



The launch of [Payments Canada's Real-Time Rail \(RTR\)](#), scheduled for 2023, should accelerate A2A's growth. A2A payments are forecast to grow at a strong 27% CAGR through 2026, when we project it will account for one-fifth of Canada's e-commerce transaction value.

Meanwhile, neither of the U.S.'s instant payment solutions – Zelle and RTP® from The Clearing House – have gained significant traction as a P2B payment method due to their lack of universal market penetration and interoperability. Nevertheless, A2A payments in the U.S. accounted for 9% of e-com transaction value in 2022. To expand the availability of instant A2A payments, the country's federal reserve banks are developing a new instant payment system called [FedNow](#), which is expected to go live in mid-2023.

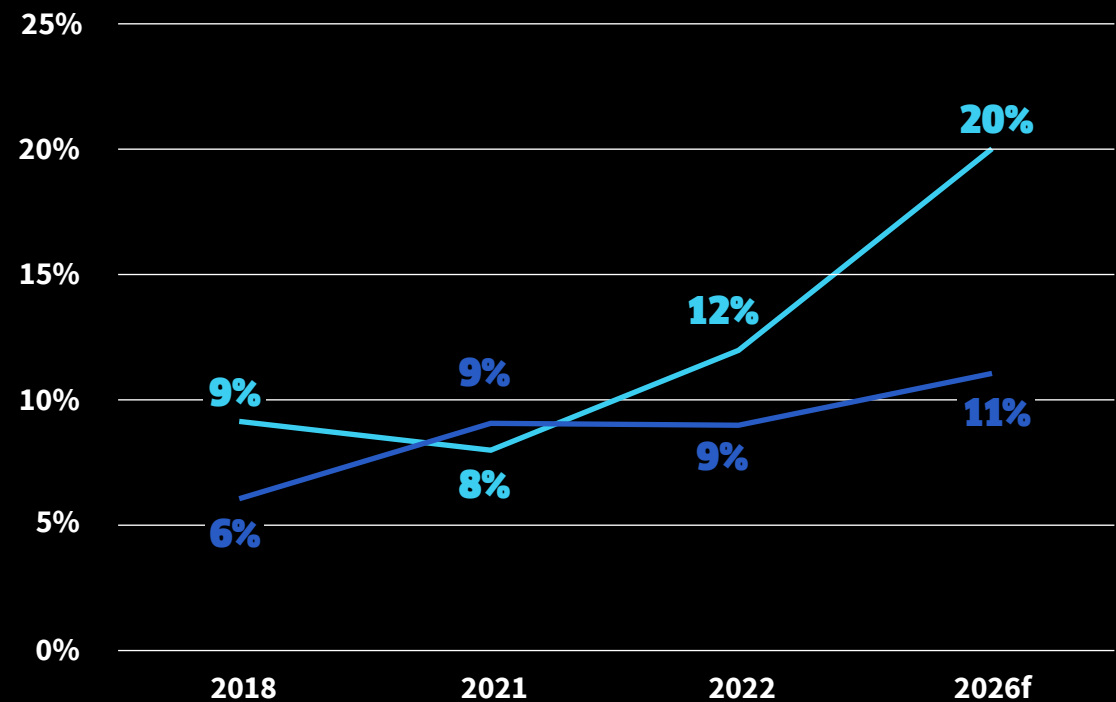
Meanwhile, a growing number of U.S. retailers have been encouraging shoppers to try Pay by Bank – an A2A/ACH solution that leverages Open Banking protocols – with the aim of reducing the cost of payment acceptance. Pay by Bank is likely to increase in popularity as merchants, banks, network cards and payment providers promote it as a cheaper alternative to cards.

With that in mind, we project that A2A will increase to at least 11% of U.S. e-com transaction value by 2026. That forecast may rise considerably if one or more of the new RTP systems achieves the same high popularity of RTP systems in Brazil, India or Thailand.

A2A POISED FOR GROWTH IN NORTH AMERICA

A2A is growing fast in Canada, while competing systems are likely to spur growth in the U.S.

A2A % of e-com transaction value 2018-2026f



Canada



U.S.

WALLETS TAKE THE LEAD IN NORTH AMERICA E-COM PAYMENTS

After a steady climb over the past eight years, digital wallets have become the leading online payment method in North America. Their share of e-com transaction value more than doubled over this period, rocketing from 14% in 2014 to 32% in 2022. Between 2022 and 2026, we forecast their share of e-com transaction value to continue to grow, reaching 41%. We also expect digital wallets' share of POS transaction value to rise from 12% in 2022 to 16% in 2026.



While credit cards remain the first choice of Canadian consumers, digital wallets' share of e-com transaction value has grown considerably in recent years. From 16% of Canada's e-com transaction value in 2018, digital wallets now account for 27%. That puts digital wallets in second place, and GPR 2023 projects that they will overtake credit cards to become Canada's leading e-com payment method by 2026, reaching 36% of e-com transaction value.

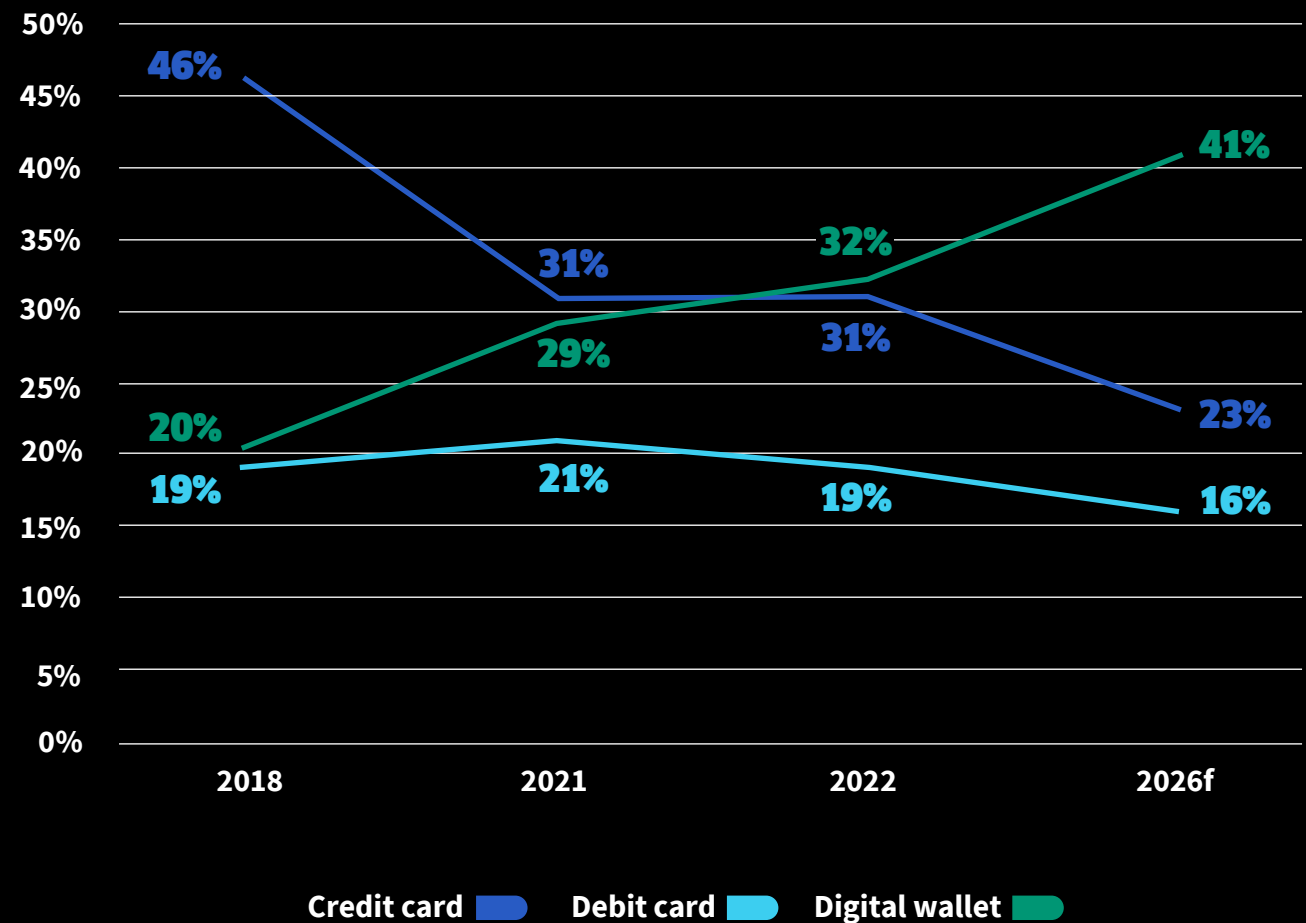
In the U.S., digital wallets have edged their way past credit cards to take the top spot. In addition to the popularity of leading wallet brands like PayPal, Apple Pay and Google Pay, wallets owned by e-commerce platforms like Amazon and Shopify are emerging as a key adoption driver.

For example, [Shop Pay](#), the one-click checkout solution launched by Shopify in 2017, is gaining penetration with SMBs because it offers easy integration, faster and safer checkout, and higher conversion rates. In 2021, Shopify partnered with BNPL provider [Affirm](#) to offer a BNPL solution, [Shop Pay Installments](#).

WALLETS TAKE THE LEAD IN NORTH AMERICA E-COM PAYMENTS

Digital wallets have displaced credit cards as the preferred online payment method

Leading North America e-com payment methods, share of transaction value, 2018-2026f



CREDIT CARD USE REMAINS HIGH AMID CONSUMER BEHAVIOR SHIFTS

Increasing use of BNPL and digital wallets has not diminished the power of credit cards

Physical credit cards are still used to pay for almost a third of all online transactions and about 40% at POS. [According to GlobalData](#), credit cards have high penetration in both the U.S. and Canada (59% and 67%, respectively, of all cards in circulation).



In addition, shoppers in both countries say they like the benefits that credit cards offer, such as reward points and discounts. In fact, credit card balances have recovered to pre-pandemic levels as government stimulus payments, declining unemployment, easing of COVID-19 restrictions and resumption of travel have given consumers the confidence to use their credit cards again.

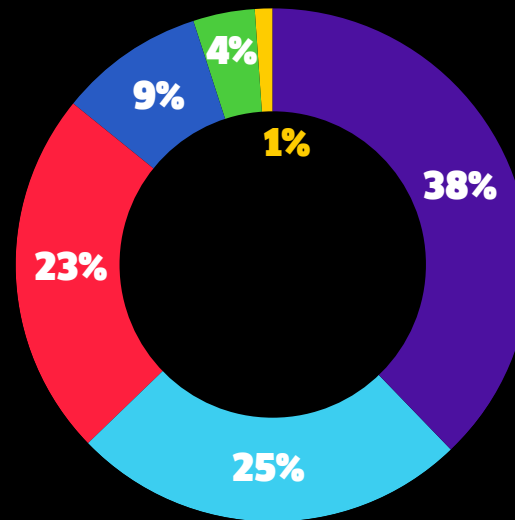
However, credit cards' share of transaction value has remained flat for both e-com and POS, and we expect it to decline in the next four years as credit cards face multiple headwinds:

- The impact of economic uncertainty on consumer spending, especially on big ticket items
- The high cost of borrowing, which is pushing consumers towards interest-free options such as BNPL (when paid back within the terms of the loan)
- Consumers' shift towards using a variety of methods to fund their wallets

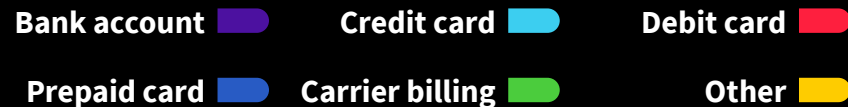
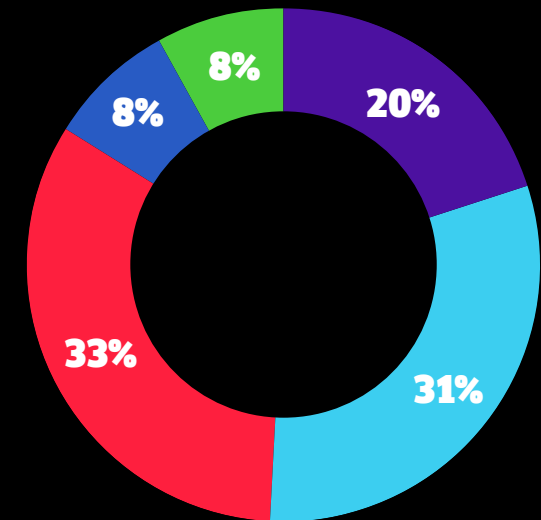
CREDIT CARD USE REMAINS HIGH AMID CONSUMER SHIFTS

Credit cards are a leading source of funding for digital wallets

2022 wallet funding - Canada



2022 wallet funding - U.S.



NORTH AMERICA MARKET GUIDES

Payment insights that drive growth

CANADA



2022 payment highlights

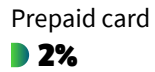
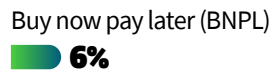
- As the leading payment method both in e-commerce and at POS, credit cards continue to dominate the payment landscape in Canada. In 2022, credit cards accounted for 50% of POS transaction value, while representing 42% of e-com value.
- Digital wallets continue to gain share of transaction value. In e-com, wallets jumped from 22% to 27% of transaction value from 2021 to 2022. While wallet gains at POS are less dramatic (from 8% share in 2021 to 10% in 2022), wallets are projected to grow at 16% CAGR from 2022 to 2026.
- Account-to-account (A2A) payments continue to increase in popularity. Driven largely by [Interac Online](#), A2A payments grew from 8% share of e-com transaction value in 2021 to 12% in 2022. We expect that the forthcoming launch of [Payments Canada's Real-Time Rail](#) system will further stimulate A2A payments.
- Canadian consumers' appetite for credit is also fueling the adoption of buy now pay later (BNPL). Canadians can choose from international brands such as [Afterpay](#), [Sezzle](#) and [Zip](#) as well as local brands, including [Flexiti](#) and [PayBright](#) (the latter was acquired by Affirm in 2020). In 2022, BNPL accounted for 6% of e-com transaction value, while POS financing options represented 2% of POS spend.

Real-time payments spotlight

- Canada does not currently have a true real-time payment system, but that is expected to change soon. Canada's first national real-time payment system – [Real-Time Rail](#) (RTR) – was originally set for a launch in mid-2023; that launch has been delayed to an undetermined future date in order to “[provide additional time](#) to validate and test the components and end-to-end integration of the RTR system.”
- Real-Time Rail will be operated by [Payments Canada](#) under the direction of the [Bank of Canada](#). According to [Payments Canada](#), “The Real-Time Rail (RTR) will allow Canadians to initiate and receive payments within seconds, any time of the day or night, 365 days per year. [In] line with Payments Canada's public-purpose mandate, the RTR will level the playing field to support existing member financial institutions and non-bank payment service providers.”
- A key participant in the RTR project is [Interac](#), which is leveraging the technologies behind its popular payment services, including [Interac e-Transfer](#) and [Interac Online](#). The Bank of Canada [designated](#) [Interac e-Transfer](#) a Prominent Payments System (PPS) in 2021 due to its centrality to the Canadian payment system.

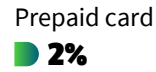
2022 e-com payment methods

Estimated share of transaction value*



2022 POS payment methods

Estimated share of transaction value*



E-com as % of all commerce **2022** **2026**



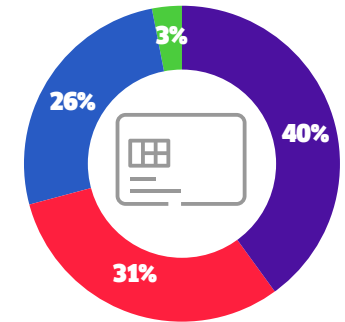
Mobile as % of all e-com



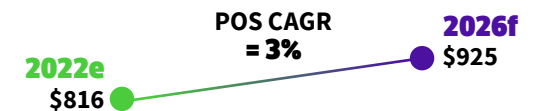
Popular alternative payment methods



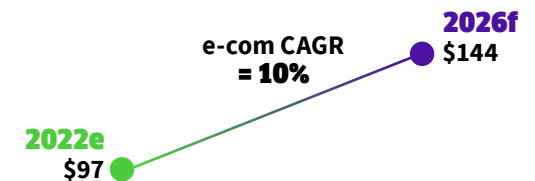
2021 card brand breakdowns (e-com and POS)



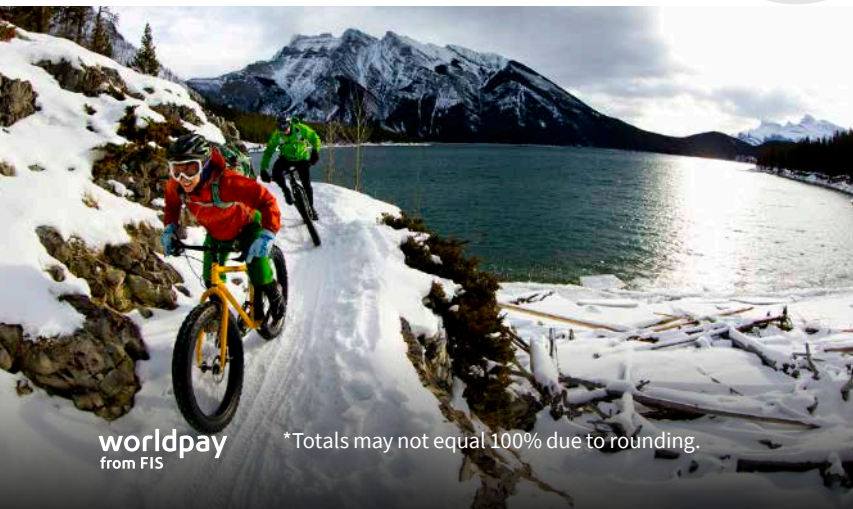
POS market size projections (US\$ Billions)



E-com market size projections (US\$ Billions)



e=estimate f=forecast 174



CANADA



2022 payment highlights

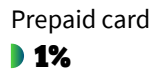
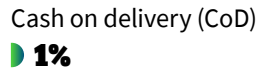
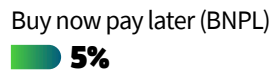
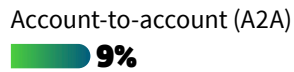
- U.S. consumers display a remarkable attachment to the use of cards, accounting for more than two-thirds of POS transaction value and half of e-com spend. Credit cards remained the leading payment method at POS, garnering 40% of transaction value in 2022, while debit cards accounted for 31% – each share was up 1% from 2021. The forecast for cards at POS is for continued share stability through 2026.
- We project that cash use will resume its decline in 2023 following a [brief and rare increase in use](#) after the initial lockdown stage of the pandemic. While cash accounted for 12% of POS transaction value in 2022, we project a decline of -5% CAGR through 2026. In 2022, digital wallets became the leading payment method among U.S. consumers shopping online, surpassing credit cards with 32% of e-com transaction value. However, cards remain an essential part of this shift: in our 2022 survey, 31% of U.S. respondents said they funded their wallets with credit cards, while 33% indicated funding by debit card.
- 2023 may be a pivotal year for account-to-account (A2A) payments in the U.S. 2023 will bring the launch of a new real-time payments network, [FedNow](#), which will join existing real-time payment networks [RTP®](#) from [The Clearing House](#) and [Zelle](#). A2A accounted for 9% of e-com transaction value in 2022; we forecast an increase for A2A payments of 14% CAGR through 2026.

Real-time payments spotlight

- 2023 promises to be an eventful year for real-time payments in the U.S. as a new system – [FedNow](#) – joins the two existing real-time payment networks, [RTP®](#) and [Zelle](#).
- Launched in 2017, RTP® from [The Clearing House](#) continues to experience significant growth in payment volume and transaction value. In Q4 2022, RTP® processed 49 million transactions worth \$22.7 billion, representing 9% volume growth and 15% value increase from Q3 2022. As of January 2023, 281 financial institutions comprised the [RTP® network](#).
- In October 2022, [EBA CLEARING](#), The Clearing House and [SWIFT announced](#) a pilot of Immediate Cross-Border Payments (IXB). The pilot seeks to leverage the existing real-time payment rails and connect U.S. and European banking systems via instant settlement between RTP® and [RT1](#).
- Also launched in 2017, [Zelle](#) is operated by [Early Warning Systems](#), which is owned by seven major U.S. banks. Zelle's primary use case is person-to-person (P2P) payments, registering more than five billion transactions totaling nearly \$1.5 trillion since the system launched. Zelle made headlines in 2022 due to [concerns](#) over [fraudulent](#) abuse of the service.
- [FedNow](#), a project of the [U.S. Federal Reserve](#), is expected to launch in mid-2023. This new payment rail will [compete](#) against a spectrum of existing private payment service providers in the U.S., including in P2P, business-to-business (B2B) and person-to-business (P2B) use cases.

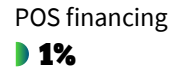
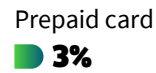
2022 e-com payment methods

Estimated share of transaction value*



2022 POS payment methods

Estimated share of transaction value*



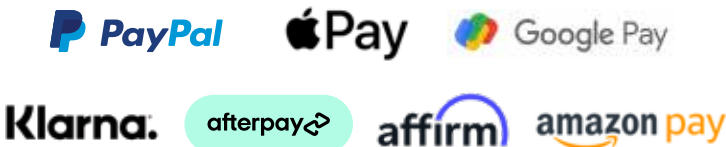
E-com as % of all commerce **2022** **2026**



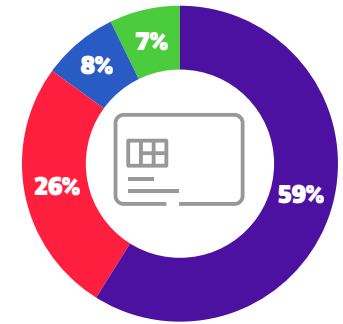
Mobile as % of all e-com



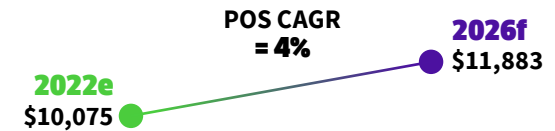
Popular alternative payment methods



2021 card brand breakdowns (e-com and POS)



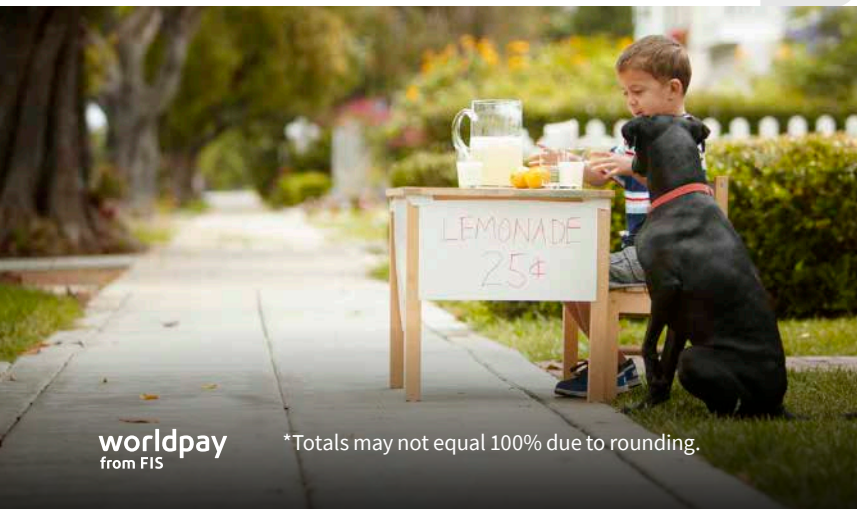
POS market size projections (US\$ Billions)



E-com market size projections (US\$ Billions)



e = estimate f = forecast 176



METHODOLOGY

Payment insights that drive growth

The eighth edition of The Global Payments Report offers a snapshot of the current payments landscape: globally, by region and in 40 select markets. The report tracks consumer payments when shopping online and at the physical point of sale, identifies key payment trends and provides potential scenarios of market evolution through 2026 for payment method shares at the regional and global level, as well as market sizes at the individual market level. This analysis is complemented by a series of insights into the data prepared by the FIS Market and Competitor Research team, highlighting the most relevant themes in the world of payments.

The Global Payments Report continues to evolve based on market changes, developing standards and reader feedback. In the 2023 edition, we have added a new payment category, simplified naming conventions, and combined two sets of payment methods where it was justified by similarities in the way they are received and understood by customers.

In 2023, we've added cryptocurrencies as a payment method category to our e-commerce analysis. Cryptocurrencies are not yet a mainstream payment method – we estimate that crypto payments accounted for less than 0.2% of e-commerce transaction value in 2022, and they do not register a market share above 1% in any of the 40 markets covered. Nevertheless, the potential for growth in adoption warrants inclusion in our analysis and ongoing monitoring. We've renamed “digital/mobile wallets” to simply “digital wallets” for both e-commerce and POS, recognizing no need for the distinction in the minds of many consumers, and we've simplified “credit/charge cards” to “credit cards” that are inclusive of charge cards. We've created a new e-com category, “A2A” (account-to-account), that combines the former categories “bank transfer” (for push payments) and “direct debit” (for pull payments). Finally, we've combined the POS categories “buy now pay later” and “retailer/bank financing” into simply “POS financing,” which is inclusive of all purchase-specific credit extended at the point of sale. Complete descriptions of all payment methods tracked in GPR 2023 are available in the Payment Terms section of the report.

GPR 2023 provides our view of the market, based on internal expertise, our own research and third-party vendor data. The FIS Market and Competitor Research team compiles The Global Payments Report using data from a mixture of internal sources, a field survey, third-party vendors and public data sources. This data is analyzed using the FIS proprietary data model and categorization scheme, developed in cooperation with a leading global management consultancy. The resulting data is rigorously tested and validated by external experts as well as FIS product and commercial teams.

Estimated shares of individual payment methods by market and region are calculated using the aforementioned data model. Our analysis models share of total transaction value – not the number of transactions. Our model contains a detailed breakdown of payment methods used when shopping online and at POS, based on GlobalData's 2022 Financial Services Consumer Survey, which was conducted online in H1 2022 among 48,000 consumers in 40 global markets.

Present in previous editions, Russia is not included among markets covered in GPR 2023 given the turmoil in the payment landscape, as well as the impracticalities of conducting a meaningful survey of Russian consumers in 2022.

E-commerce market size and forecast data is sourced from GlobalData's E-Commerce Analytics database based on data updated in October 2022; 2022 data cited in the report are therefore estimates for the year. GlobalData collected this information using consumer surveys, B2B surveys and desk research. They have also developed a proprietary forecasting model for e-commerce market size growth used in this report.

2022-2026 POS market size forecasts were calculated by applying the growth rates in Household Consumption sourced from McKinsey macroeconomic data. We augmented several POS market size calculations for 2022 onwards with publicly available datasets to make final calculations more robust. As a result, consensus data was updated for Argentina, India, Indonesia, Peru, Saudi Arabia, Singapore, South Africa, South Korea, Taiwan, Turkey and UAE. Total POS market size through 2026 was forecast 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 2026). Any indicative projections based on the data we have used should be treated as such.

Forecast breakdown by payment method for each region is calculated using historical percentage share growth trend (in CAGR) for e-commerce and the McKinsey Global Payments Map's indicative trends for POS methods. This forecast methodology was supplemented by rigorous validation from FIS and external experts. McKinsey & Company continuously maintains its payments database from over 200 global sources, including public data, consumer surveys and local research team inputs. All market size data relate to the industry, not from direct FIS business.

For the eighth consecutive year, FIS has tracked the emergence and continued growth of real-time payment systems around the world. We examine the key trends and analyze the overlay services being offered on the real-time rails – particularly as those trends impact consumer payment methods, including A2A payments – and keep an eye on the new launches and those still in development.

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

PAYMENT TERMS

Payment insights that drive growth

General definitions

Alternative payment methods (APMs) - Payment methods other than traditional payment methods such as cash (including cash-based payments such as Cash on delivery (CoD)) and cards (e.g., credit cards, debit cards and prepaid cards). Alternative payment methods include account-to-account (A2A), buy now pay later (BNPL), cryptocurrencies, digital wallets, PrePay, PostPay and POS financing. Globally, APMs accounted for approximately 33% of POS and 64% of e-com transaction value in 2022.

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 in each covered market, projected for 2022 through 2026. Global e-com transaction value CAGR for 2022 – 2026 is projected at 9%; global POS transaction value CAGR for 2022 – 2026 is projected at 6%. CAGRs offered for specific payment methods refer to the projected growth rates of absolute transaction value, not the share of transaction value.

E-commerce (e-com) - Consumer purchases of goods and services made online via the internet, whether via desktop computer, laptop computer, tablets or mobile phones. E-com is inclusive of purchases made via apps, web browsers and other internet-connected devices such as smartwatches and smart speakers. Our analysis excludes purchases or installment payments of motor vehicles, real estate, mortgage or rent payments, utility and other bill payments, loans, credit card bills, or shares and bonds. For cross-border purchases, sales are attributed to the country in which the consumer is based. Our analysis is confined to person-to-business payments only and excludes business-to-business sales. E-com market sizing figures in the GPR are sourced from [GlobalData](#).

E-com as % of all commerce - E-com transaction value as a percentage of all commerce, including e-com and POS. Global e-com sales represented approximately 11% of all commerce in 2022. Higher estimated growth rates for e-com relative to POS will see e-com as a percentage of all commerce rise to a projected 12% globally by 2026.

GPR - The Global Payments Report, a definitive account of how consumers pay in 40 leading global markets. This 2023 version is the eighth edition of GPR.

M-com sales as % e-com - Transaction value of purchases made via mobile devices as a percentage of all e-com transaction value. In 2022, m-com represented a majority of e-com spend (54%), or approximately \$3.3 trillion globally. Globally, m-com is growing at twice the rate of desktop e-com (12% CAGR for m-com versus 6% CAGR for desktop e-com through 2026); we project m-com will account for 59% of e-com transaction value by 2026.

Point of sale (POS) - All person-to-business transactions that occur at the physical point of sale. Our analysis includes traditional in-store 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 GPR 2023 approached \$49.2 trillion in 2022. We project a 6% CAGR for POS and a total global POS market size of \$62.7 trillion in 2026.

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.

Real-time payment scheme - A set of processes and systems that define the end-to-end real-time payment process from initiation to clearing and settlement.

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 market, regional and global levels. Global e-com transaction value in 2022 was approximately \$6 trillion; global POS transaction value in 2022 was approximately \$49.2 trillion.

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 payments can take place between and among individual persons, businesses and governments; our analysis measures person-to-business payments only. In 2022, A2A payments accounted for an estimated 9% of global e-com transaction value, or approximately \$525 billion. A2A is a new categorization for GPR 2023, combining what in previous editions was categorized as “bank transfer” (for push payments) and “direct debit” (for pull payments).

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 2022, or \$285 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 2022, or \$7.7 trillion. Cash is projected to continue to decline to below 10% of global POS spend by 2026, or approximately \$6 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 2022, or \$126 billion. We project COD will fall to approximately 1% of global e-com spend by 2026, when it will account for approximately \$70 billion.

Credit card - An essential anchor of person-to-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 via an extension of credit from a financial institution. In our analysis, credit cards are inclusive of charge cards and deferred debit cards. In 2022, credit cards represented 20% of global e-com transaction value (nearly \$1.2 trillion) and 26% of global POS transaction value (over \$12.2 trillion).

Cryptocurrencies - Cryptocurrencies include private cryptocurrencies such as Bitcoin and Ethereum, stablecoins such as Tether and USD Coin, and crypto-linked cards such as the BitPay Mastercard. GPR 2023 includes cryptocurrencies as a separate e-com payment category for the first time. In our analysis, central bank digital currencies are not included in this category and are currently classified within “other.” Cryptocurrencies are still an emerging payment method: they accounted for less than 0.2% of global e-com transaction value in 2022 and did not register as much as 1% 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. In 2022, debit cards accounted for 12% of global e-com transaction value (nearly \$744 billion) and 23% of global POS transaction value (over \$10.7 trillion).

Digital wallet - Apps that securely store payment credentials, allowing consumers to pay for goods and services virtually everywhere commerce takes place in e-com and at POS. Wallets can be funded directly via cash, cards, bank transfer or carrier billing. Wallets of global scale such as Alipay, Apple Pay, Google Pay and PayPal are joined by hundreds of local and regional wallets to comprise this large and fast-growing market segment. In 2022, digital wallets accounted for 49% of e-com (over \$2.9 trillion) and 32% of POS (nearly \$15.1 trillion) transaction value.

POS financing - Credit extended to consumers at the point of sale. This includes credit offered by retailers, financial institutions and third-party BNPL services such as Klarna, Afterpay and Affirm. POS financing accounted for approximately 2% of global POS transaction value in 2022, or nearly \$820 billion. The 2022 edition of the Global Payments Report categorized BNPL as a distinct category at POS; BNPL and POS financing were combined in 2023 given the increasing similarity of (and inability of the consumer to distinguish between) the POS credit offerings of fintechs, retailers and financial institutions.

PostPay - Consumers order products online and pay for them in full later at an affiliated physical store or ATM. Although PostPay services represent only 0.3% of e-com transaction value globally, PostPay accounts for approximately 4% of LATAM e-com transaction value, led by Boleto Bancário in Brazil. PostPay also thrives in Japan, where payments are typically made at Konbini (convenience) stores, accounting for 6% of 2022 e-com spend in Japan.

Prepaid card - Cards issued by financial institutions that run scheme networks such as Visa and Mastercard and that are funded in advance. Prepaid cards can be funded once or reloaded, and they can be used to make purchases as easily as debit or credit cards. Prepaid cards accounted for less than 1% of e-com and approximately 2% of POS transaction value in 2022.

PrePay - 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. PrePay accounted for less than 1% of global e-com transaction value in 2022.

Others - We continue to track other emerging and otherwise uncategorized e-com payment methods, like mobile carrier billing and central bank digital currencies. In 2022, uncategorized payment methods combined to account for less than 1% of global e-com spend.



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For further inquiries, please contact MerchantSolutionsMarketResearch@fisglobal.com

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